APPENDIX A

SENATE BILL X2 1

PERATA, 2008

Senate Bill No. 1

CHAPTER 1

An act to add and repeal Section 65595.5 of the Government Code, and to add Sections 127.5 and 134.5 to, to add Division 33 (commencing with Section 83000) to, and to repeal and add Part 2.2 (commencing with Section 10530) of Division 6 of, the Water Code, relating to water, and making an appropriation therefor.

[Approved by Governor September 30, 2008. Filed with Secretary of State September 30, 2008.]

LEGISLATIVE COUNSEL'S DIGEST

SB 1, Perata. Water quality, flood control, water storage, and wildlife preservation.

(1) The Integrated Regional Water Management Planning Act of 2002 authorizes a regional water management group, as defined, to prepare and adopt a regional water plan meeting specified requirements.

This bill would repeal these provisions of law and enact the Integrated Regional Water Management Planning Act. Regional water management groups, as defined, would be authorized to prepare and adopt integrated regional water management plans meeting specified requirements.

The Department of Water Resources would be required to develop project solicitation and evaluation guidelines for a specified funding source.

(2) Under existing law, various bond acts have been approved by the voters to provide funds for water projects, facilities, and programs. The Disaster Preparedness and Flood Prevention Bond Act of 2006, a bond act approved by the voters at the November 7, 2006, statewide general election, authorizes the issuance of bonds in the amount of $4,090,000,000 for the purposes of financing disaster preparedness and flood prevention projects. The Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006, an initiative bond act approved by the voters at the November 7, 2006, statewide general election, authorizes the issuance of bonds in the amount of $5,388,000,000 for the purposes of financing a safe drinking water, water quality and supply, flood control, and resource protection program. The Water Security, Clean Drinking Water, Coastal and Beach Protection Act of 2002, an initiative bond act approved by the voters at the November 5, 2002, statewide general election, authorizes the issuance of bonds in the amount of $3,440,000,000 to finance a safe drinking water, water quality, and water reliability program. The Costa-Machado Water Act of 2000, a bond act approved by the voters at the March 7, 2000, statewide direct primary election, authorizes the issuance of bonds in the amount of $1,970,000,000 for the purposes of financing a

safe drinking water, water quality, flood protection, and water reliability program.

This bill, with regard to those bond funds, would appropriate $820,973,000 as follows: of the funds made available pursuant to the Disaster Preparedness and Flood Prevention Bond Act of 2006, $135,000,000 to the Department of Water Resources for essential emergency preparedness supplies and projects, and $150,000,000 to the department for stormwater flood management project grants; of the funds made available pursuant to the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006, $50,000,000 to the State Department of Public Health for grants for small community drinking water systems infrastructure improvements and related actions, $50,400,000 to the State Department of Public Health for grants for projects to prevent or reduce the contamination of groundwater that serves as a source of drinking water, $181,971,000 to the department for integrated regional water management activities, $90,000,000 to the department for the implementation of Delta water quality improvement projects that protect drinking water supplies, $100,000,000 to the department for the acquisition, preservation, protection, and restoration of Sacramento-San Joaquin Delta resources, $12,000,000 to the department to complete planning and feasibility studies associated with new surface storage under the California Bay-Delta Program, $15,000,000 to the department for planning and feasibility studies to identify potential options for the reoperation of the state's flood protection and water supply systems, $10,000,000 to the department to update the California Water Plan, $10,000,000 to the State Coastal Conservancy for projects on the Santa Ana River, and $7,300,000 to the department for the urban streams restoration program; of the funds made available under the Water Security, Clean Drinking Water, Coastal and Beach Protection Act of 2002, $3,760,000 to the department for planning and feasibility studies associated with surface storage under the California Bay-Delta Program; and of the funds made available pursuant to the Costa-Machado Water Act of 2000, $2,272,000 to the department for the Sacramento River Hamilton City Area Flood Damage Reduction Project and $3,450,000 to the department for the Franks Tract Pilot Project.

The bill would provide that up to 5% of the funds appropriated by the bill may be expended to pay for the administrative costs of that program. The bill would provide that funds appropriated by the bill are available for encumbrance until June 30, 2010. On January 10, 2010, program recipients would be required to report to the fiscal committees of the Legislature with regard to the committed and anticipated expenditures of these funds. The bill would require the Director of Finance to administratively establish positions necessary to implement activities funded by the bill's appropriations.

(3) Under the Porter-Cologne Water Quality Control Act, the State Water Resources Control Board and the California regional water quality control boards are the principal state agencies with authority over matters relating to water quality.

This bill would require the state board, in consultation with other agencies, to develop pilot projects in the Tulare Lake Basin and the Salinas Valley focused on nitrate contamination. The bill would require the state board to create an interagency task force, as needed, to oversee the pilot projects and submit a report to the Legislature on the scope and findings of the projects within 2 years of receiving funding. The state board would be required to implement recommendations for developing a groundwater cleanup program for the Central Valley Water Quality Control Region and the Central Coast Water Quality Control Region based upon pilot project results within 2 years of submitting the report to the Legislature.

(4) Existing law requires the department, not later than January 1, 2009, to update a model water efficient landscape ordinance. Existing law generally requires rules and regulations of the department to be first presented to the California Water Commission and to become effective only upon approval of the commission.

This bill, until December 31, 2009, would provide that commission review and approval does not apply to the department's adoption of regulations updating the model water efficient landscape ordinance.

(5) The bill would authorize the department to utilize the Program Manager class series that was created for the California Bay-Delta Authority for positions to manage vital departmental activities.

Appropriation: yes.

The people of the State of California do enact as follows:

SECTION 1. Section 65595.5 is added to the Government Code, to read:

65595.5. (a) Notwithstanding Section 161 of the Water Code, until December 31, 2009, in order to ensure timely implementation of water conservation activities relating to landscaping, Section 161 of the Water Code does not apply to the department's adoption of regulations required by Section 65595.

(b) This section shall remain in effect only until January 1, 2010, and as of that date is repealed, unless a later enacted statute, that is enacted before January 1, 2010, deletes or extends that date.

SEC. 2. Section 127.5 is added to the Water Code, to read:

127.5. The department may utilize the program manager class series that was created for the California Bay-Delta Authority, for positions to manage vital departmental activities, including those relating to climate change mitigation and adaptation, water management, and statewide planning.

SEC. 3. Section 134.5 is added to the Water Code, to read:

134.5. The Director of Finance shall administratively establish positions necessary to implement activities funded by the appropriations made in Division 33 (commencing with Section 83000).

SEC. 4. Part 2.2 (commencing with Section 10530) of Division 6 of the Water Code is repealed.

SEC. 5. Part 2.2 (commencing with Section 10530) is added to Division 6 of the Water Code, to read:

PART 2.2. INTEGRATED REGIONAL WATER MANAGEMENT PLANS

Chapter 1. Short Title

10530. This part shall be known and may be cited as the Integrated Regional Water Management Planning Act.

Chapter 2. Legislative Findings and Declarations

10531. The Legislature finds and declares all of the following:

(a) Water is a valuable natural resource in California, and should be managed to ensure the availability of sufficient supplies to meet the state's agricultural, domestic, industrial, and environmental needs. It is the intent of the Legislature to encourage local agencies to work cooperatively to manage their available local and imported water supplies to improve the quality, quantity, and reliability of those supplies.

(b) Local agencies can realize efficiencies by coordinating and integrating their assets and seeking mutual solutions to water management issues.

(c) The reliability of water supplies can be significantly improved by diversifying water portfolios, taking advantage of local and regional opportunities, and considering a broad variety of water management strategies as described in the California Water Plan.

(d) The implementation of this part will facilitate the development of integrated regional water management plans, thereby assisting each region of the state to improve water supply reliability, water quality, and environmental stewardship to meet current and future needs.

(e) Water management is integrally linked to public health and the health of all natural resources within our watersheds. It is the intent of the Legislature that water management strategies and projects are carried out in a way that promotes these important public values.

Chapter 3. Definitions

10532. Unless the context otherwise requires, the definitions set forth in this chapter govern the construction of this part.

10533. "Basin plan" means a water quality control plan developed pursuant to Section 13240.

10534. "Integrated regional water management plan" means a comprehensive plan for a defined geographic area, the specific development, content, and adoption of which shall satisfy requirements developed pursuant to this part. At a minimum, an integrated regional water management plan describes the major water-related objectives and conflicts within a region, considers a broad variety of water management strategies, identifies the

appropriate mix of water demand and supply management alternatives, water quality protections, and environmental stewardship actions to provide long-term, reliable, and high-quality water supply and protect the environment, and identifies disadvantaged communities in the region and takes the water-related needs of those communities into consideration.

10535. "Local agency" means any city, county, city and county, special district, joint powers authority, or other political subdivision of the state, a public utility as defined in Section 216 of the Public Utilities Code, or a mutual water company as defined in Section 2725 of the Public Utilities Code.

10536. "Plan" means an integrated regional water management plan.

10537. "Regional projects or programs" means projects or programs identified in an integrated regional water management plan that accomplish any of the following:

(a) Reduce water demand through agricultural and urban water use efficiency.

(b) Increase water supplies for any beneficial use through the use of any of the following, or other, means:

(1) Groundwater storage and conjunctive water management.

(2) Desalination.

(3) Precipitation enhancement.

(4) Water recycling.

(5) Regional and local surface storage.

(6) Water-use efficiency.

(7) Stormwater management.

(c) Improve operational efficiency and water supply reliability, including conveyance facilities, system reoperation, and water transfers.

(d) Improve water quality, including drinking water treatment and distribution, groundwater and aquifer remediation, matching water quality to water use, wastewater treatment, water pollution prevention, and management of urban and agricultural runoff.

(e) Improve resource stewardship, including agricultural lands stewardship, ecosystem restoration, flood plain management, recharge area protection, urban land use management, groundwater management, water-dependent recreation, fishery restoration, including fish passage improvement, and watershed management.

(f) Improve flood management through structural and nonstructural means, or by any other means.

10538. "Regional reports or studies" means reports or studies relating to any of the matters described in subdivisions (a) to (f), inclusive, of Section 10537, that are identified in an integrated regional water management plan.

10539. "Regional water management group" means a group in which three or more local agencies, at least two of which have statutory authority over water supply or water management, as well as those other persons who may be necessary for the development and implementation of a plan that meets the requirements in Sections 10540 and 10541, participate by means of a joint powers agreement, memorandum of understanding, or other written

agreement, as appropriate, that is approved by the governing bodies of those local agencies.

Chapter 4. Integrated Regional Water Management Plans

10540. (a) A regional water management group may prepare and adopt an integrated regional water management plan in accordance with this part.

(b) A regional water management group may coordinate its planning activities to address or incorporate all or part of any of the following actions of its members into its plan:

(1) Groundwater management planning pursuant to Part 2.75 (commencing with Section 10750) or other specific groundwater management authority.

(2) Urban water management planning pursuant to Part 2.6 (commencing with Section 10610).

(3) The preparation of a water supply assessment required pursuant to Part 2.10 (commencing with Section 10910).

(4) Agricultural water management planning pursuant to Part 2.8 (commencing with Section 10800).

(5) City and county general planning pursuant to Section 65350 of the Government Code.

(6) Other water resource management planning, including flood protection, watershed management planning, and multipurpose program planning.

(c) At a minimum, all plans shall address all of the following:

(1) Protection and improvement of water supply reliability, including identification of feasible agricultural and urban water use efficiency strategies.

(2) Identification and consideration of the drinking water quality of communities within the area of the plan.

(3) Protection and improvement of water quality within the area of the plan, consistent with the relevant basin plan.

(4) Identification of any significant threats to groundwater resources from overdrafting.

(5) Protection, restoration, and improvement of stewardship of aquatic, riparian, and watershed resources within the region.

(6) Protection of groundwater resources from contamination.

(7) Identification and consideration of the water-related needs of disadvantaged communities in the area within the boundaries of the plan.

(d) This section does not obligate a local agency to fund the implementation of any project or program.

10541. (a) The department shall develop project solicitation and evaluation guidelines for the application of funds made available pursuant to Section 75026 of the Public Resources Code, to enable broad and diverse participation in integrated regional water management plan development and refinement.

(b) The department shall conduct two public meetings to consider public comments prior to finalizing the guidelines. The department shall publish the draft solicitation and evaluation guidelines on its Internet Web site at least 30 days before the public meetings. One meeting shall be conducted at a location in northern California and one meeting shall be conducted at a location in southern California. Upon adoption, the department shall transmit copies of the guidelines to the fiscal committees and the appropriate policy committees of the Legislature. To the extent feasible, each state agency shall provide outreach to disadvantaged communities to promote access to and participation in those meetings.

(c) The department shall consult with the board, the California regional water quality control boards, the State Department of Public Health, the Department of Fish and Game, the California Bay-Delta Authority or its successor, and other state agencies with water management responsibility and authority in the development of the guidelines.

(d) The department may periodically review and update the guidelines to accommodate changes in funding sources, statutory requirements, new commonly accepted management practices, and changes in state water management policy. Any guideline changes shall be made with appropriate consultation with other state agencies and public review pursuant to subdivisions (b) and (c).

(e) The guidelines shall require that integrated regional water management plans include all of the following:

(1) Consideration of all of the resource management strategies identified in the California Water Plan, as updated by department Bulletin No. 160-2005 and future updates.

(2) Consideration of objectives in the appropriate basin plan or plans and strategies to meet applicable water quality standards.

(3) Description of the major water-related objectives and conflicts within a region.

(4) Measurable regional objectives and criteria for developing regional project priorities.

(5) An integrated, collaborative, multibenefit approach to selection and design of projects and programs.

(6) Identification and consideration of the water-related needs of disadvantaged communities in the area within the boundaries of the plan.

(7) Performance measures and monitoring to demonstrate progress toward meeting regional objectives.

(8) A plan for implementation and financing of identified projects and programs.

(9) Consideration of greenhouse gas emissions of identified programs and projects.

(10) Evaluation of the adaptability to climate change of water management systems in the region.

(11) Documentation of data and technical analyses used in the development of the plan.

(12) A process to disseminate data and information related to the development and implementation of the plan.

(13) A process to coordinate water management projects and activities of participating local agencies and local stakeholders to avoid conflicts and take advantage of efficiencies.

(14) Any other matters identified by the department.

(f) The guidelines shall include standards for identifying a region for the purpose of developing or modifying an integrated regional water management plan. At a minimum, a region shall be a contiguous geographic area encompassing the service areas of multiple local agencies, and shall be defined to maximize opportunities for integration of water management activities. The department shall develop a process to approve the composition of a region for the purposes of Sections 75026, 75027, and 75028 of the Public Resources Code.

(g) The guidelines shall require that the development and implementation of an integrated regional water management plan include a public process that provides outreach and an opportunity to participate in plan development and implementation to appropriate local agencies and stakeholders, as applicable to the region, including all of the following:

(1) Wholesale and retail water purveyors, including a local agency, mutual water company, or a water corporation as defined in Section 241 of the Public Utilities Code.

(2) Wastewater agencies.

(3) Flood control agencies.

(4) Municipal and county governments and special districts.

(5) Electrical corporations, as defined in Section 218 of the Public Utilities Code.

(6) Native American tribes that have lands within the region.

(7) Self-supplied water users, including agricultural, industrial, residential, park districts, school districts, colleges and universities, and others.

(8) Environmental stewardship organizations, including watershed groups, fishing groups, land conservancies, and environmental groups.

(9) Community organizations, including landowner organizations, taxpayer groups, and recreational interests.

(10) Industry organizations representing agriculture, developers, and other industries appropriate to the region.

(11) State, federal, and regional agencies or universities, with specific responsibilities or knowledge within the region.

(12) Disadvantaged community members and representatives, including environmental justice organizations, neighborhood councils, and social justice organizations.

(13) Any other interested groups appropriate to the region.

(h) The guidelines shall require integrated regional water management plans to be developed through a collaborative process that makes public both of the following:

(1) The process by which decisions are made in consultation with the persons or entities identified in subdivision (g).

(2) The manner in which a balance of interested persons or entities representing different sectors and interests listed in subdivision (g) have been or will be engaged in the process described in this subdivision, regardless of their ability to contribute financially to the plan.

(i) The guidelines shall provide for a process for the development, periodic review, updating, and amending of integrated regional water management plans. The department shall establish eligibility requirements for the project funding, that provide sufficient time for the updating of plans as necessary to reflect changes in the guidelines.

10543. (a) A regional water management group proposing to prepare an integrated regional water management plan shall publish a notice of intention to prepare the plan in accordance with Section 6066 of the Government Code.

(b) For the purposes of carrying out this part, the regional water management group shall make available to the public the documentation prepared pursuant to subdivision (g) of Section 10541 describing the manner in which interested parties may participate in developing the integrated regional water management plan.

(c) Upon the completion of the integrated regional water management plan, the regional water management group shall publish a notice of intention to adopt the plan in accordance with Section 6066 of the Government Code and shall adopt the plan in a public meeting of its governing board.

Chapter 5. Funding for Qualified Projects and Programs

10544. When selecting projects and programs pursuant to Division 24 (commencing with Section 78500), Division 26 (commencing with Section 79000), Division 26.5 (commencing with Section 79500), or pursuant to any grant funding authorized on or after January 1, 2009, for water management activities, the department, the board, the State Department of Public Health, and the California Bay-Delta Authority or its successor, as appropriate, shall include in any set of criteria used to select projects and programs for funding, a criterion that provides a preference for regional projects or programs.

10546. An integrated regional water management plan prepared pursuant to this part shall be eligible for funding pursuant to Section 75026 of the Public Resources Code, and for any funding authorized on or after January 1, 2009, that is allocated specifically for implementation of integrated regional water management.

10547. This part does not prohibit the department from implementing Section 75026 of the Public Resources Code by using existing integrated regional water management guidelines in accordance with subdivision (d) of Section 75026 of the Public Resources Code.

Chapter 6. Miscellaneous

10548. This part does not affect any powers granted to a local agency by any other law.

10549. This part does not authorize a regional water management group to define, or otherwise determine, the water rights of any person.

10550. The plan or project shall not be funded pursuant to this part if it would fund activities inconsistent with applicable state and federal water quality laws.

SEC. 6. Division 33 (commencing with Section 83000) is added to the Water Code, to read:

DIVISION 33. INTEGRATED WATER SUPPLY AND FLOOD PROTECTION PLANNING, DESIGN, AND IMPLEMENTATION

83000. The Legislature hereby finds and declares all of the following:

(a) Water is vital to the economy, environment, and overall well-being of the state.

(b) California faces increasing challenges in managing its water supply due to climate change, uncertainty regarding the availability of water from the Sacramento-San Joaquin Delta and other sources, an increasing state population, limitations on public funds, and other factors.

(c) California must adopt a new, updated, and comprehensive set of water planning, design, and implementation policies that reflect these realities to protect its water supply future.

(d) In the past, state laws, funding schemes, and administrative actions have treated the planning, construction, and operation of water supply, groundwater, and flood control systems as separate and distinct activities, thereby reducing efficiency and water supply reliability.

(e) California has not taken full advantage of the cost savings, the environmental benefits, or the expediency of more efficient operations and usage of existing water supply, storage, and flood protection facilities.

(f) It is the policy of the state to more effectively integrate its flood protection systems with its water supply and conveyance systems in order to conserve limited public dollars, increase the available water supply, improve water quality, increase wildlife and ecosystem protections, protect public health and safety, and address the effects of climate change.

(g) The purpose of this division is to require the integration of flood protection and water systems to achieve multiple public benefits, including all of the following:

(1) Increasing water supply reliability in the least costly, most efficient, and most reliable manner to meet current and future state needs.

(2) Increasing use of water use efficiency and water conservation measures to increase and extend existing water supplies.

(3) Reducing energy consumption associated with water transport, thereby reducing state greenhouse gas emissions.

(4) Improving water management to protect and restore ecosystems and wildlife habitat.

83001. In order to provide the least costly, most efficient, and reliable water supply to a growing state, it is the intent of the Legislature that the department accomplish the following objectives:

(a) Integrate state flood protection and water supply systems.

(b) Promote conjunctive use of groundwater storage capacity to improve overall water supply and flood system operation.

(c) Promote increased water use efficiency through expanded use of water conservation, water recycling, and improvements in technology.

83002. The sum of eight hundred twenty million nine hundred seventy-three thousand dollars ($820,973,000) is hereby appropriated in accordance with the following schedule:

(a) Of the funds made available pursuant to Chapter 1.699 (commencing with Section 5096.800) of Division 5 of the Public Resources Code, the sum of two hundred eighty-five million dollars ($285,000,000) is hereby appropriated as follows:

(1) Pursuant to subdivision (c) of Section 5096.821 of the Public Resources Code, the sum of one hundred thirty-five million dollars ($135,000,000) to the department for the acquisition, design, and construction of essential emergency preparedness supplies and projects. Prior to the design or construction of any project funded pursuant to this paragraph, the California Bay-Delta Authority, or its successor, shall approve the specific project or program. Preference shall be given to projects that protect and improve Delta water quality and drinking water supplies. Of the amount made available pursuant to this paragraph, not less than thirty-five million dollars ($35,000,000) shall be expended by the department for projects to reinforce those sections of the levees that have the highest potential to suffer breaches or failure and cause harm to municipal and industrial water supply aqueducts that cross the Delta and which are vulnerable to flood damage, including the installation of scour protection on the supports of the aqueducts in those areas located adjacent to the sections of the levees that have been identified as the highest risk of breaches or failure.

(2) Pursuant to Section 5096.827 of the Public Resources Code, the sum of one hundred fifty million dollars ($150,000,000) to the department for grants for stormwater flood management projects that reduce flood damage and provide other benefits, including groundwater recharge, water quality improvement, and ecosystem restoration. Not less than one hundred million dollars ($100,000,000) of this amount shall be available for projects that address immediate public health and safety needs, strengthen existing flood control facilities to address seismic safety issues. Twenty million dollars ($20,000,000) shall be available for local agencies to meet immediate water quality needs related to combined municipal sewer and stormwater systems to prevent sewage discharges into state waters. Twenty million dollars ($20,000,000) shall be available for urban stream stormwater flood management projects to reduce the frequency and impacts of flooding in watersheds that drain to the San Francisco Bay.

(b) Of the funds made available pursuant to Division 43 (commencing with Section 75001) of the Public Resources Code, the sum of five hundred

twenty-six million four hundred ninety-one thousand dollars ($526,491,000) is hereby appropriated as follows:

(1) Pursuant to Section 75022 of the Public Resources Code, the sum of fifty million dollars ($50,000,000) to the State Department of Public Health for grants for small community drinking water system infrastructure improvements and related action to meet safe drinking water standards. First priority for these funds shall be given to disadvantaged or severely disadvantaged communities lacking resources to provide safe drinking water to residents. Small community drinking water systems that are dependent on surface water and are under orders from the State Department of Public Health to boil water from existing treatment systems for parasites, viruses, or giardia shall be eligible for grants for drinking water system infrastructure improvements.

(2) Pursuant to Section 75025 of the Public Resources Code, the sum of fifty million four hundred thousand dollars ($50,400,000) to the State Department of Public Health for grants for projects to prevent or reduce the contamination of groundwater that serves as a source of drinking water. Funds appropriated by this paragraph shall be available for immediate projects needed to protect public health by preventing or reducing the contamination of groundwater that serves as a major source of drinking water for a community.

(A) The State Department of Public Health shall prioritize project funding based on the following criteria:

(i) The threat posed by groundwater contamination to the affected community's overall drinking water supplies, including the need for the treatment or construction of alternative supplies if groundwater is not available due to contamination.

(ii) The potential for groundwater contamination to spread and reduce drinking water supply and water storage capacity for major population areas.

(iii) The potential of the project, if fully implemented, to enhance local water supply reliability.

(iv) The potential of the project to increase opportunities for groundwater recharge and optimization of groundwater supplies.

(B) The State Department of Public Health shall give additional consideration to projects that meet any of the following criteria:

(i) The project is implemented pursuant to a comprehensive basinwide groundwater quality management and remediation plan or is necessary to develop a comprehensive groundwater plan.

(ii) Affected groundwater provides a local supply that, if contaminated, will require the importation of additional water from the Sacramento-San Joaquin Delta or the Colorado River.

(iii) The project will serve an economically disadvantaged community.

(iv) Multiple contaminants affect more than one-third of the well capacity of a local water system.

(C) Of the amount made available by this paragraph, up to ten million dollars ($10,000,000) shall be allocated for projects that meet the criteria of this paragraph and both of the following criteria:

(i) The project has the potential to leverage funds.

(ii) The project addresses contamination at a site on the list maintained by the Department of Toxic Substances Control pursuant to Section 25356 of the Health and Safety Code or a site listed on the National Priorities List pursuant to the federal Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. Sec. 9601 et seq.).

(D) Of the funds made available by this paragraph, two million dollars ($2,000,000) shall be allocated to the State Department of Public Health to contract with the State Water Resources Control Board for the purposes of Section 83002.5.

(3) (A) Pursuant to Section 75026 of the Public Resources Code, the sum of one hundred eighty-one million seven hundred ninety-one thousand dollars ($181,791,000) to the department for integrated regional water management activities as follows:

(i) One hundred million dollars ($100,000,000) for implementation grants.

(ii) Thirty-nine million dollars ($39,000,000) for planning grants, local groundwater assistance grants, and CALFED scientific research grants.

(iii) Twenty-two million ninety-one thousand dollars ($22,091,000) for projects with interregional or statewide benefits.

Of the amount made available pursuant to this paragraph, not less than ten million dollars ($10,000,000) shall be made available for expenditure to interconnect municipal and industrial water supply aqueducts that cross the Delta and that are vulnerable to flood damage, including the design and construction of interties among aqueducts that provide at least 90 percent of a regional water supply that would be threatened in the event of levee failure or other disaster, and that support an integrated regional emergency water supply system.

(iv) Twenty million seven hundred thousand dollars ($20,700,000) for program delivery costs.

(B) An implementation grant pursuant to clause (i) of subparagraph (A) shall be available only for projects included in an integrated regional water management plan that meets one of the following conditions:

(i) The plan complies with Part 2.2 (commencing with Section 10530) of Division 6.

(ii) For a plan adopted before the date on which this section is enacted, both of the following apply:

(I) The regional water management group that prepared the plan enters into a binding agreement with the department to update the plan to comply with Part 2.2 (commencing with Section 10530) of Division 6 within two years of the date on which the agreement was entered into.

(II) The regional water management group undertakes all reasonable and feasible efforts to take into account water-related needs of disadvantaged communities in the area within the boundaries of the plan.

(C) Of the funds described in clauses (i) and (ii) of subparagraph (A), the department shall allocate not less than 10 percent to facilitate and support the participation of disadvantaged communities in integrated regional water

management planning and for projects that address critical water supply or water quality needs for disadvantaged communities.

(D) Of the funds described in clause (iii) of subparagraph (A), the department shall allocate two million dollars ($2,000,000) to Tulare County for development of an integrated water quality and wastewater treatment program plan to address the drinking water and wastewater needs of disadvantaged communities in the Tulare Lake Basin. Funds allocated pursuant to this paragraph shall be available for assessment and feasibility studies necessary to develop the plan, and the plan shall include recommendations for planning, infrastructure, and other water management actions, and shall include specific recommendations for regional drinking water treatment facilities, regional wastewater treatment facilities, conjunctive use sites and groundwater recharge, groundwater for surface water exchanges, related infrastructure, and cost-sharing mechanisms. Tulare County shall consult with appropriate stakeholders, including representatives of disadvantaged communities, when preparing the plan. The department, in consultation with the State Department of Public Health, shall submit the plan to the Legislature by January 1, 2011.

(E) Of the funds described in clause (i) of subparagraph (A), the department shall allocate not less than twenty million dollars ($20,000,000) to support urban and agricultural water conservation projects necessary to meet a 20-percent reduction in per capita water use by the year 2020.

(4) Pursuant to Section 75029 of the Public Resources Code, the sum of ninety million dollars (90,000,000) to the department for the implementation of Delta water quality improvement projects that protect drinking water supplies as follows:

(A) Pursuant to subdivision (d) of Section 75029 of the Public Resources Code, the sum of fifty million dollars ($50,000,000) for drinking water intake facility projects to improve the quality of drinking water supply from the Sacramento-San Joaquin Delta that are identified in the June 2005 Delta Region Drinking Water Quality Management Plan. Funding shall be made available for environmental review, design, and construction. Project proponents seeking funding for construction shall meet all of the following criteria:

(i) Have completed documentation required under the California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code) and a notice of determination has been filed prior to June 30, 2008.

(ii) Have demonstrated multiple benefits in conveyance and Delta operation to achieve protection or improvement to Delta pelagic fisheries, as well as drinking water quality improvement and public health protection.

(iii) Are able to complete design and commence construction before June 30, 2009.

(iv) Have local or federal cost-sharing funds immediately available.

(B) The sum of forty million dollars ($40,000,000) for projects consistent with subdivision (c) of Section 75029 of the Public Resources Code.

(5) Pursuant to Section 75033 of the Public Resources Code, the sum of one hundred million dollars ($100,000,000) to the department for the acquisition, preservation, protection, and restoration of Sacramento-San Joaquin Delta resources in accordance with Section 75033 of the Public Resources Code. The department shall expend these funds pursuant to priorities that reflect the value of the resources and land uses protected by the levees to the state as a whole, consistent with the Delta Vision Strategic Plan. Projects shall be selected to improve the stability of the Delta levee system, reduce subsidence, and assist in restoring the ecosystem of the Delta. Priority shall be given to projects that improve conditions for Delta smelt and other native fish. Up to five million dollars ($5,000,000) made available pursuant to this paragraph shall be available as grants and direct expenditures for emergency communications equipment to improve emergency response preparedness.

(6) Pursuant to Chapter 4 (commencing with Section 75041) of Division 43 of the Public Resources Code, the sum of thirty-seven million dollars ($37,000,000) to the department as follows:

(A) (i) Twelve million dollars ($12,000,000) to complete the planning and feasibility studies associated with new surface storage under the California Bay-Delta Program.

(ii) The planning and feasibility studies shall include the following information:

(I) The identification of specific construction and operation conditions proposed for each surface storage facility, including consideration of climate change, an estimated schedule for the construction and completion of each project funded under Section 75041, and the total costs of constructing each project.

(II) A description of the estimated total costs to construct each project and an allocation of the costs to public and private beneficiaries.

(iii) Any feasibility study conducted by or funded by the state for new surface storage under the California Bay-Delta Program shall evaluate funded projects consistent with all statutory and other legally established requirements for protection of environmental and natural resources, including protections for the McCloud River pursuant to Section 5093.542 of the Public Resources Code.

(iv) The feasibility studies shall be prepared and submitted to the Governor and the Legislature no later than December 31, 2009.

(B) (i) Fifteen million dollars ($15,000,000) for planning and feasibility studies to identify potential options for the reoperation of the state's flood protection and water supply systems that will optimize the use of existing facilities and groundwater storage capacity.

(ii) The studies shall incorporate appropriate climate change scenarios and be designed to determine the potential to achieve the following objectives:

(I) Integration of flood protection and water supply systems to increase water supply reliability and flood protection, improve water quality, and provide for ecosystem protection and restoration.

(II) Reoperation of existing reservoirs, flood facilities, and other water facilities in conjunction with groundwater storage to improve water supply reliability, flood control, and ecosystem protection and to reduce groundwater overdraft.

(III) Promotion of more effective groundwater management and protection and greater integration of groundwater and surface water resource uses.

(IV) Improvement of existing water conveyance systems to increase water supply reliability, improve water quality, expand flood protection, and protect and restore ecosystems.

(C) Ten million dollars ($10,000,000) to update the California Water Plan, including evaluation of climate change impacts, the development of strategies to adapt to climate change impacts, technical assistance to local agencies that incorporate climate change into their studies, reports, and plans, and the identification of strategies to reduce greenhouse gas emissions related to the storage, conveyance, and distribution of water.

(D) Of the money made available pursuant to subparagraphs (A), (B), and (C), up to two million dollars ($2,000,000) may be expended for planning and feasibility studies necessary to implement the Delta Vision Strategic Plan, developed pursuant to Executive Order No. S-17-06, dated September 28, 2006, establishing the Delta Vision process.

(7) Pursuant to Section 75050 of the Public Resources Code, the sum of seventeen million three hundred thousand dollars ($17,300,000) for the protection and restoration of rivers and streams as follows:

(A) Ten million dollars ($10,000,000) to the State Coastal Conservancy for the purposes of subdivision (i) of Section 75050 of the Public Resources Code.

(B) Seven million three hundred thousand dollars ($7,300,000) to the department for the purposes of subdivision (e) of Section 75050 of the Public Resources Code.

(c) Of the funds made available pursuant to subdivision (a) of Section 79550, the sum of three million seven hundred sixty thousand dollars ($3,760,000) is hereby appropriated to the department for planning and feasibility studies associated with surface storage under the California Bay-Delta Program.

(d) (1) Of the funds available pursuant to Section 79101.4, the sum of two million two hundred seventy-two thousand dollars ($2,272,000) is appropriated to the department for the Sacramento River Hamilton City Area Flood Damage Reduction Project.

(2) Of the funds available pursuant to subdivision (c) of Section 79196.5, the sum of three million four hundred fifty thousand dollars ($3,450,000) is appropriated to the department for the Franks Tract Pilot Project under the CALFED Drinking Water Quality Program.

83002.5. To improve understanding of the causes of groundwater contamination, identify potential remediation solutions and funding sources to recover costs expended by the state for the purposes of this section to clean up or treat groundwater, and ensure the provision of safe drinking water to all communities, the State Water Resources Control Board, in

consultation with other agencies as specified in this section, shall develop pilot projects in the Tulare Lake Basin and the Salinas Valley that focus on nitrate contamination and do all of the following:

(a) (1) In collaboration with relevant agencies and utilizing existing data, including groundwater ambient monitoring and assessment results along with the collection of new information as needed, do all of the following:

(A) Identify sources, by category of discharger, of groundwater contamination due to nitrates in the pilot project basins.

(B) Estimate proportionate contributions to groundwater contamination by source and category of discharger.

(C) Identify and analyze options within the board's current authority to reduce current nitrate levels and prevent continuing nitrate contamination of these basins and estimate the costs associated with exercising existing authority.

(2) In collaboration with the State Department of Public Health, do all of the following:

(A) Identify methods and costs associated with the treatment of nitrate contaminated groundwater for use as drinking water.

(B) Identify methods and costs to provide an alternative water supply to groundwater reliant communities in each pilot project basin.

(3) Identify all potential funding sources to provide resources for the cleanup of nitrates, groundwater treatment for nitrates, and the provision of alternative drinking water supply, including, but not limited to, state bond funding, federal funds, water rates, and fees or fines on polluters.

(4) Develop recommendations for developing a groundwater cleanup program for the Central Valley Water Quality Control Region and the Central Coast Water Quality Control Region based upon pilot project results.

(b) Create an interagency task force, as needed, to oversee the pilot projects and develop recommendations for the Legislature. The interagency task force may include the board, the State Department of Public Health, the Department of Toxic Substances Control, the California Environmental Protection Agency, the Department of Water Resources, local public health officials, the Department of Food and Agriculture, and the Department of Pesticide Regulation.

(c) Submit a report to the Legislature on the scope and findings of the pilot projects, including recommendations, within two years of receiving funding.

(d) Implement recommendations in the Central Coast Water Quality Control Region and the Central Valley Water Quality Control Region pursuant to paragraph (4) of subdivision (a) within two years of submitting the report described in subdivision (c) to the Legislature.

(e) For the Salinas Valley Pilot Project, the State Water Resources Control Board shall consult with the Monterey County Water Resources Agency.

83002.6. Up to 5 percent of the funds appropriated by this division may be expended to pay the costs incurred in the administration of that program.

83002.7. Funds appropriated by this division shall only be available for encumbrance until June 30, 2010. On January 10, 2010, any program that

is the recipient of an appropriation made by this division shall report to the fiscal committees of the Legislature on the details of all committed and anticipated expenditures of these funds. The report shall include all of the following information:

(a) Fiscal detail of state operations support and local assistance costs.

(b) A general description of the project and the project funding made available by an appropriation in the annual Budget Act for the 2008–09 fiscal year or proposed to be made available in the annual Budget Act for the 2009–10 fiscal year.

(c) A description of the manner in which funds have been expended and a plan for the future expenditure of funds.

(d) An anticipated timeframe for the full expenditure of the appropriation.

(e) An anticipated timeframe for the full completion of the designated project.

(f) The amount of total matching project funding that is being provided by an entity other than the state.

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APPENDIX B

CALIFORNIA DEPARTMENT OF WATER RESOURCES GRANT AGREEMENT NO. 4600009132

EXHIBIT A

STATE OF CALIFORNIA
THE NATURAL RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

GRANT AGREEMENT BETWEEN STATE OF CALIFORNIA DEPARTMENT OF WATER RESOURCES AND

COUNTY OF TULARE

AGREEMENT NUMBER: 4600009132
UNDER THE SAFE DRINKING WATER, WATER QUALITY AND SUPPLY, FLOODCONTROL, RIVER AND COASTAL PROTECTION BOND ACT OF 2006
(Public Resources Code Section 75026 et seq.)

THIS GRANT AGREEMENT, entered into by and between State of California, acting by and through the Department of Water Resources, herein referred to as the "State" and the County of Tulare, a public agency, in the County of Tulare, State of California, duly organized, existing, and acting pursuant to the laws thereof, herein referred to as the "Grantee", which parties do hereby agree as follows:

1. PURPOSE OF GRANT: This Grant is made by State to Grantee to assist in financing projects associated with the Tulare County for development of an integrated water quality and wastewater treatment program plan as appropriated by Senate Bill SBX2 1 (California Water Code §83002 (b)(3)(D), hereinafter referred to as "SBX2 1"). Grant funds may be used only as provided in this Grant Agreement for Eligible Costs as included in Exhibit A, Project Work Plan.

2. TERM OF GRANT AGREEMENT: The term of this Agreement begins on the date this agreement is executed by DWR and terminates on **November 30, 2014**, or when all of the Parties' obligations under this Agreement have been fully satisfied, whichever occurs earlier.

3. SCHEDULE: Grantee shall diligently perform or cause to be performed all work as described in Exhibit A, Project Work Plan, in accordance with Exhibit B, Project Schedule.

4. GRANT AMOUNT: The maximum amount payable by State under this Grant Agreement shall not exceed **$2,000,000**.

5. GRANTEE'S COST: The reasonable total costs of the Project are estimated to be **$2,000,000** which is summarized in Exhibit C, Project Budget. Grantee agrees to fund, or ensure funding of the difference, if any, between the estimate of Project costs and the Grant Amount specified in paragraph 4. Grantee cost share is estimated to be **$0.00**.

6. ELIGIBLE COST: Grantee shall apply State funds received only to eligible Project Costs in accordance with applicable provisions of the law and Exhibit C, Project Budget. Eligible project costs include the reasonable costs of studies, engineering, design, land and easement acquisition, legal fees, preparation of environmental documentation, environmental mitigations, monitoring, and project construction. Work performed after the date **July 1, 2010**, shall be eligible for reimbursement. Costs incurred after November 30, 2014, and prior to July 1, 2010 are not eligible for reimbursement. Reasonable administrative expenses may be included as Project Costs and will depend on the complexity of the project preparation, planning, coordination, construction, acquisitions, implementation, and maintenance. Reimbursable administrative expenses are the necessary costs incidentally but directly related to the project including an appropriate pro-rata

allocation of overhead and administrative expenses that are regularly assigned to all such projects in accordance with the standard accounting practices of the Grantee.

Costs that are not reimbursable with grant funds include, but may not be limited to, the following:

- Costs incurred prior to the reimbursable date as identified in paragraph 6 of the Grant Agreement.
- Operation and maintenance costs, including post construction performance and monitoring costs.
- Purchase of equipment not an integral part of a project.
- Establishing a reserve fund.
- Purchase of water supply.
- Replacement of existing funding sources for ongoing programs.
- Support of existing agency requirements and mandates.
- Purchase of land in excess of the minimum required acreage necessary to operate as an integral part of a project, as set forth and detailed by engineering and feasibility studies, or land purchased prior to the effective date of this Grant Agreement.
- Payment of principal or interest of existing indebtedness or any interest payments unless the debt is incurred after execution of this Grant Agreement, the State agrees in writing to the eligibility of the costs for reimbursement before the debt is incurred, and the purposes for which the debt is incurred are otherwise eligible costs.
- Overhead not directly related to Program costs.

7. GRANTEE RESPONSIBILITY: Grantee and its representatives, with the authority to act for Grantee, shall be responsible for work and for persons or entities engaged in work, including, but not limited to, subcontractors, suppliers, and providers of services. Grantee and its representatives shall provide regular inspections of any construction work in progress. Grantee and its representatives shall fulfill its obligations under the Grant Agreement. Grantee shall faithfully and expeditiously perform or cause to be performed all project work as described in Exhibit A, Project Work Plan.

   Grantee shall be responsible for any and all disputes arising out of its contracts for work on the Project, including but not limited to bid disputes and payment disputes with Grantee's representatives, contractors and subcontractors. State will not mediate disputes between Grantee and any other entity concerning responsibility for performance of work.

8. RELATIONSHIP OF PARTIES: Grantee is solely responsible for design, construction, and operation and maintenance of projects within the work plan. Review or approval of plans, specifications, bid documents, or other construction documents by State is solely for the purpose of proper administration of grant funds by State and shall not be deemed to relieve or restrict responsibilities of Grantee under this Grant Agreement.

9. GRANTEE REPRESENTATIONS: Grantee accepts and agrees to comply with all terms, provisions, conditions, and commitments of this Grant Agreement, including all incorporated documents, and to fulfill all assurances, declarations, representations, and statements made by Grantee in the application, documents, amendments, and communications filed in support of its request for Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006.

10. PROJECT PERFORMANCE AND ASSURANCES: Grantee agrees to faithfully and expeditiously perform or cause to be performed all project work as described in the Project Work Plan, Exhibit A, under this Grant Agreement and implement the Project in accordance with applicable provisions of the law. Grantee and its representatives shall fulfill its obligations under the Grant Agreement, and shall be responsible for the performance of the project. In the event State finds it necessary to enforce this provision of this Grant Agreement in the manner provided by law, Grantee agrees to pay all costs incurred by State including, but not limited to, reasonable attorneys' fees, legal expenses, and costs.

11. REQUIREMENTS FOR DISBURSEMENT: Grantee shall, by October 31, 2011 meet all conditions precedent to the disbursement of money under this Grant Agreement, including Basic Conditions, paragraph 12. Failure by Grantee to comply by this date may, at the option of State, result in termination of the Grant Agreement under Exhibit D, Standard Conditions. For disbursements of funds for each project, Grantee shall continue to meet the Basic Conditions as well as the Conditions for Disbursement, paragraph 13.

12. BASIC CONDITIONS: State shall have no obligation to disburse money for a project under this Grant Agreement unless and until Grantee has satisfied for such project the State's requirements for disbursement in accordance with the California Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006 which include:
    a) Grantee demonstrates compliance with the provisions of the Grant Agreement between State and Grantee.
    b) Grantee demonstrates the availability of sufficient funds to complete the project.
    c) Work that is subject to the California Environmental Quality Act (CEQA) shall not proceed under this Agreement until documents that satisfy the CEQA process are received by the DWR Point of Contact and DWR has completed its CEQA compliance. Work that is subject to a CEQA document shall not proceed until and unless approved by the DWR Point of Contact. Such approval is fully discretionary and shall constitute a condition precedent to any work for which it is required. Once CEQA documentation has been completed, DWR will consider the environmental documents and decide whether to continue to fund the project or to require changes, alterations or other mitigation.
    d) For the term of this Grant Agreement, Grantee submits timely periodic progress reports as required by paragraph 18, Submission of Reports.

13. CONDITIONS FOR DISBURSEMENT: Prior to disbursement of funds, by State for construction, Grantee shall submit to State:
    a) Final plans and specifications certified by a California Registered Civil Engineer as to compliance with the approved project as defined in paragraph 1.
    b) A written statement that all necessary permits, easements, rights-of-way, and approvals as may be required by other State, federal, and/or local agencies as specified in paragraph 22, permits, licenses, approvals, and legal obligations, have been obtained.

14. METHOD OF PAYMENT: After the disbursement requirements in paragraph 11 are met, State will disburse the whole or portions of the Grant commitment to Grantee, following receipt from Grantee of an invoice for costs incurred, and timely progress reports as required by paragraph 18.

    Invoices submitted by Grantee shall include the following information:

a) Costs incurred for work performed in implementing the Project or contracts during the period identified in the particular invoice.
b) Costs incurred for any interests in real property (land or easements) that have been necessarily acquired for a project during the period identified in the particular invoice for the construction, operation, or maintenance of a project.
c) Any appropriate receipts and reports for costs incurred.
d) Invoices shall be submitted on forms provided by State and shall meet the following format requirements:
   i. Invoices must contain the date of the invoice, the time period covered by the invoice, and the total amount due.
   ii. Invoices must be itemized based on the categories specified in the Project Budget, Exhibit C. The amount claimed for salaries/wages/consultant fees must include a calculation formula (i.e., hours or days worked times the hourly or daily rate = the total amount claimed).
   iii. Each invoice shall clearly delineate those costs claimed for reimbursement from the State's grant amount, paragraph 4 and those costs that represent Grantee's and Local Project Sponsors' costs, as applicable, paragraph 5.
   iv. Original signature and date (in ink) of Grantee's Project Manager

Payment will be made no more than monthly, in arrears, upon receipt of an invoice bearing the Grant Agreement number. Submit the original and three (3) copies of the invoice form to the following address:

Department of Water Resources
Division of Integrated Regional Water Management
South Central Region Office
Attention: Ernest Taylor

Overnight/Hand Delivery Address:
3374 East Shields Avenue
Fresno, CA 93726

15. DISBURSEMENT: Following the review of each invoice, State will disburse to Grantee the amount approved, subject to the availability of funds through normal State processes. For each project, funds will be disbursed by State in response to each approved invoice, and in accordance with the Project Budget, Exhibit C. Any and all money disbursed to Grantee under this Grant Agreement and any and all interest earned by Grantee on such money shall be used solely to pay Eligible Costs.

16. WITHHOLDING OF GRANT DISBURSEMENT BY STATE: If State determines that a project is not being implemented in accordance with the provisions of this Grant Agreement, or that Grantee has failed in any other respect to comply with the provisions of this Grant Agreement, and if Grantee does not remedy any such failure to State's satisfaction, State may withhold from Grantee all or any portion of the Grant Commitment and take any other action that it deems necessary to protect its interests. State may require the Grantee to immediately repay all or any portion of the disbursed grant amount with interest, consistent with its determination. State may consider Grantee's refusal to repay the requested disbursed grant amount a contract breach subject to the default provisions in paragraph 17. If State notifies Grantee of its decision to withhold the

entire grant amount from Grantee pursuant to this paragraph, this Grant Agreement shall terminate upon receipt of such notice by Grantee and shall no longer be binding on either party.

17. DEFAULT PROVISIONS: Grantee will be in default under this Grant Agreement if any of the following occur:
    - Breach of this Grant Agreement, or any supplement or amendment to it, or any other agreement between Grantee and State evidencing or securing Grantee's obligations;
    - Making any false warranty, representation, or statement with respect to this Grant Agreement;
    - Failure to operate or maintain projects in accordance with this Grant Agreement; or
    - Failure to make any remittance required by this Grant Agreement.

    Should an event of default occur, State may do any or all of the following:
    - Declare the Grant be immediately repaid, with interest, which shall be equal to State of California general obligation bond interest rate in effect at the time of the default;
    - Terminate any obligation to make future payments to Grantee;
    - Terminate the Grant Agreement; and
    - Take any other action that it deems necessary to protect its interests.

18. SUBMISSION OF REPORTS: The submittal and approval of all reports is a requirement for the successful completion of this Grant Agreement. Reports shall meet generally accepted professional standards for technical reporting and shall be proofread for content, numerical accuracy, spelling, and grammar prior to submittal to State. All reports shall be submitted to the State's Project Manager, and shall be submitted in both electronic and hard copy forms. If requested, Grantee shall promptly provide any additional information deemed necessary by State for approval of reports. Reports shall be presented in the formats described in Exhibit E, Report Format. The submittal and approval of reports is a requirement for initial and continued disbursement of State funds. Submittal of a Project Completion Report for the Project is a requirement for the release of any funds retained for such project.
    - Quarterly Reports: Beginning October 2011, and for the duration of the Grant Agreement, Grantee shall submit to State a quarterly report which explains the status of each project described in the Project Work Plan, Exhibit A. Reports shall be submitted by the last day of January, April, July, and October for the preceding quarter. Progress reports shall summarize the work completed for each project during the reporting period. Quarterly reports shall include, for each project, a statement of progress compared to the schedule contained in Exhibit B, Project Schedule, and a comparison of actual costs to date to the budget contained in Exhibit C, Project Budget.
    - Project Completion Report: Grantee shall prepare and submit to State a separate Project Completion Report detailing the project elements included in Exhibit A, Project Work Plan. Grantee shall submit a Project Completion Report within ninety (90) calendar days of completion of all tasks associated with the project. Each Project Completion Report shall include a description of actual work done, a final schedule showing actual progress versus planned progress, and copies of any final documents or reports generated or utilized during the project. The Project Completion Report shall also include, if applicable, certification of final project by a registered civil engineer, consistent with Standard Condition D-14 of this Grant Agreement.

19. MONITORING REQUIREMENTS: Grantee shall ensure that all groundwater projects and projects that include groundwater monitoring requirements are consistent with the Groundwater

Quality Monitoring Act of 2001 (Part 2.76 (commencing with Section 10780) of Division 6 of the Water Code) and, where applicable, that projects that affect water quality shall include a monitoring component that allows the integration of data into statewide monitoring efforts, including where applicable, the surface water ambient monitoring program carried out by the State Water Resources Control Board. Exhibit G, Statewide Monitoring, provides guidance on such monitoring requirements.

20. PERFORMANCE EVALUATION: Grantee's performance under this Agreement will be evaluated by State after completion.

21. OPERATION AND MAINTENANCE OF PROJECT: For the useful life of the projects and in consideration of the Grant made by State, Grantee agrees to ensure or cause to be performed the commencement and continued operation of the projects, and shall ensure or cause the projects to be operated in an efficient and economical manner; shall ensure all repairs, renewals, and replacements necessary to the efficient operation of the same are provided; and shall ensure or cause the same to be maintained in as good and efficient condition as upon its construction, ordinary and reasonable wear and depreciation excepted. The Grantee assumes all operations and maintenance costs of the facilities and structures; State shall not be liable for any cost of such maintenance, management, or operation. Grantee may be excused from operations and maintenance only upon the written approval of the State's Project Manager. For purposes of this Grant Agreement, "operation costs" include direct costs incurred for material and labor needed for operations, utilities, insurance, and similar expenses. "Maintenance costs" include ordinary repairs and replacements of a recurring nature necessary for capital assets and basic structures and the expenditure of funds necessary to replace or reconstruct capital assets or basic structures. Refusal of Grantee to ensure operation and maintenance of the projects in accordance with this provision may, at the option of State, be considered a breach of this Grant Agreement and may be treated as default under paragraph 17, "Default Provisions."

22. PERMITS, LICENSES, APPROVALS, AND LEGAL OBLIGATIONS: Grantee shall be responsible for ensuring any and all permits, licenses, and approvals required for performing their obligations under this Grant Agreement are obtained, and shall comply with other applicable federal, State and local laws, rules, and regulations, guidelines, and requirements for the project described in Exhibit A, Project Work Plan, prior to disbursement of funds under this Grant Agreement.

    Grantee agrees to comply with all applicable California Labor Code requirements, including prevailing wage provisions. Grantee must, independently or through a third party, adopt and enforce a Department of Industrial Relations-certified Labor Compliance Program (LCP) meeting the requirements of Labor Code section 1771.5 for projects funded by Proposition 84 (Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006.

    Grantee's failure to comply with LCP requirements is a substantial breach of this Agreement. At the State's request, grantee must promptly submit written evidence of Grantee's compliance with the LCP requirements.

23. NOTIFICATION OF STATE: For each project, Grantee shall promptly notify, in writing, State of the following items:

a) Events or proposed changes that could affect the scope, budget, or work performed under this Grant Agreement. Grantee agrees that no substantial change in the scope of a project will be undertaken until written notice of the proposed change has been provided to State and State has given written approval for such change.

b) Any public or media event publicizing the accomplishments and/or results of this Grant Agreement and provide the opportunity for attendance and participation by State's representatives. Grantee shall make such notification at least fourteen (14) calendar days prior to the event.

c) Completion of work on a project.

d) Final inspection of a project by a Registered Civil Engineer, as determined and required by State, and in accordance with Standard Condition D-14, and provide State the opportunity to participate in the inspection. Grantee shall make such notification at least fourteen (14) calendar days prior to the final inspection.

24. PROJECT MANAGERS: Either party may change its Project Manager upon written notice to the other party.

- State's Project Manager: State's Project Manager shall be the Chief, Division Integrated Regional Water Management, Department of Water Resources. State's Project Manager shall be State's representative and shall have the authority to make determinations and findings with respect to each controversy arising under or in connection with the interpretation, performance, or payment for work performed under the Grant Agreement.
- Grantee's Project Manager: Grantee's Project Manager shall be Jean Rousseau, County Administrative Officer. Grantee's Project Manager shall be the Grantee's representative for the administration of the Grant Agreement and shall have full authority to act on behalf of the Grantee, including authority to execute all payment requests.

25. NOTICES: Any notice, demand, request, consent, or approval that either party desires or is required to give to the other party under this Grant Agreement shall be in writing. Notices may be sent by any of the following means: (i) by delivery in person; (ii) by certified U.S. mail, return receipt requested, postage prepaid; (iii) by "overnight" delivery service; provided that next-business-day delivery is requested by the sender; or (iv) by facsimile transmission, followed submittal of a hard copy. Notices delivered in person will be deemed effective immediately on receipt (or refusal of delivery or receipt). Notices sent by certified mail will be deemed effective given seven (7) calendar days after the date deposited with the U. S. Postal Service. Notices sent by overnight delivery service will be deemed effective one business day after the date deposited with the delivery service. Notices sent by facsimile will be effective on the date of successful transmission, which is documented in writing. Notices shall be sent to the following addresses. Either party may, by written notice to the other, designate a different address that shall be substituted for the one below:

State of California
Department of Water Resources
Division of Integrated Regional Water Management
Attention: Chief, Division of Integrated Regional Water Management
Financial Assistance Branch
Post Office Box 942836
Sacramento, California 94236-0001

Mike Ennis, Chairman
Tulare County Board of Supervisors
County of Tulare
2800 W. Burrel Avenue
Visalia, CA 93291

26. INCORPORATION OF STANDARD CONDITIONS AND GRANTEE COMMITMENTS: The following exhibits are attached and made a part of this Grant Agreement by this reference:
Exhibit A – Project Work Plan
Exhibit B – Project Schedule
Exhibit C – Project Budget
Exhibit D – Standard Conditions
Exhibit E – Report Format
Exhibit F – Grantee Resolution
Exhibit G – Statewide Monitoring
Exhibit H – Travel and Per Diem Expenses

IN WITNESS WHEREOF, the parties hereto have executed this Grant Agreement.

STATE OF CALIFORNIA
DEPARTMENT OF WATER RESOUCES

_____
Paula J. Landis, P.E., Chief
Division of Integrated Regional Water Management

Date_____

COUNTY OF TULARE

_____
Mike Ennis, Chairman
Tulare County Board of Supervisors

Date_____

Approved as to Legal Form and Sufficiency

_____
Katherine A. Spanos, Assistant Chief Counsel
Office of Chief Counsel

Date_____

APPROVED AS TO FORM:
COUNTY COUNSEL
By_____
Deputy (2011 GRT)

EXHIBIT A
PROJECT WORK PLAN

Tulare County Integrated Water Quality and Wastewater Treatment Program Plan

Scope of the Proposal

Tulare County will prepare a plan to address the drinking water and wastewater needs of rural, disadvantaged communities in the Tulare Lake Basin (Basin). The Project will culminate in the production of a final Report that will contain the plan, including results and recommendations for the implementation of specific projects, to be submitted to Department of Water Resources (DWR) in August 2014. To prepare the plan, Tulare County will consult with various state, federal and local agencies, stakeholders and consultants to identify the water and wastewater problems affecting disadvantaged communities in the Basin and develop recommended solutions to address these problems through pilot projects and studies. For more information, see the attached timeline and budget.

Purpose, Goals and Objectives

Disadvantaged communities (DACs) in the Tulare Lake Basin region face widespread drinking water and wastewater challenges. In many cases local Integrated Regional Water Management (IRWM) planning groups have been unable to help disadvantaged communities within their planning areas address these challenges. This Project will enable Tulare County to investigate and develop solutions for disadvantaged communities that can be integrated into IRWM planning efforts for the Tulare Lake Basin region.

The purpose of this Project is to develop a plan that provides rural, disadvantaged communities with a safe, clean and affordable potable water supply and effective and affordable wastewater treatment and disposal. The final product will be an integrated water quality and wastewater treatment program plan to address the drinking water and wastewater needs of disadvantaged communities in the Tulare Lake Basin region.

The plan will include recommendations for planning, infrastructure, and other water management actions, as well as specific recommendations for regional drinking water treatment facilities, regional wastewater treatment facilities, conjunctive use sites and groundwater recharge, groundwater for surface water exchanges, related infrastructure, project sustainability, and cost-sharing mechanisms. The Project will identify projects and programs that will create long-term reliability, while optimizing the ongoing operation and maintenance (O&M) and management costs for small water and wastewater systems.

The Project will focus on the drinking water and wastewater needs of rural and unincorporated areas that meet the definition of disadvantaged community from Prop. 84 – less than 80% of the statewide median household income. This would include community water systems, wastewater systems, schools that provide their own drinking water or are served by a local water system, and rural communities with a high density of contaminated private wells.

The Tulare County Administrative Office will manage the Project in conjunction with a team of consultants and stakeholder consultation groups. The final Report and Project Completion Report will be submitted to DWR by August 31, 2014 and November 30, 2014, respectively. (See Exhibit C).

Work Items Performed Under Each Task

Administration

Administrative tasks will be ongoing throughout the Project. These tasks will include submittal of reports and invoices, coordination of meetings and travel and per diem associated with these activities.

Task 1 – Baseline Data Gathering

Tulare County will develop a database of all disadvantaged communities in the Tulare Lake Basin. The database may include the following information:

a. Community name and profile (population, connections, median household income, etc.);
b. Identified water problems (e.g., drinking water (quality and supply), wastewater, drainage/stormwater, flooding problems):
    i. Current status;
    ii. Solutions considered to date and potential options;
c. Location;
d. Community water or waste water provider (e.g. Pixley Public Utility District);
e. Community technical representative(s);
f. Status of eligibility for funding under existing government funding programs;
g. Date last updated

Subtask 1.1 – Data Gathering, Data Mapping, and Database Creation

Tulare County will coordinate with other local, state and federal agencies as well as appropriate organizations to collect existing data and create the database described above. It will also create a protocol for the update and maintenance of the database throughout the life of the Project. Tulare County will utilize a GIS consultant and/or staff to map the location of disadvantaged communities in the Tulare Lake Basin and other available and appropriate data in order to identify regional challenges and opportunities for regional projects. (Examples of data that might be useful include groundwater quality, surface water conveyance infrastructure, groundwater recharge areas, LAFCO boundaries, etc.) Maps may be utilized in identifying priority issues and pilot projects, as well as in developing final recommendations and illustrating recommendations in the final Report.

Subtask 1.2 – Database Update and Maintenance

For the duration of the Project, the County Administrative Office will update and maintain this database, in conjunction with the California Department of Public Health and other relevant agencies. Database information and updates will be made available to Tulare Lake Basin Integrated Regional Water Management (IRWM) planning groups, relevant General Plan efforts, and other agencies as requested. This information will be provided to DWR, and upon request other agencies and the general public.

Subtask 1.3 – Database Planning

The final Report will include a proposal on how the database will be maintained and updated beyond the life of the Project.

Task 2 – Stakeholder Consultation and Community Outreach

Tulare County designated consultant/s will prepare the final Report in consultation with stakeholders, including representatives of disadvantaged communities throughout the life of the Project. The communities to be served will be involved in the development of any solutions to address their water and wastewater problems. Their feedback will be critical to the success of this Project because community members have a unique understanding of the problems facing their community. Because they have to live with the solutions potentially generated by the pilot project, communities must have buy-in and understand what will be needed to implement, operate, and maintain any solution to ensure that the recommendations will be successfully implemented.

Subtask 2.1 – Convening of the "Stakeholder Oversight Committee"
Tulare County staff will establish a basin-wide Stakeholder Oversight Committee comprised of community representatives (including water consumers and local water board members), as well as regulatory and funding agency representatives and other organizations working on disadvantaged community water and wastewater needs as appropriate. This body will work with the project consultant/s to identify plan priorities for the basin, pilot projects, and review draft and final recommendations, as described in Tasks 3 and 5. All meetings will be open to the public.

Subtask 2.2 – Community Outreach
Tulare County staff will work with community outreach consultants to conduct outreach to the residents of communities that will be the subject of individual pilot projects. This process will also serve to recruit community members for participation in the Stakeholder Oversight Committee and each individual Pilot Project Stakeholder Advisory Group (see Subtask 2.3).

Subtask 2.3 – Convening the Pilot Project Stakeholder Advisory Groups
In order to ensure that each pilot project is developed with input from stakeholders, a separate Pilot Project Stakeholder Advisory Group will be convened for each individual pilot project or study. Each group will be comprised of members of impacted communities, regulatory and funding agencies, local water or wastewater providers, and other agencies and organizations as appropriate, in order to provide input and recommendations to the technical consultants throughout the identification and analysis of physical, management, financial, and operational alternatives to the known problems.

Subtask 2.4 – Stakeholder Involvement Report
As part of the final Report to DWR (see Task 5) a summary of the lessons learned and recommendations for improvements to the Stakeholder involvement processes described in this Task, (as well as any recommendations for incorporation of these lessons in other on-going or future planning processes) will be prepared.

Task 3 – Select and Design Pilot Projects and Studies to Develop Representative Solutions to Priority Issues

Subtask 3.1 – Identification of Priority Issues throughout the Tulare Lake Basin
In consultation with the Stakeholder Oversight Committee, the consultants will utilize the database to identify common problems associated with providing safe, reliable water and wastewater services to disadvantaged communities that can be effectively explored by further study, alternative solution development, and pilot projects. Using this list of common problems, the consultants will work with the Stakeholder Oversight Committee to identify the priority issues facing disadvantaged communities in the Tulare Lake Basin.

Subtask 3.2 – Identification of Potential Solutions to Priority Issues
For each priority issue identified in Subtask 3.1, the consultants will list the potential solutions for that particular issue. This list of issues and corresponding potential solutions will be combined with a matrix of community scenarios (i.e. the number of connections, community setting) and the resulting matrix will be used as a tool to identify potential solutions for communities throughout the basin region based on where they fall within the matrix. (See Subtask 3.3).

Subtask 3.3 – Identification and Evaluation of Representative Pilot Projects and Studies
In order to generate and select representative pilot projects and studies the Stakeholder Oversight

Committee will develop a set of detailed metrics to evaluate and prioritize potential pilot projects and studies. These metrics will likely include average cost estimates for potential solution components (i.e average capital costs, average surface water treatment costs); the severity of the public health impacts addressed; effectiveness at solving the problem; technical, managerial, and financial feasibility and affordability; long-term sustainability; whether the solution represents a regional solution; whether the project has the potential to solve a common problem in a way that can be replicated in similarly situated communities throughout the Tulare Lake Basin; and potential for funding with an evaluation of the best funding options. The priority issues identified in Subtask 3.1, the matrix developed in Subtask 3.2, and the evaluation metrics will serve as the basis for the Stakeholder Oversight Committee and consultants to generate representative pilot projects, and studies that present potential regional solutions to the identified priority issues. Pilot projects and studies will consider the given community setting observed throughout the Tulare Lake Basin.

> *For example, DACs in the Tulare Lake Basin within the scope of this study can be classified into the following three settings: 1) isolated communities, 2) neighboring unincorporated communities, and 3) an unincorporated community near a city. Examples of pilot projects addressing priority issues include a pilot project to address the hypothetical priority issue of arsenic contamination in an isolated community, the lack of sewer services in several neighboring unincorporated communities, or nitrate contamination in a community on private wells near a city. Some priority issues may not be conducive to the pilot project model; these will be addressed through overarching issue studies. These studies will evaluate different models for delivery of services, governance models, or any other issue that poses a barrier to the long term sustainability of DAC drinking water and wastewater systems, as determined by the Stakeholder Oversight Committee. An example of an overarching issue study would be cost-sharing or joint management options for delivery of water services to reduce operation and maintenance costs and ensure access to professional and certified services.*

For each pilot project and study identified, a preliminary budget and timeframe will be estimated, as well as potential additional resources. Tulare County will integrate the pilot projects and studies identified in this phase of the project into the database and transmit them to relevant IRWM planning groups. This information will be provided to DWR, and upon request other agencies and the general public. The Stakeholder Oversight Committee will use these metrics to establish a priority list for all identified projects, which can then be used as a guide for future funding priorities.

Subtask 3.4 – Selection of Representative Pilot Projects and Studies
Using the priority list developed in Subtask 3.3, the Stakeholder Oversight Committee will select a final roster of representative pilot projects and studies that will become the focus of the final Report to be submitted to DWR. The number of representative pilot projects and studies selected will be determined by the Stakeholder Oversight Committee, through consultation with technical consultants.

Subtask 3.5 – Preparation of Representative Pilot Projects and Studies
Once the representative pilot projects and studies have been selected through the Stakeholder Oversight Process, Tulare County and the consultants will take the following steps to prepare for each project or study:

1. Determine a final scope, budget, schedule and form of the result(s) or deliverables;
2. Identify and retain additional consultants if needed and convene a Pilot Project Stakeholder Advisory Group;
3. Determine any additional resources necessary for successful implementation

appropriate agencies. In particular, the final Report will provide specific recommendations, data, and projects that should be integrated into the various Integrated Regional Water Management Plans in the Tulare Lake Basin. The final Report will also make recommendations on how state, federal, and local agencies can provide funding and other support to move each pilot project through to completion. The database, priority issues, and evaluation metrics created by the consultants and Stakeholder Oversight Committee will serve as a guide for prioritization of projects that become eligible for funding under existing and new funding programs to assure the largest benefit possible to DACs.

Subtask 5.3 - Finalization of the Report
The consultants will work with Tulare County to incorporate suggestions from the Stakeholder Oversight Committee's review of the draft Report and finalize the Report for submission to DWR.

Submission of the Final Report to the Department of Water Resources
Once the Report has been finalized by the consultants and approved by Tulare County, it will be submitted to the Department of Water Resources to be submitted to the Legislature.

Submission of the Project Completion Report to the Department of Water Resources
The Project Completion Report will be submitted to the Department of Water Resources by November 30, 2014 in accordance with Exhibit E.

Quarterly Reports
Progress reports will be submitted on a quarterly basis in accordance with Exhibit E.

Task 4 - Implement Pilot Project Stakeholder Process to Develop Studies and Representative Solutions to Priority Issues

The consultants identified in Subtask 3.4 and 3.5 will implement the selected representative pilot projects and studies in accordance with the scope, budget, schedule and deliverables for each pilot project or study.

Subtask 4.1 – Implementation of the Pilot Project Stakeholder Process

In consultation with the Pilot Project Stakeholder Advisory Group convened for each pilot project, the consultants will further develop and evaluate the possible solutions generated in Subtask 3.2, gather data to determine their effectiveness, and conduct feasibility studies to determine a recommended solution.

Subtask 4.2 – Generation of Recommendations from Representative Pilot Projects or Studies

For each representative pilot project or study, the consultants will work with the corresponding Pilot Project Stakeholder Advisory Group to develop final recommendations. These recommendations will be integrated into the final Report to DWR, used to update the database, and transmitted to IRWMPs, General Plan processes, and other agencies, as appropriate. This information will be provided to DWR, and upon request other agencies and the general public. Final recommendations will, at a minimum, include the following:

1. A description of the particular problem being addressed and identification of specific communities facing that problem in similar settings throughout the Tulare Lake Basin, for which these recommendations may also be applicable;
2. A description of the solution recommended by the pilot project and any other lessons learned over the course of the study or project (regional impact?);
3. Funding opportunities available to implement the recommended solutions, including the preparation of funding applications when possible;
4. A discussion of steps that may be taken to insure long-term sustainability of the implemented program for the Tulare Lake Basin; and
5. Identification of any obstacles or barriers to implementation of the recommended solution and a proposal for how to eliminate those obstacles or barriers, if applicable.

If appropriate and time and money permit, the consultants may also conduct preliminary engineering, environmental compliance reports (*i.e.*, CEQA & NEPA), conduct water testing, geotechnical work (including test wells if necessary) and design in order to implement the recommended approaches for some pilot projects.

Task 5 – Preparation and Finalization of the Report to DWR

Subtask 5.1 – Preparation of Draft Report

The consultants will prepare a draft Report incorporating the results of each representative pilot project or other study to be reviewed by the Stakeholder Oversight Committee before finalizing the Report and submitting it to the Department of Water Resources.

Subtask 5.2 – Recommendations on Integration with other Agencies

Because various state, federal, and local agencies are involved directly in the provision of drinking water and wastewater services or provide regulatory oversight of drinking water and wastewater systems, the final Report will include recommendations on how the Tulare Lake Basin Disadvantaged Community Water Plan can be integrated into these existing planning and funding processes and disseminated to the

EXHIBIT B
PROJECT SCHEDULE

The proposed project schedule is included in this section below.

Tulare County Integrated Water Quality and Wastewater Treatment Program Plan
Master Schedule Overview

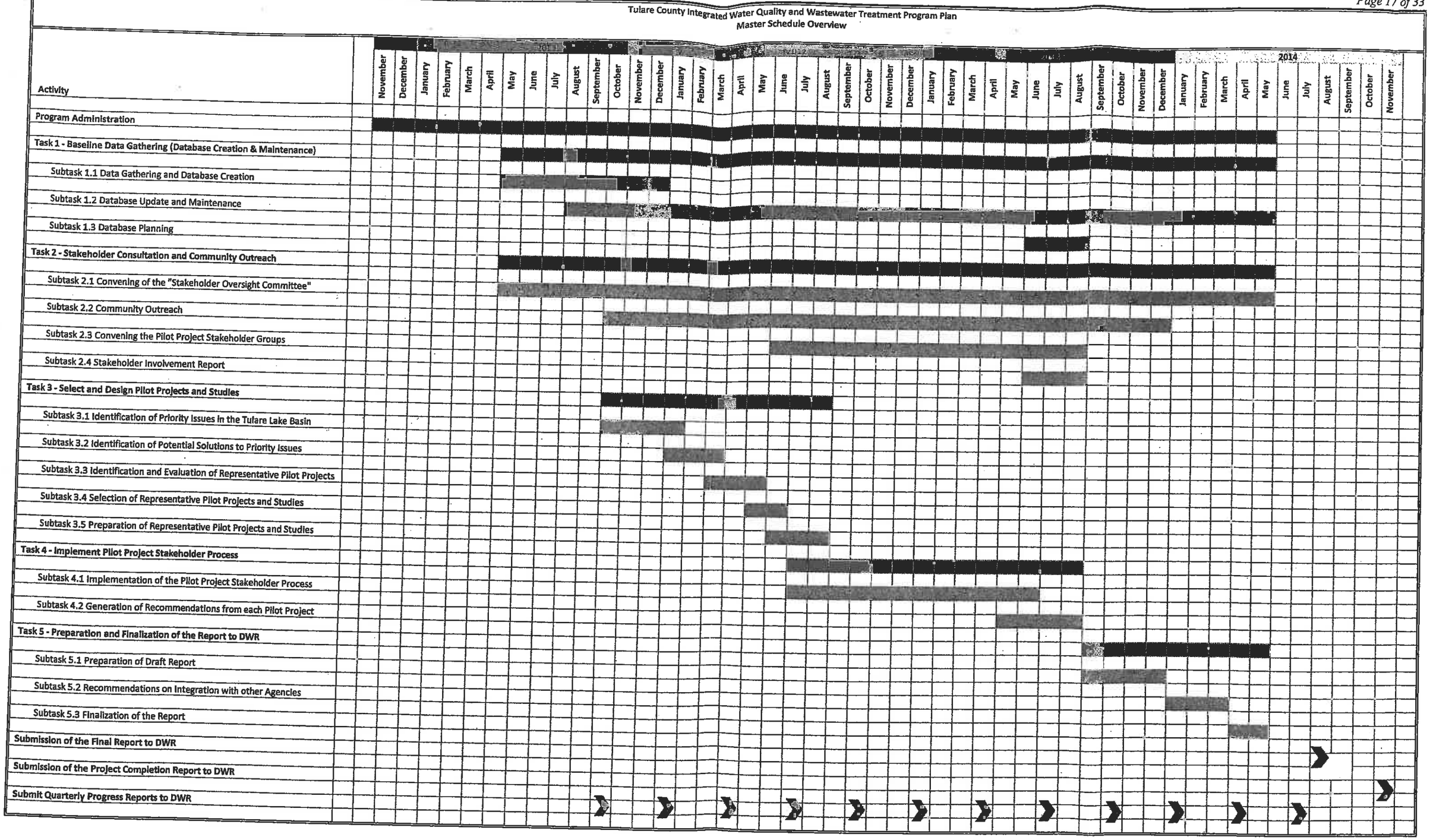

EXHIBIT C
PROJECT BUDGET

The cost estimate to complete the proposed Work Plan for this project is $2,000,000, as presented in the Project Budget below.

Tulare County Integrated Water Quality and Wastewater Treatment Program Plan

PHASE	TASK	Tulare Co Program Manager	Tulare Co Program Accounting	Tulare Co Database Programmer	Tulare Co GIS Specialist	Tulare Co Env Services Specialist	[redacted]																Task Fee	Contingency	With Contingency Task Fee
		$140	$100	$110	$120	$150	$140	$160	$140	$100	$95	$110	$140	$140	$120	$150	$70	$60						15%	
Task 1	Database Creation and Maintenance																						$52,220.00	$7,833.00	$60,053.00
Subtask 1.1	Data Gathering and Database Creation	20	12	10	8		4	4																	Target $60,000.00
Subtask 1.2	Database Update and Maintenance	40	24	72	80	40	4	4															$7,260.00	$1,089.00	$8,349.00
Subtask 1.3	Database Planning	8	16	8	40		8	8															$32,720.00	$4,908.00	$37,628.00
Task 2	Stakeholder Consultation and Community Outreach														8		8						$12,240.00	$1,836.00	$14,076.00
Subtask 2.1	Convening the Stakeholder Oversight Committee	12	4	6			30	30		24													$129,120.00	$19,368.00	$148,488.00
Subtask 2.2	Community Outreach	12	2	6			50	40							24		24	18		$250.00					Target $150,000.00
Subtask 2.3	Convening the Pilot Project Stake Holder Advisory Groups	12	2	6			40	32	40		50	50	50	20	220	20	34	18	$1,000	$2,000	$2,000		$20,030.00	$3,004.50	$23,034.50
Subtask 2.4	Stakeholder Involvement Report	12	2	6			6	6							74		34	18					$50,800	$7,620.00	$58,420.00
Task 3	Select and Design Pilot Projects and Studies to Develop Representative Solutions to Priority Issues																						$34,250.00	$5,137.50	$62,387.50
Subtask 3.1	Identification of Priority Issues throughout the Tulare Lake Basin	20	2				20	20	64	40	56	56	40	16	8		4	8					$4,040.00	$606.00	$4,646.00
Subtask 3.2	Identification of Potential Solutions to Priority Issues	20	2				30	40	60	48	21	20	24	16	8		4	8					$177,945.00	$26,691.75	$ - $204,636.75
Subtask 3.3	Identification and Evaluation of Representative Pilot Projects and Studies	20	2	20			40	24	44	36	24	24	24	16	8	40	4	8							Target $205,000.00
Subtask 3.4	Selection of Representative Pilot Projects and Studies	20	2		24		8	8		8		8					2	8	$500.00	$500.00	$1,000		$43,000.00	$6,450.00	$49,450.00
Subtask 3.5	Preparation of Representative Pilot Projects and Studies	20	2			16	32	32	32	64	24	24	12	16	12		4	8					$38,315.00	$5,747.25	$44,062.25
Task 4	Implement Pilot Project Stakeholder Process to Develop Studies and Representative Solutions to Priority Issues																						$41,920.00	$6,288.00	$48,208.00
Subtask 4.1	Implementation of the Pilot Project Stakeholder Process	132	32	8	40		520	520	600	1000	1540	1300	240	680	240	500		160	$500.00	$2,000	$2,000		$1,069,320.00	$160,398.00	$1,229,718.00
Subtask 4.2	Generation of Recommendations from each Representative Pilot Project or Study	132	32	8	40		120	100	140	200	180	120	100		100	100		60				$10,000	$862,560.00	$132,984.00	Target $1,248,200.00 $1,019,544.00
Task 5	Preparation and Finalization of the Report to DWR																						$182,760.00	$27,414.00	$210,174.00
Subtask 5.1	Preparation of Draft Report	29	4	2	40		40	40	32	44	64	64	38	38	32	32		32					$129,700.00	$19,455.00	$149,155.00 Target $155,000.00
Subtask 5.2	Recommendations on Integration with Other Agencies	10	2	3		3	30	20		20						12		16					$63,420.00	$9,513.00	$72,933.00
Subtask 5.3	Finalization of the Report	16	2	12	2		60	40		40		40	20	21		40		20	$500.00	$500.00	$2,000	$10,000	$14,540.00	$2,181.00	$16,721.00
Submission of the Final Report to DWR (milestone - costs covered elsewhere)																							$51,740.00	$7,761.00	$59,501.00
Submission of the Project Completion Report to DWR (milestone - costs covered elsewhere)																									
Submit Quarterly Progress Reports to DWR		24	12				60	48										24					$22,680.00	$3,402.00	$26,082.00
	Total Hours	650	156	167	274	59	1091	1016	1012	1524	1939	1703	548	703	754	744	110	421							
	Subtotal Costs	$77,000.00	$15,600.00	$18,370.00	$32,880.00	$8,850.00	$152,740	$162,400	$141,680	$152,400	$184,205	$187,330	$76,720.00	$98,420.00	$88,080.00	$111,600	$7,700.00	$25,260	$2,500	$5,250	$7,000	$25,000	$1,580,985.00	$237,147.75	$1,818,132.75
	County of Tulare Administrative Overhead (10%)																								$181,813.25
	Total Cost	$77,000.00	$15,600.00	$18,370.00	$32,880.00	$8,850.00	$152,740	$162,400	$141,680	$152,400	$184,205	$187,330	$76,720.00	$98,420.00	$88,080.00	$111,600	$7,700.00	$25,260	$2,500	$5,250	$7,000	$25,000	$1,580,985.00		$1,999,946.03
	Target Cost																								$2,000,000.00

EXHIBIT D
STANDARD CONDITIONS

D.1 ACCOUNTING AND DEPOSIT OF GRANT DISBURSEMENT:
SEPARATE ACCOUNTING OF GRANT DISBURSEMENT AND INTEREST RECORDS: Grantee shall account for the money disbursed pursuant to this Grant Agreement separately from all other Grantee funds. Grantee shall maintain audit and accounting procedures that are in accordance with generally accepted accounting principles and practices, consistently applied. Grantee shall keep complete and accurate records of all receipts, disbursements, and interest earned on expenditures of such funds. Grantee shall require its Local Project Sponsors, contractors, or subcontractors to maintain books, records, and other documents pertinent to their work in accordance with generally accepted accounting principles and practices. Records are subject to inspection by State at any and all reasonable times.

FISCAL MANAGEMENT SYSTEMS AND ACCOUNTING STANDARDS: The Grantee agrees that, at a minimum, its fiscal control and accounting procedures will be sufficient to permit tracing of grant funds to a level of expenditure adequate to establish that such funds have not been used in violation of state law or this Grant Agreement.

REMITTANCE OF UNEXPENDED FUNDS: Grantee, within a period of sixty (60) calendar days from the final disbursement from State to Grantee of grant funds, shall remit to State any unexpended funds that were disbursed to Grantee under this Grant Agreement and were not needed to pay Eligible Project Costs.

D.2 ACKNOWLEDGEMENT OF CREDIT: Grantee and Local Project Sponsors shall include appropriate acknowledgement of credit to the State and to all cost-sharing partners for their support when promoting the IRWM Program or associated grant funded projects or using any data and/or information developed under this Grant Agreement. During construction or implementation of each project, Grantee or Local Project Sponsors shall install a sign at a prominent location which shall include a statement that the project is financed under the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006, administered by State of California, Department of Water Resources. Grantee shall notify State as each sign has been erected by providing them with a site map with the sign location noted and a photograph of each sign.

D.3 AMENDMENT: No amendment or variation of the terms of this Grant Agreement shall be valid unless made in writing, signed by the parties and approved as required. No oral understanding or agreement not incorporated in the Grant Agreement is binding on any of the parties.

D.4 AMERICANS WITH DISABILITIES ACT: By signing this Grant Agreement, Grantee assures State that it complies with the Americans with Disabilities Act (ADA) of 1990, (42 U.S.C., 12101 *et seq.*), which prohibits discrimination on the basis of disability, as well as all applicable regulations and guidelines issued pursuant to the ADA.

D.5 AUDITS: State reserves the right to conduct an audit at any time between the execution of this Grant Agreement and the completion of the Program, with the costs of such audit borne by State. After completion of the Program, State may require Grantee to conduct a final audit, at Grantee's

expense, such audit to be conducted by and a report prepared by an independent Certified Public Accountant. Failure or refusal by Grantee to comply with this provision shall be considered a breach of this Grant Agreement, and State may take any action it deems necessary to protect its interests.

Grantee agrees that the awarding department, the Bureau of State Audits, or their designated representative shall have the right to review and to copy any records and supporting documentation pertaining to the performance of this Grant Agreement. Grantee agrees to maintain such records for a possible audit for a minimum of three (3) years after final payment, unless a longer period of records retention is stipulated. Grantee agrees to allow the auditor(s) access to such records during normal business hours and to allow interviews of any employees who might reasonably have information related to such records. Further, Grantee agrees to include a similar right of the State to audit records and interview staff in any contract related to performance of this Agreement.

D.6 BUDGET CONTINGENCY: If the Budget Act of the current year and/or any subsequent years covered under this Grant Agreement does not appropriate sufficient funds for the IRWM Program, this Grant Agreement shall be of no force and effect. This provision shall be construed as a condition precedent to the obligation of State to make any payments under this Grant Agreement. In this event, State shall have no liability to pay any funds whatsoever to Grantee or to furnish any other considerations under this Grant Agreement and Grantee shall not be obligated to perform any provisions of this Grant Agreement. Nothing in this Grant Agreement shall be construed to provide Grantee with a right of priority for payment over any other Grantee. If funding for any fiscal year is reduced or deleted by the Budget Act for purposes of this program, State shall have the option to either cancel this Grant Agreement with no liability occurring to State, or offer a Grant Agreement amendment to Grantee to reflect the reduced amount.

D.7 COMPETITIVE BIDDING AND PROCUREMENTS: Grantee and Local Project Sponsors shall comply with all applicable laws and regulations regarding securing competitive bids and undertaking competitive negotiations in Grantee's contracts with other entities for acquisition of goods and services and construction of public works with funds provided by State under this Grant Agreement.

D.8 COMPUTER SOFTWARE: Grantee certifies that it has appropriate systems and controls in place to ensure that state funds will not be used in the performance of this Grant Agreement for the acquisition, operation, or maintenance of computer software in violation of copyright laws.

D.9 CONFLICT OF INTEREST:

CURRENT STATE EMPLOYEES: No State officer or employee shall engage in any employment, activity, or enterprise from which the officer or employee receives compensation or has a financial interest and which is sponsored or funded by any State agency, unless the employment, activity, or enterprise is required as a condition of regular State employment. No State officer or employee shall contract on his or her own behalf as an independent contractor with any State agency to provide goods or services.

FORMER STATE EMPLOYEES: For the two-year period from the date he or she left State employment, no former State officer or employee may enter into a contract in which he or she engaged in any of the negotiations, transactions, planning, arrangements, or any part of the decision-making process relevant to the contract while employed in any capacity by any State

agency. For the twelve-month period from the date he or she left State employment, no former State officer or employee may enter into a contract with any State agency if he or she was employed by that State agency in a policy-making position in the same general subject area as the proposed contract within the twelve-month period prior to his or her leaving State service.

D.10 DELIVERY OF INFORMATION, REPORTS, AND DATA: Grantee agrees to expeditiously provide, during work on the IRWM Program and throughout the term of this Grant Agreement, such reports, data, information, and certifications as may be reasonably required by State.

D.11 DISPOSITION OF EQUIPMENT: Grantee shall provide to State, not less than 30 days prior to submission of the final project invoice, a final inventory list of equipment purchased with grant funds provided by State. Grantee shall consult with State on the scope of the inventory not less than 60 days prior to the submission of the final project invoice. The inventory shall include all items with a current estimated fair market value of more than $500 per item. Within 60 days of receipt of such inventory, State shall provide Grantee with a list of the items on the inventory that State will take title to. All other items shall become the property of Grantee. State shall arrange for delivery from Grantee of items that it takes title to. Cost of transportation, if any, shall be borne by State.

D.12 DISPUTES: In the event of an invoice dispute, payment will not be made until the dispute is resolved and a corrected invoice submitted. Failure to use the address exactly as provided may result in return of the invoice to the Grantee. Payment shall be deemed complete upon deposit of the payment, properly addressed, postage prepaid, in the United States mail.

Any claim that Grantee may have regarding the performance of this Grant Agreement including, but not limited to claims for additional compensation or extension of time, shall be submitted to the Director, Department of Water Resources, within thirty (30) calendar days of Grantee's knowledge of the claim. State and Grantee shall then attempt to negotiate a resolution of such claim and process an amendment to the Grant Agreement to implement the terms of any such resolution.

D.13 DRUG-FREE WORKPLACE REQUIREMENTS: Grantee, Local Project Sponsors, and their contractors or subcontractors will comply with the requirements of the Drug-Free Workplace Act of 1990 (Government Code 8350 *et seq.*) and have or will provide a drug-free workplace by taking the following actions:

a) Publish a statement notifying employees, contractors, and subcontractors that unlawful manufacture, distribution, dispensation, possession, or use of a controlled substance is prohibited and specifying actions to be taken against employees, contractors, or subcontractors for violations, as required by Government Code Section 8355(a).

b) Establish a Drug-Free Awareness Program, as required by Government Code Section 8355(b) to inform employees, contractors, or subcontractors about all of the following:

1. The dangers of drug abuse in the workplace,
2. Grantee's policy of maintaining a drug-free workplace,
3. Any available counseling, rehabilitation, and employee assistance programs, and
4. Penalties that may be imposed upon employees, contractors, and subcontractors for drug abuse violations.

c) Provide as required by Government Code Sections 8355(c), that every employee, contractor, and/or subcontractor who works under this Grant Agreement:

1. Will receive a copy of Grantee's drug-free policy statement, and

2. Will agree to abide by terms of Grantee's condition of employment, contract or subcontract.

D.14 FINAL INSPECTIONS AND CERTIFICATION OF REGISTERED CIVIL ENGINEER: Upon completion of a construction project and as determined by State, Grantee shall provide for a final inspection and certification by a California Registered Civil Engineer that the project has been completed in accordance with submitted final plans and specifications and any modifications thereto and in accordance with this Grant Agreement and to the State's satisfaction.

D.15 GOVERNING LAW: This Grant Agreement is governed by and shall be interpreted in accordance with the laws of the State of California.

D.16 INCOME RESTRICTIONS: Grantee agrees that any refunds, rebates, credits, or other amounts (including any interest thereon) accruing to or received by Grantee under this Grant Agreement shall be paid by Grantee to State, to the extent that they are properly allocable to costs for which Grantee has been reimbursed by State under this Grant Agreement.

D.17 INDEMNIFICATION: Grantee agrees to indemnify State and its officers, agents, and employees against and to hold the same free and harmless from any and all claims, demands, damages, losses, costs, expenses, or liability due or incident to, either in whole or in part, and whether directly or indirectly, arising out of the IRWM Program, including without limitation, arising out of post-construction operation and maintenance.

D.18 INDEPENDENT CAPACITY: Grantee, and the agents and employees of Grantee, if any, in the performance of the Grant Agreement, shall act in an independent capacity and not as officers, employees, or agents of the State.

D.19 INSPECTION OF BOOKS, RECORDS, AND REPORTS: During regular office hours, each of the parties hereto and their duly authorized representatives shall have the right to inspect and to make copies of any books, records, or reports of either party pertaining to this Grant Agreement or matters related hereto to the extent permitted by Government Code sections 6250 et seq. or other applicable laws. Each of the parties hereto shall maintain and shall make available at all times for such inspection accurate records of all its costs, disbursements, and receipts with respect to its activities under this Grant Agreement. Failure or refusal by Grantee to comply with this provision shall be considered a breach of this Grant Agreement, and State may withhold disbursements to Grantee or take any other action it deems necessary to protect its interests, as provided in paragraph 17.

D.20 INSPECTIONS OF PROJECTS BY STATE: State shall have the right to inspect the work being performed at any and all reasonable times, providing a minimum of a 24-hour notice, during the term of the Grant Agreement. This right shall extend to any subcontracts, and Grantee shall include provisions ensuring such access in all its contracts or subcontracts entered into pursuant to its Grant Agreement with State.

D.21 NONDISCRIMINATION: During the performance of this Grant Agreement, Grantee, Local Project Sponsors, and their contractors shall not unlawfully discriminate, harass, or allow harassment against any employee or applicant for employment because of sex, race, color, ancestry, religious creed, national origin, physical disability (including HIV and AIDS), mental disability, medical condition (cancer), age (over 40), marital status, and denial of family care leave. Grantee, Local Project Sponsors, and their contractors shall ensure that the evaluation and

treatment of their employees and applicants for employment are free from such discrimination and harassment. Grantee, Local Project Sponsors, and their contractors shall comply with the provisions of the Fair Employment and Housing Act (Government Code Section 12990 (a-f) et seq.) and the applicable regulations promulgated there under (California Code of Regulations, Title 2, Section 7285 et seq.). The applicable regulations of the Fair Employment and Housing Commission implementing Government Code Section 12990 (a-f), set forth in Chapter 5 of Division 4 of Title 2 of the California Code of Regulations, are incorporated into this Grant Agreement by reference and made a part hereof as if set forth in full. Grantee, Local Project Sponsors, and their contractors shall give written notice of their obligations under this clause to labor organizations with which they have a collective bargaining or other agreement. Grantee shall include the nondiscrimination and compliance provisions of this clause in all contracts to perform work under the Grant Agreement.

D.22 OPINIONS AND DETERMINATIONS: The parties agree that review or approval of any IRWM Program applications, documents, permits, plans and specifications or other program information by the State is for administrative purposes only and does not relieve the Grantee of its responsibility to properly plan, design, construct, operate, maintain, implement, or otherwise carry out the IRWM Program.

D.23 PROHIBITION AGAINST DISPOSAL OF PROJECT WITHOUT STATE PERMISSION: Grantee and Local Project Sponsors shall not sell, abandon, lease, transfer, exchange, mortgage, hypothecate, or encumber in any manner whatsoever all or any portion of any real or other property necessarily connected or used in conjunction with the IRWM Program without prior permission of State. Grantee and Local Project Sponsors shall not take any action concerning the performance of this Grant Agreement, including but not limited to actions relating to user fees, charges, and assessments that could adversely affect the ability of Grantee to meet its obligations under this Grant Agreement, without prior written permission of State. State may require that the proceeds from the disposition of any real or personal property acquired through this Grant Agreement be remitted to State.

D.24 REMEDIES, COSTS, AND ATTORNEY FEES: Grantee agrees that any remedy provided in this Grant Agreement is in addition to and not in derogation of any other legal or equitable remedy available as a result of breach of this Grant Agreement, whether such breach occurs before or after completion of the IRWM Program, and exercise of any remedy provided by this Grant Agreement shall not preclude either party from pursuing any legal remedy or right which would otherwise be available. In the event of litigation between the parties hereto arising from this Grant Agreement, it is agreed that the prevailing party shall be entitled to such reasonable costs and/or attorney fees as may be ordered by the court entertaining such litigation.

D. 25 RETENTION: State shall, for each project, withhold ten percent (10.0%) of the funds requested by Grantee for reimbursement of Eligible Costs until the project is completed and Grantee has met requirements of paragraph 19, Submissions of Reports.

D.26 RIGHTS IN DATA: Grantee and Local Project Sponsors agree that all data, plans, drawings, specifications, reports, computer programs, operating manuals, notes, and other written or graphic work produced in the performance of this Grant Agreement shall be in the public domain. Grantee and Local Project Sponsors may disclose, disseminate and use in whole or in part, any final form data and information received, collected, and developed under this Grant Agreement, subject to appropriate acknowledgement of credit to State for financial support. Grantee and Local Project

Sponsors shall not utilize the materials for any profit-making venture or sell or grant rights to a third party who intends to do so.

D.27 SEVERABILITY OF UNENFORCEABLE PROVISION: If any provision of this Grant Agreement is held invalid or unenforceable by a court of final jurisdiction, all other provisions of this Grant Agreement shall be construed to remain fully valid, enforceable, and binding on the parties.

D.28 SUCCESSORS AND ASSIGNS: This Grant Agreement and all of its provisions shall apply to and bind the successors and assigns of the parties. No assignment or transfer of this Grant Agreement or any part thereof, rights hereunder, or interest herein by Grantee shall be valid unless and until it is approved by State and made subject to such reasonable terms and conditions as State may impose.

D.29 TERMINATION, IMMEDIATE REPAYMENT, INTEREST: This Grant Agreement may be terminated by written notice at any time prior to completion of the IRWM Program, at the option of State, upon violation by Grantee of any material provision after such violation has been called to the attention of Grantee and after failure of Grantee to bring itself into compliance with the provisions of this Grant Agreement within a reasonable time as established by State. In the event of such termination, Grantee agrees, upon demand, to immediately repay to State an amount equal to the amount of grant funds disbursed to Grantee prior to such termination. In the event of termination, interest shall accrue on all amounts due at the highest legal rate of interest from the date that notice of termination is mailed to Grantee to the date of full repayment by Grantee.

D.30 TIMELINESS: Time is of the essence in this Grant Agreement.

D.31 TRAVEL: Travel includes the costs of transportation, subsistence, and other associated costs incurred by personnel during the term of this Grant Agreement. Travel and per diem shall be reimbursed consistent with the rates applicable at the time of travel. These rates are published at http://www.dpa.ca.gov/jobinfo/statetravel.shtm or its successor website. For the purpose of computing such expenses, Grantee's designated headquarters shall be: 2800 W. Burrel Avenue, Visalia, CA 93291. No travel outside the State of California shall be reimbursed unless prior written authorization is obtained from the State. Exhibit H, Travel and Per Diem Expenses, provides the travel reimbursement rates posted at the time of execution of this Grant Agreement.

D.32 WAIVER OF RIGHTS: None of the provisions of this Grant Agreement shall be deemed waived unless expressly waived in writing. It is the intention of the parties here to that from time to time either party may waive any of its rights under this Grant Agreement unless contrary to law. Any waiver by either party of rights arising in connection with the Grant Agreement shall not be deemed to be a waiver with respect to any other rights or matters, and such provisions shall continue in full force and effect.

EXHIBIT E
REPORT FORMAT

QUARTERLY REPORT

Quarterly Reports shall generally use the following format. This format may be modified as necessary to effectively communicate information on the projects contained in the Work Plan. The quarterly report should reflect the status of all of the projects identified in the Grant Agreement. A brief summary of program status should also be provided.

For each project, describe the work performed during the quarter including:

PROJECT INFORMATION

- Legal matters;
- Engineering matters;
- Environmental matters;
- Status of permits, easements, rights-of-way, and approvals as may be required by other State, federal, and/or local agencies;
- Major accomplishments during the quarter (i.e. tasks completed, milestones met, meetings held or attended, press releases, etc.);
- Discussion of the ambient surface water and groundwater data submittal effort for the previous quarter, including a description of the data submitted and date(s) of submittal;
- Issues/concerns that have, will, or could affect the schedule or budget, with a recommendation on how to correct the matter; and
- Description of the differences between the work performed and the work outlined in the project work plans.
- Discussion of project performance achieved over the previous quarter relative to the criteria established in the Project Assessment and Evaluation Plan (PAEP).

COST INFORMATION

- Listing showing costs incurred during the quarter by the grantee, the local project sponsor overseeing the work, and each contractor working on the project. Listing should include hours per task worked on during the quarter for above personnel;
- A discussion on how the actual budget is progressing in comparison to the project budget included in the Work Plan; and
- A revised budget, by task, if changed from latest budget in Work Plan.

SCHEDULE INFORMATION

- A schedule showing actual progress verse planned progress as shown in Exhibit B;
- A discussion on how the actual schedule is progressing in comparison to the schedule in Exhibit B; and
- A revised schedule, by task, if changed from latest schedule in Exhibit B.

ANTICIPATED ACTIVITIES NEXT QUARTER

Provide a description of anticipated activities for the next quarterly reporting period.

PROJECT COMPLETION REPORT

Project Completion Reports shall generally use the following format. This format may be modified as necessary to effectively communicate information on the various projects contained in the IRWM Program. A Project Completion Report is required for each project identified in the Work Plan, Exhibit A.

EXECUTIVE SUMMARY

The Executive Summary consists of a maximum of ten (10) pages summarizing project information (see report status section below for topics). The Executive Summary should include the following:

- Brief description of work proposed to be done in the original Exhibit A Work Plan;
- Description of actual work completed and any deviations from the work plan identified in the Grant Agreement;
- Describe the mechanism or process that allows for continued performance monitoring of the objectives;

REPORTS AND/OR PRODUCTS

- Provide a copy of the final technical report or study;
- Provide a map and shapefile(s) showing the location of the completed project. A description of the geographic projection and datum used for the shapefile must be submitted with the shapefile (a NAD '83 datum and a UTM 11 projection should be utilized);
- If any wells were constructed as part of the project, provide the following information: well logs; borehole geophysical logs; state well number; site information to include horizontal (NAD '83) and vertical (NAVD '88) datum to be determined within 0.5 feet;
- Provide an electronic copy of any as-built plans (media: CD-ROM; PDF format);
- Provide copies of any data collected along with location maps;
- If applicable, describe the findings of any study and whether the study determined the engineering, hydrologic, hydrogeologic, environmental, economic and financial feasibility of the project.

COST & DISPOSITION OF FUNDS INFORMATION

- A list of invoices showing:
  - The date each invoice was submitted to State;
  - The amount of the invoice;
  - The date the check was received; and
  - The amount of the check. (If a check has not been received for the final invoice, then state this in this section.)
- A summary of final funds disbursement including:
  - Labor cost of personnel of agency/ major consultant /sub-consultants. (Indicate personnel, hours, rates, type of profession and reason for consultant, i.e., design, CEQA work, etc.);
  - Construction cost information, shown by material, equipment, labor costs, and change orders;
  - Any other incurred cost detail; and
  - A statement verifying separate accounting of grant disbursements.
- Summary of project cost including:

- Accounting of the cost of project expenditure;
- Include all internal and external costs not previously disclosed;
- A discussion of factors that positively or negatively affected the project cost and any deviation from the original project cost estimate.

ADDITIONAL INFORMATION

- A final project schedule showing actual progress verse planned progress;
- Certification that the project was conducted in accordance with the approved work plan and any approved modifications thereto; and
- Submittal schedule for Post Performance Report and outline of the reporting format.

ELECTRONIC REPORT FORMATTING

Grantee agrees that work funded under this Agreement will be provided in an electronic format to State. Electronic submittal of final reports, plans, studies, data, and other work performed under this grant shall be as follows:

- Text preferably in MS WORD or text PDF format.
- Files generally less than 10 MB in size.
- Files named so that the public can determine their content. For example, file naming of reports must have the title and, if subdivided into smaller sized files, the chapter number/letter and names in the report Table of Content (TOC); files of maps, figures, and tables by number/letter as referenced in the TOC; well logs files with DWR required naming convention; and Appendix number/letter and named in the TOC.
- For projects involving a modeling component, grantee shall provide the major input data files, parameters, calibration statistics, output files, and other information requested by DWR's Project Manager.

EXHIBIT F
GRANTEE RESOLUTION

BEFORE THE BOARD OF SUPERVISORS
COUNTY OF TULARE, STATE OF CALIFORNIA

IN THE MATTER OF Approve and accept a grant from the California Department of Water Resources for the County of Tulare Disadvantaged Community Water Study Project.	**RESOLUTION NO.**	**2010-0686**
	AGREEMENT NO.	**24676**

UPON MOTION OF SUPERVISOR ENNIS, SECONDED BY SUPERVISOR ISHIDA, THE FOLLOWING WAS ADOPTED BY THE BOARD OF SUPERVISORS, AT AN OFFICIAL MEETING HELD AUGUST 17, 2010, BY THE FOLLOWING VOTE:

AYES: SUPERVISORS ISHIDA, VANDER POEL, COX, WORTHLEY AND ENNIS
NOES: NONE
ABSTAIN: NONE
ABSENT: NONE

ATTEST: JEAN M. ROUSSEAU
COUNTY ADMINISTRATIVE OFFICER/
CLERK, BOARD OF SUPERVISORS

BY: Denise A. Ybarra
Deputy Clerk

* * * * * * * * * * * * * * * * * *

1 Approved and accepted a grant from the California Department of Water Resources ("DWR") for the County of Tulare Disadvantaged Community Water Study Project ("Study") from October 1, 2010 through March 31, 2014 in an amount not to exceed $2,000,000.

2 Authorized Jean Rousseau, County Administrative Officer, to be the Project Manager on behalf of Tulare County.

3 Authorized the Chairman to sign three copies of the Grant Agreement.

CAO
Co. Counsel

DAY

EXHIBIT G
STATEWIDE MONITORING

REQUIREMENTS FOR STATEWIDE MONITORING AND DATA SUBMITTAL

Ambient surface water and groundwater quality monitoring data (may include chemical, physical, or biological data) shall be submitted to the State as described below, with a narrative description of data submittal activities included in project reports, as described in Exhibit E.

Surface water quality monitoring data shall be submitted to the Surface Water Ambient Monitoring Program (SWAMP), which is administered by the State Water Resources Control Board (SWRCB). If a project work plan contains a surface water monitoring element, the Grantee shall also prepare, maintain, and implement a Quality Assurance Project Plan (QAPP) in accordance with:

- The SWAMP QAPP and data reporting requirements.
- The USEPA's *EPA Requirements for Quality Assurance Project Plans* (Publication EPA AQ/R-5, 2001).

The QAPP shall be submitted to the State for review and a decision regarding approval. Guidance for preparing the QAPP is available at:

http://www.waterboards.ca.gov/swamp/qapp.html

SWAMP comparable electronic format shall be followed. SWAMP data formats and templates can be accessed at:

http://mpsl.mlml.calstate.edu/swdbcompare.html

After the Grantee has followed the proper quality assurance and quality control (QA/QC) procedures and prepared the data for submittal to SWAMP, the data shall be uploaded, using the methodology established by SWAMP, to the California Environmental Data Exchange Network (CEDEN) database at the following link:

http://bdat.ca.gov

Groundwater quality monitoring data shall be submitted to the State through the SWRCB Groundwater Ambient Monitoring and Assessment (GAMA) Program. If a project work plan contains a groundwater ambient monitoring element, the Grantee shall contact the SWRCB GAMA Program for guidance on the submittal of ambient groundwater data. Information on the SWRCB GAMA Program can be obtained at:

http://www.waterboards.ca.gov/gama/index.html

Prior to the Grantee implementing any sampling or monitoring activities, State must be notified in writing as the planned procedure for submittal of groundwater data to GAMA.

REQUIREMENTS FOR PROJECT ASSESSMENT AND EVALUATION PLAN (PAEP) SUBMITTAL:

Project Assessment and Evaluation Plans (PAEPs) shall be prepared for each project receiving grant funding. For each project, a PAEP shall be submitted to State prior to project construction or monitoring, and as deemed appropriate by State. For information about preparing PAEPs and the recommended content, relevant documentation may be found at the following web site:
http://www.waterboards.ca.gov/funding/paep.html

EXHIBIT H
TRAVEL AND PER DIEM EXPENSES*

I. SHORT-TERM PER DIEM EXPENSES

A. In computing reimbursement for continuous short-term travel of more than 24 hours and less than 31 consecutive days, the employee will be reimbursed for actual costs up to the maximum allowed for each meal, incidental, and lodging expense for each complete 24 hours of travel, beginning with the traveler's times of departure and return, as follows:

1. On the first day of travel on a trip of 24 hours or more:

Trip begins at or before 6 a.m.	Breakfast may be claimed on the first day.
Trip begins at or before 11 a.m.	Lunch may be claimed on the first day.
Trip begins at or before 5 p.m.	Dinner may be claimed on the first day.

2. On the fractional day of travel at the end of a trip of more than 24 hours:

Trip ends at or after 8 a.m.	Breakfast may be claimed.
Trip ends at or after 2 p.m.	Lunch may be claimed.
Trip ends at or after 7 p.m.	Dinner may be claimed.

If the fractional day includes an overnight stay, receipted lodging may also be claimed. No meal or lodging expense may be claimed or reimbursed more than once on any given date or during any 24-hour period.

3. Reimbursement shall be for actual expenses, subject to the following maximum rates:

Meals:

Breakfast	$ 6.00	Receipts are not required for regular short-term travel meals
Lunch	$10.00	
Dinner	$18.00	
Incidentals	$ 6.00	

Lodging:

Statewide	Actual up to $84.00 plus tax

When required to conduct State business and obtain lodging in the counties of Los Angeles and San Diego, reimbursement will be for actual receipted lodging to a maximum of $110 plus tax.

When required to conduct State business and obtain lodging in the counties of Alameda, San Francisco, San Mateo, and Santa Clara, reimbursement will be for actual receipted lodging to a maximum of $140 plus tax.

If lodging receipts are not submitted, reimbursement will be for meals only at the rates and time frames set forth in B.1 below.

B. In computing reimbursement for continuous travel of less than 24 hours, actual expenses, up to the maximums in A.3 above, will be reimbursed for breakfast and/or dinner and/or lodging in accordance with the following time frames:

1. Travel begins at or before 6 a.m. and ends at or after 9 a.m.: Breakfast may be claimed. Travel begins at or before 4 p.m. and ends at or after 7 p.m.: Dinner may be claimed. If the trip of less than 24 hours includes an overnight stay, receipted lodging may be claimed. **No lunch or incidentals may be reimbursed on travel of less than 24 hours.**

2. Employees on short-term travel who stay in commercial lodging establishments or commercial campgrounds will be reimbursed for actual lodging expenses substantiated by a receipt. Employees who stay with friends or relatives, or who do not produce a lodging receipt, will be eligible to claim meals only.

II. LONG-TERM TRAVEL AND PER DIEM EXPENSES

A. Employee maintains a separate residence in the headquarters area:

Long-term travelers who maintain a permanent residence at their primary headquarters may claim daily long-term lodging up to $24.00 with a receipt, and long-term meals of $24.00 for each period of travel from 12 to 24 hours at the long-term location. For travel of less than 12 hours, the traveler may claim either $24.00 in receipted lodging or $24.00 in long-term meals.

B. Employee does not maintain a separate residence in headquarters area:

Long-term travelers who do not maintain a permanent residence at their headquarters may claim daily receipted lodging up to $12.00, and long-term meals of $12.00 for each period of travel from 12 to 24 hours at the long-term locations. For travel of less than 12 hours, the travelers may claim either $12.00 in receipted lodging or $12.00 in long-term meals.

III. MILEAGE REIMBURSEMENT*

Reimbursement for personal vehicle mileage is 51* cents per mile.

IV. VEHICLE RENTAL

Reimbursement for vehicle rental shall be for actual and necessary costs of such rental and airplane usage shall be allowed at the lowest fare available. Claims for reimbursements shall be allowed upon submittal of the appropriate receipt. Refer to California Code of Regulations, Title 2, Sections 599.627 and 599.628.

* Refer to the latest expenses and reimbursement information in the following web page: http://www.dpa.ca.gov/personnel-policies/travel/hr-staff.htm.

APPENDIX C

REPORT TO THE LEGISLATURE, SENATE BILL X2 1

JUNE 2011

REPORT TO THE LEGISLATURE

Senate Bill X2 1
(Perata, Chapter 1, Statutes of 2008)

Proposition 84
The Safe Drinking Water, Water Quality and Supply,
Flood Control, River and Coastal Protection Act of 2006

California Department of Public Health

Division of Drinking Water and Environmental Management

June 2011

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EXECUTIVE SUMMARY

Proposition 84, the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Act of 2006 (Public Resources Code Section 75001, et seq.), was passed by California voters in the November 2006 general election. The Drinking Water Program of the California Department of Public Health (CDPH) is responsible for implementing certain sections of Proposition 84, specifically Public Resources Code Sections 75021, 75022, 75023, and 75025 of Chapter 2 (Safe Drinking Water and Water Quality Projects). The overall purpose of these sections is to provide the funds necessary to address the most critical water needs of the state including the provision of safe drinking water to all Californians, the protection of water quality and the environment, and the improvement of water supply reliability.

In September 2008, Senate Bill (SB) X2 1 (Perata) and SB 732 (Steinberg) were signed into law, which modified some of the provisions of Sections 75022 and 75025. In addition, SB X2 1 appropriated $50 million to CDPH for Section 75022 and $50.4 million for Section 75025. These appropriations were only available for encumbrance until June 30, 2010. CDPH modified its implementation of Proposition 84 to meet the requirements of SB X2 1.

However, in December 2008, the Department of Finance (DOF) in Budget Letter 08-33, directed all state entities that have expenditure control and oversight of General Obligation bond programs to cease authorizing any new grants or obligations for bond projects, and to suspend all projects, excluding those for which DOF authorizes an exemption. Accordingly, CDPH suspended authorizing any new grants or obligations for bond projects on Proposition 84 projects.

Thereafter, CDPH was allocated proceeds for Proposition 84 from subsequent bond sales from April 2009 through November 2010. With these allocations, CDPH has continued to progress since the restart of the Proposition 84 program. The impact of the freeze on operations is reflected in this report. CDPH did not meet the encumbrance timeframes specified in SB X2 1, and received authority to reappropriate the SB X2 1 funds through Fiscal Year 2013-14.

Pursuant to Water Code Section 83002.7, which was created by SB X2 1, CDPH is required to submit a report to the fiscal committees of the Legislature on the details of all committed and anticipated expenditures of funds appropriated by SB X2 1 from Proposition 84.

California Department of Public Health

Report to the Legislature
Senate Bill X2 1 (Perata, Chapter 1, Statutes of 2008)

Proposition 84
The Safe Drinking Water, Water Quality and Supply, Flood Control,
River and Coastal Protection Act of 2006
June 2011

I. BACKGROUND

A. Statutory Requirement for Report to Legislature

Pursuant to Water Code Section 83002.7, which was created by Senate Bill (SB) X2 1 (Perata, 2008), the California Department of Public Health (CDPH) is required to submit a report to the fiscal committees of the Legislature on the details of all committed and anticipated expenditures of funds appropriated by SB X2 1 from Proposition 84, the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Act of 2006.

B. Background on Proposition 84

Proposition 84, the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Act of 2006 (Public Resources Code Section 75001, et seq.), was passed by California voters in the November 2006 general election. CDPH's Drinking Water Program is responsible for implementing Public Resources Code Sections 75021, 75022, 75023, and 75025 of Chapter 2 (Safe Drinking Water and Water Quality Projects). The overall purpose of these sections is to provide the funds necessary to address the most critical water needs of the state including the provision of safe drinking water to all Californians, the protection of water quality and the environment, and the improvement of water supply reliability. Specifically:

- The purpose of Section 75021 is to provide funding for grants and direct expenditures to fund emergency and urgent actions to ensure safe drinking water supplies; $10 million was authorized for this purpose.
- The purpose of Section 75022 is to provide grants for small community drinking water system infrastructure improvements and related actions to meet safe drinking water standards; $180 million was authorized for this purpose.
- The purpose of Section 75025 is to provide funding for immediate projects needed to protect public health by preventing or reducing the contamination of groundwater that serves as a major source of drinking water for a community; $60 million was authorized for this purpose.

- In addition, Proposition 84 authorized, in Public Resources Code Section 75023, $50 million for the state match required for the Safe Drinking Water State Revolving Fund.
- Proposition 84 allows up to five percent of the funding to be used by CDPH for administration of the funding programs. In addition, 3.5 percent for bond costs must come out of the available funding.

The funding available for grants to projects for each of the programs is as follows:

	Funding Authorized	Bond Costs 3.5%	Administration 5%	Available for Projects
Section 75021	$10,000,000	$350,000	$500,000	$9,150,000
Section 75022	$180,000,000	$6,300,000	$9,000,000	$164,700,000
Section 75023	$50,000,000	$1,750,000	$2,500,000	$45,750,000
Section 75025	$60,000,000	$2,100,000	$3,000,000	$54,900,000*
TOTAL	$300,000,000	$10,500,000	$15,000,000	$274,500,000

** $2 million is allocated, pursuant to SB X2 1, to the State Water Resources Control Board to develop pilot projects in the Tulare Lake Basin and the Salinas Valley that focus on nitrate contamination.*

C. CDPH Implementation of Proposition 84

In 2007, CDPH held public workshops and sought public comments on draft criteria for funding under Proposition 84. CDPH developed an expenditure plan for implementation of the programs and began to embark on funding for projects meeting the requirements of Sections 75021 and 75022.

In September 2008, SB X2 1 (Perata) and SB 732 (Steinberg) were signed into law, which modified some of the provisions of Sections 75022 and 75025. In addition, SB X2 1 appropriated $50 million for Section 75022 and $50.4 million for Section 75025. These appropriations were only available for encumbrance until June 30, 2010. Subsequently, CDPH developed revised criteria and a revised expenditure plan to meet the requirements of SB X2 1.

However, in December 2008, the Department of Finance (DOF) in Budget Letter 08-33, directed all state entities that have expenditure control and oversight of General Obligation bond programs to cease authorizing any new grants or obligations for bond projects, and to suspend all projects, excluding those for which DOF authorizes an exemption. Accordingly, CDPH suspended authorizing any new grants or obligations for bond projects on Proposition 84 projects.

Thereafter, CDPH was allocated proceeds for Proposition 84 from subsequent bond sales in April 2009, October/November 2009, March/April 2010 and October/November 2010. With these allocations, CDPH has continued with the Proposition 84 program. The impact of the freeze on operations is reflected in this report. CDPH did not meet the encumbrance timeframes specified in SB X2 1, and received authority to reappropriate the SB X2 1 funds through Fiscal Year 2013-14.

II. REPORT TO LEGISLATURE

A. Fiscal Detail of State Operations Support and Local Assistance Costs

Water Code Section 83002.7 requirement: "Fiscal detail of state operations support and local assistance costs."

Fiscal Year	Section	Program Purpose	Encumbrances	Expenditures
PROGRAM SUPPORT (STATE OPERATIONS)				
2008-09 (Actual)	SB X2 1	Salary and Wages	$ 0	$9,071
		Operating Expenses & Equipment	$ 0	$724
		SUBTOTAL		$9,795
2009-10 (Actual)	SB X2 1	Salary and Wages	$ 0	$312,647
		Operating Expenses & Equipment		$77.982
		SUBTOTAL		$390,629
		TOTAL		$400,419

LOCAL ASSISTANCE (GRANTS FOR PROJECTS)				
2008-09 (Actual)	75022 (SB X2 1)	Small Community Infrastructure	$ 0	$16,500
	75025 (SB X2 1)	Prevent or Reduce Groundwater Contamination	$ 0	$ 0
		SUBTOTAL	$ 0	$ 16,500
2009-10 (Actual)	75022 (SB X2 1)	Small Community Infrastructure	$3,826,101	$ 457,571
	75025 (SB X2 1)	Prevent or Reduce Groundwater Contamination	$949,837	$ 0
		SUBTOTAL	$4,775,938	$ 0
		TOTAL	**$4,775,938**	**$ 474,071**

B. General Description of Projects and Project Funding

Water Code Section 83002.7 requirement: "A general description of the project and the project funding made available by an appropriation in the annual Budget Act for the 2008-09 fiscal year or proposed to be made available in the annual Budget Act for the 2009-10 fiscal year."

See attached Table A-1: Proposition 84 Section 75022, Projects Awarded Funding in 2010-11

See attached Table A-2: Proposition 84 Section 75022, Projects Expected to Receive Funding in 2011

See attached Table A-3: Proposition 84 Section 75025, Projects Awarded Funding in 2010-11

See attached Table A-4: Proposition 84 Section 75025, Projects Expected to Receive Funding in 2011

C. Expenditure Plan

Water Code Section 83002.7 requirement: "A description of the manner in which funds have been expended and a plan for the future expenditure of funds."

See attached Table B: Proposition 84 Expenditure Plan.

D. Timeframe for Expenditure

Water Code Section 83002.7 requirement: "An anticipated timeframe for the full expenditure of the appropriation."

Full expenditure of the appropriations pursuant to SB X2 1 is three years from the date of encumbrance. CDPH has requested a reappropriation of the SB X2 1 funds for five years, through fiscal year 2013-14. Complete construction of the projects is expected three years after that, or June 30, 2017. Funding recipients have six months to file a final claim; thus, full expenditure is expected by December 31, 2017.

The appropriation for SB X2 1 for Section 75022 was $50 million, and the appropriation for Section 75025 was $50.4 million. However, less than half of these funds have been made available to CDPH through bond sales in 2010. As shown in the Proposition 84 Spending Plan and as noted in Part B of this report, CDPH did not fully encumber the entire appropriation authorized by SB X2 1 by June 30, 2010. Depending upon bond sales, full encumbrance is not expected to occur until fiscal year 2013-14.

E. Anticipated Timeframe for Project(s) Completion

Water Code Section 83002.7 requirement: "An anticipated timeframe for the full completion of the designated project(s)."

All projects must be completed within three years of execution of a funding agreement.

Table A-1 lists the projects covered by Section 75022 that received executed funding agreements in 2010 and 2011 and their anticipated completion dates.

Table A-2 lists the projects covered by Section 75022 that are expected to receive funding in 2011. Projects are expected to be completed within three years of execution of a funding agreement.

Table A-3 lists the projects covered by Section 75025 that received executed funding agreements in 2010 and 2011 and their completion dates.

Table A-4 lists the projects covered by Section 75025 that are expected to receive funding in 2011. The second round of projects for this section has not been selected yet. The remaining SB X2 1 funds for Section 75025 are expected to be encumbered in fiscal year 2011-12.

Table C (Proposition 84 Section 75022, Feasibility Study Projects Expected to Request Construction Funding) lists projects that are conducting feasibility studies that are expected to request construction funding from Section 75022. These feasibility study projects are expected to be complete by with requests for construction funding coming shortly thereafter.

The Prop 84 program invited a third round of applicants for Section 75022 funding in April 2011. The total amount of Section 75022 funding needed to fully fund the invited projects is estimated to be $65 million.

F. Matching Funds

Water Code Section 83002.7 requirement: "The amount of total matching project funding that is being provided by an entity other than the state."

Section 75022 does not require a match from non-state sources. Section 75025 projects are not required to provide a match, but certain projects are prioritized based on ability to leverage non-state funds. The second round of projects for this section has not yet been selected, so the amount of non-state match is not yet known.

APPENDICES

Table A-1 Proposition 84 Section 75022 Projects Awarded Funding in 2010-11					
	Project Title	**Project Description**	**Project No.**	**Funding**	**Project Completion Date**
1	Lewiston Valley Water Company Drinking Water Intake Improvement Project	Feasibility Study to design intake improvements for the Lewiston Valley WC Treatment Plant.	P84C-5301002-001 (FAA)	$313,500	12/31/2011
2	South Fork Union School District New Well Project	Install new well, storage tank, pumps, and monitoring equipment.	P84C-1502260-001 (FA)	$45,168	9/16/2012
3	Wilmar Union School District Consolidation Project with the City of Petaluma	Construction Project to install water pipeline to connect Wilmar USD's Wilson School to the City of Petaluma.	P84C-4901136-001 (FA)	$65,490	8/31/2012
4	Fairways Tract WC Consolidation Project with the City of Porterville	Construction Project to install pipelines to connect Fairways Tract WC to the City of Porterville	P84C-5400663-001 (FA)	$916,105	1/1/2013
5	Mojave Public Utility District Arsenic Treatment Project	Construction Project to install arsenic treatment system for Mojave Public Utility District.	P84C-1510014-001 (FA)	$1,424,500	9/30/2013
6	Queen Motel Consolidation Project with California American Water Company	Construction Project to install water pipeline to connect Queen Motel and Lonoak water systems to California Water Service Company.	P84C-2700706-002 (FA)	$1,033,000	6/30/2013
7	Latrobe School Well and Arsenic Treatment Project	Feasibility Study to drill new well and install an arsenic treatment system.	P84C-0900410-001 (FA)	$275,470	9/28/2012
8	Lovell School Consolidation Project with Cutler Public Utility District	Construction Project to install water pipeline to connect Lovell School to Cutler PUD.	P84C-5400634-001 (FA)	$185,380	1/31/2012
9	Edmundson Acres Mutual Water Company Consolidation Project with Arvin CSD	Construction Project to install water pipeline to connect Edmundson Acres Mutual Water Company to Arvin CSD.	P84C-1500190-002 (FA)	$19,004	9/9/2012
10	Hillview Water Company Arsenic and Uranium Treatment Project	Feasibility Study to design three treatment plants to remove arsenic and uranium.	P84C-2010007-005 (FA)	$500,000	10/31/2011

Table A-1 Proposition 84 Section 75022 Projects Awarded Funding in 2010-11					
	Project Title	**Project Description**	**Project No.**	**Funding**	**Project Completion Date**
11	Sierra Linda Mutual Water Company New Well Project	Feasibility Study to drill a test well and design well improvements	P84C-2000506-001 (FA)	$495,000	12/1/2011
12	Alpaugh Joint Powers Authority Centralized Arsenic Treatment Project	Feasibility Study to design centralized arsenic treatment plant for Alpaugh JPA.	P84C-5410050-001 (FA)	$278,962	12/1/2011
13	Tranquility Irrigation District New Well Project	Feasibility Study to drill test wells and design new well for Tranquility ID.	P84C-1010030-002 (FA)	$497,000	12/1/2011
14	Caruthers CSD Well and Arsenic Treatment Project	Feasibility Study to drill test wells and design new well and arsenic treatment system for Caruthers CSD	P84C-1010039-009 (FA)	$500,000	11/30/2011
15	Lake Morena Oak Shore Nitrate Treatment and Consolidation Project	Feasibility Study to design nitrate treatment system at Lake Morena Oak Shores MWC and design pipeline to connect the Lake Morena Trailer Resort.	P84C-3700923-001 (FA)	$128,500	9/4/2012
16	Lindsay Strathmore Irrigation District - El Rancho Water System Interconnection Project with Page Moore Water System	Feasibility Study to design interconnection pipeline to connect Lindsay Strathmore Irrigation District (LSID) - El Rancho water system to LSID Page Moore water system.	P84C-5410052-001 (FA)	$163,143	12/31/2011
17	Aerial Acres Mutual Water Company Arsenic Treatment Project	Feasibility Study to design arsenic treatment plant and well improvements for Aerial Acres MWC	P84C-1500405-001 (FA)	$119,974	2/8/2012
18	Arvin Community Services District New Wells and Arsenic Treatment Project	Feasibility Study to design two new wells and five arsenic treatment plants for Arvin CSD	P84C-1510001-001 (FA)	$499,432	1/31/2012
19	City of McFarland Arsenic Treatment Project	Feasibility Study for arsenic pilot plant study and design arsenic treatment system for the City of McFarland.	P84C-1510013-002 (FA)	$173,500	9/1/2011
20	Riverdale Public Utilities District Centralized Arsenic Treatment Project	Feasibility Study to design centralized arsenic treatment system, storage tank, and blending pipelines at Riverdale Public Utilities District.	P84C-1010028-002 (FA)	$499,800	9/9/2011

Table A-1 Proposition 84 Section 75022 Projects Awarded Funding in 2010-11					
	Project Title	**Project Description**	**Project No.**	**Funding**	**Project Completion Date**
21	North Edwards Water District Arsenic Treatment and Consolidation Project	Feasibility Study to design arsenic treatment system and design water pipeline to connect Fountain Trailer Park and Dunes Apartments to North Edwards Water District.	P84C-1510052-003 (FA)	$416,000	12/31/2011
22	Lakeside School Consolidation Project with the City of Bakersfield	Feasibility Study to design water pipeline to connect Lakeside School to the City of Bakersfield.	P84C-1502154-001 (FA)	$39,200	2/28/2012
23	Sunbird Mobile Home Park Consolidation Project with Coachella Valley Water District	Feasibility Study to design water pipeline to connect Sunbird Mobile Home Park to Coachella Valley Water District.	P84C-3301755-001 (FA)	$13,340	1/31/2012
24	North Fork Union School New Well Project	Feasibility Study to design new well for North Fork Union School.	P84C-2000612-001 (FA)	$38,600	4/30/2012
25	Semi Tropic School Consolidation Project with Lost Hills Utility District	Feasibility Study to design water pipeline to connect Semi Tropic School to Lost Hills Utility District.	P84C-1502244-002 (FA)	$17,700	3/31/2012
26	Richgrove Community Services District Consolidation Project with Rodriguez Labor Camp Water System	Feasibility Study to design new well, storage tank, and water pipeline to connect Rodriguez Labor Camp Water System to Richgrove Community Services District.	P84C-5410024-002 (FA)	$100,000	9/24/2012
27	Fairmont School New Well Project	Feasibility Study to design new production well for Fairmont School	P84C-1000112-001 (FA)	$323,117	9/22/2012
28	Kit Carson Elementary School Consolidation project with City of Hanford	Feasibility Study to design water pipeline to connect Kit Carson School to the City of Hanford.	P84C-1600014-001 (FA)	$146,668	4/25/2012
29	Pratt MWC Consolidation Project with the City of Tulare	Feasibility Study to design distribution and water pipelines to connect Pratt MWC to the City of Tulare.	P84C-5410033-003 (FA)	$97,300	2/28/2012
			TOTAL	**$9,324,853**	

Table A-2 Proposition 84 Section 75022 Projects Expected to Receive Funding in 2011					
	Project Title	**Project Description**	**Project No.**	**Funding**	**Project Completion Date**
1	Pauma Valley Mutual Water Company Consolidation Project with Yuima MWD	Feasibility Study to design storage tanks and design water pipeline to connect to Yuima MWD	P84C-3700934-001 (TR)	$282,000	To be determined
2	Apple Ave Water System #3 Consolidation Project with the City of Greenfield	Feasibility Study to design the water pipeline to connect the Apple Avenue Water System to the City of Greenfield.	P84C-2701036-001 (TR)	$64,896	To be determined
3	Tooleville MWC Consolidation Project with the City of Exeter	Feasibility Study to design a storage tank and water pipeline to connect to the City of Exeter.	P84C-5400567-001 (TR)	$81,600	To be determined
4	Cutler Public Utility District New Well and Nitrate Blending Project	Construction Project to install new well, storage tank, and pump station for Cutler Public Utility District.	P84C-5410001-001 (TR)	$2,431,300	To be determined
5	Keeler Community Service District Arsenic Treatment Project	Feasibility Study to design arsenic treatment system.	P84C-1400036-006 (TR)	$50,000	To be determined
6	Pinon Pines Mutual Water Company Fluoride Removal Treatment Project	Feasibility Study to design a fluoride removal treatment system and blending tank.	P84C-1510054-001 (TR)	$447,500	To be determined
7	Long Canyon Water Company Regional Consolidation Project	Feasibility Study to drill test well and design new well, storage tank, and water pipelines to connect 12 water systems.	P84C-1500578-002 (TR)	$499,748	To be determined
8	Rosamond Community Services District Regional Consolidation Project	Feasibility Study to design water pipelines to connect nine small community water systems to Rosamond Community Services District.	P84C-1510018-801 (TR)	$1,440,215	To be determined
9	Kernvale Mutual Water Company Consolidation Project with Erskine Creek Water Company	Feasibility Study to design storage tanks, distribution pipelines, and interconnection pipeline to connect to Erskine Creek Water Company.	P84C-1500364-001 (TR)	$67,000	To be determined
10	Arnold Park (O'Bannon MHP) Consolidation Project with the City of Hollister	Feasibility Study to design water pipeline to connect Arnold Park (O'Bannon MHP) to the City of Hollister.	P84C-3500526-001 (TR)	$45,000	To be determined
11	East Niles Community Services District Regional Consolidation Project	Feasibility Study to design a new well, pump station, pipelines to connect three small water systems to East Niles CSD.	P84C-1510006-801 (TR)	$465,213	To be determined

Table A-2 Proposition 84 Section 75022 Projects Expected to Receive Funding in 2011					
	Project Title	**Project Description**	**Project No.**	**Funding**	**Project Completion Date**
12	City of Hanford Regional Consolidation Project	Feasibility Study to design new well and water pipelines to connect three small community water systems to the City of Hanford.	P84C-1610003-004 (TR)	$500,000	To be determined
13	Hungry Gulch Water System Consolidation Project with Boulder Canyon Water Association Water System	Feasibility Study to design new well and arsenic treatment system, and design water pipeline to connect the Hungry Gulch Water System to the Boulder Canyon Water Association Water System.	P84C-1500436-001 (FA)	$175,000	To be determined
14	Akin Water Company Consolidation Project with the City of Porterville	Feasibility Study to design water pipeline to connect Akin Water Company to the City of Porterville.	P84C-5401038-001 (TR)	$82,000	To be determined
15	R.S. Mutual Water Company Consolidation Project with California Water Service Company	Feasibility Study to design water pipeline to connect R.S. Mutual Water Company to California Water Service Company.	P84C-1500458-001 (TR)	$82,000	To be determined
16	El Adobe POA Water System Consolidation Project with Lamont Public Utility District	Feasibility Study to design storage tank and water pipeline to connect El Adobe POA Water System to Lamont PUD.	P84C-1500493-001 (APP)	$196,720	To be determined
17	City of Santa Rosa Regional Consolidation Project	Feasibility Study to design water pipelines to connect four small community water systems to the City of Santa Rosa.	P84C-4910009-801 (FA)	$467,000	To be determined
18	Washington School Consolidation Project with California American WC	Feasibility Study to a storage tank and water pipeline to connect to California American WC.	P84C-2701221-002 (TR)	$269,600	To be determined
19	Buena Vista School Nitrate Treatment Project	Feasibility Study to design a new well and install nitrate treatment system for Buena Vista School.	P84C-5400919-001 (TR)	$219,000	To be determined
20	CSA 70 W-4 Water System Interconnection Project with High Desert WC	Feasibility Study to design the water pipeline to connect CSA 70 W-4 Water System to High Desert WC.	P84C-3600196-501 (TR)	$260,000	To be determined
21	MCHA Los Banos Center Water System Consolidation Project with the City of Los Banos	Construction Project to install a pipeline to connect MCHA Los Banos Center Water System to the City of Los Banos.	P84C-2400108-001 (TR)	$1,200,000	To be determined

Table A-2 Proposition 84 Section 75022 Projects Expected to Receive Funding in 2011					
	Project Title	**Project Description**	**Project No.**	**Funding**	**Project Completion Date**
22	MD#43 Miami Creek Knolls Water System New Well Project	Feasibility Study to design new well and storage tank for MD#43 Miami Creek Knolls Water System.	P84C-2000557-003 (TR)	$500,000	To be determined
23	Seventh Standard Mutual Water Company Consolidation Project with Oildale Mutual Water Company	Feasibility Study to design the water pipeline to connect Seventh Standard Mutual Water Company Consolidation Project to Oildale MWC	P84C-1500373-001 (FA)	$112,160	To be determined
24	Son Shine Water System Consolidation Project with Arvin CSD	Feasibility Study to design pump station, storage tank, and water pipeline to connect Son Shine Water System to Arvin CSD.	P84C-1500588-001 (TR)	$397,350	To be determined
25	Island Union School Arsenic Treatment Project	Feasibility Study to design arsenic treatment system for Island Union School.	P84C-1600017-002 (FA)	$500,000	To be determined
26	Oak Valley School New Well Project	Feasibility Study to design well and storage tank.	P84C-5400713-001 (TR)	$230,000	To be determined
27	San Benancio School Consolidation Project with California American Water Company	Construction Project to install water pipeline to connect San Benancio School to California American Water Company.	P84C-2701227-003 (TR)	$282,450	To be determined
28	County Water Company Consolidation Project with Elsinore Valley Water District	Feasibility Study to design water pipeline to connect County Water Company to Elsinore Valley Water District	P84C-3302093-501 (TR)	$290,000	To be determined
29	LSID - Tonyville Interconnection with the City of Lindsay	Feasibility Study to design an interconnection with the City of Lindsay.	P84C-5410007-003P (TR)	$262,500	To be determined
30	Beverly-Grand MWC Consolidation with City of Porterville	Feasibility Study to design water pipeline to connect Beverly-Grand MWC to the City of Porterville.	P84C-5400651-001 (TR)	$142,600	To be determined
			TOTAL:	**$12,042,852**	

Table A-3 Proposition 84 Section 75025 Projects Awarded Funding in 2010-11					
	Project Title	**Project Description**	**Project No.**	**Funding**	**Project Completion Date**
1	California State Polytechnic University – Pomona Groundwater Treatment Plant Project	Construction project to install a Reverse Osmosis Treatment facility to reduce contamination at Well #1.	P84G-1910022-801 (FA)	$2,472,300	12/8/2013
2	City of Anaheim Abandoned Well Destruction Project	Construction project to destroy eight abandoned wells near and within the boundaries of a known contaminated plume.	P84G-3010001-801 (FA)	$375,000	7/31/2013
3	City of El Monte Well No. 3 Treatment and Blending Project	Construction project to install Granular Activated Carbon (GAC) treatment system.	P84G-1910038-802 (FA)	$990,413	7/1/2013
4	Department of Toxic Substances Control Hard Chrome/South Central Los Angeles Project	Construction project to install treatment facilities for remediation of hexavalent chromium contamination.	P84G-8400006-801 (FA)	$5,161,805	3/8/2014
5	Eastern Municipal Water District Perris Desalter Project	Construction project to install an iron and manganese removal facility.	P84G-3310009-803 (FA)	$10,000,000	8/31/2011
6	Morro Bay Water Department Desalting Plant Project	Construction project to install a Brackish Water Reverse Osmosis treatment system.	P84G-4010011-801 (FA)	$600,000	7/1/2013
7	West Valley Water District/City of Rialto Wellhead Treatment System Project	Construction project to install Fluidized Bed Bioreactor and Blending treatment at Wells 11 and 6.	P84G-3610004-801 (FA)	$10,000,000	7/1/2013
			TOTAL	**$ 29,599,518**	

Table A-4 Proposition 84 Section 75025 Projects Expected to Receive Funding in 2011					
	Project Title	**Project Description**	**Project No.**	**Funding**	**Project Completion Date**
1	City of Perris Eastern Municipal Water District Enchanted Heights Sewer Project	Proposed construction project to extend the EMWD sewer transmission main to the Enchanted Heights Community and abandoning the existing septic system.	P84G-3310009-801 (TR)	$9,744,830	To be determined
			TOTAL	**$9,744,830**	

CDPH PROPOSITION 84 EXPENDITURE PLAN

Table B

Proposition 84 Expenditure Plan
Chapter 2 – Safe Drinking Water & Water Quality Projects ($300 Million)

Description	2007-08 (Actual)	2008-09 (Actual)	Prior Years 2007/08 - 2008/09 (Actual)	Current 2009-10 (Estimated)	Year 1 2010-11 (Projected)	Year 2 2011-12 (Projected)	Year 3 2012-13 (Projected)	Year 4 2013-14 (Projected)	Year 5 2014-15 (Projected)	Total	SBX2 1 Total
Beginning Balance			300,000,000	286,209,201	259,703,445	205,183,823	136,999,826	72,865,829	31,505,750		
Bond Costs											
Bond Costs subtotal @ 3 ½%			10,500,000	0	0	0	0			10,500,000	
Adjusted Beginning Balance (A)			289,500,000							10,500,000	
SUPPORT BUDGET											
Baseline Support of 16.5 PYs	414,000	1,467,421	1,881,421	2,007,969	2,154,000	2,154,000	2,154,000	1,638,616	1,500,000		
SBX 2 1		9,994	9,994	1,500,000							1,509,994
Total Support (B)	414,000	1,477,415	1,891,415	3,507,969	2,154,000	2,154,000	2,154,000	1,638,616	1,500,000	15,000,000	
LOCAL ASSISTANCE BUDGET											
Section 75021(a) Emergency Grants	889,000	396,884	1,285,884	4,099,000	2,052,616	1,000,000	250,000	250,000	212,500	9,150,000	
75022- SBX2 1				6,898,787	11,913,006	10,000,000	10,000,000	9,678,213		48,490,006	48,490,006
75025 - SBX2 1				10,000,000	38,400,000	0				48,400,000	
75025 - SBX2 1 - SWRCB Contract				2,000,000						2,000,000	50,400,000
Section 75022 - Infrastructure Improvements		113,500	113,500			28,254,997	28,254,997	29,793,250	29,793,250	116,209,994	
Section 75023 – State Match for SRF Capitalization Grant	0	0	0		0	22,875,000	22,875,000	0	0	45,750,000	
Section 75025 – Prevention of Groundwater Contamination			0	0	0	3,900,000	600,000			4,500,000	
Total Local Assistance (C)	889,000	510,384	1,399,384	22,997,787	52,365,622	66,029,997	61,979,997	39,721,463	30,005,750	274,500,000	
Subtotal (B+C)			3,290,799	26,505,756	54,519,622	68,183,997	64,133,997	41,360,079	31,505,750	300,000,000	100,400,000
End of Year Balance (A-(B+C))	1,303,000	1,987,799	286,209,201	259,703,445	205,183,823	136,999,826	72,865,829	31,505,750	0		

Table C Proposition 84 Section 75022 Feasibility Study Projects Expected to Request Construction Funding					
	Project Title	**Project Description**	**Project No.**	**Estimated Total Project Cost**	**Completion Date**
1	Hillview Water Company Arsenic and Uranium Treatment Project	Construction Project to install three treatment plants to remove arsenic and uranium.	P84C-2010007-005C	$4,462,300	To be determined
2	City of McFarland Arsenic Treatment Project	Construction Project to install arsenic treatment system for the City of McFarland.	P84C-1510013-002C	$2,400,000	To be determined
3	Tranquility Irrigation District New Well Project	Construction Project to install new well for Tranquility Irrigation District.	P84C-1010030-002C	$1,690,000	To be determined
4	Alpaugh Joint Powers Authority Centralized Arsenic Treatment Project	Construction Project to install centralized arsenic treatment plant for Alpaugh Joint Powers Authority.	P84C-5410050-001C	$750,000	To be determined
5	Caruthers Community Services District Well and Arsenic Treatment Project	Construction Project to install new well and arsenic treatment system for Caruthers CSD	P84C-1010039-009C	$6,400,000	To be determined
6	Sierra Linda Mutual Water Company New Well Project	Construction Project to install new well for Sierra Linda Mutual Water Company.	P84C-2000506-001C	$2,250,000	To be determined
7	Lindsay Strathmore Irrigation District - El Rancho Water System Interconnection Project with Page Moore Water System	Construction Project to install interconnection pipeline to connect Lindsay Strathmore Irrigation District (LSID) - El Rancho water system to LSID Page Moore water system.	P84C-5410052-001C	$773,000	To be determined
8	North Edwards Water District Arsenic Treatment and Consolidation Project	Construction Project to install arsenic treatment system and install water pipeline to connect Fountain Trailer Park and Dunes Apartment water systems to North Edwards WD	P84C-1510052-003C	$1,070,000	To be determined
9	Lewiston Valley Water Company Drinking Water Intake Improvement Project	Construction Project to install intake improvements for Lewiston Valley Water Company's Surface WTP	P84C-5301002-001C	$1,174,000	To be determined
10	Pratt Mutual Water Company Consolidation Project with the City of Tulare	Construction Project to install distribution pipelines and water pipeline to connect Pratt MWC to the City of Tulare.	P84C-5410033-003C	$3,650,000	To be determined
11	Lakeside School Consolidation Project with the City of Bakersfield	Construction Project to install water pipeline to connect Lakeside School to the City of Bakersfield.	P84C-1502154-001C	$4,850,000	To be determined

Table C Proposition 84 Section 75022 Feasibility Study Projects Expected to Request Construction Funding					
	Project Title	**Project Description**	**Project No.**	**Estimated Total Project Cost**	**Completion Date**
12	Arvin Community Services District New Wells and Arsenic Treatment Project	Construction Project to install two new wells and five arsenic treatment plants for Arvin Community Services District.	P84C-1510001-001C	$4,084,484	To be determined
13	Sunbird Mobile Home Park Consolidation Project with Coachella Valley Water District	Construction Project to install water pipeline to connect Sunbird Mobile Home Park to Coachella Valley WD	P84C-3301755-001C	$527,421	To be determined
14	Kit Carson Elementary School Consolidation project with City of Hanford	Construction Project to install a water pipeline to connect Kit Carson School to the City of Hanford.	P84C-1600014-001C	$2,106,000	To be determined
15	Semi Tropic School Consolidation Project with Lost Hills Utility District	Construction Project to install water pipeline to connect Semi Tropic School to Lost Hills Utility District.	P84C-1502244-002C	$682,000	To be determined
16	North Fork Union School New Well Project	Construction Project to drill new well for North Fork Union School.	P84C-2000612-001C	$1,025,000	To be determined
17	Aerial Acres Mutual Water Company Arsenic Treatment Project	Construction Project to install arsenic treatment plant and well improvements for Aerial Acres Mutual Water Company.	P84C-1500405-001C	$665,446	To be determined
18	Latrobe School Well and Arsenic Treatment Project	Construction Project to drill new well and install an arsenic treatment system.	P84C-0900410-001C	$172,533	To be determined
19	Apple Ave Water System #3 Consolidation Project with the City of Greenfield	Construction Project to install water pipeline to connect the Apple Avenue Water System to the City of Greenfield.	P84C-2701036-001C	$148,056	To be determined
20	Washington School Consolidation Project with California American WC	Construction Project to install a storage tank and water pipeline to connect to California American WC.	P84C-2701221-002C	$1,628,800	To be determined
21	Arnold Park (O'Bannon Mobile Home Park) Consolidation Project with the City of Hollister	Construction Project to install water pipeline to connect Arnold Park (O'Bannon MHP) to the City of Hollister.	P84C-3500526-001C	$446,000	To be determined
22	MD#43 Miami Creek Knolls Water System New Well Project	Construction Project to install new well and storage tank for MD#43 Miami Creek Knolls Water System.	P84C-2000557-003C	$1,890,350	To be determined
23	Son Shine Water System Consolidation Project with Arvin Community Services District	Construction Project to install pump station, storage tank, and water pipeline to connect Son Shine WS to Arvin CSD	P84C-1500588-001C	$2,600,000	To be determined

Table C Proposition 84 Section 75022 Feasibility Study Projects Expected to Request Construction Funding					
	Project Title	**Project Description**	**Project No.**	**Estimated Total Project Cost**	**Completion Date**
24	East Niles Community Services District Regional Consolidation Project	Construction Project to install a new well, pump station, pipelines to connect three small water systems to East Niles CSD.	P84C-1510006-801C	$12,204,450	To be determined
25	Island Union School Arsenic Treatment Project	Construction Project to install arsenic treatment system for Island Union School.	P84C-1600017-002C	$1,430,000	To be determined
26	City of Hanford Regional Consolidation Project	Construction Project to install new well and water pipelines to connect three small community water systems to the City of Hanford.	P84C-1610003-004C	$2,925,882	To be determined
27	Tooleville Mutual Water Company Consolidation Project with the City of Exeter	Construction Project to install a storage tank, water pipeline to connect the Tooleville MWC to the City of Exeter.	P84C-5400567-001C	$3,021,535	To be determined
28	Beverly-Grand MWC Consolidation with City of Porterville	Construction Project to install a water pipeline to connect Beverly-Grand MWC to the City of Porterville.	P84C-5400651-001C	$801,000	To be determined
29	Oak Valley School New Well Project	Construction Project to drill new well and install a storage tank for Oak Valley School.	P84C-5400713-001C	$523,000	To be determined
30	Buena Vista School Nitrate Treatment Project	Construction Project to install a new well and install nitrate treatment system for Buena Vista School.	P84C-5400919-001C	$500,000	To be determined
31	Akin Water Company Consolidation Project with the City of Porterville	Construction Project to install water pipeline to connect Akin WC to the City of Porterville.	P84C-5401038-001C	$315,500	To be determined
32	Richgrove Community Services District Consolidation Project with Rodriguez Labor Camp Water System	Construction Project to install new well, storage tank and water pipeline to connect Rodriguez Labor Camp Water System to Richgrove CSD	P84C-5410024-002C	$4,500,000	To be determined
33	Keeler Community Service District Arsenic Treatment Project	Construction Project to install arsenic treatment system for Keeler CSD	P84C-1400036-006C	$172,533	To be determined
34	CSA 70 W-4 Water System Interconnection Project with High Desert Water Company	Construction Project to install water pipeline to connect CSA 70 W-4 Water System to High Desert Water Company.	P84C-3600196-501C	$2,250,000	To be determined

Table C Proposition 84 Section 75022 Feasibility Study Projects Expected to Request Construction Funding					
	Project Title	**Project Description**	**Project No.**	**Estimated Total Project Cost**	**Completion Date**
35	Lake Morena Oak Shore Nitrate Treatment and Consolidation Project	Construction Project to install a nitrate treatment system at Lake Morena Oak Shores Mutual Water Company (MWC) and install water pipeline to connect the Lake Morena Trailer Resort to Lake Morena Oak Shores MWC.	P84C-3700923-001C	$1,890,350	To be determined
36	Pauma Valley Mutual Water Company Consolidation Project with Yuima Municipal Water District	Construction Project to install storage tanks and water pipeline to connect Pauma Valley Mutual Water Company to Yuima MWD	P84C-3700934-001C	$3,700,000	To be determined
37	City of Santa Rosa Regional Consolidation Project	Construction Project to install water pipelines to connect four small community water systems to the City of Santa Rosa.	P84C-4910009-801C	$2,646,858	To be determined
38	Kernvale Mutual Water Company Consolidation Project with Erskine Creek Water Company	Construction Project to install storage tanks, distribution pipelines and interconnection pipeline to connect Kernvale MWC to Erskine Creek WC	P84C-1500364-001C	$440,000	To be determined
39	Seventh Standard Mutual Water Company Consolidation Project with Oildale Mutual Water Company	Construction Project to install water pipeline to connect Seventh Standard Mutual Water Company Consolidation Project to Oildale MWC	P84C-1500373-001C	$1,890,350	To be determined
40	Hungry Gulch Water System Consolidation Project with Boulder Canyon Water Association Water System	Construction project to drill new well, install arsenic treatment system and install water pipeline to connect the Hungry Gulch Water System to the Boulder Canyon WA	P84C-1500436-001C	$925,000	To be determined
41	R.S. Mutual Water Company Consolidation Project with California Water Service Company	Construction Project to install water pipeline to connect R.S. MWC to California Water Service Company.	P84C-1500458-001C	$115,000	To be determined
42	El Adobe POA Water System Consolidation Project with Eco Resources-Lamont Public Utility District	Construction Project to install storage tank and water pipeline to connect El Adobe POA Water System to Eco Resources-Lamont PUD	P84C-1500493-001C	$1,918,850	To be determined
43	Long Canyon Water Company Regional Consolidation Project	Construction Project to install new well, storage tank, water pipelines to connect 12 water systems to Long Canyon WC	P84C-1500578-002C	$11,970,700	To be determined

Table C Proposition 84 Section 75022 Feasibility Study Projects Expected to Request Construction Funding					
	Project Title	**Project Description**	**Project No.**	**Estimated Total Project Cost**	**Completion Date**
44	Rosamond Community Services District Regional Consolidation Project	Construction Project to install water pipelines to connect ten small community water systems to Rosamond CSD	P84C-1510018-801C	$16,650,000	To be determined
45	Pinon Pines Mutual Water Company Fluoride Removal Treatment Project	Construction Project to install a fluoride removal treatment system and blending tank at Pinon Pines MWC	P84C-1510054-001C	$1,590,000	To be determined
46	County Water Company Consolidation Project with Elsinore Valley Water District	Construction Project to install water pipeline to connect County Water Company to Elsinore Valley Water District	P84C-3302093-501C	$2,000,000	To be determined
47	Riverdale Public Utilities District Centralized Arsenic Treatment Project	Construction Project to install centralized arsenic treatment system, storage tank, and blending pipelines at Riverdale PUD	P84C-1010028-002C	$5,900,000	To be determined
48	Fairmont School New Well Project	Construction Project to install a new production well for Fairmont School	P84C-1000112-001C	$1,500,000	To be determined
			TOTAL	**$127,226,398**	

APPENDIX D

COMPLIANCE ORDERS

Quarterly PICME Violation Reporting

Check CO issuance spreadsheet for newly issued orders for ***CHEMICAL MCL VIOLATIONS****, add to this spreadsheet each quarter f*

System #	System Name	Compliance Order #	Violation Type/Period	Staff	Date Issued
1000005	Big Creek CSD	**03-23-13R-004**	**HAA5 MCL**	SP	6/6/13
1000461	Cargill Meat Solutions Corp. (frmrly Bee	**03-12-08O-007**	**Nitrate MCL**	PD	4/22/08
1000238	Camden Trailer Park	**03-23-09O-018**	**Arsenic MCL**	SP	9/24/09
1000010	Camp Sierra	**03-23-09O-007**	**SWTR Turbidity**	SP	4/14/09
1000580	Campos Brothers Farms (Walnut)	**03-23-11O-003**	**Arsenic MCL**	PD	6/10/11
1000547	Cal Produces Sales Corp	**03-23-12O-007**	**Nitrate MCL**	PD	5/15/12
1010039	Caruthers CSD	**03-23-09O-001**	**Arsenic MCL**	PD	1/15/09
1000536	Con Agra Foods	**03-23-10O-007**	**TTHM MCL**	PD	8/31/10
1000360	Cotton West Ag Management (Vasto va	**03-12-08O-029**	**TTHM MCL**	PD	10/30/08
1000360	Cotton West Ag Management (Vasto va	**03-23-13R-002**	**HAA5 MCL**	PD	4/12/13
1000360	Cotton West Ag Management (Vasto va	**03-23-11O-002**	**Filter Loading Rate**	PD	5/19/11
1000360	Cotton West Ag Management (Vasto va	**03-23-11O-006**	**SWTR CT**	PD	8/8/11
1000248	Double L Mobile Ranch Park	**03-23-11O-004**	**Uranium MCL**	PD	8/1/11
1000405	Doyal's MHP	**03-23-12O-006**	**SWTR GWUDI**	PD	5/1/12
1000577	Dunlap Leadership Academy	**03-23-11O-005**	**Uranium MCL**	PD	8/1/11
1000112	Fairmont School	**03-23-09O-011**	**Nitrate MCL**	SP	5/19/09
1000359	FCSA #32/Cantua Creek	**03-12-08O-003**	**TTHM MCL**	SP	2/14/08
1000359	FCSA #32/Cantua Creek	**03-23-13R-007**	**HAA5 MCL**	SP	8/27/13
1000019	FCSA#30/El Porvenir	**03-12-08O-019**	**TTHM MCL**	SP	10/30/08
1000546	FCSA #49/Five Points	**03-12-23O-012**	**TTHM MCL**	SP	10/30/12
1000546	FCSA #49/Five Points	**03-23-13R-006**	**HAA5 MCL**	SP	8/27/13
1000042	FCWWD 40/Shaver Springs **(Uranium**	**03-23-09O-013**	**Uranium MCL**	SP	6/16/09
1000042	FCWWD 40/Shaver Springs **(Arsenic)**	**03-23-10O-005**	**Arsenic MCL**	SP	4/26/10
1000480	Fowler Packing Company	**03-23-09O-029**	**DBCP MCL**	SP	12/21/09
1009281	Hammonds Ranch	**03-12-08O-020**	**TTHM MCL**	PD	10/30/08
1009027	Harris Farms Headquarters	**03-23-09O-021**	**SWTR CT**	PD	10/6/09
1009027	Harris Farms Headquarters	**03-12-08O-021**	**TTHM MCL**	PD	10/30/08
1000213	Harris Farms/Horse Barn	**03-23-09O-016**	**TTHM MCL**	PD	9/8/09
1000213	Harris Farms - Horse Division	**03-23-11O-010**	**SWTR CT**	PD	12/20/11
1009028	Harris Farms South #101-144	**03-12-08O-009**	**TTHM MCL**	PD	4/29/08
1009078	Harris Feeding Company	**03-12-08O-022**	**TTHM MCL**	PD	10/30/08
1009078	Harris Feeding Company	**03-23-11O-009**	**SWTR CT**	PD	12/20/11
1000214	Harris Ranch Restaurant	**03-12-08O-008**	**TTHM MCL**	PD	4/29/08
1000214	Harris Ranch Restaurant	**03-23-13R-005**	**HAA5 MCL**	PD	8/22/13
1010044	Huron, City of	**03-12-07O-004**	**TOC TT**	SP	7/6/07
1010044	Huron, City of	**03-12-08O-016**	**TTHM MCL**	SP	5/15/08
1000177	I-5 & Panoche	**03-12-08O-011**	**TTHM MCL**	PD	4/29/08
1000178	I-5 & 198 Property Services	**03-12-08O-010**	**TTHM MCL**	PD	4/29/08
1000459	Johnny Quick #127	**03-23-10O-002**	**Nitrate MCL**	SP	2/10/10
1000176	JR Simplot	**03-23-10O-006**	**Uranium MCL**	EL	7/19/10
1000053	Lanare CSD	**03-23-09O-010**	**Arsenic MCL**	PD	5/18/09
1000054	Las Deltas MWS	**03-23-12O-005**	**Pressure**	PD	4/6/12
1000445	Linda Vista Farms	**03-23-10O-010**	**Uranium MCL**	SP	11/29/10
1000469	Lion Raisins Employee Labor Camp	**03-23-09O-026**	**Nitrate MCL**	PD	12/10/09
1000576	Lone Star Dehydrator	**03-23-09O-020**	**DBCP MCL**	SP	9/29/09
1000490	Los Gatos Tomato Products	**03-23-09O-015**	**TTHM MCL**	PD	9/8/09
1000490	Los Gatos Tomato Products	**03-23-12O-003**	**SWTR CT**	PD	3/2/12

Quarterly PICME Violation Reporting

Check CO issuance spreadsheet for newly issued orders for ***CHEMICAL MCL VIOLATIONS****, add to this spreadsheet each quarter f*

System #	System Name	Compliance Order #	Violation Type/Period	Staff	Date Issued
1000056	Meadow Lakes Club	**03-12-08O-018**	**Uranium MCL**	PD	9/19/08
1009091	Olam Spices & Vegetables (Key Foods)	**03-23-11O-001** **03-23-13R-008**	**Arsenic MCL**	PD	3/1/11 8/22/13
1009092	Olam Spices & Vegetables (Key Foods)	**03-23-13R-001**	**TTHM MCL**	PD	3/5/13
1009039	Pappas & Company (Mendota)	**03-12-08O-015**	**TTHM MCL**	PD	5/14/08
1009039	Pappas & Company (Mendota)	**03-23-10O-005**	**SWTR CT**	PD	8/3/10
1009006	Pappas & Company (Coalinga)	**03-12-08O-025**	**TTHM MCL**	PD	10/30/08
1009006	Pappas & Company (Coalinga)	**03-23-09O-027**	**SWTR CT**	PD	12/21/09
1009006	Pappas & Company (Coalinga)	**03-23-11O-007**	**HAA5 MCL**	PD	9/15/11
1009232	Peck Ranch **(aka Baker Farms)**	**03-12-08O-027**	**TTHM MCL**	PD	10/30/08
1000207	Pershing High School	**03-12-080-036**	**Nitrate/Ur MCL**	SP	11/17/08
1000472	PG&E Helms Support Facility	**03-23-09O-009**	**Arsenic MCL**	PD	5/1/09
1009035	Pilibos Brothers Ranch	**03-23-09O-028**	**SWTR CT**	PD	12/21/09
1000452	Ray Moles Farm	**03-23-12O-009**	**Nitrate MCL**	PD	9/6/12
1000505	Ray & Larry Moles Farm	**03-23-12O-010**	**Nitrate MCL**	PD	9/6/12
1009258	San Andreas Farms	**03-12-080-034**	**TTHM MCL**	PD	10/30/08
1009258	San Andreas Farms	**03-23-10O-003**	**SWTR CT**	PD	3/4/10
1009259	San Andreas Farms	**03-23-13R-003**	**HAA5 MCL**	PD	4/25/13
1009035	Simonian Farms (Pilibos Brothers Ranc	**03-12-080-033**	**TTHM MCL**	PD	10/30/08
1009222	Terra Linda	**03-12-08O-028**	**TTHM MCL**	PD	10/30/08
1000485	Tessenderlo Kerley	**03-23-12O-008**	**Nitrate MCL**	PD	8/23/12
1000584	True Organics	**03-23-11O-008**	**Arsenic MCL**	SP	12/15/11
1009172	Vaquero Farms	**03-23-09O-002**	**TTHM MCL**	PD	1/15/09
1000221	Washington Union High School	**03-23-09O-005**	**DBCP MCL**	SP	4/10/09
1009214	Westside Harvesting (Steve Marks)	**03-12-08O-026**	**TTHM MCL**	PD	10/30/08
1000369	Zonneveld Dairy	**03-23-09O-014**	**Arsenic MCL**	SP	7/29/09
1000369	Zonneveld Dairy	**03-23-12O-011**	**Nitrate MCL**	SP	9/10/12
1000182	Burrell Union School		**Lead AL Exceedance**	PD	
1009111	SCE/Big Creek Powerhouse #1		**Lead AL Exceedance**	SP	
1000112	Fairmont School		**Lead AL Exceedance**	SP	
1000276	Orange Center School		**Lead AL Exceedance**	SP	1/14/13
1000040	FCWWD 37/Mile High		**Copper AL Exceedance**	SP	6/24/13
EPA Administrative Orders (CDPH does not enter violations)					
1010030	Tranquillity Irrigation District	**EPA Admin Order**	**Arsenic MCL**		9/25/2008?
1010028	Riverdale PUD	**EPA Admin Order**	**Arsenic MCL**		9/25/2008

Tehachapi District
Water Systems with
Chemical MCL Violations and Enf. Actions
March 1, 2013

SYSTEM #	SYSTEM NAME	SYSTEM TYPE	CONTAMINANT	Compliance Order #	Date Issued	STATUS	Jurisdiction	On Valley Floor? (Yes/No)
1500096	Old River Road MWC	C	Uranium	03-19-09O-045	5/13/2009	Applied for SRF planning funds in 2012. Application was determined incomplete.	Visalia District (#12)	Yes
1500364	Kernvale Mutual Water Company	C	Uranium & Arsenic	03-19-09O-002	1/26/2009	P84 planning project for consolidation with Erskine Creek Water Company underway - FA already issued.	Tehachapi District (#19)	No
1500373	Seventh Standard Mutual Water Company	C	Nitrate	03-19-07O-006	8/14/2007	Pursuing P84 construction funds for consolidation with Oildale MWC. Construction funding application already received; wating for issuance of FA by HQ.	Visalia District (#12)	Yes
1500378	Maher Mutual Water Company	C	Arsenic	03-19-09O-003	1/26/2009	Part of Vaughn Water Company Regional consolidation project. Waiting for issuance of planning FA.	Visalia District (#12)	Yes
1500393	Rainbird Valley MWC	C	Uranium/Nitrate	03-12-99O-002	5/5/2009	Part of Long Canyon regional planning project. Waiting for issuance of FA by HQ.	Tehachapi District (#19)	No
1500406	Tradwinds Water Association	C	Uranium	03-19-09O-044	3/28/2009	Part of Long Canyon funding project; waiting for issuance of FA.	Tehachapi District (#19)	No
1500409	Brock MWC	C	Nitrate	03-19-08O-006	9/22/2008	Part of vaughn Water Company's regional consolidation project; waiting for issuance of P84 planning funding agreement.	Visalia District (#12)	Yes
1500436	Hungry Gulch Water System	C	Arsenic	03-19-09O-007	1/26/2009	P84 planning FA already issued. Boulder Canyon Water Association with arsenic MCL violation to physically consoldate with Hungry Guclh.	Tehachapi District (#19)	No
1500449	Fourth Street Water System	C	Arsenic	03-19-09O-008	1/26/2009	P84 planning FA already issued; plan to drill a new well.	Tehachapi District (#19)	No
1500458	R.S. Mutual Water Company	C	Uranium & Arsenic	03-19-03O-010	8/13/2003	Waiting for some items to be submitted by Cal Water for issuance of P84 planning FA for consolidation with CWS-Kernville System.	Tehachapi District (#19)	No
1500475	Krista Mutual Water Company	C	Fluoride	03-09C-040	5/26/2009	Waiting for issuance of SRF FA.	Tehachapi District (#19)	No
1500493	El Adobe Property Owners	C	Arsenic	03-19-10O-002	9/27/2010	Pursuing P84 planning funds - possibility of consolidation with Lamont PUD	Visalia District (#12)	Yes
1500494	Wilson Road Water Company	C	Nitrate	03-19-09O-041	2/24/2009		Visalia District (#12)	Yes
1500516	Tut Brothers Farm #96	C	Waterworks Std Violat	03-19-12O-001	1/17/2012	Currently hauling water.	Visalia District (#12)	Yes
1500521	Boulder Canyon Water Association	C	Arsenic	03-19-09O-014	1/26/2009	Part of Hungry Gulch P84 planning project for consolidation with Hungry Gulch.	Tehachapi District (#19)	No
1500525	Lake View Ranchos Water Co.	C	Arsenic	03-19-09O-015	1/26/2009	Pursuing P84 planning funds.	Tehachapi District (#19)	No
1500544	Enos Lane PUD	C	Arsenic	03-19-12O-005	7/6/2012	Pursuing P84 and SRF funding to drill a new well and blending treatment.	Visalia District (#12)	Yes
1500561	Round Mountain Water Company	C	Uranium	03-19-06O-001	3/9/2006	Planning to drill a new well using its own funds.	Visalia District (#12)	Yes
1500569	Valley View Estates MWC	C	Nitrate	03-19-07O-003	8/3/2007	System is on SRF PPL but haven't applied for funding.	Tehachapi District (#19)	No
1500575	San Joaquin Estates MWC	C	Nitrate	03-19-00O-003	11/15/2000	Pursuing SRF funding to correct the problem; Later this year, the Department is going to invite the Water Company to submit a full SRF loan application for a consolidation project with East Niles CSD. A temporary intertie with East Niles CSD was in operation from March to early May 2006 when Water Company's well had mechanical breakdown.	Visalia District (#12)	Yes
1500588	Sonshine Properties	C	Nitrate & DBCP	03-19-12O-007	7/8/2012	P84 planning FA already issued. Plan to consoldiate with Arvin CSD.	Visalia District (#12)	Yes
1502017	Wheeler Farms Headquarters	C	Nitrate	03-12-95O-004	4/27/1995	Bottled water being provided.	Visalia District (#12)	Yes
1502383	Nord Road Association	C	Arsenic	03-19-09O-024	1/26/2009	Part of Vaughn Water Company Regional consolidation project. Waiting for issuance of planning FA.	Visalia District (#12)	Yes
1502699	East Wilson Road Water Company	C	Nitrate	03-19-01O-004	10/3/2001	Part of East Niles CSD P84 regional consolidation planning project.	Visalia District (#12)	Yes
1503509	Anne Sippi Clinic	C	TTHM & HAA5	Only Letter Issued	6/23/2011	Prop 50 project may pay for the improvements needed.	Visalia District (#12)	Yes
1510051	Lebec CWD	C	Fluoride	03-19-09O-047	12/23/2009	Pusruing SRF for planning funds. Waiting for isuance of FA.	Tehachapi District (#19)	No
1510054	Pinon Pines MWC	C	Fluoride & Arsenic	03-19-11O-001	4/22/2011	Prop 84 planning FA issued. Test well done; waiting for fluoride pilot study. A second funding agreement to be issued to allow more time and money to complete the planning project.	Tehachapi District (#19)	No

CO = Compliance Order
PN = Public Notification
PWS = Public Water System
MCL = Maximum Contaminant Level
M/R = Monitoring and Reporting
RWQCB = Regional Water Quality Control Board
SNC = Significant Non-Complier
SRF = State Revolving Fund

Compliance Orders DEADLINE TRACKING- VISALIA DISTRICT

STAFF	System #	System Name	Compliance Order #	CO Issue Date	Violation Type	Source
EPA Administrative ORDERS						
CJF	1610001	Armona CSD	EPA Adm.		**Arsenic MCL Exc**	
CJF	1510001	Arvin CSD	EPA Adm.		**Arsenic MCL Exc**	Submit plan, Qtrly prog repts, Qtrly monit, Qtrly PN (w/proof)
ATF	1610002	Avenal, City of	EPA Adm. 2011-6000 & Adm Ord 2001-6000	3/25/2011	**DBP (TTHMs/HAA5)**	Compliance due by 6/30/13, Qtrly prog repts, Qtrly monit, Qtrly PN w/proof?.
ATF	1610002	Avenal, City of	EPA Adm. 2004-6023	3/25/2004	**DBP (TOC)**	
CJF	1510005	Delano, City of	EPA Adm. 2008-6020	9/25/08	**Arsenic MCL Exc**	**Wells 4,12,19,20,21,22,23,24 & 26.** Submit plan, RAA must meet MCL by 6/30/10, Qtrly Arsenic monit, Qtrly prog repts.
Compliance Orders Issued						
BP	5410050	Alpaugh Joint Powers	03-12-080-040	12/18/08	**Arsenic MCL Exc**	**For Wells 1 & 10.** Submit plan, Qtrly prog repts, Qtrly PN (w/proof), Qtrly monitoring.
CJF	1510001	Arvin CSD	03-12-04O-002	6/15/04	**Nitrate**	**Well 9:** Submit plan, Qtrly PN (w/proof), Qtrly NO3 monitoring.
	1500409	Brock MWC	03-19-08O-006	9/22/2008	**Nitrate**	DO THEY NEED TO BE SOX'D?
ATF	5410001	Cutler PUD	03-12-06O-002	10/13/05	**DBCP MCL Exc**	**For Well 6:** Submit Qtrly prog repts, monthly prod rept, Qtrly PN (w/proof), Min use of W6, continue SRF project.
ATF	5410001	Cutler PUD **(starts 4Q-12)**	03-12-12O-006	9/25/12	**Nitrate**	**For Well 6.** Submit plan (due , Qtrly prog rept, Qtrly monit NO3 & coliform to waste, Qtrly PN (w/proof) if used, monthly prod repts. Minimize use of W6. Notify Dept of plannned use. Notify Dept w/in 24 hrs of emerg use & T1 PN immediate.
BP	5400665	Del Oro - River Island No. 1	03-12-11O-003	11/18/11	**Nitrate**	**For Well 2** - Qtrly/monthly sampling, sample to waste if not delivering to system, immediate PN w/proof if used & exc'ds, monthly prod repts, min use.
BP	5400665	Del Oro - River Island No. 1	03-12-11O-003	11/18/11	**Uranium MCL Exc**	**Uranium: Wells 2, 5, 14 & 34.** Qtrly monit, sample to waste if not being used in system, Qtrly PN w/proof req'd when exc'd & used in system, monthly prod rept, min use.
BP	5402048	Del Oro - River Island No. 2	03-12-080-031	10/16/08	**Nitrate**	**Well 2, sometimes Well 1**
LR	5410034	Del Oro Pine Flat	03-12-09O-007	9/16/09	**Uranium**	**Barn & Meadow Wells:** Submit plan, Qtrly prog reprts, Qtrly PN w/proof, Qtrly monitor for GA & UR.
	1502699	East Wilson Road WC	03-19-01O-004	10/4/01	**Nitrate**	
	1500493	El Adobe POA	03-19-010O-002	9/27/2010	**Arsenic**	**Wells 1 & 2:** Submit plan, Qtrly prog reports, Qtrly PN (w/proof), continue Qrtly monitoring
	1500544	Enos Lane PUD	03-19-12O-005	7/6/2012	**Arsenic**	**Wells 1 & 2:** Submit plan, Qtrly prog reports, Qtrly PN (w/proof), continue Qrtly monitoring
LR	5410003	Exeter, City of	03-12-04O-001	4/16/04	**DBCP MCL Exc**	**Well 6:** Submit plan, monthly prod repts, Qtrly DBCP monit, PN w/proof when used.
	1500584	Gooselake WC	03-19-090-040	2/9/2009	**Nitrate**	
ATF	1510024	Greenfield CWD	03-12-10O-001	3/4/10	**Arsenic MCL Exc**	**For Berkshire & Taft wells only.** Submit Qtrly prog repts, Qtrly PN (w/proof), continue Qtrly monit.
BP	5400968	Improvement Dist. #1	**None on File**		**SWTR TT (inadequate treatment)**	
ATF	5410019	Ivanhoe PUD **(starts 3Q-12)**	03-12-12O-005	9/20/12	**Nitrate**	**For Well 7.** Submit plan, Qtrly prog rept, Qtrly monit NO3 & coliform to waste, Qtrly PN (w/proof) if used, monthly prod repts. Minimize use of W7. Notify Dept of plannned use. Notify Dept w/in 24 hrs of emerg use & T1 PN immediate.
SS	1510802	Kern Valley State Prisc	03-12-080-037	12/12/08	**Arsenic MCL Exc**	Submit project plan, Qtrly prog repts, Qtrly PN (w/proof) if source is used, Qtrly monit.
CJF	1610009	Kettleman City CSD	03-12-09O-003	1/23/09	**Arsenic MCL Exc**	Submit Qtrly prog repts, Qtrly PN (w/proof), continue Qtrly monit.
SS	1510012	Lamont PUD	03-12-080-039	12/18/08	**Arsenic MCL Exc**	**For Wells 12 & 16.** Submit plan, Qtrly prog rept, Qtrly PN (w/proof).
SS	1610005	Lemoore, City of	03-12-11O-002	5/23/11	**TTHM MCL**	Submit quarterly PN (w/proof), quarterly monitoring, written response to directives.
SS	5410006	Lindsay, City of	03-12-12O-003	3/16/12	**DBCP MCL Exc**	**Well 14:** Improv plan, Submit Qtrly Prog Repts, Qtrly PN w/proof, Qtrly monit, Qtrly prod repts.

Compliance Orders DEADLINE TRACKING- VISALIA DISTRICT

STAFF	System #	System Name	Compliance Order #	CO Issue Date	Violation Type	Source
BP	1610700	LNAS	03-12-08O-006	4/16/08	**TTHM MCL**	Submit plan, Qtrly prog rept, Qtrly PN (w/proof).
ATF	5410052	LSID - El Rancho	03-12-05O-005	9/29/05	**SWTR-No Filtration**	Submit plan, Qtrly PN (w/proof).
ATF	5410037	LSID Page Moore	03-12-09O-008	11/23/09	**TTHM & HAA5**	Submit Qtrly PN with proof.
ATF	5410007	LSID - Tonyville	03-12-05O-004	9/29/05	**Nitrate**	Submit plan, Qtrly PN (w/proof), collect NO3 and coliform data when high nitrate well is used.
ATF	5410007	LSID Tonyville	03-12-07O-003	3/23/07	**TTHM/HAA5 MCL Exc**	Submit Monitoring plan, Qtrly prog rept, Qrtrly PN (w/proof).
ATF	5410007	LSID-Tonyville	03-12-08O-002	2/5/08	**Perchlorate MCL**	**For S.Lindsay Hts, S.Sect 8 & Stark Sect 8 wells**: Submit Qrtrly PN (w/proof), Qtrly monit.
	1500378	Maher MWC	03-19-09O-003	1/23/2009	**Arsenic**	**Well 01:** Submit plan, Qtrly PN (w/proof), Qtrly monitoring, Qtrly prog rept
CJF	1510013	McFarland, City of	03-12-12O-004	5/8/12	**Arsenic MCL Exc**	**Garzoli well:** Improv plan, Submit Qtrly Prog Repts, Qtrly monit, Qtrly PN w/proof
	1502383	Nord Rd WA	03-19-09O-024	1/23/2009	**Arsenic**	**Well 01:** Submit plan, Qtrly PN (w/proof), Qtrly monitoring, Qtrly prog rept
BP	5400506	North Kaweah MWC	2011-16 (Issued by County)	9/14/11	**Waterworks Standard Non-Compliance**	
BP	5400506	North Kaweah MWC	**None on File**		**SWTR TT (inadequate treatment)**	
	1500585	Oasis POA	01-19-09O-018	1/23/2009	**Arsenic**	**Well 03:** Submit plan, Qtrly PN (w/proof), Qtrly monit, Qtrly prog rept
	1500096	Old River MWC	03-19-09O-045	4/3/2009	**Uranium**	
SS	5410009	Pixley PUD	03-12-09O-001	1/21/09	**Arsenic**	**Wells 1,2A & 3:** Submit plan, Qtrly prog rept, Qtrly PN (w/proof), continue Qtrly monit.
ATF	5400682	Plainview MWC - Cent	CO 2011-10	5/24/11 by Tulare Co.	**Nitrate**	**Well 01** 2012 Permit: Qtrly PN & proof, Qtrly monit for NO3.
CJF	5410033	Pratt PUD	03-12-010O-002	2/1/10	**Arsenic**	**For Well 3 only** - Submit Qtrly prog rept, Qtrly PN (w/proof), Qtrly monit.
ATF	5410024	Richgrove CSD	03-12-09O-005	5/1/09	**Arsenic**	**For Well 4.** Submit Qtrly prog rept, Qtrly PN (w/proof), Qtrly monit.
	1500561	Round Mtn WC	03-19-06O-001	3/9/2006	**Uranium**	
	1500575	San Joaquin Estates MWC	03-19-00O-003	12/1/2000	**Nitrate**	
	1500373	Seventh Standard MW	03-19-07O-006	8/13/07	**Nitrate**	
SS	1510019	Shafter, City of	03-12-11O-001	2/10/11	**Arsenic**	**For Well 17 only** - Submit Qtrly prog repts (1st report due 4/11/11), Qtrly PN (w/proof), Qtrly monit.
BP	5400747	Sierra Lodge	03-12-12O-001	1/18/12	**SWTR**	**Req'd to meet 0.1 NTU in 95%.** Notify w/in 24 hrs >0.5 NTU, monthly PN if SWTR req'ts exceeded, submit PNProof, submit Qtrly prog repts starting 4/10/12. Plan & timeline due by 2/17/12.
	1500588	Son Shine Properties	03-19-01O-002	8/3/2001	**Nitrate & DBCP**	**For Well 1 (Standby).** Submit Qtrly PN (w/proof), Qtrly monit.
	1500588	Son Shine Properties	03-19-08O-007	10/10/2008	**DBCP**	**For Well 2.** Submit Qtrly PN (w/proof), Qtrly monit.
	1500588	Son Shine Properties	03-19-12O-007	7/3/2012	**Nitrate**	**For Well 2.** Submit Qtrly prog repts, Qtrly PN (w/proof), Qtrly monit.
BP	5410503	NPS-Wolverton	03-12-07O-001	1/24/07	**TTHM/HAA5 MCL Exc**	Submit Improvement plans, Qtrly prog repts, Qtrly PN (w/proof).
BP	5401006	UC Davis School of Ve	03-12-09O-004	4/17/09	**Nitrate**	**For Well 2.** Submit Qtrly prog repts (1st report due 6/1/09), Qtrly PN (w/proof), Qtrly monit.
	1502017	Wheeler Farms	03-12-95O-004 Amended	1/12/1995	**Nitrate**	**For Well 1.** Submit Qtrly PN (w/proof), Qtrly monit, Ok to provide bottled water, moratorium on add'l hses & facilities.
	1500494	Wilson Road Water Community	03-19-09O-042	2/24/2009	**Nitrate**	
	5400108	Burnett Road Water S	03-12-05O-009	10/17/05	**No water for 2 wk 7/01**	*No data in the Tipton file for this system
INACTIVE SOURCES						
SS	5410006	Lindsay, City of	03-12-08O-001	1/24/08	**Perchlorate MCL**	**For Well 11-INACTIVE No Power supplied**: Submit plan, Qtrly PN (w/proof), min use.
SS	5410026	Poplar CSD	03-12-010O-003	7/23/10	**Nitrate**	**For Well 1 (South)** - Made inactive, submit prod repts monthly, conduct Qtrly NO3 & coliform monit (flush to waste), submit Qtrly prog repts, notify Dept & public of planned use.

APPENDIX E

COMMUNITY PROFILE DESCRIPTIONS

Community Profiles

Tulare Lake Basin
Disadvantaged Communities Pilot Study

Management and Non-Infrastructure Section

2014

Community Profiles
Tulare Lake Basin Disadvantaged Community Pilot Study

Community	Entity	County	Water Service	Sewer Service	Range of Connections					
					<15	15-50	51-200	201-500	501-2000	>2000
Akin	Private	Tulare	XXX			XXX				
Allensworth	CSD	Tulare	XXX				XXX			
Alpaugh	District	Tulare	XXX					XXX		
Beverly Grand	MWC	Tulare	XXX			XXX				
Biola	CSD	Fresno	XXX	XXX				XXX		
Crider	MWC	Kern	XXX		XXX					
East Orosi	CSD	Tulare	XXX	XXX			XXX			
Fairways Tract	MWC	Tulare	XXX	X			XXX			
Hardwick	MWC	Kings	XXX			XXX				
Kelso Assoc	Assoc	Kern	XXX		XXX					
Kettleman City	CSD	Kings	XXX	XXX				XXX		
Lamont	PUD	Kern	XXX	XXX						XXX
Lanare	CSD	Fresno	XXX				XXX			
Laton	CSD	Fresno	XXX	XXX				XXX		
Lemon Cove	District	Tulare	XXX	XXX		XXX				
London	CSD	Tulare	XXX	XXX				XXX		
Matheny Tract	MWC	Tulare	XXX					XXX		
Pixley	PUD	Tulare	XXX	XXX					XXX	
Plainview	MWC	Tulare	XXX					XXX		
Rexland Acres	CSA	Kern	X	XXX					XXX	
Richgrove	CSD	Tulare	XXX	XXX					XXX	
Sultana	CSD	Tulare	XXX	XXX			XXX			
Teviston	CSD	Tulare	XXX				XXX			
Tooleville	MWC	Tulare	XXX	X			XXX			
Tract 92	CSD	Tulare	XXX				XXX			
West Goshen	MWC	Tulare	XXX				XXX			

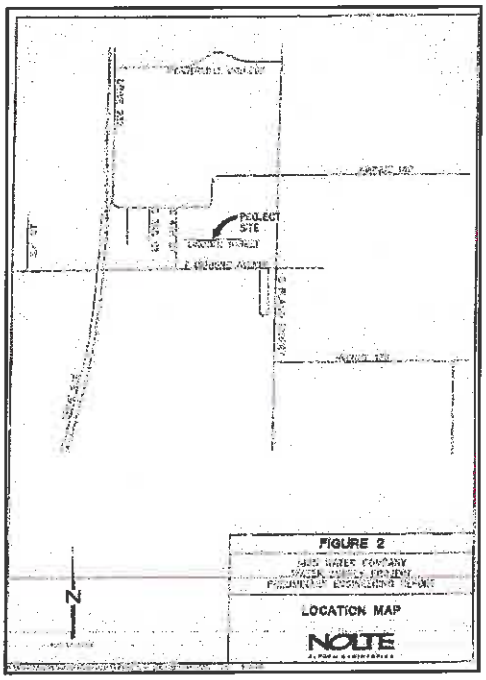
Entity Provided Service	XXX
Service by Others	X

AKIN WATER SYSTEM

15-50 Connections Range
(26 Connections)

Location and Introduction

The Tulare County neighborhood that encompasses the neighborhood served by the Akin Water System is located just southeast of the City of Porterville.



1. **When was community established and why**
   Housing in the area was apparently first developed in the 1940s to serve the new development along Lincoln St. The Akin brothers (James and Bill) were developers; they set up the water company to further the development.

2. **How old are the systems**

   This system was apparently developed as part of the issuance of building permits by the County of Tulare. It is uncertain how long the water system existed prior to 1986 when the County requested the system's owner apply for a Water Supply Permit which thereafter was issued in 1987.

3. **Median household income**

Per the last decennial census to calculate median household income, the 2000 Census indicated the median annual income for households in Tulare County Census Tract 41.02 Block Group 1 that incorporates the neighborhood that represents the Akin Water System, was $28,824 or 60.7% of the statewide median household income at that time. Since then the US Census Bureau no longer asks the income question in the decennial census, but rather collects income data through the continually occurring American

expressed as a 5-year adjusted average. The median annual household income for the Year 2000 Census and the previous three rounds of ACS are expressed as:

Period	MHI	Margin of Error	% of State MHI
2000	$28,824		60.7%
2005-09	$33,375	+/- $9,807	55.3%
2006-10	$24,793	+/- $8,067	40.7%
2007-11	$24,439	+/- $3,393	39.7%

Based on the Census data listed above, residents served by the Akin Water System can be viewed as living in a severely disadvantaged community with a median household income less than 60% of the statewide median.

4. Monthly sewer rates and water rates, if known.

There is no sewer service for residents. The neighborhood is dependent on individual septic tank systems for sewage disposal. The current water flat rate is $30 / month. This is approximately 1.5% of the 2006-10 estimated median household income for the neighborhood.

5. Billing methods for the community systems. *Does the community use the property tax rolls to collect annually or semi-annually? Are there other services that might be on the same bill? Are bills paid by mail or is there an office drop off point? Discuss how this works for very small communities that do not have a formal billing process.*

The Water Company operates its water system totally as an enterprise fund with all operating revenue generated from customer user fees. Customers pay in advance every two months. The system owner's wife generates bills, collects payments, and makes deposits to a bank account. Residents can mail or drop off payments at the owner's house, but the owner lives on the other side of town from the Lincoln St neighborhood. The owner accepts checks and money orders.

6. Are systems in the black or in debt?

The system carries no debt. It has little in the way of cash reserves. In the fiscal year 2009-2010, the water system's financial situation was as follows:

Description	Water System	
Cash beginning of year	$	3,900
Operating Income	$	8,175
Operating Expense	$	9,184
Operating Exp. (w/o Dep.)	$	9,184
Non-operating Revenue	$	0.00
Non-operating Expenses	$	136
Cash end of year	$	2,755
Change in Net Assets	$	(1,145)

7. Are systems run as a business or are the systems dealt with more issue by issue as they come

The system is run as a business; in fact, it is a business, though not a profitable one.

8. Range of household budgets in the community *Discuss how much is spent on utilities such as sewer and water, if known. Are there discretionary funds in the typical households. If water or sewer rates go up what might get cut.*

Akin Water System represents an area that is severely disadvantaged, with 2005-09 ACS MHI indicating an MHI of 55% of the statewide MHI. The 2005-09 ACS indicates the following range of household incomes in the community:

Census Tract 41.02, California	Annual Household Income Estimate	Margin of Error
Less than $10,000	12.5%	+/- 9.5
$10,000 to $14,999	8.3%	+/- 7.8
$15,000 to $24,999	9.1%	+/- 7.3
$25,000 to $34,999	23.3%	+/- 11.9
$35,000 to $49,999	13.1%	+/- 7.4
$50,000 to $74,999	26.7%	+/- 12.6
Median income (dollars)	33,375	+/- 9,807

An estimated 30% of households have annual incomes less than $25,000 and 53% of households have annual incomes less than $35,000. As such, there is very little disposable income in the community.

9. Population served

The Akins Water Company serves 26 dwellings with a population of approximately 85 persons.

10. Short description of water systems and sewer systems including number of connections adequacy of backup systems and MCL challenges if known.

There is no community wide sewer system that serves the neighborhood provided water by the Akins Water System. The community depends on individual on-site septic tank systems for wastewater disposal.

The Akins Water System has 26 connections servicing 26 residences.

The water system is supplied by two water wells, each of which produces water exceeding the Maximum Contaminant Level for nitrate. The south well (#1) which is the system's primary well is located on Lincoln Street was drilled to a depth of 180 feet, is equipped with a 3 hp submersible pump and pumps into a 86 gallon hydropneumatic tank. The north well (#2) which is the system's back-up well was drilled to a depth of 180 feet, is equipped with a 1 hp submersible pump and pumps into four (4) hydropneumatic tanks totaling 220 gallons. As such, the Water Company has a back-up source of water though not one that provides potable water.

Water pumped from the wells has intermittently exceeded the nitrate Maximum Contaminant Level set by EPA and CDPH. The chronic on again and off again problem with Akin Water Company's water quality has been the nitrate levels of water produced from the community's two wells. Attached is a table listing nitrate levels from both wells from 1989 through October 2012. This table shows that the east and west wells have produced water exceeding the nitrate MCL 6 and 4 times respectively over this period, though not over the MCL since 2006.

Akin Water System **Nitrate Levels in Active Wells** Nitrate MCL = 45 ppm		
Date	**East Well #1** (ppm)	**West Well #2** (ppm)
3/9/1989	32	
6/24/1992	33	
7/30/1996	44	
4/29/1998		45
6/8/1999	54	
11/29/1999	52.7	
10/17/2000		49
10/17/2000	45	
6/19/2001	42.6	52.6
12/3/2001		45
7/2/2002	50	41
12/5/2002	41	38
12/15/2003	49	36
6/15/2004	42	
2/8/2006	47	
3/12/2007	**44**	**43**
1/8/2008	39	40
1/14/2008	38	
2/4/2009	36	36
5/27/2009	33	27
11/12/2010	35	35
10/14/2011	26	26
10/19/2012	19	19
Times Exceeding MCL	6	4

11. Existing governing body such as County Service District, Public Utility District, Mutual water system, etc.

The Akin Water Company is governed by the owner Jim Akin.

12. Decision making process *Is there a board of directors, designated lead home owner, long time unofficial leader, or is there a lack of good decision making process. History on this would be good.*

The water system owner makes decisions as needed to keep the system in operation. The system was originally co-owned with Mr. Akin's brother Bill (they developed the Lincoln St. neighborhood) but the brother is now deceased and Mr. Akin is sole owner.

13. Discussion of operation and maintenance personnel for each community

Part-time or full time personnel, contractors used, any shared human resources with other communities or agencies.

The water system's owner, Jim Akin, has his D1 license. He takes care of most issues with the water system. Major repairs would be farmed out to a pipeline construction company.

14. Discuss how district is managed such as independent manager, County personnel involved, CDPH personnel involved *Is the California Public Utilities Commission involved on rate setting or is it a local decision?*

The water system is privately owned and decisions regarding rates rest with the owner. The water system is not regulated by the CPUC.

Since the Akin Water Company has less than 200 connections, the system is monitored by the Tulare County Health & Human Services Agency, Tulare County Public Health Environmental Health Division. Tulare County is the Local Primacy Agency under the State Department of Public Health in monitoring compliance for and in enforcing EPA's Safe Drinking Water Act.

15. Discuss problems that have been solved by community that could be applied as solutions by other communities.

Under private ownership, there has not been the need nor the opportunity for residents to band together to solve common problems.

16. Discuss largest unresolved problems/issues for the community and what is being considered to solve these problems, if any.

The Akin Water system has had nitrate problems since 1998.

Consolidation with the City of Porterville could be a good way to resolve the water quality problems of residents served by the Akin Water Company. The neighborhood is located very near, but not adjacent to the City of Porterville but is within the city's Sphere of Influence. The City requires that unincorporated areas desiring water service annex to the city and construct their water distribution system to city standards. This

model has been followed recently by properties within the former Fairways Tract Mutual Water Company. A CDPH Planning Grant has been approved and work is underway on completing the engineering and pre-project steps necessary for Akin WC residents to receive potable water. These efforts include initiating the annexation process and completing an agreement with the City of Porterville.

Unfortunately, annexation is proving to be a greater challenge than it was for Fairways Tract. The geographical location of the Akin Water Company system is not directly adjacent to the City limits, and happens to be surrounded by irregularly drawn city limits. LAFCO rules indicate that in order to be approved, the Akin annexation needs to create a neatly shaped city boundary (no peninsula, no island), essentially correcting the irregularity of previous annexations. Therefore, many additional properties need to be annexed along with Akin, none of which will benefit from water service through the narrow scope of the Akin project. (See Figure 1 below, provided by the City of Porterville. The green area represents the "worst-case" scenario, i.e. the largest possible annexation area, and hopefully will be reduced through negotiation with the City and collaboration with LAFCO. Figure 2 illustrates one potential alternative.)

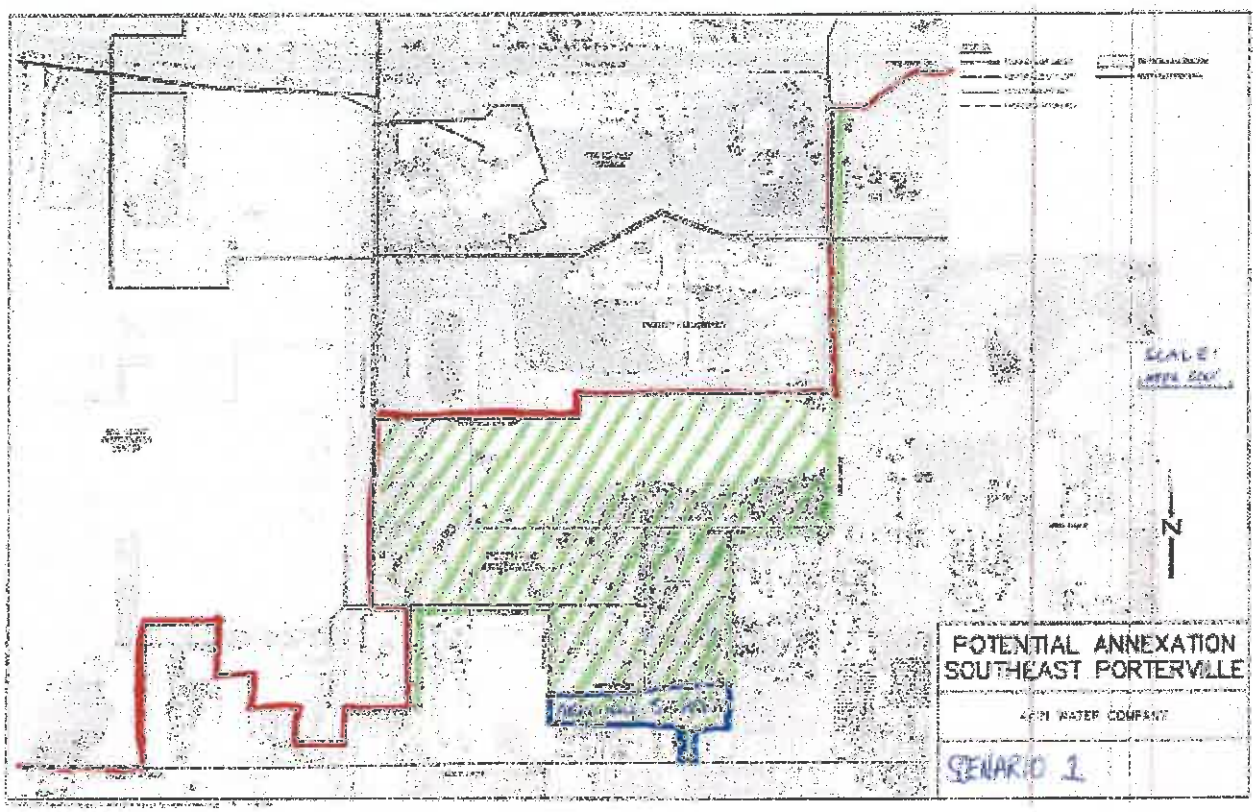
Figure 1

Potential Annexation Area

City Limits

Potential Annexation Area

Figure 2



ALLENSWORTH

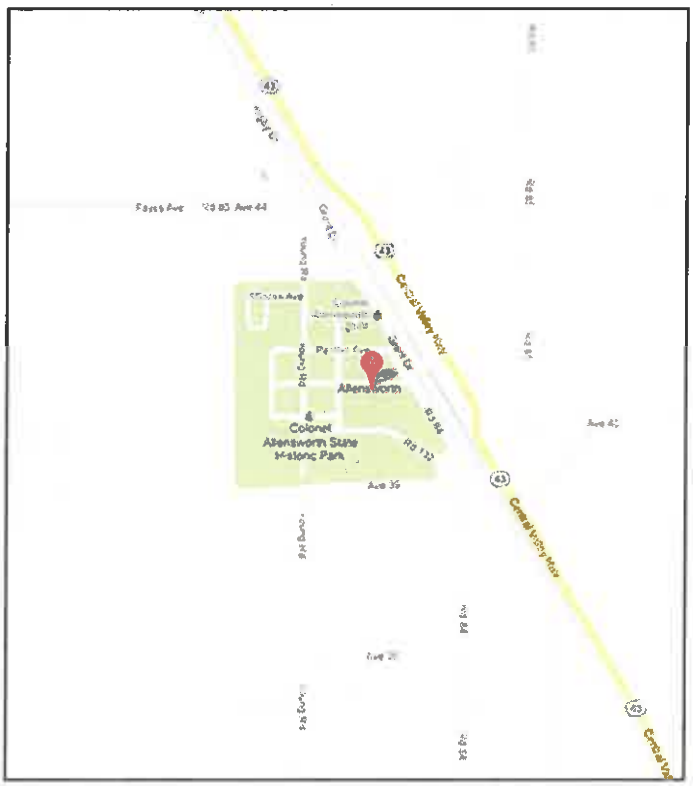
51-200 Connections Range
(119 Connections)

Location and Introduction

The Tulare County community of Allensworth is located in the southwestern corner of Tulare County, in the old lakebed area. Allensworth is about 8 miles west of Earlimart, along Highway 43. The current community is located immediately south of the historic settlement, which is now a state historic park and therefore not occupied.

1. When was community established and why

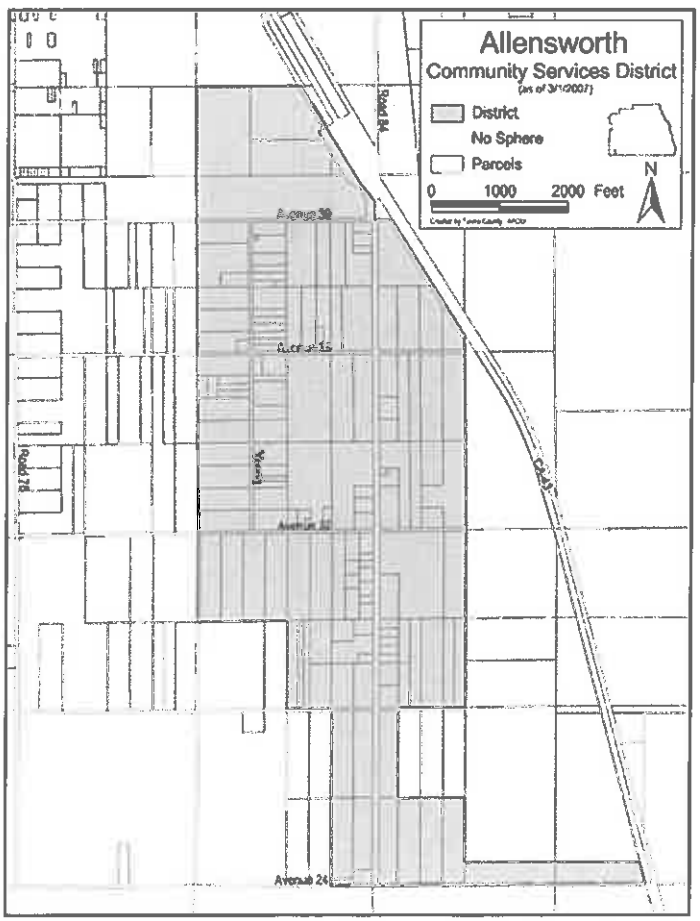
The historic town of Allensworth was established in 1908 by Colonel Allen Allensworth. Lt. Col. Allensworth was born into slavery, escaped, served in the Navy during the Civil War and later served for 20 years as the chaplain to the 24th Infantry, and he dedicated his life to the improvement of circumstances for African-Americans. He founded the colony of Allensworth to provide a home for the soldiers of the country's four all-black regiments and to create a community where, free of the bonds of racism, black families could work hard, become self-sufficient and prosper. Even though this utopian community prospered for less than 20 years, it's still celebrated today for its vision and the opportunity it presented for African-Americans to gain a foothold, buy land and establish themselves as leaders and professionals.



That townsite of Allensworth is now the Col. Allensworth State Historic Park. The present-day community of Allensworth is located immediately south of the old townsite, and bears little relation to the neat buildings preserved in the Park.

2. How old are the systems

Water has always been an issue in Allensworth. The lack of an adequate water supply was a partial cause of the utopian community's demise in the early 1900s. Up until 1966-7, community members depended on private wells for both domestic supply and irrigation of crops. At that time, the Allensworth Membership Water Company was formed and a community water system was installed. This older system's one well still exists and is located adjacent to the current District's office on Road 84. Lyles Pipeline Company donated a trencher to the community and it was used by community volunteers to install the water distribution system. In 1980, the community reorganized the structure of water system operations and dissolved the Membership (Mutual) Water Company and formed a community services district with the later taking over the assets and liabilities of the previous company. The CSD was formed with broad powers beyond the immediate needs to provide water.



In 1982 The Allensworth Community Services District was successful in receiving a State Safe Drinking Water Bond Law grant of $400,000 which was used to investigate and implement a new source of water supply with arsenic levels compatible with then State and federal health standards. This process included a sampling of wells within roughly a five mile radius of the community. In general, wells in and near the community were found to produce water in the 100 to 150 ppb arsenic range. However, roughly three miles to the east in an area where the Phillips Brothers pumped water that irrigated crops in Allensworth, a relatively shallow pool of "low" arsenic water was found. At the time the MCL was 50 ppb, and these easterly wells were producing well below that level. A test well confirmed lower arsenic water above the Corcoran Clay which in this area is at a depth of about 350 feet. The resulting production well not only was low in arsenic, but did not produce water with a hydrogen sulfide odor which residents, though not pleased by its taste, had grown accustomed to. A roughly 3 and a half mile 6-inch transmission line was installed to transport water from the new well to the community. It fed a new 42,000-gallon gravity storage tank which through a bank of booster pumps pressurized a hydropneumatic tank.

In 1997, the District successfully applied for funding from USDA. USDA committed a grant of $571,250 and loan of $114,540. Additional grant funding was approved from the County of Tulare with HUD Community Development Block Grant funds for this $685,790 project to drill a second well, install a larger (5,000 gallon) hydropneumatic tank and replace almost all of the water distribution system with 6-inch PVC water main. Through this project, the District installed sectionalizing gate valves, fire hydrants and new water service connections.

3. Median household income

Per the last decennial census to calculate median household income, the 2000 Census indicated the median annual income for households in Tulare County Census Tract 43 Block Group 1 that incorporates the community of Allensworth, was $23,750 or 50.0% of the statewide median household income at that time. Since then the US Census Bureau no longer asks the income question in the decennial census, but rather collects income data through the continually occurring American Community Survey where a smaller sampling is done annually. This data is expressed as a 5-year adjusted average. The median annual household income for the past four rounds is expressed as:

Period	MHI	Margin of Error	% of State MHI
2005-09	$23,015	+/- $4,664	38.1%
2006-10	$22,625	+/- $3,635	39.5%
2007-11	$24,375	+/- $7,504	39.5%
2008-12	$23,594	+/- $8,044	38.4%

Based on the Census data listed above, Allensworth can be viewed as a severely disadvantaged community with a median household income less than 60% of the statewide median.

4. Monthly sewer rates and water rates, if known

There is no sewer service in Allensworth. The community is dependent on individual septic tank systems for sewage disposal. The current water rate is $42.00/month for the first 1000 cubic feet of use, with metered rates kicking in after that ($2 per 100CF). The CSD Board with input from a citizen's advisory committee is considering an adjustment of water rates at this time (November 2012). The estimated average monthly water bill is currently $70 per month. This is approximately 3.7% of the 2006-10 estimated median household income for the community. The recommended new monthly rate is a base of $42.00 (no water included) with a metered rate that begins at $0.72 per hundred cubic feet (CCF), scaling up to $2.00 per CCF, after 15,000 CCF of usage.

5. Billing methods for the community systems *Does the community use the property tax rolls to collect annually or semi-annually. Other services that might be on the same bill. Are bill paid by mail or is there an office drop off point. Discuss how this works for very small communities that do not have a formal billing process.*

The Allensworth CSD was formed after 1978's Proposition 13 and as such was not allowed to share in the distribution of property taxes collected by Tulare County. The District financially operates its water system totally as an enterprise fund with all operating revenue generated from customer user fees. Allensworth CSD staff manually reads water meters towards the end of each month and normally mails customer bills out just after the first of the following month. Customers therefore pay in arrears based on their water usage. The office manager generates bills, collects payments, and makes deposits to the Tulare County Treasurer's office in Visalia. Residents can mail or drop off payments at the ACSD office, but with no post office in town, most people drop off payments at the office. The office accepts checks and money orders. Deposits are delivered in person to Visalia, by the manager, about once a week. The District (which utilizes the County of Tulare Treasury as its depository) pays its bills by utilizing the County's Auditor-Controller's office to issue warrants (checks). Payment vouchers and an Order to Disburse Funds are approved monthly by the Board of Directors directing the County to issue warrants. When issued, the warrants are mailed to the ACSD thence the District general manager mails the warrants to vendors. This warrant process, depending on the dates vouchers are submitted takes anywhere from 2 to 4 weeks to issue a warrant. Though somewhat time consuming, this process consists of some additional oversight and documentation for each payment issued.

6. Are systems in the black or in debt?

The Allensworth CSD struggles constantly in staying financially afloat. In the past ten years, the District has had to borrow money once from Tulare County and twice from Self-Help Enterprises (SHE) and to cover operational costs. One financial crisis resulted due to payment of invoices from the District's fund at Tulare County when there were insufficient funds to cover warrants issued. The County approved a loan to the District to cover this short fall which took 3 to 4 years to pay back. Twice during this period, SHE has lent the ACSD funds to cover the costs of annual audits, as they fall behind on these repeatedly. Grant money for water project development has been jeopardized (though not yet lost) due to the District's tardiness in preparing audits. The District is also paying on the USDA loan that financed the water system improvements constructed in 1999. The District has virtually no money in reserves. The District is currently (November 2012) going through hopefully the final steps in a lengthy process to receive community buy-in to a rate increase that will improve revenues to meet required expenses. This process will culminate with a Proposition 218 hearing.

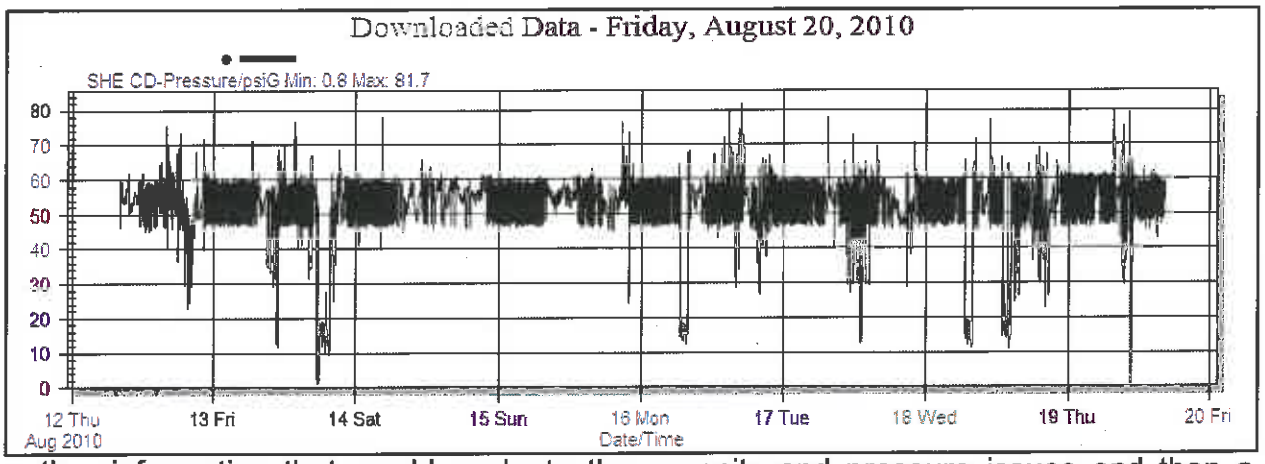
In the fiscal year 2010-11, the District's financial situation was as follows:

Description	Water System	
Cash beginning of year	$	9,463
Operating Income	$	109,408
Operating Expense	$	140,083
Depreciation	$	22,482
Operating Exp. (w/o Dep.)	$	117,601
Non-operating Revenue	$	495
Non-operating Expenses	$	0
Cash end of year	$	(2,886)
Change in Net Assets	$	(32,555)
Interest Paid	$	5,171

It should be noted that all numbers, with the exception of the cash balances are based on the accrual method of accounting.

7. Are systems run as a business or are the systems dealt with more issue by issue as they come?

The ACSD District operates as a business, but has its challenges. For example, a moratorium on new service connections has been in place since 2011. This moratorium is due to the lack of water supply in summer months to meet peak demand. Prior to the District issuing this moratorium numerous new connections were allowed which resulted in reduced pressure and supply to the rest of the community, especially near the existing connections located near the new connections. The District sought to



gather information that would evaluate the capacity and pressure issues and then a recommended solution with cost estimate. The following is a snap shot of pressure readings in August 2010 dipping at times below 20psi.

Unfortunately, the District has few resources to provide a technical evaluation of the problem and assessment of potential solutions. Therefore, there has been little done to reverse the moratorium, despite some pretty heated objections from the community. Another wrinkle in this issue is that the County of Tulare has started issuing building permits along with well drilling permits to property owners that are unable to receive will serve letters from the District. As a result, new private domestic wells are being drilled in an area where it can almost be assured that arsenic levels will be in the 100 to 150 ppb range, ten to fifteen times the arsenic MCL.

A recent (2011) Municipal Services Review (MSR) by Tulare County LAFCO makes the following conclusion:

> …[T]he District does not have the ability to implement traditional revenue generating mechanisms and is completely dependent [sic] on outside sources to fund even basic maintenance and operational costs. …[T]he District faces challenges well beyond basic system operation/maintenance, meaning that any funding that is secured will not be used, at least not completely, to address the system's chronic contamination and groundwater supply issues. This approach is unsustainable and threatens the District's solvency.

8. **Range of household budgets in the community** *Discuss how much is spent on utilities such as sewer and water, if known. Are there discretionary funds in the typical households. If water or sewer rates go up what might get cut.*

Allensworth is severely disadvantaged, with 2006-10 ACS MHI indicating an MHI at less than 39.5% of the statewide MHI. The 2006-10 ACS indicates the following range of household incomes in the community:

Allensworth CDP, California	Annual Household Income Estimate	Margin of Error
Less than $10,000	14.3%	+/- 15.5
$10,000 to $14,999	7.9%	+/- 11.1
$15,000 to $24,999	42.9%	+/- 18.6
$25,000 to $34,999	17.5%	+/- 15.6
$35,000 to $49,999	0.0%	+/- 41.5
$50,000 to $74,999	17.5%	+/- 13.9
Median Income (dollars)	$22,625	+/- $3,635

An estimated 65.1% of households have annual incomes less than $25,000 and 82.6% of households have annual incomes less than $35,000. As such, there is very little disposable income in the community.

Allensworth families in general don't have any room for flexibility in their budgets. There is very little local job opportunity (virtually none at all in Allensworth, other than at the school or a few farming jobs near the community) so those who are employed have to travel to work. Many families depend on farm labor for their major source of revenue so their incomes fluctuate seasonally. There are also many residents who depend on fixed-income sources such as disability and social security. The proposed rate increase has been an object of considerable controversy, with residents showing up in droves to community meetings, board meetings and water finance committee meetings to express the difficulty that many have in covering the expense for this basic necessity.

There is no natural gas service in Allensworth so residents spend more of their disposable income on energy services than in other similar communities. This means that there are fewer dollars available for each family to cover water utility and drinking water costs.

9. Population served

The 2010 United States Census reported that Allensworth had a population of 471. The population density was 151.8 people per square mile. The racial makeup of Allensworth was 158 (33.5%) White, 22 (4.7%) African American, 0 (0.0%) Native American, 8 (1.7%) Asian, 0 (0.0%) Pacific Islander, 279 (59.2%) from other races, and 4 (0.8%) from two or more races. Hispanic or Latino of any race were 436 persons (92.6%).

The average household size was 4.10. There were 142 housing units at an average density of 45.8 per square mile (17.7/km^2), of which 56 (48.7%) were owner-occupied, and 59 (51.3%) were occupied by renters. The homeowner vacancy rate was 0%; the rental vacancy rate was 11.8%. 220 people (46.7% of the population) lived in owner-occupied housing units and 251 people (53.3%) lived in rental housing units.

10. Short description of water systems and sewer systems including number of connections adequacy of backup systems and MCL challenges if known

The ACSD has 119 active connections servicing 116 residences, the Allensworth School (with an ADA of 74) the Allensworth Community Center and the Allensworth State Historic Park.

The two District water wells that supply the community produce water that violates the Arsenic MCL. Though, these wells produce water very close to the 10ppb MCL level, and the west well's arsenic levels fluctuate above and below the MCL, the system still violates the arsenic MCL. As such, the District has a back-up source of water though not one that consistently provides potable water. It should be noted that the newer west well (equipped with a 20 hp motor) which went on line in May 1999 was drilled to a depth of 320 feet with a 12-inch casing installed to a depth of 315 feet; has a 50 foot conductor casing; is grouted to a depth of 90 feet; gravel packed from 90 to 240 feet; has a 10-foot cement seal from 240 to 250 feet in depth; and is gravel packed below that. The well was drilled at a time when it was anticipated that EPA and the state would lower the arsenic MCL below the 50ppb in effect at the time, however, it was not known what the new MCL would become. For that reason, the well was constructed in such a way that the 10-foot seal at the 240 to 250 foot depth level could be utilized to isolate water taken from the well.

Allensworth Community Services District Arsenic Levels in Active Wells Arsenic MCL = 10 ppb		
Date	East Well #1 (ppb)	West Well #2 (ppb)
3/6/1990	17	
11/23/1993	16	
11/4/1996	15	
9/28/1999	10	
10/24/2002	9	
10/26/2005	11	
9/21/2007	11	
12/11/2007	12	
12/13/2007	13	
3/26/2008	13	
8/7/2008	10	
12/19/2008	11	
11/30/2010	12	13
3/29/2011	14	14
6/13/2011	12	12
8/8/2011	10	6
11/16/2011	11	11
4/5/2012	12	7
9/13/2012	12	9
Times Exceeding MCL	**18**	**4**
Old off-line well at storage tank site		
6/6/1996	65	

Water pumped from the wells has intermittently exceeded the arsenic Maximum Contaminant Level set by EPA and CDPH. The chronic problem with Allensworth water quality has been the arsenic levels of water produced from the community's two wells. The table above lists arsenic levels from both wells from 1990 through September 2012. This table shows that the east and west wells have produced water exceeding the nitrate MCL 18 and 4 times respectively over this period.

Good system records do not exist and much of the information that is known is in the head of the former maintenance worker, who still offers some help and services to the ACSD.

There is no community wide sewer system in Allensworth. The community depends on individual on-site septic tank systems for wastewater disposal. In wet years, the combination of a perched water table and tight soils creates problems for effective leaching of septic tank effluent.

11. Existing governing body such as County Service District, Public Utility District, Mutual water system, etc.

The Allensworth Community Services District provides water service to the unincorporated community of Allensworth. The District is governed by a 5-member board of directors (currently 4 members with one perpetual vacancy).

12. Decision making process *Is there a board of directors, designated lead home owner, long time unofficial leader, or is there a lack of good decision making process. History on this would be good.*

The Allensworth CSD Board of Directors is in charge of the decision making process related to the community's water system. This applies to policy decisions and other major decisions. The District General Manager provides the overall management of the system.

As a side note, within this small community in addition to the Community Services District Board, there is also an Allensworth Elementary School District board, a town council, and the Allensworth Progressive Association Board of Directors. Each fills its own role.

13. Discussion of operation and maintenance personnel for each community

Part-time or full time personnel, contractors used, any shared human resources with other communities or agencies.

The District has one full-time (30-hour) general manager. Currently they are also employing a second office worker, part-time. The general manager does most of the field work, with occasional support called in (see below).

A previous maintenance system employee has been available for assistance at times when needed.

The District utilizes a pump company for repairs as needed.

14. Discuss how district is managed such as independent manager, County personnel involved, CDPH personnel involved *Is the California Public Utilities Commission involved on rate setting or is it a local decision?*

The District has one full-time (30-hour) general manager that is accountable to the Board of Directors. The General Manager is a certified D1 operator even though her primary job responsibilities are (at least in theory) clerical/office duties. Since help in the field is not always available, she also reads meters and manages repairs. A previous maintenance system employee has been available for assistance at times when needed. The District utilizes a pump company for repairs as needed.

Since the ACSD water system has less than 200 connections, the system is monitored by the Tulare County Health & Human Services Agency, Tulare County Public Health Environmental Health Division. Tulare County is the Local Primacy Agency under the State Department of Public Health in monitoring compliance for and in enforcing EPA's Safe Drinking Water Act.

No CPUC. Most of their functions are entirely internal (budgeting, billing, operations, etc). The exception is their banking relationship with the Tulare County Treasurer.

15. Discuss problems that have been solved by community that could be applied as solutions by other communities.

Allensworth has had success with a water committee that has been meeting on an ongoing basis for about a year now. The committee is able to bring together District directors & staff, community members, and other interested parties to strategize and problem-solve.

The water committee started out by making a list of problems and then setting priorities for what issues to tackle first. The committee has made numerous recommendations to the Board, and their efforts have resulted in a campaign to eliminate "double dwellers" (multiple residences served by one service connection), some preliminary engineering studies, an effort to establish policies (personnel, etc.) and the rate adjustment that is currently underway.

16. Discuss largest unresolved problems/issues for the community and what is being considered to solve these problems, if any.

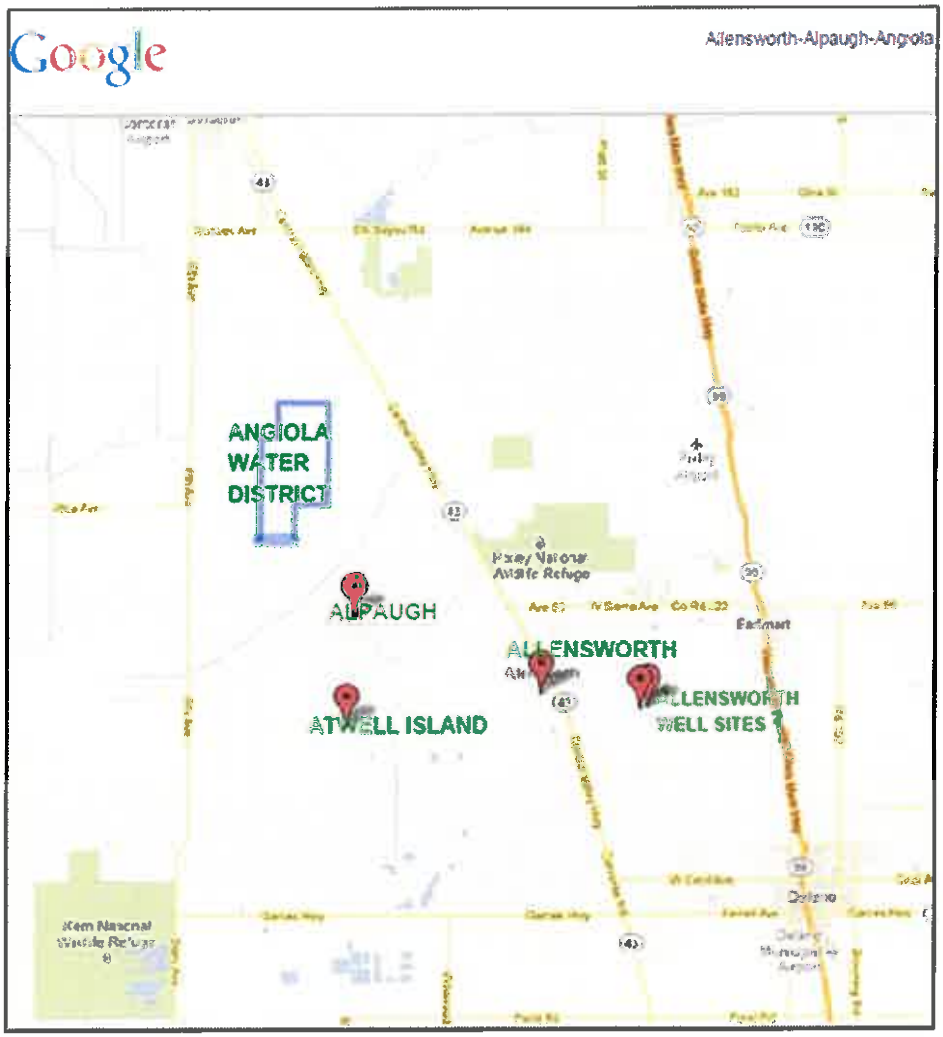
Allensworth has had arsenic problems since the 1960s. This is a huge unresolved problem. A regional project could be a good answer for them; the Strategic Growth Council grant awarded to Tulare County in 2012 will investigate the feasibility of a regional solution for Allensworth and Alpaugh, building on a potential partnership with Angiola Water District south of Corcoran.

Allensworth's other big unresolved problem is their moratorium and the concern over insufficient water supplies.

Consolidation could be a good way to resolve Allensworth's water problems. Although it is located at a distance of several miles from Alpaugh, the two communities face similar problems with regard to economy of scale, contamination and revenue deficiencies. The Strategic Growth Council grant is a fantastic opportunity to explore this option, and should be coupled with the Tulare Lake Basin Disadvantaged Community Pilot Study to advance some solutions for the region.

The 2011 LAFCO MSR makes the following comment regarding consolidation:

> One of the major obstacles to consolidation is the governance structure of the resulting entity; in particular, existing governing boards fear that the interests of their respective constituencies will no longer be advanced with the same vigor and empathy as before. This issue cannot be adequately addressed within the parameters of an MSR; however, it should be noted that Section 61030 (a) of the CSD law allows LAFCO to increase the number of members to serve on the initial board of directors of the resulting entity from 5 to 7, 9 or 11. Terms to be served by the new board of directors can also be set by LAFCO in accordance with Section 56886 (n). The expanded board of directors can be elected by division, with division boundaries being drawn according to community boundaries to ensure that customers of existing districts continue to have adequate representation on the new board.



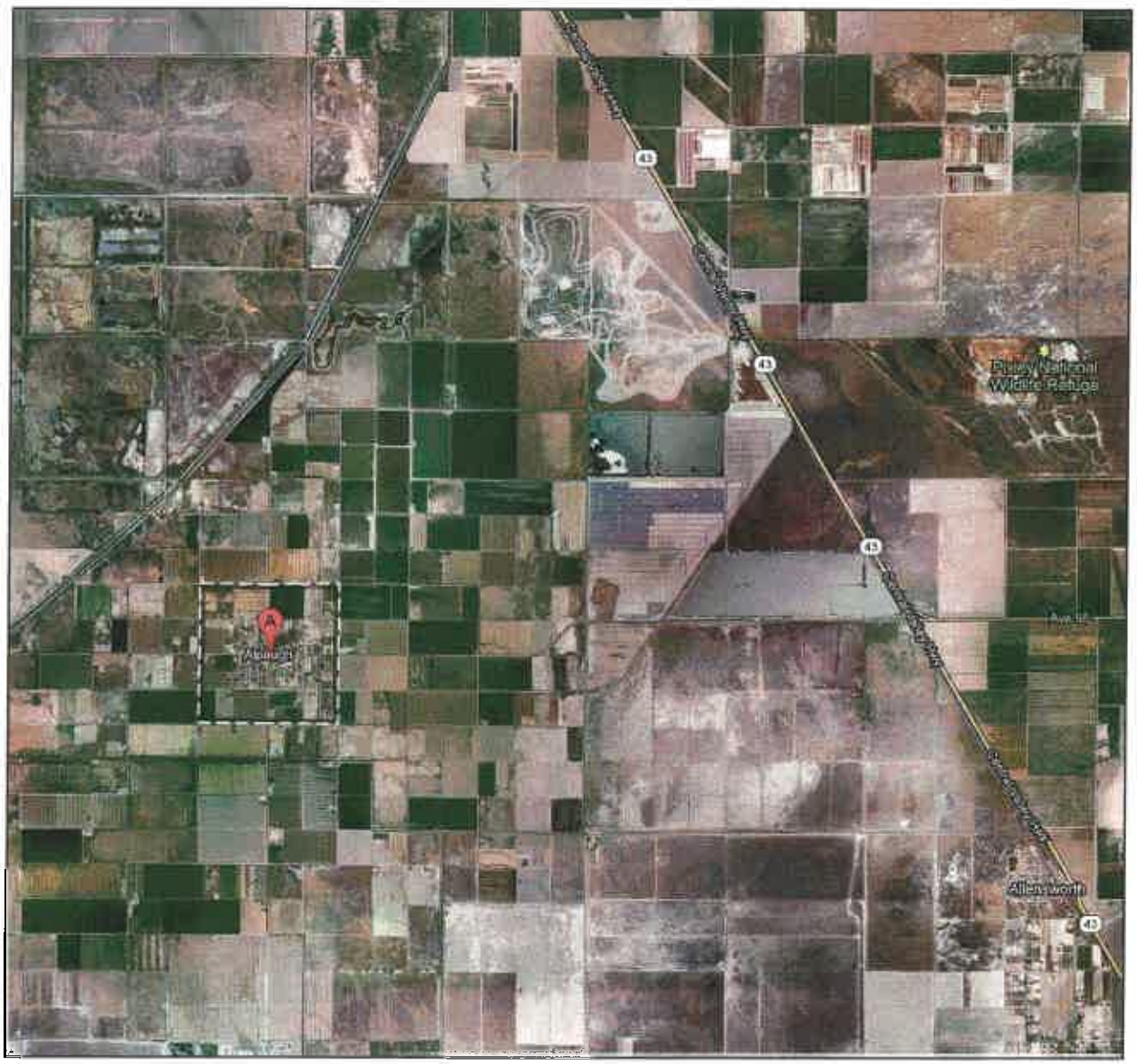
The Alpaugh-Allensworth area also has some unique cultural and recreational resources (e.g. BLM's Atwell Island wetland restoration project, Allensworth State Historic Park, Pixley National Wildlife Refuge), and there is budding interest in leveraging these resources to create expanded opportunity for water resource development and tourism. For example, one idea is to build a trail system over pipeline easements that could move water (and hikers/birders/cyclists) between Atwell Island and Allensworth.

ALPAUGH

201-500 Connections Range
(360 Connections, of which 343 are residential)

Location and Introduction

The Tulare County community of Alpaugh is located about 3.5 miles west of State Highway 43 near the southwestern border of Tulare County with neighboring Kings and Kern counties. Alpaugh residents tend to do their banking and other business in Corcoran, about 16 miles north, and Alpaugh is also located within 20 miles of Delano.



1. When was community established and why

Near what was the southeastern end of Tulare Lake, a large island owned by Visalia Judge Atwell was known as Atwell's Island. The town of Alpaugh was established where this island previously existed. In 1905 a group of Los Angeles investors obtained control of the 8,861 acre Atwell Island and sold small tracts of land. At the time there was trouble in getting a good supply of water. A school district was formed in 1906, a church and school built along with residential structures. Initially artesian wells could supply small amounts of water. Later dual purpose wells were drilled that would provide water for irrigation and natural gas for cooking and heating. Sometime after 1913 the Santa Fe Railroad constructed an eight mile spur line from its main line to the east. The community became a hub for agricultural shipping at that point. *(source: History of Tulare and Kings Counties, California, Eugene Menefee and Fred Dodge, by Historic Record Company, Los Angeles, CA 1913).*

2. How old are the systems.

Much of the District's water distribution system was constructed over 70 years ago. (The Tulare County Waterworks District, the original potable water provider to the townsite of Alpaugh, was formed in 1919.) At that time, the pipeline system consisted of steel and asbestos cement pipe varying in size from 2 to 8 inches in diameter. In the 1990s, the community's water source consisted of 2 wells owned and operated by the Alpaugh Irrigation District and none of the District services had water meters. Water exceeded State and Federal standards for color and odor and arsenic. Bacterial contamination of the water distribution system had also occurred on occasions. In the warmer months, water pressure dipped below 20psi during the day failing State minimal pressure standards and causing the local school to close when there was insufficient pressure to flush toilets. This deteriorated distribution system had suffered numerous breaks. At the time, line repairs had to be done with caution due to septic tank effluent in proximity to portions of the pipeline. These frequent leaks, often in close proximity to septic tank systems with low-pressure conditions, created a potential health hazard to Alpaugh's water consumers.

As a step in the right direction, AID Well 10 was drilled 2003 by the Alpaugh Irrigation District. Soon after, the AJPA drilled AJPA Well 1 in 2006. This USDA/DWR funded project also included the construction of a 350,000 gallon ground level storage tank all of the community's water distribution system and much of the distribution pipeline in the outlying Irrigation District. More pipeline was replaced in 2011 with funding provided by the DWR Water Use Efficiency Program, including the major rehabilitation of the line connecting AID Well 10 to the storage tank at the AJPA Well 1 well site. The older pipeline (which extends far outside the townsite to customers formerly served by AID, see governance comments below) dates back decades.

3. Median household income.

Per the last decennial census to calculate median household income, the 2000 Census indicated the median annual income for households in Alpaugh Census Designated Place (CDP) that incorporates the community of Alpaugh and portions the surrounding area was $23,688 or 49.9% of the statewide median household income at that time. Since then the US Census Bureau no longer asks the income question in the decennial census, but rather collects income data through the continually occurring American Community Survey where a smaller sampling is done annually. This data is expressed as a 5-year adjusted average. The median annual household income for the past four rounds is expressed as:

Period	MHI	Margin of Error	% of State MHI
2005-09	$21,613	+/- $3,725	35.8%
2006-10	$24,688	+/- $5,772	43.1%
2007-11	$22,875	+/- $4,288	37.1%
2008-12	$20,724	+/- $4,574	33.8%

As such, Alpaugh's median household income is well below the 60 percent of the statewide median household income threshold, justifying a determination that Alpaugh is a severely disadvantaged community.

4. Monthly sewer rates and water rates, if known.

No sewer. Water rates have a base charge of $45 per month for the first 10,000 gallons of usage or $55 per month for usage between 10,001 and 25,000 gallons. Thereafter, all users are charged $3 per 1,000 gallons consumed. Customers in the AID area pay an additional $10 per month toward the USDA financing that paid for the AID Well 1 project. TCWWD customers (within the townsite) are assessed this loan repayment fee on their property taxes via Measure R, approved in the year 2000 election. The average water rate in Alpaugh is now $55 per connection.

5. Billing methods for the community systems.

Does the community use the property tax rolls to collect annually or semi-annually. Other services that might be on the same bill. Are bill paid by mail or is there an office drop off point. Discuss how this works for very small communities that do not have a formal billing process.

AJPA sends out bills monthly through the USPS on postcards, which are a cost-saving measure over stamped envelopes. Customers can pay through the mail or by coming into the office, which is open four days per week. Office staff collects bills, and takes deposits to a commercial bank in Corcoran.

6. **Are systems in the black or in debt?**

The only current debts are the USDA debts for the AID Well 1 and AJPA Well 10 projects; Annual payments are approximately $25,000. In general, AJPA operates in the black but margins are usually narrow and historically, a system emergency equals a fiscal crisis. Since the last rate increase in 2009, AJPA has been building up reserve funds and repaying funds borrowed from their capacity fund (capital improvement reserve funded capacity fees paid for new connections). AJPA is constantly looking for ways to save money and improve efficiency. Besides billing on postcards, they have recently switched chlorine vendors, saving about 50% of their chlorine bill; they also bought a Kubota work vehicle that consumes far less fuel than their regular truck. They would like to move out of the rented office at the Veteran's Memorial Building in favor of a modular office building installed at the AJPA Well 1 site (which also serves as the District's Corporation Yard), but have been stymied by zoning problems. It is hoped that the recent establishment of a Community Services District, that was approved in the November 2012 election, will contribute to improved efficiency and stability.

7. **Are systems run as a business or are the systems dealt with more issue by issue as they come up?**
   See previous comments.

8. **Range of household budgets in the community** *Discuss how much is spent on utilities such as sewer and water, if known. Are there discretionary funds in the typical households. If water or sewer rates go up what might get cut.*

   Alpaugh is severely disadvantaged, with 2007-11 ACS MHI indicating an MHI of approximately 37% of the statewide MHI. The 2007-11 ACS indicates the following range of household incomes in the community:

Alpaugh CDP, California	Annual Household Income Estimate	Margin of Error
Less than $10,000	10.0%	+/-7.8
$10,000 to $14,999	16.3%	+/-9.6
$15,000 to $24,999	27.8%	+/-13.0
$25,000 to $34,999	22.0%	+/-8.9
$35,000 to $49,999	9.1%	+/-7.3
$50,000 to $74,999	9.1%	+/-6.8
$75,000 to $99,999	2.9%	+/-4.2
$100,000 to $149,999	2.9%	+/-4.2
$150,000 to $199,999	0.0%	+/-16.4
$200,000 or more	0.0%	+/-16.4
Median income (dollars)	$22,875	+/-$4,288

An estimated 54% of households have annual incomes less than $25,000 and 76% of households have annual incomes less than $35,000. The 2006-10 ACS indicates that 51.5% (MOE +/- 14.4%) of Alpaugh families live below the poverty line. As such, there is very little disposable income in the community

Alpaugh families in general don't have any room for flexibility in their budgets. Many families depend on farm labor for their major source of revenue so their incomes fluctuate seasonally. There are also many residents who depend on fixed-income sources such as disability and social security.

9. Population served.

The 2010 United States Census reported that the Alpaugh Census Designated Place (CDP) had a population of 1,026. The majority of households in Alpaugh are located in this CDP. The racial makeup of Alpaugh was 381 (37.1%) White, 4 (0.4%) African American, 11 (1.1%) Native American, 4 (0.4%) Asian, 0 (0.0%) Pacific Islander, 597 (58.2%) from other races, and 29 (2.8%) from two or more races. Hispanic or Latino of any race were 867 persons (84.5%).

The average household size was 4.54. There were 243 housing units, of which 120 (53.1%) were owner-occupied, and 106 (46.9%) were occupied by renters. The homeowner vacancy rate was 1.6%; the rental vacancy rate was 0.9%. 522 people (50.9% of the population) lived in owner-occupied housing units and 504 people (49.1%) lived in rental housing units.

10. Short description of water systems and sewer systems including number of connections adequacy of backup systems and MCL challenges if known.

There is no community wide sewer system in Alpaugh. The community depends on individual on-site septic tank systems for wastewater disposal. In wet years, the combination of a perched water table and tight soils creates problems for effective leaching of septic tank effluent.

The Alpaugh Community Services District which recently took over the assets and liabilities of the Alpaugh JPA provides water to 360 connections of which 343 are residences, the Alpaugh School (with an ADA of 303) the Tulare County Fire Station, a few commercial customers including a store and cafe and the Western Farms Fertilizer Plant located about a half mile west of the community. There is an agreement between the Authority and fertilizer plant for the plant to only draw water to fill its storage tanks at night when other system demand is low.

The water system is more or less adequate at this point, especially now that AID Well 10 is once again available for backup use (due to pipe repair). Until Well 10 was available, the town was getting by on Well 1 only. Along with the 350,000 gallon ground level storage tank and booster pumps, Well 1 has been able to handle the demand.

The chief problem facing Alpaugh is its consistent violation of the arsenic MCL. There is a pilot study underway to analyze the feasibility of arsenic treatment. This project, funded by CDPH / Prop 84, was inconclusive in the first attempt (and had some problems) so a second funding agreement is in the works. Alpaugh also has some hydrogen sulfide odor problems, which they address by chlorinating.

11. Existing governing body such as County Service District, Public Utility District, Mutual water system, etc.

This is one of Alpaugh's more unique characteristics. Up until recently, the system was operated by the Alpaugh Joint Powers Authority, a JPA between Alpaugh Irrigation District and Tulare County Waterworks District No. 1. Previously, TCWWD provided domestic water to residents within the 1-square-mile townsite of Alpaugh (by contract to the AID), and the AID provided domestic water to its more rural irrigation district customers for several square miles around Alpaugh. In 2003, the two agencies entered into a joint powers agreement to run the domestic water system, with each contributing its existing distribution system pipelines. AID also contributed the use of its Well No. 45 (under lease to the AJPA), which exceeded even the old arsenic standard of 50 ppb. The use of this well was abandoned by the AJPA once Wells AID10 and AJPA1 were completed. AID constructed and contributed Well 10 with USDA funding. The TCWWD contributed Well 1 and its well site, also financed by USDA, along with replacement of many miles of distribution lines.

In the November 6, 2012 general election, the voters within both the AID and TCWD#1 voted by roughly a 75 to 25% majority to form the Alpaugh CSD. This new CSD now has the power to provide domestic water to those previously receiving water through the AJPA. This allows the AID to concentrate only on providing irrigation water to farmers. The TCWWD#1, in existence for roughly a century has now dissolved, thus reducing three legal entities down to two with a resulting cost savings:

> The Community Services District will avoid excessive overhead costs by operating with a part-time staff, which provides adequate levels of service to the community. With the dissolution of the Alpaugh Joint Powers Authority and Tulare County Waterworks District #1, the duplication of audits, legal services, bookkeeping, accounting, insurance and other charges will be reduced. The Community Services District will avoid unnecessary costs by contracting out professional services including engineering, legal services, and other consulting services. (LAFCO MSR for formation of the CSD, 2012)

12. Decision making process *Is there a board of directors, designated lead home owner, long time unofficial leader, or is there a lack of good decision making process. History on this would be good.*

See above for history of the AJPA formation. Per the joint powers agreement, the intent was for the Authority to be an interim measure, a step on the way to forming one public

agency for the provision of water service to the entire Alpaugh area. The formation of a Community Services District was approved by voters in the November 2012 election.

The old AJPA board of directors was comprised of six directors, three each from the two member agencies. All six were appointed by their parent agency and ..."serve at the pleasure of the [agency] who appointed [them] and may be replaced at any time by the [agency] who appointed them." (Joint Exercise of Powers Agreement, 2003) This has led to constant turnover and frequent partisanship, along with the obvious voting problems that come with a board comprised of an even number of directors. No provisions existed for tie-breaking votes.

The joint powers agreement also provided for an executive director appointed by the board. The executive director (ED) could be a member of the Board of Directors, or not; the ED could be the same person as the secretary and/or treasurer, or not. The joint powers agreement vested the ED with the authority to discipline employees and conduct day-to-day operation of the system. This, too, has proven problematic; sometimes the ED has been a volunteer and it's a rather large job for a volunteer to take on. The joint powers agreement did not specify the need for a general manager and so presumably meant for the ED to serve in such a role. At the dissolution of the AJPA, the general manager's contract identified him as the ED, essentially combining these two roles into one. The final manager/ED is a local resident, and has been able to get everyone moving in the same direction in a much more effective manner than previous general managers hired from outside. This ED is now the general manager of the newly formed Alpaugh CSA.

13. Discussion of operation and maintenance personnel for each community

Part-time or full time personnel, contractors used, any shared human resources with other communities or agencies.

Alpaugh staffing ebbs and flows, but generally they have one general manager, two part-time office personnel, two part-time field personnel, and a slate of on-call maintenance workers. The Authority/now District utilizes the services of Tom Day, a contract water treatment and distribution operator, who visits about once a week for an hour or two, lending his expertise, operators' license and general support to the operation of the water system.

14. Discuss how district is managed such as independent manager, County personnel involved, CDPH personnel involved.

Discuss how district is managed such as independent manager, County personnel involved, CDPH personnel involved. Is the California Public Utilities Commission involved on rate setting or is it a local decision?

As discussed above, AJPA employs a general manager who is a local resident. He also serves as Executive Director. With greater than 200 connections, the system is regulated by CDPH. AJPA is not subject to CPUC regulation; nor are either of its member agencies. Rate setting is a local decision arrived at by the Board of Directors and subject to Prop 218.

15. Discuss problems that have been solved by community that could be applied as solutions by other communities.

AJPA's arsenic treatment pilot study may reveal helpful strategies for other communities, but as local water chemistry is so specific, results will not translate clearly for other areas. The formation of the AJPA is a strategy that could be employed in other areas, but with some lessons learned, such as the inclusion of a tie-breaking vote (e.g. a seventh "at large" member).

16. Discuss largest unresolved problems/issues for the community and what is being considered to solve these problems, if any.

Discuss largest unresolved problems/issues for the communities and what is being considered to solve these problems, if any.

Wells AID10 and AJPA1 were drilled to address Alpaugh's long-time arsenic contamination. Unfortunately the regulatory standard changed in the midst of the creation of the AJPA and the construction of the new wells; hence the new wells went out of compliance shortly after being drilled. Therefore the community is still seeking a way to provide arsenic-free drinking water to their customers.

One solution that has been floated and is due to be explored via a Tulare County Strategic Growth Council grant is a potential interconnection between Angiola Water District, the new Alpaugh Community Services District, and the Allensworth Community Services District. Angiola WD is owner of two wells that are virtually arsenic-free, a very rare commodity in the Corcoran-Alpaugh-Allensworth area. This would be an unusual partnership involving an irrigation district, and may involve some kind of exchange or a blending solution. Angiola is not seeking to sell water to Alpaugh (they would prefer to sell the existing well sites and be made whole with replacement sources) but wholesale supply might be an option.

BEVERLY GRAND MUTUAL WATER COMPANY

15-50 Connections Range
(28 Connections)

Location and Introduction

The Tulare County neighborhood that encompasses the neighborhood served by the Beverly Grand Mutual Water Company is located just northwest of the City of Porterville.

1. **When was community established and why**
   This suburban subdivision was mapped in the late 1950s and all the homes were built between 1958 and 1963.

2. **How old are the systems**
   The Mutual Water Company was incorporated in 1958. The water system was installed in between 1955-57. All components date to that time.

3. **Median household income**

Per the last decennial census to calculate median household income, the 2000 Census indicated the median annual income for households in Tulare County Census Tract 35 Block Group 2 that incorporates the neighborhood that represents the Beverly Grand Mutual Water Company, was $41,711 or 88% of the statewide median household income at that time. Since then the US Census Bureau no longer asks the income question in the decennial census, but rather collects income data through the continually occurring American Community Survey (ACS) where a smaller sampling is done annually. This data is expressed as a 5-year adjusted average. The median annual household income for the Year 2000 Census, three recent ACS rounds and the 2009 Survey are expressed as:

Period	Area	MHI	Margin of Error	% of State MHI
2000	CT35BG2	$41,711		88%
2005-09	CT35BG2	$57,083	+/-$30,093	96.9%
2006-10*	CT35.01BG1	$66,896	+/-$ 8,067	109.9%
2009 Survey		$29,000		48%
2007-11	CT35.01BG1	$76,454	+/-$17,954	124.0%

**Note: As of 2010, Beverly Grand is in Tulare County Census Tract 35.01, Block Group 1.*

It was suspected that the census data for the block group showed a higher income level than actually exists within the service area of the Beverly Grand Mutual Water Company. Therefore, for the purposes of a funding application to California Department of Public Health (CDPH), a community survey was conducted by Self-Help Enterprises in January 2009. The median household income was determined by the survey to be **$29,000** (48% of 2009 CA MHI). According to the ACS, the 2009 MHI for Census Tract 35, Block Group 2 (an area that includes, but is much larger than, Beverly Grand's service area) was $57,083. At the time of the income survey, ACS data at the block group level reported income figures that were approximately 49% higher than the actual incomes of Beverly Grand customers. ACS data should therefore be considered less than reliable for the Beverly-Grand service area.

Based on the more representative survey data listed above, the Beverly Grand neighborhood can be viewed as a severely disadvantaged community with a median household income less than 60% of the statewide median.

4. Monthly sewer rates and water rates, if known.
There is no sewer service for Beverly Grand residents. The neighborhood is dependent on individual septic tank systems for sewage disposal. The current water flat rate is $27.50/month. This is approximately 0.5% of the 2006-10 estimated median household income for the neighborhood *based on American Community Survey numbers at the block group level (see discussion in #3 above).* Water rates were the same in 2009 as they are now; using the survey-determined MHI of $29,000, water rates are 1% of area MHI.

5. Billing methods for the community systems *Does the community use the property tax rolls to collect annually or semi-annually. Other services that might be on the same bill. Are bill paid by mail or is there an office drop off point. Discuss how this works for very small communities that do not have a formal billing process.*
The Beverly Grand Mutual Water Company was formed in 1958. The Water Company operates its water system totally as an enterprise fund with all operating revenue generated from customer user fees. Customers are billed for two months at a time. The system's secretary generates bills, collects payments, and makes deposits to a bank account. Residents mail payments (check or money order) to the president/secretary's house in Arroyo Grande, or they can drop off cash payments at the home of the maintenance worker, who lives within the water system's service area.

6. Are systems in the black or in debt?

In the fiscal year 2010-11, the water system's financial situation was as follows:

Description	Water System	
Cash beginning of year	$	5,680
Operating Income	$	8,754
Operating Expense	$	7,917
Operating Exp. (w/o Dep.)	$	7,917
Non-operating Revenue	$	0
Non-operating Expenses	$	0
Cash end of year	$	6,517
Change in Net Assets	$	837

7. Are systems run as a business or are the systems dealt with more issue by issue as they come

Issues are dealt with as they arise, for the most part. The system is very small and in general functions well. Apart from the nitrate violation, there have been no emergencies in the past 5 years. There are no reserve funds.

8. Range of household budgets in the community *Discuss how much is spent on utilities such as sewer and water, if known. Are there discretionary funds in the typical households. If water or sewer rates go up what might get cut.*

The Beverly Grand Mutual water Company represents an area that is severely disadvantaged based on survey data collected in 2009. The results of the survey indicated a MHI of 48% of the statewide MHI at the time. The survey results indicated the following range of household incomes in the community:

Annual Household Income Estimate	# of Beverly Grand Households
Less than $10,000	1
$10,000 to $14,999	0
$15,000 to $24,999	8
$25,000 to $34,999	5
$35,000 to $49,999	7
$50,000 to $74,999	0
Median Household Income	$29,000

An estimated 43% of households have annual incomes less than $25,000 and 67% of households have annual incomes less than $35,000. As such, there is very little disposable income in the Beverly Grand neighborhood.

9. Population served

The Beverly Grand Mutual Water Company serves 28 dwellings with a population of approximately 100 persons. The median household income for the Beverly Grand neighborhood is $29,000. The majority of the community is Hispanic (57%) with 43% of

the households having at least one member employed in agriculture. Almost of half of the residents are children. The average household size is 3.8 persons. Extrapolating the average household size to occupied residential units counted provides an estimate of 103 for the population of the Beverly Grand Neighborhood.

10. Short description of water systems and sewer systems including number of connections adequacy of backup systems and MCL challenges if known.

The Beverly Grand Mutual Water Company has 28 connections servicing 28 residences. The system's only water well was drilled to a depth of 190 feet has a 12-inch casing with perforations starting at a depth of 65 feet. The well is equipped with a 7.5 hp submersible pump (that reportedly pumps 155 to 200 gpm) and a 2,500 hydropneumatic tank. Ownership of the well site was lost due to a tax sale of the well site property, though operations have continued in this manner for years. The Water Company has no back-up source of water.

Water pumped from the community's sole well has exceeded the nitrate Maximum Contaminant Level set by EPA and CDPH. Attached is a table listing nitrate levels from the community well from 1967 through June 2012. This table shows that the well has produced water exceeding the nitrate MCL 21 times over this period.

Beverly Grand Mutual Water Company Nitrate Levels in Active Wells Nitrate MCL = 45 ppm	
Date	Community Well (ppm)
4/10/1967	12
10/26/1979	25
7/1/1988	34
1/10/1992	30
1/4/1995	37
1/9/1996	29
2/11/1998	37
2/11/1999	36
2/8/2000	55
2/28/2001	44
2/24/2004	62
4/5/2004	72
7/13/2004	65
10/5/2004	50
1/4/2005	73
4/4/2005	71
7/18/2005	65
10/4/2005	65
1/3/2006	62
4/4/2006	71
7/18/2006	75
10/3/2006	71
1/4/2007	79
2/12/2007	68
5/2/2008	91
4/6/2009	75
4/7/2010	65
5/7/2010	69
4/18/2011	65
6/7/2012	78
Times Exceeding MCL	**21**

There is no community wide sewer system that serves the neighborhood provided water by the Beverly Grand Water System. The community depends on individual on-site septic tank systems for wastewater disposal.

11. Existing governing body such as County Service District, Public Utility District, Mutual water system, etc.
The Beverly Grand Mutual Water Company is governed by a 3 member Board of Directors. At this point, two of the board members (a married couple) do most of the management from their current home on the central coast. A third board member still lives in the community and does some of the onsite maintenance and meets local needs.

12. Decision making process *Is there a board of directors, designated lead home owner, long time unofficial leader, or is there a lack of good decision making process. History on this would be good.*
The water system's president and secretary make the day to day decisions as needed to keep the system in operation.

13. Discussion of operation and maintenance personnel for each community
Part-time or full time personnel, contractors used, any shared human resources with other communities or agencies.
The water system has a paid maintenance worker and contracts with a D1 operator. See #13 below.

14. Discuss how district is managed such as independent manager, County personnel involved, CDPH personnel involved *Is the California Public Utilities Commission involved on rate setting or is it a local decision?*
The water system is managed generally by the 3-member board of directors. Two of the directors, president & secretary (married couple) live now in Arroyo Grande, but retain ownership of their property in Beverly Grand. The third board member, vice-president, lives in the community. The Board pays a maintenance worker (who also lives in the community) to keep the well site clean and handle any maintenance issues. In addition, the water system pays a certified distribution system operator who handles sampling, nitrate notifications and consumer confidence reports (CCRs). Bookkeeping is handled by the secretary.

Since the Beverly Grand Mutual Water Company has less than 200 connections, the system is monitored by the Tulare County Health & Human Services Agency, Tulare County Public Health Environmental Health Division. Tulare County is the Local Primacy Agency under the State Department of Public Health in monitoring compliance for and in enforcing EPA's Safe Drinking Water Act.

As a Mutual, the system is not regulated by the PUC.

15. Discuss problems that have been solved by community that could be applied as solutions by other communities.
The local Board and water company membership have made strides towards the eventual resolution of their nitrate problem. The MWC has successfully applied for and

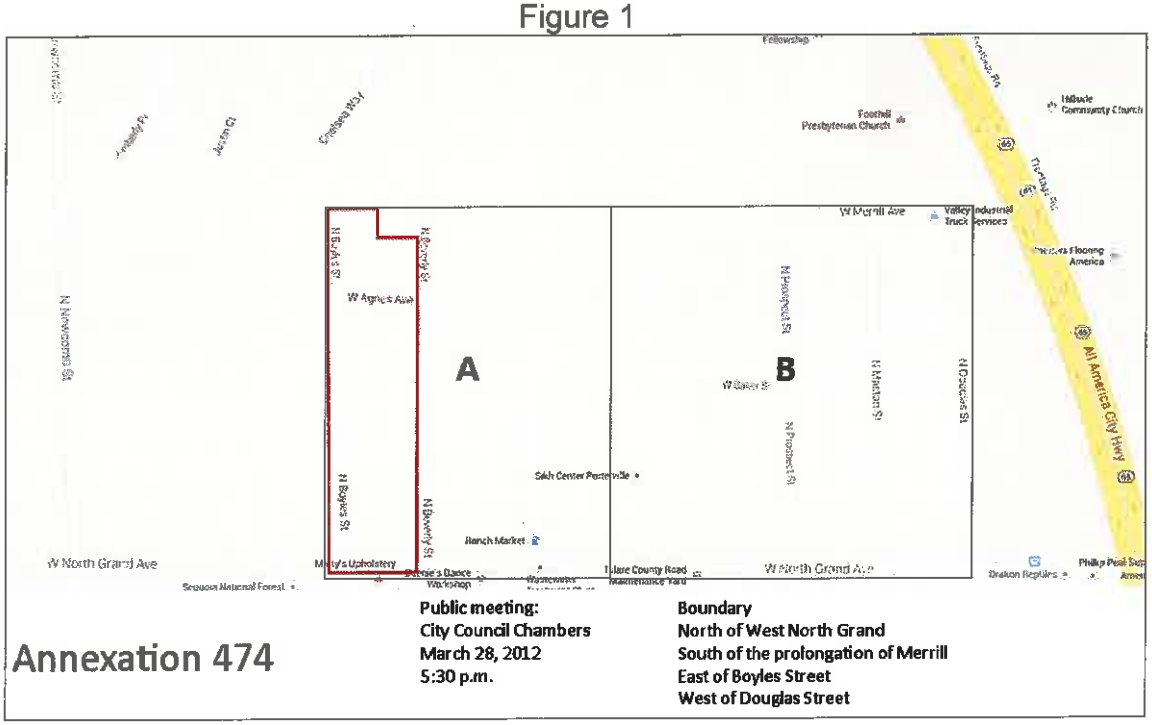
received a Proposition 84 Planning grant from CDPH to design a new water distribution system with an intertie to the City of Porterville's water system that would be built to standards. Negotiations have begun on the annexation of the Beverly Grand area to the City.

16. Discuss largest unresolved problems/issues for the community and what is being considered to solve these problems, if any.

The Beverly Grand water system has had nitrate problems since about 2004. The nitrate level first rose above the MCL around the same time that a neighboring system deepened its well. There is no proven correlation but the president and secretary believe there is a connection.

Consolidation with the City of Porterville could be a good way to resolve the water quality problems of residents served by the Beverly Grand Mutual Water Company and possibly neighboring properties served with private domestic water wells. The neighborhood is located adjacent to the City of Porterville and is within the city's Sphere of Influence. The City requires that adjacent unincorporated areas annex to the city and construct their water distribution system to city standards in order to receive City water service. This model has been followed recently by properties within the former Fairways Tract Mutual Water Company. A CDPH Planning Grant has been approved and work is underway on a Feasibility Study to evaluate the best options for Beverly Grand's residents to receive potable water. These efforts include initiating the annexation process.

Figure 1



Unfortunately, the City's policy of requiring annexation will be challenging in this case. Annexing only the Beverly Grand service area would create a peninsula, which is frowned upon by both LAFCO and the City of Porterville. Therefore, the proposed annexation (the eastern half of area "A" on Figure 1 above) is being required to consolidate with a neighboring proposed annexation (eastern portion of area "B" on

Figure 1 above), along with some other parcels which fill the gap between and create a neat city limit line. Although consent to annex has been obtained from all Beverly Grand property owners, it may be harder to get the neighboring parcels' consent since they do not stand to gain water service as part of this project. (Note: the thick black line shown in Figure 1 represents the existing City boundary.)

Biola

201-500 Connections Range
(324 Connections)

Location and Introduction

The unincorporated Fresno County community of Biola is located 18 miles west of the City of Fresno along Shaw Avenue and six miles north-northeast of the City of Kerman. The community is situated within Section 9 of Township 16S, Range 25E M.D.B.& M. at an elevation of approximately 250 feet. The community is represented by the Biola Community Services District which provides water, wastewater and other services to the community.

Biola CSD

The Biola Community Services District Mission Statement

A commitment to the ever growing needs of the community by providing high quality services, open lines of communication, promoting community participation, and using resources to build high quality standards for the people.

1. When was community established and why

The community of Biola, whose name was an acronym of the "Bible Institute of Los Angeles (BIOLA)", was founded in 1912 by William Kerchoff, a Los Angeles resident and founder of Southern California Gas Company and the San Joaquin Power Company.

A post office, re-established in 1920, serves the community along with a few small businesses (small grocery store, hardware store, auto services, gas stations, Laundromat) located primarily along North Biola Avenue. The community also has two

churches, a dehydrator, and two manufacturing plants (fertilizer, foam packing shells) with a new organic fertilizer manufacturer slated to begin in 2014.

The Biola Community Services District was formed in 1962. The District provides water, wastewater, storm drain, parks and recreation services to this isolated community. Services not provided by the District are fire suppression and law enforcement. North Central fire station is located within the Biola community boundaries. Biola was recently successful in obtaining grant funding to purchase new fire engines for the fire station. Sherriff patrol is provided by Fresno County. The District staff reported they are pleased to receive frequent visits from the local sheriffs and attribute manageable crime to these frequent visits.

The community has one school, Biola-Pershing Elementary, which is part of the Central Unified School District. During the 2013-2014 school year, the school's population is 220 students in grades K-6. Of the student population, 87% are Hispanic, 1% American Indian, 10% Asian, 1% African American and 1% Caucasian. 87% of the students are English Language Learners and of those 3% are Migrant students. 100% qualify for the free lunch program. The majority of the students walk to school, and approximately 10% of the students ride the bus to and from school.

A new Fresno County Public Library branch was opened on the elementary school site during the 2013-2014 school year for two afternoons per week and a few hours on Saturdays. The Biola Community Center offers a meeting site and limited recreational facilities for the community.

Fire protection is provided by North Central Fire Protection District which serves a 250 square mile area, including Biola's small station constructed in 1986, as part of the Fresno Fire Department and North Central Fire Protection District merger. This station houses a single engine company and a water tender.

The majority of the workforce is employed as farm labor, primarily in the vineyards with some working with field crops on the west side of the San Joaquin Valley.

How old are the systems

The majority of Biola's water and waste water systems were installed in the early to mid-1960's. Therefore, the District's existing water distribution system and waste water systems are about 50 years old.

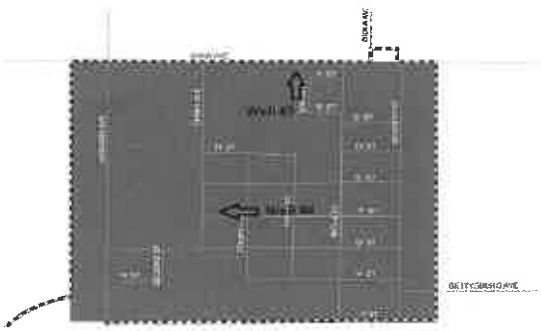
Old District records are not available (nobody knows where they are and it is suspected they were burnt in a fire that destroyed the old community center), but it is believed, Well #1 was abandoned before 1995, Well #3 was constructed around 1990, and Well #2 (contaminated with DBCP above the MCL) abandoned when Well #4 was constructed around 2003. The newest Well #4 was constructed partially to replace the

contaminated Well #2 and to increase capacity for a 100-unit affordable housing development that includes single-family residences and apartments built in 2008. The Well #4 project was funded by a combination loan and grant from the Safe Drinking Water State Revolving Funds (SDWSRF) through both DWR and CDPH for $813,577. Originally a higher percentage of loan was offered by the State based on the median household income calculated from the most recent Year 2000 Census. However, the District Board at the time did not believe the Census was conducted accurately to truly represent the community's true median household income (MHI). Upon the request of the District, and supported by an income survey conducted by Self Help Enterprises which calculated the MHI at $20,000, the loan portion of the offer was decreased and the grant portion was increased to allow for more affordable user rates to the District's customers.

All Biola water lines are old and in need of replacement. Many of the asbestos cement water mains are undersized and insufficient for fire flow requirements. The galvanized service lines from homes to meters are also in need of replacing. Residents sometimes report low pressure in the home. When checked, pressure up to the meter is fine. It is suspected that the decreased water flow between meters and dwellings causes the pressure drops.

Water meters, which were installed in 1976, are worn and in need of replacement. Meters are read manually by the office Customer Representative. Meters are reported to be difficult to read due to scratched glass, meters buried in dirt from gophers, and the need to literally "lay on my stomach" to read some meters. The current General Manager is investigating obtaining Radio Read meters to replace these.

Well #3 is located on the northern boundary of the District. The newer Well #4 is located near the center of the District (see map below).



The waste water treatment and disposal facility is located in the south western portion of the District.

The District boundary and the Sphere of Influence are nearly coterminous having 242 acres and 255 acres respectively. The District does not indicate any desire or need to expand its Sphere of Influence.

2. Median household income

Per the last decennial census to calculate median household income, the 2000 Census indicated the median annual income for households within the Biola CSD boundaries was $32,667 or 68.8 %. A community income survey was conducted by Self-Help Enterprises in the year 2002. This survey showed a MHI of $20,000. The American Community Survey (ACS), where a small sampling is done annually, expresses a five-year adjusted average for MHI. The Biola median household income determinations from the Year 2000 Census, Community survey and the two most recent ACS are tabulated below:

Period	Area	MHI	Margin of Error	% of State MHI
2000		$32,667		68.8%
2002 Survey		$20,000		
2007-11	**CDP**	$23,274	+/- $11,275	37.8%
2008-12	**CDP**	$19,167	+/- $ 4,169	31.2%

The survey results and both the 2007-11 and 2008-12 ACS data indicate that Biola is well below the 60% threshold for a Severely Disadvantaged Community.

3. Monthly sewer rates and water rates, if known

The monthly water rate, effective May 1, 2013, for the common ¾ inch residential water connection is $27.00 per month for the first 20,000 gallons, with an additional $.80 per 1000 gallons up to 27,500 gallons and another $1.15 per 1000 gallons up to 35,000 gallons. The District reports most residents do not exceed the 20,000 gallon base rate in the winter. Summer rates are usually around $30 per month. Rates are based on water line size, ranging from ¾ inch to 6 inch, so both commercial and residential rates are charged according to line size. For example, newly constructed homes with larger 1 inch water lines are charged a base rate of $31 per month instead of the $27.00 for residents with smaller lines.

Prior to April, 2013, the base rate was for 10,000 gallons and the combined water, sewer, and solid waste monthly rates were $64.43. The base number of gallons was increased with new water rates which led to an increase of about $14 per month. Even though meters were installed in mid-1970's, they were not used until early 1990's. Tiered rates began around 2008.

Water rates for the Fire Station are based on meter size. Water charges are not applied to water used to fight accidental fires.

The monthly sewer rate is $38.90 per dwelling. Commercial sewer rates range from $19.45 for a dining facility and general store, to $38.90 for service stations, schools and churches, to $77.80 for laundries and grocery store. Industrial sewer rates are determined on individual site sewer system discharge measurements. Sewer rates were modified from a more tiered system to a flat rate system effective May 2013. The District maintains the right to "modify the rates" based upon individual circumstances. Average residential water and sewer rates are 1.9% and 2.4% respectively of the 2008-12 estimated median household income for the community.

4. Billing methods for the community systems.

The District has worked to financially operate its water and sewer systems primarily as enterprise funds with almost all operating revenue generated from customer user fees and some property taxes. Customers pay in arrears for water and sewer services. Residents can mail or drop off payments at the BCSD office. The office accepts checks or money orders but no cash. The Utility Services Representative generates the monthly bills, collects payments and makes deposits to the District's bank account in Kerman. The District accountant writes checks from this bank account for operational expenses, payroll and to pay other bills including reimbursements which are mailed to the vendors.

The District has noticed a significant increase in delinquent payments, doubling in the fiscal year 2012-2013 over fiscal year 2011-2012.

Mailings of bills are also used to send notices about upcoming community events and activities, as well as Board meeting information and general community communication.

5. Are systems in the black or in debt?

The Biola District's total operating revenue is derived from fees for solid waste disposal, water and wastewater service, use of the community center, and a limited amount of money from property taxes. The table below provides financial information from Fiscal Year 2012-2013 on both the water and sewer system enterprise funds. Though there is a loss in each fund, there were no rate increases in 2012-2013.

Description	Water System	Sewer System	All Enterprise Funds
Operating Income	$159,684	$203,029	**$362,713**
Operating Expense	$289,262	$369,089	**$658,351**
Depreciation	$65,613	$84,618	**$150,231**
Operating Expense (w/o Dep)	$223,649	$284,471	**$508,120**
Non-operating Revenue	$12,927	$395	**$13,322**
Non-operating Expense	$3,137	$0	**$3,137**
Change in Net Position	-$119,788	-$165,665	**-$285,453**
Cash end of year	$805,320	$46,232	**$851,552**

6. **Are systems run as a business or are the systems dealt with more issue by issue as they come?**

Under a new General Manager and Board leadership, the District has worked successfully toward operating more as an enterprise fund and less on an issue-by-issue model. Currently, the District feels secure under the present General Manager's leadership and contracted operator Jared Steeley. However, due to previous experiences, the District is fully aware of the ever present challenge to maintain operations and financial controls because of inadequate financial resources and a limited pool of qualified personnel available, especially with the challenge of attracting qualified people due to lower salaries.

The current General Manager is also working with the Board to begin building a savings for future maintenance, repairs, and replacement. This method of managing the District is an improvement from past procedures. The current Board understands the significance and impact of not preparing for the future and desires to not repeat past financial mistakes.

7. **Range of household budgets in the community**

The 2007-2011 ACS data indicates Biola is a SDAC with a MHI of $19,167 or 31.2 % of state MHI, and the following range of household incomes in the community:

Biola CDP, California	Annual Household Income Estimate	Margin of Error
Total Households	222	+/- 76
Less than $10,000	8.1%	+/- 13.4
$10,000 to $14,999	5.4%	+/- 6.4
$15,000 to $24,999	59.9%	+/- 24.5
$25,000 to $34,999	8.6%	+/- 11.0
$35,000 to $49,999	0.0%	+/- 15.5
$50,000 to $74,999	6.3%	+/- 7.9
$75,000 to $99,999	11.7%	+/- 15.5
$100,000 to $149,000	0.0%	+/- 15.5
Median Income (dollars)	$19,167	+/- $4,169
Mean Income (dollars)	$28,589	+/- $10,579

The 2008-12 ACS indicates that $49,120 is 80% of Statewide MHI and $36,840 is 60% of Statewide MHI. An estimated 82% of households have annual incomes less than $35,000. Consequently, there is very little disposable income in the community.

Biola families in general don't have any room for flexibility in their budgets. Many families depend on farm labor for their major source of revenue so their incomes

fluctuate seasonally. There are also many residents who depend on fixed-income sources such as disability and social security.

8. Population served

The 2010 United States Census reported that Biola had a population of 1,623. According to District personnel, almost all residents are "permanent" and the population does not fluctuate much seasonally. The community is comprised of several generations of "big families" that don't move away.

Fluctuating vacancy status can matter to small rural communities because of potential impact on consistent revenue for water and waste water services. The 2010 Census states 97.4% of the 351 housing units were occupied. There were 9 vacant housing units of which 4 were rental and 2 were for sale. One was "other". There were 0 housing units rented but not occupied or sold but not occupied. Vacancy status of housing units for migratory workers was 0, and only 2 were considered seasonal, recreational or occasional use.

According to a Biola resident and District employee, "it can be *years"* before a house is for sale or for rent; it's "very rare." The 2010 Census report states that 63.2 % of the 351 housing units are owner occupied and 36.8% are renter occupied.

Based on the Year 2000 Census Demographic Profile, the racial makeup of Biola was 510 (31.4%) White, 6 (0.4%) African American, 43 (2.6%) Native American, 316 (19.5%) Asian, (0.1%) Pacific Islander, 692 (42.6%) from other races, and 54 (3.3%) from two or more races. Hispanic or Latino of any race was 1,196 persons (73.7%).

9. Short description of water systems and sewer systems including number of connections, adequacy of backup systems, and MCL challenges if known

The BCSD has 324 active connections servicing 317 residences, 7 commercial properties, and 1 church.

The majority of Biola's original water system is more than 50 years old. However, upgrades have made significant improvement to the water system so that District staff reports the system is "running fine" now. Due to aging, there are occasional "pump issues", for which an alarm system is set to notify staff. These are usually issues that are easily remedied by CSD staff. The primary equipment need is for old meters to be replaced with new radio read meters to ensure more accurate meter reading and ability to detect leaks.

The District reports Well #4 provides adequate water supply. Well #3 is considered a back-up well, used during Well #4 maintenance and during high peak times. It is also run during evening hours just to keep pressure up.

There are currently no MCL violations. The only treatment necessary at this time is chlorination which is done automatically. The District is securing a new chlorination system soon which will eliminate the need to transport barrels onsite. They will be contracting with a company to do this. The CDPH website had listed previous repeated coliform violations and a nitrate violation only once. No other violations were listed.

In addition to District staff being available for minor service calls, the District currently contracts with Jared Steeley to operate the water system, including monthly monitoring for water quality. There are sampling sites throughout the District that are monitored monthly for coliform bacteria.

When asked about sufficient water supply due to potential drought conditions, District staff replied, "We're good because we're so close to the river. CDPH says that's why we have good water too.....because we're close to the river."

In fiscal year 2013-2014, the Biola CSD was awarded a Community Development Block Grant (CDBG) from Fresno County to replace undersized (for fire flow) asbestos cement main water lines on Third Street and Biola Ave with larger PVC pipe. The District is requesting 2014-2015 CDBG funds to replace undersized main lines on two more streets.

The District has been invited by CDPH to submit a Safe Drinking Water State revolving Fund program application to rehabilitate the community's water distribution system including the replacement of water mains, service connections and possibly of replacing worn out direct read water meters with radio read meters.

The District will begin seeking additional funding to replace galvanized service lines between the homes and water meters. A potential source of these funds could be Fresno County's HARP program operated with CDBG funds. It would be beneficial if this on-site work could be coordinated with the meter replacement work. Working with the current GM leadership, the Board has developed an appreciation for the significance of improvements now to prevent more expensive repairs later and the value of upgrading the entire system simultaneously.

The waste water treatment plant was originally built in the 1970's. Due to 20 years of maintenance neglect, the amount of sludge that built up resulted in potential overflow and ineffective and costly treatment. At that time, the plant consisted of four aeration ponds followed by evaporation/percolation ponds for disposal.

Upgrades to the treatment plant were made in the early 2000's. Around 2012, a $250,000 CDBG grant provided funds to construct a new aeration pond. Additionally, 300-plus tons of sludge was removed from the ponds at a cost of $300,000. This was paid for through user fees.

The waste water treatment plant still needs some work done. The three monitoring wells currently used need replacement. When drawing water to test for potential contamination from the sewer plant, water is usually turbid or samples have been dry. These wells are checked every three months by a contractor, California Water Services Company.

Now that the sludge has been removed (as described above), the waste water treatment plant sufficiently treats the waste water. There are now four aeration ponds used primarily with a fifth used as a "polishing" form of treatment so the discharge to the percolation ponds is as clean as possible. If and when the town grows, this pond will then start to take on a much larger role in reducing B.O.D. (biological oxygen demand) to the percolation ponds.

The one main big pond and four old evaporation/percolation ponds are sufficient. The aerators on the large main pond run all the time. The other aerators run only at night now that the sludge has been removed. Of significant note is that the monthly electricity bill for aeration of the ponds has been reduced from $5,000 to $2500- $3000, as a result of removing the sludge from the ponds.

The current GM and Board are also beginning to investigate using probiotics for sludge reduction and increased treatment efficiency. Other wastewater systems, including the City of Fresno facility, report great results with probiotics, especially on fats and oils which cause problems with the Biola system now.

Biola has installed a new "headwork's" (placed near the very beginning of the plant) that removes most of the inorganics that are present in raw incoming wastewater. This system consists of a newly constructed flow trough (concrete) that has an auger that carries up unwanted debris and automatically drops it into a plastic bag for proper disposal methods. There is also a by-pass channel that was installed so the plant can still receive wastewater if the headwork's is down for maintenance or has an operating failure during its course of operation.

The lower percolation ponds (1, 2, 3, 4) were renovated in early 2014. The banks (levee's) were reinforced and the ponds were deepened by roughly 2-3'. The ponds are now ready for future use.

It is safe to say that this facility has seen a positive transformation between the years 2011-2014.

Both the current District and operator have expressed that previously they were actually embarrassed of the plant. Now, the plant is ready for tours, provides healthy treatment of the wastewater and is a place that looks and operates like someone really cares about this facility. To that, both the District and the Operator JSWWC say "WE CARE!"

10. Existing governing body such as County Service District, Public Utility District, Mutual water system, etc.

The independent Biola Community Services District provides water and sewer services to the unincorporated Fresno County community of Biola. The District is governed by a five member board of directors elected by voters residing in the District. As in other independent districts, if an election is uncontested, the directors are appointed by the Fresno County Board of Supervisors to save the District from paying election costs. Terms are four years. Filling seats on the board of directors is sometimes easy, sometimes challenging.

The District has experienced the results of poor leadership in the past contrasted with current effective, informed and honest leadership. Reportedly previous leadership contributed to insufficient water and waste water system management, lack of pursuing grants and other funds, even alleged embezzlement of district funds. A Board Recall campaign, combined with a new General Manager secured and appointed in 2011 with the help of Fresno County Supervisor Phil Larson, has led the District to rectify the District's infrastructure as well as turning around financial and governance management.

11. Decision making process

The Biola CSD Board of Directors is in charge of the decision making process related to the community's water system and waste water treatment plant. This applies to policy decisions and other major decisions. The Office Manager has the capability of approving work or repairs that are under $3,000. Any decision higher than $3,000 requires board discussion and according action.

Due to previous alleged fraud in District management, monies are received in the form of checks or money orders only. No cash is received into the District office. All reimbursements now go through a four step approval process.

12. Discussion of operation and maintenance personnel for each community

General operations: The District is run by a part time General Manager who serves as Finance and Capital Improvements Director, manages personnel, and works with the accountant and two District engineers. A part time Assistant Manager serves as board appointed Secretary to the Board, writes the newsletters and performs other secretarial duties.

Billing: The full time Utility Services Representative reads the meters, prepares and sends the bills, collects and manages payments, does the banking, and orders office supplies and other daily money management.

Systems operations: Consultants and operators are contracted for water treatment and waste water plant management. The District contracts with California Water Services

(Tito Balling of Coalinga) on an "as needed" basis for maintenance of the water and wastewater systems. This includes tri-monthly monitoring of the waste water monitoring wells.

Both the waste water and water facilities are managed by JSWWC Water & Wastewater Management, Jared Steeley, on a contract basis. District representatives have expressed their appreciation for the services provided by this company.

The Biola CSD does not share any human resources with other communities or agencies.

13. Discuss how district is managed such as independent manager, County personnel involved, CDPH personnel involved

The District's water system is directly regulated by the State Department of Public Health in monitoring compliance for and in enforcing EPA's Safe Drinking Water Act. The wastewater system is regulated by the Central Valley Regional Water Quality Control Board.

There is no CPUC involvement since this is a publically owned and operated system. Most of their functions are entirely internal (budgeting, billing, operations, etc). The exception is the District's banking relationship with the Fresno County Treasurer.

14. Discuss problems that have been solved by the community that could be applied as solutions by other communities.

Biola's story is clearly one of how allegedly dishonest and/or incompetent leadership can mislead a small community volunteer Board contrasted with how honest and competent leadership can help small community volunteer Boards be effective community leaders and managers of public services and public funds. Similar stories have played out in many small rural communities. Much can be learned from Biola CSD's story.

Under new leadership, in 2012, The District upgraded their waste water treatment plant and removed twenty years' worth of sludge. This has resulted in significant reduction of energy costs, from $5000 per month to current $2500-$3000 per month. Under new leadership (General Manager), the District is better situated to develop and implement an improved maintenance plan.

The District reports that, while the water system is better situated than previously, it still needs additional work to catch up on some neglected maintenance and develop and implement an improved maintenance plan. But again, with the current General Manager helping them repair old problems and plan for the future, combined with competent

systems operations by JSWWC, the District feels confident they are better equipped to do so.

Because the current Board has been proactive in educating the community about water management and the reason for rate increases, the community has supported water rate increases- $7 the first time under the new leadership and about $5 the second time. The second increase, which began May 2013, was based on an increased base amount so impacted only the larger water users significantly.

Desiring to continue developing the culture of cooperation within the community, instead of just raising overall rates for the new meters and lines replacement project, the GM is suggesting a "surcharge" for a limited time to pay specifically for the improvements and to be sunset when the project is completed. The GM and the Board believe this will continue to develop trust among the rate payers.

The Biola CSD has developed a proactive and questioning culture in their leadership style. For example, they ask their GM many questions, educating themselves to make informed decisions.

Because the current GM clearly understands the managerial limitations small communities like Biola face, he has worked to create outside sources to provide many of the services needed: accounting, operations, and engineers. This way the Board of the future will primarily manage, not operate, the District's business. The current general manager took the position of GM to not just help the Board "fix some problems", but to help prepare them to prevent future problems and become more effective leaders. District staff clearly stated that honest, skilled and effective leadership (in the position of the General Manager) has made all the difference in District operations and management of water and waste water services.

15. Discuss largest unresolved problems/issues for the community and what is being considered to solve these problems, if any.

Water meters need replacing. Radio read meters will improve monitoring efficiency and help identify and diminish leaks.

The monitoring wells for the waste water treatment plant need replacing, as described in an earlier section.

Now that the sludge has been removed and the waste water treatment system is functioning more efficiently, some improvements and upgrade to the waste water system, such as new pumps, would be helpful. A probiotic system is also being considered for the treatment plant.

One primary concern of the District recently is an increase in graffiti and potential vandalism to the equipment. The District has increased and modified fencing and types

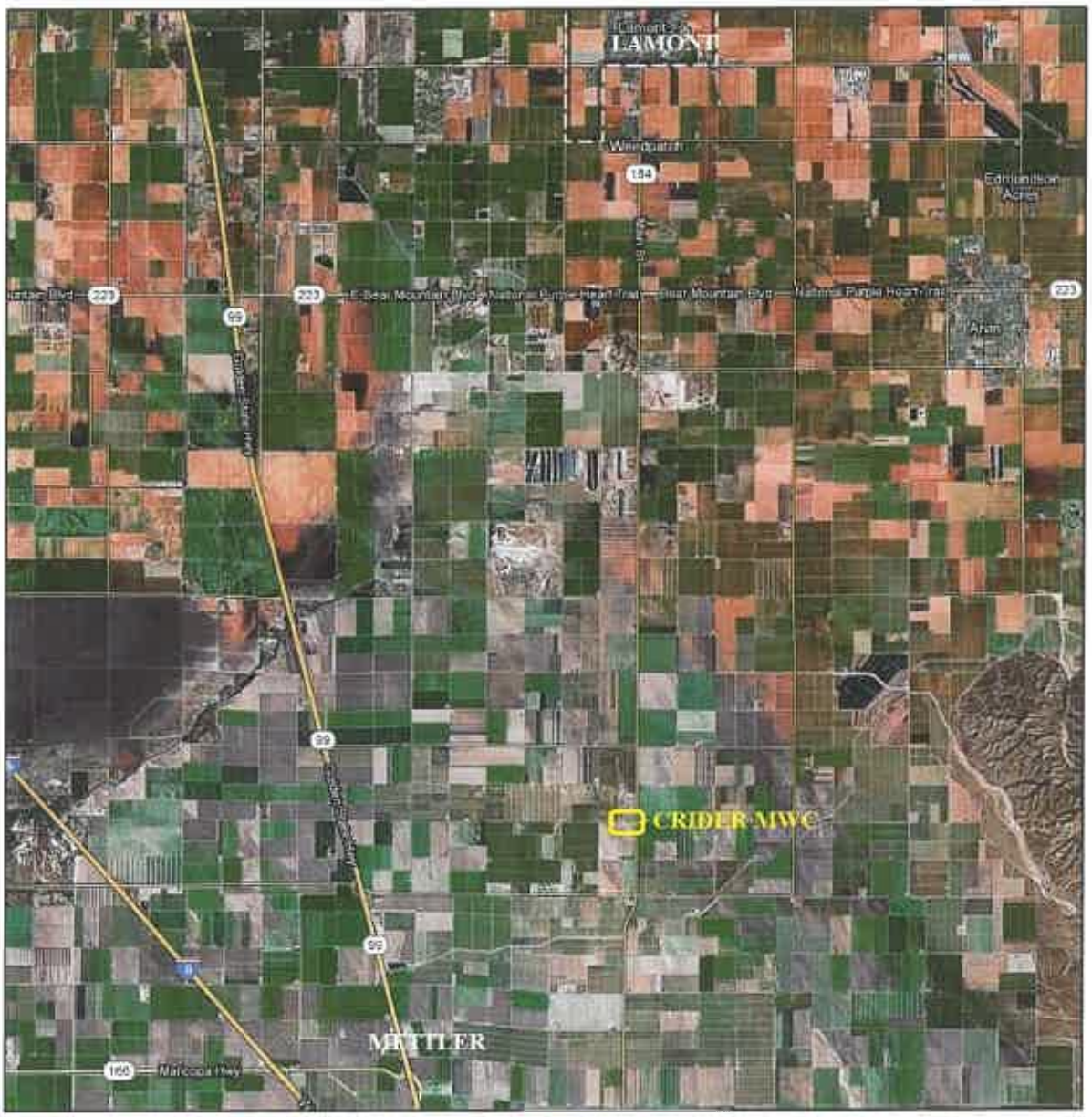
of locks and bolts to discourage invasion of potential vandals. It's believed this is being done by young people in the area. But the ability of vandals to get inside the system to do graffiti has made the District aware of the potential for further vandalism to the system itself. The District is discussing an investment in security cameras in order to be proactive on this matter to prevent the need to be reactive at a later time.

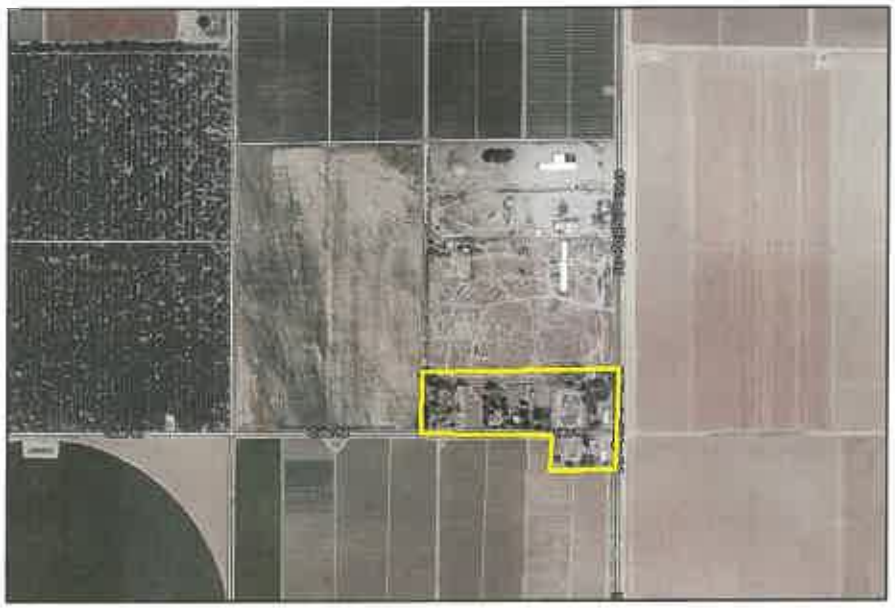
CRIDER MUTUAL WATER COMPANY

<15 Connections Range
(14 Connections)

Location and Introduction

Crider Mutual Water Company has 14 connections and less than 25 permanent residents. The community the water system serves is located west of Wheeler Ridge Road along Crider Road approximately 10 miles south of Lamont. This very small water system is located six miles north-east of the nearest neighboring community water system in Mettler.





1. When was community established and why.

The community was established as a County subdivision in 1960 with ½ to 1 acre lots that were sold and developed. One vacant lot remains. The system serves two markets, an abandoned church, one other commercial site and 10 dwellings.
The water system permitted for the community originally consisted of:

a. An old 300 foot unsealed, landlocked agricultural well with initial nitrate levels in the 60 ppm range;
b. Used 2 and 3-inch diameter oil field pipelines were utilized for the distribution system which ran behind homes;
c. An old leaky 3,000 gallon hydro-pneumatic tank;
d. An unsecured and landlocked 20 feet X 30 feet well site, surrounded by a 1 acre parcel; and
e. In the late 1970's over 300 hogs kept on the parcel surrounding the well site, despite protests from residents. Eventually the hogs broke through the fence into the well site to wallow in the cool mud from the leaking pressure tank. Compounded with the pressure tank water and hog waste washing into the unsealed well, the Nitrate levels increased and the water reportedly smelled like hog urine. In early 1980s nitrate concentrations increased to over 300 ppm as a result of the pollution caused by the hogs. Eventually the residents were successful in getting the hogs removed.

2. How old are the systems?

The current water system which includes a well, pumps, storage & hydro-pneumatic tank, waterlines and meter was installed in the late 80's utilizing USDA (then Farmers Home Administration) and HUD Community Development Block Grant (CDBG) funding with technical assistance from Self-Help Enterprises. A test well was drilled using CDBG funds that located clean water. USDA funds were used to drill a 600 foot deep well and seal off the upper contaminated aquifer from the deeper potable water aquifers. The

current water supply system meets drinking water standards. The new well, 7,000 gallon storage tank and a 500 gallon hydro-pneumatic tank were built and protected from livestock and flooding by a concrete wall, chain link fencing and cement sanitary seals in the new well. New 4-inch and 2-inch PVC water mains and meters were installed in front of the properties within the County road right-of-way, providing ready access to the meters and distribution system.

3. Median household income.

The project improvements were built in the early 1980's. The 1980 census for the area was too large to be representative of the area. Self-Help Enterprises conducted a community income survey in the early 1980's documenting a median annual household income of about $10,000. The community is still within a large Census Tract and Block Group that does not accurately represent this small community. Per the last decennial census to calculate median household income, the 2000 Census indicated the median annual income for households in Kern County Census Tract 62.02 that incorporates the area that represents the Crider MWC Water System, was $30,259 or 64.0% of the statewide median household income at that time. Since then the US Census Bureau no longer asks the income question in the decennial census, but rather collects income data through the continually occurring American Community Survey (ACS) where a smaller sampling is done annually. This data is expressed as a 5-year adjusted average. The median annual household income for the Year 2000 Census and the past four rounds of the ACS are expressed as:

Period	Area	MHI	Margin of Error	% of State MHI
2000	CT62.02	$30,259		64.0%
2005-09	CT62.02BG1	$36,047	+/-$4,588	61.2%
2006-10	CT62.02	$35,670	+/-$5,898	58.6%
2007-11	CT62.02BG1	$33,779	+/-$6,078	54.8%
2008-12	CT35.01BG1	$36,617	+/-$ 4,367	59.6%

The Census data though for a much larger area is somewhat representative of the small community of Crider. Past special survey data, continuing community demographics of the Crider Mutual Water Company and broad census data shows this to be a severely disadvantaged area.

4. Monthly sewer rates and water rates, if known.

There is no sewer service for residents. The neighborhood is dependent on individual septic tank systems for sewage disposal. The current metered water rate averages $45.00 per month. This is approximately 1.5% of the 2008-12 estimated median household income for the neighborhood. In addition, there is a property assessment averaging $5.79 per month for each share (property) to cover debt service for payment on the USDA loan. Overall this bring the cost of water service up to 1.5% of the 2008-12 estimated median household income for the neighborhood.

5. Billing methods for the community systems. *Does the community use the property tax rolls to collect annually or semi-annually? Are there other services that might be on the same bill? Are bills paid by mail or is there an office drop off point? Discuss how this works for very small communities that do not have a formal billing process.*

The Water Company operates its water system totally as an enterprise fund with all operating revenue generated from customer user fees. As a Mutual Water Company, it cannot tax its customers. Water meters are read monthly and monthly bills collected by mail or hand delivery. As stated above, there is a property assessment averaging $5.79 per month for each share (property) to cover debt service for payment on the USDA loan.

6. Are systems in the black or in debt?

The water system has existed for decades barely able to pay bills to keep water flowing. On this borderline with no reserves, system operations are dependent on current month's revenues, thus making operations very sensitive to late user payments and shutoffs since there are few users.

7. Are systems run as a business or are the systems dealt with more issue by issue as they come.

The system is run as a business but it has difficulty collecting from some members.

8. Range of household budgets in the community. *Discuss how much is spent on utilities such as sewer and water, if known. Are there discretionary funds in the typical households? If water or sewer rates go up what might get cut.*

The Crider community is severely disadvantaged, with 2008-12 ACS MHI indicating an MHI of 59.6% of the statewide MHI. The 2008-12 ACS indicates the following range of household incomes in the greater area represented by the census tract:

Kern County CT 62.02, California	Annual Household Income Estimate	Margin of Error
Less than $10,000	4.3%	+/-3.0
$10,000 to $14,999	4.9%	+/-2.9
$15,000 to $24,999	21.7%	+/-7.3
$25,000 to $34,999	14.9%	+/-6.0
$35,000 to $49,999	24.1%	+/-7.3
$50,000 to $74,999	15.7%	+/-5.8
$75,000 to $99,999	7.1%	+/-3.9
$100,000 to $149,999	4.5%	+/-3.7
$150,000 to $199,999	0.6%	+/-1.0
$200,000 or more	2.1%	+/-1.7
Median income (dollars)	$36,617	+/-4,367

An estimated 45.8% of households in the greater census Tract 62.02 have annual incomes less than $35,000. The true income in the small neighborhood served by the Crider Mutual Water Company is estimated to be much lower. As such, it is estimated that there is very little disposable income in the community.

9. Population served.

The Crider Mutual Water Company serves 10 dwellings with a population of less than 25 permanent residents.

10. Short description of water systems and sewer systems including number of connections adequacy of backup systems and MCL challenges if known.

There is no community wide sewer system that serves the neighborhood provided water by the Crider Mutual Water Company System. The community depends on individual on-site septic tank systems for wastewater disposal.

The Crider Mutual Water Company has 14 connections servicing 10 residences.

The water system is supplied by a single water well, which produces water meeting State and Federal Health standards for water quality. The well is drilled to a depth of 600 feet. The well pumps into a 7,000 gallon storage tank from which water is pumped into a 500 gallon hydro-pneumatic tank. The distribution system is comprised of 4-inch and 2-inch PVC water mains installed in front of the properties within the County road right-of-way. Each customer service is metered. As such, the Water Company has no back-up source of water.

11. Existing governing body such as County Service District, Public Utility District, Mutual water system, etc.

The Mutual Water Company is governed by a board of directors comprised of property owners utilizing water service.

12. Decision making process. *Is there a board of directors, designated lead home owner, long time unofficial leader, or is there a lack of good decision making process. History on this would be good.*

The Mutual Water Company Board is comprised of 3 persons that are qualifying land owners.

13. Discussion of operation and maintenance personnel for each community.

Part-time or full time personnel, contractors used, any shared human resources with other communities or agencies.

Board members and community residents provide necessary operation and maintenance on a voluntary basis. Volunteers are reimbursed for materials they purchase for O&M work. Specialized services such as pump repairs are contracted out.

14. Discuss how district/company is managed such as independent manager, County personnel involved, and CDPH personnel involved. *Is the California Public Utilities Commission involved on rate setting or is it a local decision?*

The Mutual Water Company manages its affairs and sets rates through the local decision making process implemented by water company shareholders (property owners). The Kern County Environmental Health Department monitors this NonCommunity Water System for compliance with State and EPA Safe Drinking Water Act regulations. Noted that a NCWS is subject to less water contaminant tests than a Community Water System and thus helps reduce some operational costs.

15. Discuss problems that have been solved by community that could be applied as solutions by other communities.

Problems with the older nitrate contamination and old failing water system have been corrected with facilities installed three decades ago with assistance from Self-Help Enterprises and financing from USDA and CDBG.

16. Discuss largest unresolved problems/issues for the community and what is being considered to solve these problems, if any.

- Small size, low-income and few people willing to help run system.
    1. Local efforts to educate users about system and requirements.
    2. Residents unwilling to help out if someone is doing the work.
- This system & other NonCommunity Water Systems (NCWS) like it (less than 25 population and fewer than 15 connections), currently do not qualify for DWSRF or Proposition 84 grant funds.
    1. System must rely on CDBG and or USDA funding for infrastructure improvements.
    2. State funding regulations could be changed to allow small NCWS systems to be eligible for funding.
- Increasing regulations and other operational costs force the system to raise water rates.
    1. Seek lower cost options (Time of Use, energy efficient equipment, etc).
    2. Review and raise rates to cover costs, including reserves for repairs.
- Illegal use of water (e.g. marijuana garden) creates excessive demand and puts more strain on the existing pump and system.
    1. Active system observation. High water use led Board member to check for leaks. A water hose was found transferring water to a nonmutual system vacant parcel that was growing marijuana. Hose was cut.
    2. Metered rate allowed charging for water use.
- Given the small size one or two nonpaying customers have a great impact on payment of power and other bills.
    1. Increase rates to develop a reserve, BUT that would make it more expensive for current low-income users and may increase delinquencies.

- Regulations that add additional burdens to small systems

Small water system Board of Directors must deal with mounting requirements and regulations that unfortunately frustrate these volunteers. For example AB54 enacted in 2012 requires all Mutual Water Company board members to attend 2 hours of Ethics training every year. While passed in response to a larger urban Mutual Water Companies' problem; this legislation places a huge burden on small systems like Crider which have board members that have difficulty paying for training usually a considerable distance from their homes.

- Consolidation
- 1. Physical consolidation is too expensive with the closest water systems being Mettler (6 miles) and Lamont (8 miles) away.
    3. Regional management consolidation might be an option, but it requires a larger entity to own & operate the system and:
        A. Would likely increase rates to pay for operating costs now volunteered.
        B. Might not be possible due to large spread of similar systems.
        C. Limited County staffing and funds.
        D. Would take the system out of local control.

EAST OROSI

51-200 Connections Range
(106 Connections)

Location and Introduction

The Tulare County community of East Orosi is located approximately one and a half miles east of the town of Orosi on the north side of Avenue 416.

1. When was community established and why.

The northern Tulare County community of East Orosi was established in 1916 by Orosi Farms. The community was located along a rail line that was built in the late 1800's. The railroad station agent's house still remains in the community on a block sized parcel located between Georgia Street and Idaho Avenue and between Fruitdale Avenue and Glendale Avenue. Old beat up sidewalks from this past era can still be found on the east-west Georgia Street (Avenue 418) in the center of the community. The southwestern entrance to the community is off of El Monte Way (Avenue 416) along Fruitdale Avenue where an old bridge dated July 1915 crosses the Alta Irrigation Canal with the abutments marked Orosi Farms. The major employer in the community is the Fancher Creek Packers Orange Packing House located on the northwest corner of the community. A bulk propane storage and sales facility, Pope's Propane Service, is located just south of the packing house. The community's only commercial business, a small grocery/convenience store the East Orosi Market is located at the

southeast corner of the community. The community is situated within Section 9 of Township 16S, Range 25E M.D.B.&M. at an elevation of approximately 385 feet.

2. How old are the systems.

The East Orosi Community Services District was formed on April 19, 1955 and apparently took over the operation of an older community water system that may have been as old as the railroad. The footings of a long gone elevated water storage tank can still be found near the existing East Orosi CSD office just east of Ione Road at the intersection with Florida Avenue. The older water distribution system consisted of cast iron pipelines. In the early 1980's the District received a $400,000 grant from the California Safe Drinking Water Bond program. This grant paid for the replacement of the entire water distribution system with 4 and 6-inch PVC water mains, the drilling of 2 test wells, 2 production wells and the equipping of those two production wells with pumps and hydropneumatic tanks. One well, the East Well, is located along the east side of Ione Road between Avenue 418 and Idaho Avenue. The other well, the West Well, is located about a half mile out of the community along Road 136.

Due to the severity of septic system leaching failures, in the late 1970's the District started the process to plan, design and build a community sewer system. The heavy soil with hard pan layers present in the community created significant problems with septic system leaching. Surfacing effluent was common and created a potential health threat. In the early 1980's the District received funding from the former Clean Water Grant Program and the USDA Farmers Home Administration to build a community sewer system and transport the wastewater to the Cutler-Orosi Joint Wastewater Powers Authority Treatment Plant roughly four miles away. In order to receive increased grant funding, the District was encouraged to install what was considered at the time as an innovative/alternative sewer collection system. This small diameter sewer system utilizes septic tanks to remove solids and only the effluent that would have otherwise gone to a leach line is conveyed off the property to the District's gravity sewer collection system, then on to a lift station that pumps the effluent through a force main to the Cutler-Orosi Treatment facility. The District has easements on each property to enter and pump septic tanks to remove solids when necessary. Since there are no solids in the collection system it was constructed of smaller sized pipes and cleanouts exist where otherwise manholes would exist.

3. Median household income.

Per the last decennial census to calculate median household income, the 2000 Census indicated the median annual income for households in East Orosi, was $26,071 or 54.9% of the statewide median household income at that time. Since then the US Census Bureau no longer asks the income question in the decennial census, but rather collects income data through the continually occurring American Community Survey

where a smaller sampling is done annually. This data is expressed as a 5-year adjusted average. The median annual household income for the Year 2000 Census and the past four rounds of ACS is expressed as:

Period	MHI	Margin of Error	% of State MHI
2000	$26,071		54.9%
2005-09	$26,163	+/- $ 1,091	43.3%
2006-10	$29,063	+/- $ 8,024	50.7%
2007-11	$29,938	+/- $19,398	48.6%
2008-12	$28,750	+/- $ 3,010	46.8%

4. Monthly sewer rates and water rates, if known.

The monthly flat water rate is $17.15 dollars per month and the monthly sewer rate is $39.85 dollars per month for a total monthly District utility charge of $57.00. This is approximately 0.7% and 1.6% respectively for water and sewer service of the 2007-11 estimated median household income for the community.

5. Billing methods for the community systems.

East Orosi CSD mails out water and sewer utility bills to its customers on a monthly basis. Water and sewer service customers have the option of writing a check or obtaining a money order and then mailing payment to the District's post office box. The other option, which approximately 70% of customers opt for, is to pay their monthly water and sewer bills in cash each Tuesday between the hours of 3:00 and 5:00 pm.

6. Are systems in the black or in debt?

The amount of revenue collected to cover water and sewer system expenses has not been sufficient to cover operating costs, debt service, debt reserve and put aside annual reserves. On the water side, repair, maintenance and water testing costs were unusually high in fiscal year 2011-12 followed by utilities expenses. On the wastewater side, the fee for treatment of wastewater at the COWJPA plant jumped from $16,217 to $25,777 from the previous fiscal year. In the fiscal year 2011-12, the District's financial situation was as follows:

Description	All Funds	Water System	Sewer System
Cash beginning of year	$ 144,340		
Operating Income		$ 22,045	$ 51,224
Operating Expense		$ 44,085	$ 84,426
Depreciation		$ 1,313	$ 25,416
Operating Exp. (w/o Dep.)		$ 42,772	$ 59,010
Non-operating Revenue		$ 511	$ (1,530)
Cash end of year	$ 112,808		

It should be noted that all numbers, with the exception of the cash balances are based on the accrual method of accounting.

7. **Are systems run as a business or are the systems dealt with more issue by issue as they come up?**

The EOCSD District operates as a business, but has its challenges. For the past few years, the District has had difficulty in filling all of its board seats and as such having a sufficient number of board members to have the necessary quorum to conduct board meetings. In 2012 the board has filled all five seats and has conducted almost regular monthly board meetings. The District Board and management also have the goal to operate the water and sewer system finances as enterprise funds. This has been extremely challenging with the water system which normally does not receive enough revenue to cover costs.

8. **Range of household budgets in the community.**

East Orosi is severely disadvantaged, with 2007-11 ACS MHI indicating an MHI at about 50% of the statewide MHI. The 2006-10 ACS indicates the following range of household incomes in the community:

East Orosi CDP, California	Annual Household Income Estimate	Margin of Error
Less than $10,000	0.0%	+/-49.0%
$10,000 to $14,999	0.0%	+/-49.0%
$15,000 to $24,999	0.0%	+/-49.0%
$25,000 to $34,999	80.0%	+/-40.6%
$35,000 to $49,999	20.0%	+/-40.6%
$50,000 to $74,999	0.0%	+/-49.0%
$75,000 to $99,999	0.0%	+/-49.0%
$100,000 to $149,999	0.0%	+/-49.0%
$150,000 to $199,999	0.0%	+/-49.0%
$200,000 or more	0.0%	+/-49.0%
Median income (dollars)	$29,063	+/-$8,024

American Community Survey (ACS) data for small communities such as East Orosi is not often statistically valid due to the small sample taken. Unfortunately, this is especially true for East Orosi as can be seen from the high margin of error in the above table. An estimated 80% of households have annual incomes less than $35,000. The 2006-10 ACS indicates that 70% +/- 28.2% of East Orosi residents live below the poverty line and the 2007-11 ACS indicates that 48.8% +/- 12.3% of the labor force are unemployed. As such, there is very little disposable income in the community.

9. Population served.

The 2010 United States Census reported that East Orosi had a population of 495. The racial makeup of East Orosi was 209 (42.2%) White, 0 (0.0%) African American, 5 (1.0%) Native American, 2 (0.4%) Asian, 1 (0.2%) Pacific Islander, 261 (52.7%) from other races, and 17 (3.4%) from two or more races. Hispanic or Latino of any race were 466 persons (94.1%).

The average household size was 4.42. There were 116 housing units at an average density of 468 per square mile, of which 46 (41.1%) were owner-occupied, and 66 (58.9%) were occupied by renters. The homeowner vacancy rate was 2.1%; the rental vacancy rate was 1.5%. 192 people (38.8% of the population) lived in owner-occupied housing units and 303 people (61.2%) lived in rental housing units.

10. Short description of water systems and sewer systems including number of connections adequacy of backup systems and MCL challenges if known.

The EOCSD has 106 water connections servicing residences, the East Orosi Market, and the Mennonite Brethren Church. The District also provides sewer service to all of these users. The Fancher Creek Packers Orange Packing House and Pope's Propane Service are not known to be connected to either the water or sewer system.

East Orosi's water system is supplied from groundwater from two wells. One well, the East Well, is located along the east side of Ione Road between Avenue 418 and Idaho Avenue. The other well, the West Well, is located about a half mile out of the community along Road 136. Each well is equipped with a 7.5hp submersible pump. Each discharges into a hydropneumatic tank. The East Well is served with a 7,500 gallon tank and the west well with a smaller 3,500 gallon tank. Neither well has chlorination facilities. Each well can provide sufficient capacity to the system and the District has commonly operated the system with alternating one well on and the other off. The east well is normally the lead well between October and March and tre west well serves as the primary well between April and September. As such, if one well goes down, the other well should be capable of providing backup supply. The water distribution system consists of 4 and 6-inch PVC water mains with fire hydrants and sectionalizing gate valves. The 105 water service connections are metered.

In 2010 and 2011, bacteriological sampling of the distribution system indicated numerous instances of the presence of total coliform bacteria. These violations occurred in January, February, April, May, June and December in 2010. Violations occurred again in January, February, March, April, June, September, October, and November of 2011. As a result of these repeated violations, a Compliance Order was issued on September 7, 2011 by the Tulare County Department of Environmental Health Services. Subsequent inspections and disinfection of the system and the hiring of a certified operator have dramatically reduced the bacteriological violations since then.

Water pumped from the wells has intermittently exceeded the nitrate Maximum Contaminant Level set by EPA and CDPH. The chronic on again and off again problem with East Orosi's water quality has been the nitrate levels of water produced from the community's two wells. Attached is a table listing nitrate levels from both wells from 1986 through January 2013. This table shows that the east and west wells have produced water exceeding the nitrate MCL 8 and 11 times respectively over this period.

East Orosi Community Services District Nitrate Levels in Active Wells Nitrate MCL = 45 ppm		
Date	East Well #1 (ppm)	West Well #2 (ppm)
12/23/1986	22	29
8/7/1990	41	29
2/28/1994	14	31.1
1/9/1997	43	42
1/11/1999	35	35
1/14/2002		43.4
2/5/2002	33.7	
4/17/2003	50.2	49
6/17/2003	41.2	43.1
10/8/2003	43.7	42.3
8/25/2004	48.6	
11/8/2004	43.4	42.8
1/5/2005	43	38
12/14/2005	61.3	59.9
3/2/2006	44.6	55.8
5/3/2006	42.5	43.5
8/1/2006	48	43
10/24/2006	34.5	45.7
1/15/2007	31.6	38.1
4/5/2007	43.8	44
7/17/2007	47	43.3
10/10/2007	24	54
1/10/2008	39.7	39.9
4/1/2008	39.2	24.2
7/9/2008	43.7	43.1
10/8/2008	3.3*	0.7*
1/27/2009	1.9*	32.8
4/24/2009	41.7	41.2
7/29/2009	41.8	43.9
10/22/2009	**45.4**	**45.9**
2/10/2010	55.7	57.6
7/24/2010	33.5	31.0
1/13/2011	48.4	50.7
6/30/2011	50.2	49.5
10/24/2011		51.0
2/27/2012	49.4	49.7
4/10/2012	41.9	41.4
8/22/2012	41.8	58.8
10/22/2012	43.5	42.3
1/3/2013	42.4	44.9
Times Exceeding MCL	**8**	**11**
* Questionable Test results		

East Orosi's sewer system is unique for this area. It is a small diameter sewer system which utilizes septic tanks to remove solids and only the effluent that would otherwise

go to a leach line is conveyed off the property to the District's gravity sewer collection system, thence on to a lift station that pumps the effluent through a 4 mile force main to the Cutler-Orosi Treatment facility. The District has easements on each property to enter and pump septic tanks to remove solids when necessary. Since there are no solids in the collection system it was constructed of smaller sized pipes and cleanouts exist where otherwise manholes would exist. The District has a contract with the Cutler-Orosi Wastewater Joint Powers Authority for that agency to treat and dispose of East Orosi's wastewater. East Orosi is not a member of that Board and as such pays required fees with no vote on the overall budget of the JPA which sets the fees.

11. Existing governing body such as County Service District, Public Utility District, Mutual water system, etc.

The East Orosi Community Services District provides water and wastewater service to the unincorporated community of East Orosi. The District has a five member board.

12. Decision making process:

The East Orosi CSD Board of Directors is in charge of the decision making process related to the community's water and wastewater systems. This applies to policy decisions and other major decisions. The District Office Manager provides the overall management of the system.

13. Discussion of operation and maintenance personnel for each community.

- 1 Part-time Office Manager
- 1 Part-time Grounds Person
- 1 Contracted System Operator

  The District has recently hired a contract operator (Tom Day) to oversee the operation and maintenance of the water system.

14. Discuss how district is managed such as independent manager, County personnel involved, CDPH personnel involved.

The District has one part-time office manager that is accountable to the Board of Directors. It appears that the office manager fills the role of a general manager. The District lacks the resources to hire a full time manager and there is not a need for full time management.

Since the EOCSD water system has less than 200 connections, the system is monitored by the Tulare County Health & Human Services Agency, Tulare County Public Health Environmental Health Division. Tulare County is the Local Primacy

Agency under the State Department of Public Health in monitoring compliance for and in enforcing EPA's Safe Drinking Water Act.

15. Discuss problems that have been solved by community that could be applied as solutions by other communities.

Over the years, various board members and staff have struggled yet persevered to seek resources to solve their water and sewer issues. The water system is greatly improved compared to the system the District took over in the 1950's. That said, there is still need to make improvements which the District Board is pursuing through applications to CDPH and indirectly to DWR through the IRWMP process. The methods to be utilized and the results of the proposed well modification work to be funded by these two agencies can be useful to other communities that seek solutions to high nitrate wells.

On the wastewater side, an evaluation of the small diameter sewer collection system in comparison to a conventional gravity system would be useful in determining if the small diameter system is viable for other Tulare Lake Basin communities. In addition, an evaluation of the contract status versus member status with the Cutler-Orosi WJPA would be useful to other Tulare Lake Basin communities that wish to consider consolidation with a larger entity for wastewater treatment.

16. Discuss largest unresolved problems/issues for the community and what is being considered to solve these problems, if any.

-The largest unresolved water problem for East Orosi is how to deal with intermittent high nitrate levels in the water produced from the community's two wells. Well rehabilitation work funded by DWR under the IRWMP program will determine if modifications to the system's East Well will solve the problem. Project Feasibility Study funds from CDPH will subsequently be used to conduct a similar modification to the west well. As part of this CDPH funded feasibility study an investigation will be undertaken to evaluate the possibility of supplying water to East Orosi through an intertie with Orosi if additional capacity can be provided. The District has also had to investigate the cause of chronic failures of the Total Coliform Rule. As directed by CDPH and the Tulare County Health Department, the District has hired a treatment and distribution operator to take actions to resolve this issue.

-The District needs to do a rate analysis for the water system which is underfunded.

-The District needs to plan for the eventual increase of wastewater capacity at the Cutler-Orosi Wastewater Facility needed when the community grows. Wastewater connection fees should be sufficient set and should be aside to pay the COWJPA for

this expansion. Operations reserves should also be accumulated in the wastewater fund to cover replacement of valves, air relief valves, pumps and other equipment that can be corroded by the septic tank effluent that is pumped to the Cutler-Orosi facility.

FAIRWAYS TRACT WATER COMPANY

51-200 Connections Range
(64 Connections)

Location and Introduction

The Tulare County neighborhood that encompasses the Fairways Tract Water System is located on the eastern side of the City of Porterville. Until recently, the community consumed water that was heavily contaminated by nitrates, but the neighborhood has been annexed into Porterville and all former FTWC customers are now City of Porterville customers.

1. When was community established and why?

This suburban subdivision was laid out and mapped as Tulare County Tract 74 in February 1947 and homes in this small subdivision were built after that date.

2. How old are the systems?

The Fairways Tract Water Company was incorporated in 1948. Most of the original components date to that time. A second well was drilled in 1972. Both of the wells exceeded the MCL for nitrate. The older water system has now been abandoned and a new water distribution system with a connection to the City of Porterville system has been installed. This profile will compare the differences between the earlier water system and the newer arrangement which is a total consolidation with the City of Porterville's water system.

3. Median household income.

Per the last decennial census to calculate median household income, the 2000 Census indicated the median annual income for households in Tulare County Census Tract 39.01 Block Group 4 that incorporates the neighborhood that represents the Fairways

Tract Water Company, was $24,250 or 51.1% of the statewide median household income at that time. Since then the US Census Bureau no longer asks the income question in the decennial census, but rather collects income data through the continually occurring American Community Survey (ACS) where a smaller sampling is done annually. This data is expressed as a 5-year adjusted average. The median annual household income for the Year 2000 Census and three recent rounds of the ACS are expressed as:

Period	MHI	Margin of Error	% of State MHI
2000	$24,250		51.1%
2005-2009	$26,645	+/- $9,246	44.1%
2006-2010	$25,954	+/- $11,417	45.3%
2007-2011	$28,482	+/- $24,034	38.9%

Based on the Census data listed above, the Fairways Tract neighborhood can be viewed as a severely disadvantaged community with a median household income less than 60% of the statewide median.

4. Monthly sewer rates and water rates, if known.

Fairways Tract residents are provided sewer service by the Porter Vista Public Utility District. This District collects wastewater from the area and transports it to the City of Porterville system for treatment and disposal. The current sewer system rate is $16.49 per month. The previous flat monthly rate for water service from the Fairways Tract Water Company was $25. This was 1.1% of the 2006-10 estimated median household income for the neighborhood *based on American Community Survey numbers at the block group level.* The current City Water rate is metered with a base monthly charge of $5.00 and a usage fee of 72 cents for each 100 cubic feet used (plus a 6% utility user tax). Some water customers report monthly water bills from the City as low as $6 to $12 a month.

5. Billing methods for the community systems.

The Fairways Tract Water Company was formed in 1948. The Water Company was dissolved in 2012 since the neighborhood has been annexed into the City of Porterville and water service is now provided by the City. Prior to the nonoperation of the Water Company, the Company operated its water system totally as an enterprise fund; with all operating revenue generated from customer user fees. Customers were billed monthly by a contract bookkeeping firm, Creekside Bookkeeping located in the neighboring town of Exeter. The bookkeeping company generated bills, received payments by mail, and made deposits to the Water Company's bank account. They also prepared taxes and other financial documents as needed.

6. Are systems in the black or in debt? *No debt.*

The following is financial information for the last full year of operations (FYE June 30, 2011, actually ended April 30, 2011) for the Fairways Tract Water Company:

Description	Water System	
Cash beginning of year	$	2,395
Operating Income	$	14,136
Operating Expense	$	11,271
Depreciation		unknown
Operating Exp. (w/o Dep.)	$	11,271
Non-operating Revenue	$	0
Non-operating Expenses	$	0
Cash end of year	$	5,260
Change in Net Assets	$	2,865

7. Are systems run as a business or are the systems dealt with more issue by issue as they come.

Issues are dealt with as they arise, for the most part. The system has continuously had to deal with nitrate MCL violations by notifying customers that the water was unsafe to drink and by applying for funding to resolve the issue.

The following is a chronology of the steps taken to eventually resolve the water quality issues:

Milestone	Time Frame
Board President and secretary attend Fresno funding fair to learn about potential funding that could solve nitrate noncompliance	Summer 2000
Request reinstatement of corporate status suspended 1979	September 2000
Prepare USDA pre-app	October 2000
Weill Foundation Grant of $5,000 to cover USDA PER costs	March 2001
Community needs survey initiated	June 2002
City sets policy that water service can only be provided to annexed areas	
USDA funds not available under annexation criteria	
Community Poll on willingness to Annex to City to get water service	February 2006
DWSRF Construction Application	January 2007
City of Porterville Public Hearing for Fairways Tract Annexation	September 2007
Negotiate contract with engineer to design project	November 2007
Negotiations with City of Porterville	2006-2007
Prop 84 Construction App	N/A (funded via 2007 SRF application)
Prop 84 Letter of Commitment	May 2008*
SHE loan to Design Project	October 2008
Executed service agreement City-FTWC	August 2009
Approval of Labor Compliance Plan Procedures	November 2009
Prop 84 executed Construction Funding agreement	January 2010*
Secure RCAC revolving loan for construction cash flow	April 2010
Start Construction	January 2010
Complete Construction	May 2011
Transfer ownership of water system to City of Porterville	June 2011
Dissolve Water Company	August 2011
Party	October 2011

**The twenty-month delay between issuance of the Letter of Commitment and the execution of the funding agreement is not considered typical. In December 2008, the State of California issued a stop-work order on all bond-funded projects that lasted approximately twelve months. Development of funding agreements was also suspended.*

The previous water distribution system was old and prone to leaks. Volunteer board members made repairs when they could and even when it was very difficult (such as on hot days, when users without water were frustrated and would try to get volunteers to work harder and faster). Major breaks would be repaired by contractors, though much more expensively. The water company never seemed to be able to save more than about $6000 in the company's bank account.

8. **Range of household budgets in the community.** Discuss how much is spent on utilities such as sewer and water, if known. Are there discretionary funds in the typical households? If water or sewer rates go up what might get cut.

The Fairways Tract Water Company represents an area that is severely disadvantaged, with 2007-11 ACS MHI indicating an MHI at about 39% of the statewide MHI. The 2007-11 ACS indicates the following range of household incomes in the community (please note, the income distribution data is only available at the Census Tract, not block group, level):

Tulare County CT 39.01, California	Annual Household Income Estimate	Margin of Error
Less than $10,000	5.6%	+/- 4.0%
$10,000 to $14,999	10.9%	+/- 5.3%
$15,000 to $24,999	20.1%	+/- 7.1%
$25,000 to $34,999	12.2%	+/- 5.3%
$35,000 to $49,999	12.3%	+/- 4.9%
$50,000 to $74,999	16.0%	+/- 4.7%
Median income (dollars)	$37,553 (CT 39.01)	+/- $11,000

An estimated 37% of households in the Census Tract have annual incomes less than $25,000 and 49% of households have annual incomes less than $35,000. As such, there is very little disposable income in the community.

9. **Population served**.

The Fairways Tract Water Company previously served 64 dwellings with a population of approximately 250 persons.

10. **Short description of water systems and sewer systems including number of connections adequacy of backup systems and MCL challenges if known.**

Fairways Tract residents are provided sewer service by the Porter Vista Public Utility District. This District collects wastewater from the area and transports it to the City of Porterville system for treatment and disposal.

The old Fairways Tract Water Company had 64 connections servicing 64 residences. The oldest well (known as the west well or well number two) was drilled in the late 1940's to a depth of 142 feet and was equipped with a 20 horse power water lubricated turbine pump. The other well (known as the east well or well number one) was drilled on September 8, 1972 and was 250 feet deep. It pumped between 300 and 350 gallons per minute and was equipped with a 10 horse power water lubricated turbine pump. The storage tank was a 2,500 gallons hydro pneumatic tank. The main pipes were 6 and 8-inch asbestos-cement with 4-inch PVC and 4-inch iron. The laterals were ¾-inch galvanized pipes.

The system had continuously dealt with nitrate MCL violations by notifying customers that the water was unsafe to drink since 1992. Attached is a table listing nitrate levels of water produced from the community's wells from 1992 until the wells were properly destroyed in 2011 when City of Porterville water became available.

Fairways Tract Water System
History of Nitrate Levels in Previous Water Wells
Nitrate MCL = 45 ppm

Date of Sample	PPM	Comments
3/4/1992		Compliance Order first issued
5/7/1993	79.5	WELL 01
7/21/1993	88.1	WELL 01
12/24/1993	88.3	WELL 01
1/16/1995	100	WELL 02 - EAST
4/6/1995	94	WELL 02 - EAST
9/13/1995	91	WELL 02 - EAST
11/17/1995	98	WELL 02 - EAST
4/18/1996	87	WELL 02 - EAST
9/12/1996	94	WELL 02 - EAST
12/27/1996	86	WELL 02 - EAST
3/26/1997	99	WELL 02 - EAST
12/29/1998	96	WELL 02 - EAST
9/7/1999	107	WELL 02 - EAST
6/22/2000	110	WELL 02 - EAST
7/12/2000	96	WELL 02 - EAST
11/27/2001	66	WELL 02 - EAST
2/11/2002	120	WELL 02 - EAST
6/5/2003	123	WELL 02 - EAST
9/29/2004	47	WELL 02 - EAST
11/13/2006	139	WELL 02 - EAST
11/15/2005	131	WELL 02 - EAST
3/21/2007	130	WELL 02 - EAST
4/24/2008	116	WELL 02 - EAST
11/13/2009	113	WELL 02 - EAST
12/21/2010	111	WELL 02 - EAST
3/1/2011	120	WELL 02 - EAST
4/5/2011	108	WELL 02 - EAST
Average:	101	

The previous water distribution system was old and prone to leaks. Volunteer board members made repairs when they could and even when it was very difficult (such as on

hot days, when users without water were frustrated and would try to get volunteers to work harder and faster). Major breaks would be repaired by contractors, though much more expensively.

With only one operating well, the Water Company had no back-up source of water when the pump was down. In addition, there were no sectionalizing valves on the old water distribution system, which meant when line repairs were made, the whole system had to be shut down.

11. Existing governing body such as County Service District, Public Utility District, Mutual water system, etc.

The Fairways Tract Water Company was governed by a 3 member Board of Directors. The Company was set up as a mutual benefit, not-for-profit entity. In effect, the President and Vice-President volunteered both as policy makers and as unpaid maintenance and repair staff.

12. Decision making process. *Is there a board of directors, designated lead home owner, long time unofficial leader, or is there a lack of good decision making process. History on this would be good.*

The water system's president and vice-president made the day to day decisions as needed to keep the system in operation.

13. Discussion of operation and maintenance personnel for each community.

Part-time or full time personnel, contractors used, any shared human resources with other communities or agencies.

While in operation, the water system was operated by volunteer board members. Oversight of operations was made by a contract certified water treatment plant and distribution operator, Tom Day. Due to some bacteriological problems, the County Health Department required that a hypo chlorinator be utilized at the well site, necessitating the Assistance of Mr. Day.

14. Discuss how district/company is managed such as independent manager, County personnel involved, CDPH personnel involved. *Is the California Public Utilities Commission involved on rate setting or is it a local decision?*

The water system was managed generally by the 3-member board of directors. (Generally, there were only two directors, president & vice-president. The third seat was almost always vacant.) In addition, the water system paid a certified water treatment plant and distribution system operator who handled sampling, nitrate notifications and consumer confidence reports (CCRs). Bookkeeping was handled by a contract bookkeeping company (Creekside Bookkeeping and Tax Services in Exeter).

Since the Fairways Tract Water Company has less than 200 connections, the system was monitored by the Tulare County Health & Human Services Agency, Tulare County Public Health Environmental Health Division. Tulare County is the Local Primacy Agency under the State Department of Public Health in monitoring compliance for and in enforcing EPA's Safe Drinking Water Act.

As a Mutual, the system is not regulated by the PUC.

15. Discuss problems that have been solved by community that could be applied as solutions by other communities.

The Fairways Tract water system had had nitrate problems since about 1992. The local Board, primarily through the efforts of the president and vice-president, through the cooperation of the water company membership made strides over the years that eventually resolved the water system's nitrate problem. After years of effort, the Company received grant funding from CDPH to design and build a new water distribution system with an intertie to the City of Porterville's water system.

16. Discuss largest unresolved problems/issues for the community and what is being considered to solve these problems, if any.

Annexation to the City of Porterville and the consolidation with the City's water system are significant milestones that the Fairways Tract neighborhood has already accomplished. As part of the City, the neighborhood has the opportunity to benefit further through the City's access to resources that unincorporated areas find more lacking.

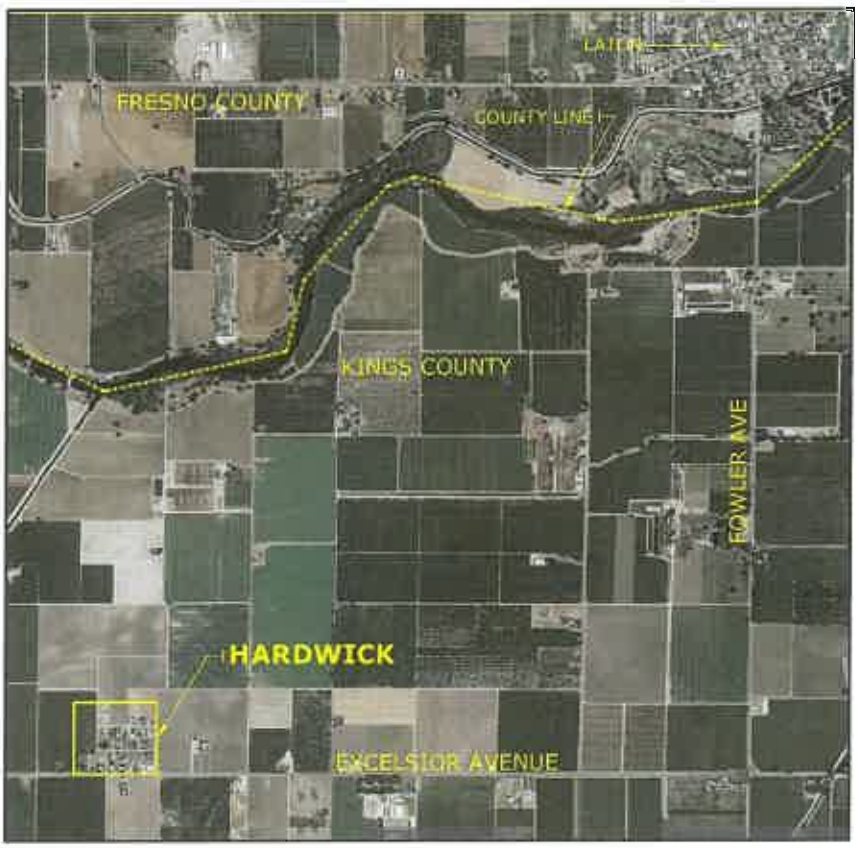
HARDWICK

15-50 Connections Range
(20 Connections on system)

(In addition, there are 21 more potential connections in community now served by private wells)

Location and Introduction

The community of Hardwick is located in the northeastern portion of Kings County, California approximately 5 miles west of the intersection of Excelsior Rd. and State Highway 43 between 14th and 15th Avenues. The Kings River runs about a mile north of the community.



1. When was community established and why.

The community of Hardwick was named to commemorate an official of the Southern Pacific Railroad. A post office was established in Hardwick in 1895, discontinued in 1904, reestablished in 1909, and finally permanently closed in 1942. The community is now served by the post office located in Hanford. The Hardwick School was constructed in 1914 and operated until the Hardwick and Kings River

schools unified in 1962. The present fire station on the western edge of the community is located on the site of the earlier school. The Hardwick Fire Station was constructed in 1963 on the former site of the Hardwick Elementary School. The school operated from 1892 until 1963. It is said that bricks from the original school were used in the construction of the fire station.

2. How old are the systems?

The Hardwick Water Company, a non-profit mutual benefit corporation, provides water to about half the residents of this small rural community with 41 homes and about 140 residents. The Water Company provides domestic water service to approximately 20 residential properties. The other dwellings and businesses in Hardwick currently obtain their water from private wells. The majority of the private wells tested (13/16) exceeded the uranium Maximum Contaminant Level of 30 ppb.

The existing system's water well was drilled in the 1960's on a small parcel owned by the Water Company. The original well reportedly has a 10-inch casing. In later years an 8-inch casing was installed in the 10-inch casing to repair a break in the old casing according to a report by the Kings County Department of Public Health. The existing well is estimated to be 160-170 feet deep. There are also 2 older wells on the property. The original electrical service panel was replaced, but the service line is currently installed on the original makeshift power pole which appears to be close to collapse.

The 1978 pump was replaced with a new 7.5 hp submersible pump in 2006 by Hayes and Sons. The well pump discharges into a 1,500 gallon hydro-pneumatic tank that has been welded for repairs on two separate occasions. The tank is fitted with a pressure gauge that maintains system pressures of 30-50 psi. System pressure is maintained at this level due to concerns that higher pressure settings may result in leaks (previous experience with the system operation).

The existing gate valve between the hydro-pneumatic tank and the system will not completely shut off water flow to the system. As a result, this requires the entire distribution system to be shut down and the tank drained for any repairs to the distribution system. The distribution system is comprised of primarily old (reportedly 100 year-old) 2-inch steel pipelines that run in a haphazard pattern along alleys as well as streets and the exact locations are unknown in some areas. There are numerous dead-ends in the system where previous services had been terminated. The current practice of providing service is to shut down the system, drain it completely and then cut out a portion of the pipe and install a tee with the compression couplings to provide a new service lateral. Many leaks have occurred on the service connections and the location of some service connections is

unknown. There are currently no gate valves within the entire distribution system. The current system cannot meet Kings County Fire Department requirements for storage or pressure and there are currently no fire hydrants in the entire system.

3. Median household income.

Per the last decennial census to calculate median household income, the 2000 Census indicated the median annual income for households in Kings County Census Tract 1 Block Group 1 that incorporates the community of Hardwick, was $31,786 or 66.9% of the statewide median household income at that time. This Census Tract Block Group took in an area of approximately 10 square miles which is much larger than the community which sits on approximately 20 acres. Since then the US Census Bureau no longer asks the income question in the decennial census, but rather collects income data through the continually occurring American Community Survey (ACS) where a smaller sampling is done annually. This data is expressed as a 5-year adjusted average. The median annual household income for the past four rounds of the ACS (with Survey info for comparison) is expressed as:

Period	Area	MHI	Margin of Error	% of State MHI
2005-09	CT1BG1	$53,750	+/-$12,624	89.0%
2006-10	CDP	$17,813	+/-$17,712	31.1%
2010 Survey		$23,000		37.8%
2007-11	CDP	$19,167	+/-$13,050	31.1%
2008-12	CDP	$19,896	+/-$32,915	32.4%

It was suspected that the census data for the block group showed a higher income level than actually exists within Hardwick. Community residents indicated this median household income figure appeared higher than that of the community as most residents are either retired or farm workers whose incomes are either fixed or seasonal in nature. Therefore, to more accurately determine resident characteristics, a community survey was considered necessary. Therefore, for the purposes of submitting funding applications to CDPH and for CDBG funds through Kings County, a community survey was conducted by Self-Help Enterprises in June 2010. SHE determined that there were 41 housing units in Hardwick with 36 being occupied at the time of the survey. Surveyors visited every occupied unit, receiving 33 complete survey responses (91%).

Based on survey results, the median household income for the community is determined to be $23,000, with 82 percent of the residents living in low-income households. This includes 33 percent and 27 percent of families that live in very low and extremely low income households respectively. Just over half of the community is Hispanic and roughly a quarter of the households have some members employed as farm workers. According to the ACS, the 2009 MHI for Census Tract 1, Block Group 1 (an area that includes, but is much larger than, Hardwick's service area) was $53,750 +/- $12,624. At the time of the income survey, ACS data at the block group level reported income figures more than twice

the actual income of Hardwick households. ACS income data should therefore be considered less than reliable for the Hardwick community.

Based on the Census data, but more so the community survey results listed above, Hardwick can be viewed as a severely disadvantaged community with a median household income less than 60% of the statewide median.

4. Monthly sewer rates and water rates, if known.

There is no sewer service for residents. The neighborhood is dependent on individual septic tank systems for sewage disposal.

Monthly water rates: $40.00 per month.

5. Billing methods for the community systems.

Customers have the option of either mailing in their payments by check or money order or paying them in person at the Board of Directors President's home located at 14616 Johnson Street, Hardwick, CA 93230

6. Are systems in the black or in debt?

The Hardwick Water Company currently operates financially in the black.

The following is financial information for the last full year of operations (FY 2011-12) for the Hardwick Water Company:

Description	Water System
Cash beginning of year	$ 10,199
Operating Income	$ 7,900
Operating Expense	$ 3,644
Depreciation	$ 350
Operating Expense (w/o Dep)	$ 3,294
Non-operating Revenue	$ 5
State Franchise Tax Payment	$ 800
Kings County taxes and fees	$ 1,135
Cash end of year	$ 12,850
Change in Net Assets	$ 3,131

It should be noted that all numbers, with the exception of the cash balances are based on the accrual method of accounting.

The amount of revenue collected to cover water system expenses is sufficient to cover operating costs. At least $5,000 remains in checking and anything left-over is put in saving for emergencies. For example, in 2011 Hardwick Water Company put aside approximately $4,000 for reserves.

7. **Are systems run as a business or are the systems dealt with more issue by issue as they come up?**

The system is dealt with on an issue by issue basis. However, they do have a Board and a bookkeeper.

The Hardwick Water Company operates as a business; however, it has its challenges. The Water Company has previously had difficulty in filling the Secretary position on the board. The District Board has the goal to operate the water system finances as enterprise funds. However, this has been a challenge for the Water Company due to the limited number of customers in the system.

8. **Range of household budgets in the community.** *Discuss how much is spent on utilities such as sewer and water, if known. Are there discretionary funds in the typical households? If water or sewer rates go up what might get cut.*

Hardwick is severely disadvantaged, with the 2010 Community Survey indicating an MHI of $23,000 37.8% of the statewide MHI. The 2010 survey also indicates the following range of household incomes in the community:

Hardwick, California	Annual Household Income
Less than $10,000	0%
$10,000 to $14,999	18%
$15,000 to $24,999	33%
$25,000 to $34,999	24%
$35,000 to $49,999	12%
$50,000 to $74,999	9%
$75,000 to $99,999	3%
$100,000 to $149,999	0%
$150,000 to $199,999	0%
$200,000 or more	0%
Median income (dollars)	23,000

An estimated 51% households have annual incomes less than $25,000. The As such, there is very little disposable income in the community. A breakdown of

similar household income levels for families in other Tulare Lake Basin communities shows that families have some discretionary funding, but it is limited due to their poverty income levels. Furthermore, any substantial increase in water rates could pose a hardship upon some of Hardwick's residents.

9. Population served.

The 2010 United States Census reported that Hardwick had a population of 138. The population density was 994.6 people per square mile. The racial makeup of Hardwick was 63 (45.7%) White, 5 (3.6%) African American, 0 (0.0%) Native American, 0 (0.0%) Asian, 0 (0.0%) Pacific Islander, 67 (48.6%) from other races, and 3 (2.2%) from two or more races. Hispanic or Latino of any race were 86 persons (62.3%).

The average household size was 4.03. There were 37 housing units, of which 18 (52.9%) were owner-occupied, and 16 (47.1%) were occupied by renters. The homeowner vacancy rate was 0%; the rental vacancy rate was 5.9%. 63 people (45.7% of the population) lived in owner-occupied housing units and 74 people (53.6%) lived in rental housing units.

10. Short description of water systems and sewer systems including number of connections adequacy of backup systems and MCL challenges if known.

There is no sewer service for residents. The neighborhood is dependent on individual septic tank systems for sewage disposal.

The existing system water well was drilled in the 1960's on a small parcel (APN 002-254-005) owned by the Water Company. The original well reportedly had a 10-inch casing. In later years an 8-inch casing was installed in the 10-inch casing to repair a break in the old casing according to a report by the Kings County Health Dept. The existing well is estimated to be 160 – 180 feet deep with a standing water level that varies around 70 feet in depth with a pump setting at 130 feet. There are also 2 older wells on the property. The original electrical service panel was replaced, but the service line is currently installed on the original power makeshift pole which appears to be close to collapse. The system's only water well that supplies the community produces water that violates the Uranium MCL. Over the past several years, the uranium levels in the well have ranged from 42- 49 pCi/l (pico Curies per liter). This is more than double the maximum containment level for uranium of 20-pCi/l per the current standards. As such, the Water Company has a back-up source of water.

The Hardwick water system has approximately 20 connections. The remaining 20 residences are served by private wells. Sixteen (16) of these wells were tested for

uranium of which 13 exceeded the other uranium MCL of 30 ppb (see Table No. 2 below). Uranium levels on these private domestic wells were generally higher than from water from the community well with Uranium concentrations exceeding five (5) times the MCL on four domestic wells. This data clearly indicates that there are health concerns related to drinking water for the community at large whether they are receiving water from the community system or not.

11. Existing governing body such as County Service District, Public Utility District, Mutual water system, etc.

The Hardwick Water Company is considered a domestic non-profit organization. The Hardwick Water Company, a non-profit mutual benefit corporation, provides water to about half the residents of this small rural community with 41 homes and about 140 residents. The Water Company provides domestic water service to approximately 20 residential properties. The other dwellings and businesses in Hardwick currently obtain their water from private wells. The majority of the private wells tested (13/16) exceeded the uranium Maximum Contaminant Level of 30 ppb.

12. Decision making process – Is there a board of directors, designated lead homer owner, long time unofficial leader, or is there a lack of good decision making process? History on this would be good.

The Hardwick Water Company Board of Directors consists of a Board President, Treasurer, and Secretary.

13. Discussion of operation and maintenance personnel for each community. *Part-time or full time personnel, contractors used, any shared human resources with other communities or agencies.*

The Board President volunteers his time and takes care of routine water system maintenance. In addition, the Water Company contracts for the following services:

- One (1) part-time bookkeeper: Bressler & Company 770 East Bush Street, Lemoore, CA. 93245 (559) 924-1225; and

- One (1) contract System Operator: California Water Service Company, 700 W. Elm, Coalinga, CA 93210-2524, (559) 935-2300

14. Discuss how district is managed such as independent manager, County personnel involved, and CDPH personnel involved. *Is the California Public Utilities Commission involved on rate setting or is it a local decision?*

The District is managed by a Board of Directors.

Water rates are set by the Board.

15. Discuss problems that have been solved by communities that could be applied as solutions by other communities.

The process that the Hardwick Board has initiated through the CDPH funding process to resolve its water issues can be utilized by other communities as an example to follow for small communities that have a water system and neighbors on individual water wells. The initial testing of private wells and the realization that all the community had a uranium issue regardless of whether they were served by a community well or private well; meant that as a whole the community passed a threshold together of concern for water quality. The drilling of a test well in an area such as Hardwick will be a challenge. The shallow aquifer is contaminated with uranium. It is suspected that the deeper stratas will be contaminated with arsenic. The art of drilling a test well and sampling zones will be very critical in such conditions. All of these challenges can be evaluated and the information gained can be utilized by other communities facing the same or similar challenges.

16. Discuss largest unresolved problems/issues for the communities and what is being considered to solve these problems, if any.

The largest unresolved issue for the community of Hardwick is finding an affordable long term solution to the uranium contamination of the community's drinking water supply.

In December 2012, CDPH executed a Proposition 84 Planning Grant Funding Agreement to fund a Feasibility Study which will drill a test well, and design water system improvements so that the construction of a new water well with site improvements and the replacement of the water distribution system will be shovel ready.

Kelso Water Well Association

<15 Connections Range
(6 Connections)

1. When was community established and why.

This water system is owned and operated by the systems' property owners. It is not incorporated. Located east of Lake Isabella in Kern County, it lies within a tract of 188 parcels and about 161 homes built in the 1960's thru the 1990's. The surrounding properties range in size from one half to 2.5 acres and use on-site septic systems for wastewater disposal. Water is supplied by wells serving one, two, three, four, five, six or more properties. The closest community water systems are located over 2 to 3 miles by road and one mile as the crow flies. The area is within a floodplain.

2. How old is the system.

This water system was built in the 1960's to serve homes built between 1965 and 1980.

3. Median household income.

The residents served water by the Kelso Water Well Association live within the boundaries of the US Census Bureau's Weldon Census Designated Place (CDP). Per the last decennial census to calculate median household income, the 2000 Census indicated the median annual income for households in the Weldon Census Designated Place (CDP), was $19,265 or 40.6% of the statewide median household income at that time. A sad note is that the median household income only rose by $896 from the prior 1990 decennial census when the median household income was $18,369.

Since then the US Census Bureau no longer asks the income question in the decennial census, but rather collects income data through the continually occurring American Community Survey (ACS) where a smaller sampling is done annually. The ACS data is based on an annual sample size of 3%. This data is expressed as a 5-year adjusted average. The median annual household income for the Year 2000 Census and the past four rounds of the ACS is expressed as:

Period	MHI	Margin of Error	% of State MHI
2000	$22,409		40.6%
2005-09	$30,951	+/- $ 3,406	52.5%
2006-10	$32,690	+/- $ 6,719	53.7%
2007-11	$37,891	+/- $ 7,397	61.5%
2008-12	$31,167	+/- $11,451	50.8%

The 2008-12 ACS indicates that 33.7% +/- 13.3% of the greater Weldon area's residents live below the poverty line. Based on the Census data listed above, the

greater Weldon area which includes Kelso can be viewed as a severely disadvantaged community with a median household income less than 60% of the statewide median.

4. **Monthly sewer rates and water rates, if known.**

The monthly flat water rate was raised in November 2012 from $45.00 to $75.00 per month. This is approximately 2.9% of the median household income for water service based on the 2008-12 ACS median household income for the area.

There is no community sewer. Septic systems only.

5. **Billing methods for the community systems.**

Monthly flat rate payments are collected from well users.

6. **Are systems in the black or in debt?**

Money collected to operate the water system is barely enough to pay the power bill. There no reserve for system repairs. The 2012 pump failure left the users without water for over a week until financing from Self-Help Enterprises allowed the well pump replacement to proceed. The new rates will cover costs, including a $13 per month per user loan repayment and funds for future repairs.

7. **How the water system is operated. Does it set budgets and rates? Collect enough money to pay bills? Put money aside in a reserve? Review and approve claims for payment? Does the Board meet regularly? Etc.**

Operated on as needed basis. There is no corporate entity.

8. Range of household incomes in the community.

The greater Weldon area which includes Kelso is severely disadvantaged, with 2008-12 ACS median household income (MHI) indicating an MHI of 50.8% of the statewide MHI. The 2008-12 ACS indicates the following range of household incomes in the community:

Weldon CDP, California	Annual Household Income Estimate	Margin of Error
Less than $10,000	10.4%	+/-7.1
$10,000 to $14,999	15.0%	+/-7.8
$15,000 to $24,999	18.5%	+/-10.2
$25,000 to $34,999	10.4%	+/-7.1
$35,000 to $49,999	13.5%	+/-8.0
$50,000 to $74,999	16.4%	+/-8.5
$75,000 to $99,999	6.7%	+/-5.8
$100,000 to $149,999	9.2%	+/-6.5
$150,000 to $199,999	0.0%	+/-3.0
$200,000 or more	0.0%	+/-3.0
Median income (dollars)	$31,167	+/-11,451

An estimated 43.9% of households in the greater Weldon area have annual incomes less than $25,000 and 54.3% of households have annual incomes less than $35,000. The 2008-12 ACS indicates that 33.7% +/- 13.3% of the greater Weldon area's residents live below the poverty line. The area continues to be occupied by many elderly and other folks dependent on social security income. As such, there is very little disposable income in the community.

9. Population served.

With some of the homes not occupied, there are less than eight people residing on the system. The vacant homes have property owners living elsewhere in California or are deceased.

10. Short description of water systems and sewer systems including number of connections adequacy of backup systems and MCL challenges if known.

The Kelso Creek system has six water connections supplying six residences. The water system is supplied from groundwater from one well. The well is equipped with a 1hp submersible pump that discharges into a 5,000 gallon storage tank then a booster pump puts the water into two 50 gallon pressure tanks. The well has no chlorination facilities. The well is about 376 feet deep and has sufficient capacity to supply system users. There is no backup water supply. The water distribution system consists of two inch metal water mains. The water services are not metered. Water pumped from the well has not been tested recently.

11. Existing governing body such as County Service District, Public Utility District, Mutual water system, etc.

The system is an unincorporated association of property owners sharing the use of a single well located on a separate well site.

12. Decision making process:

Meetings and phone calls are made to system owners/users to decide on major issues.

13. Discussion of operation and maintenance personnel for each community.

- There is no licensed operator.
- Water sampling and well repairs must be contracted out.
- Most nontechnical system O & M activities are performed by system users.

14. Discuss how system is managed such as independent manager, County personnel involved, and CDPH personnel involved.

Most system activities are performed by system users.

15. Discuss problems that have been solved by community that could be applied as solutions by other communities.

When the well pump failed in 2012, the community was without water for several days including Thanksgiving. Residents relied on neighbors with water to provide water for drinking, washing and to flush toilets. A system this size does not qualify for State Emergency grant funds to replace the pump since anything less than 15 connections or having fewer than 25 residents is considered a non-community water system. Self-Help Enterprises (SHE) approved a loan that allowed the driller to install a new pump for $3,600. The rate increase will cover the $110 per month system loan payment that will be made over 3 years. The loan is secured with a promissory note. The contractor was paid directly by SHE since there is no corporate entity to disburse funds to. SHE staff is working with the system, the local Salvation Army and Rotary to locate grant funds to lower the loan principle.

16. Discuss largest unresolved problems/issues for the community and what is being considered to solve these problems, if any.

The largest unresolved water problems for the system is its' small size, lack of a repair reserve, lack of interested and or able bodied people, and a history of high uranium levels in the water and the area.

Rates have been raised to set money aside for a reserve.

Other nearby single well and non-community systems have similar problems.

Keeping things as they are will continue problems with operations, rates and water quality.

Regional entity formation needs:

- Clean and adequate source of water.
- Affordable rates.
- Community acceptance and formation of a regional entity.

KETTLEMAN CITY

201-500 Connections Range
(356 Connections)

Location and Intro

The Kings County unincorporated community of Kettleman City is located 28 miles southwest of Hanford just east of Interstate 5 on the west side of the San Joaquin Valley at the base of the Kettleman Hills. Kettleman City is divided into two areas. The commercial zone with gas stations, fast food and motels is at Kettleman Junction where Interstate 5 and State Route 41 meet. The residential area together with some retail businesses and county government buildings is located about a mile east of Interstate 5 along State Route 41. The California Aqueduct crosses State Route 41 between these two areas.

1. When was community established and why.

The Kettleman Hills were named after Dave Kettleman, a pioneer sheep and cattleman who grazed his animals there in the 1860s. Oil was discovered in the Kettleman Hills in 1928. The town of Kettleman City was founded in 1929. The

early 1970's saw two substantial projects that had significant impacts on the community: the completion of the California Aqueduct and the opening of Interstate 5. Waste Management, Inc. opened a hazardous waste disposal site in the Kettleman Hills in the late 1970's. Many residents are employed by local farming operations or other related industries.

2. How old are the systems.

The Kettleman City Water System served the unincorporated community of Kettleman City since 1933. A permit to operate the system, dated March 1, 1951 was issued to Luther H. Penix by the Kings County Health Department. In 1966 the water system was sold to James A. Wiles. In 1974 the number of service connections went above 200 and the responsibility for monitoring the operations of the system were transferred from the Kings County Health Department to the State of California Department of Health Services. On June 26, 1975 a permit to operate the domestic water system was issued to James A. Wiles from the State of California Department of Health Services. On April 1, 1979 the water and sewer system was sold to the Kettleman City Community Services District. On October 30, 1979 a domestic water supply permit was granted to the Kettleman City Community Services District.
The majority of the residential water system was installed in June 1985. There are some water pipelines installed in June 1979 and a few original water pipelines that were installed in January 1966.

The residential and commercial sewer system was installed in May 1978.

3. Median household income.

Per the last decennial census to calculate median household income, the 2000 Census indicated the median annual income for households in the Kettleman City Census Designated Place (CDP), was $22,409 or 47.2% of the statewide median household income at that time. Since then the US Census Bureau no longer asks the income question in the decennial census, but rather collects income data through the continually occurring American Community Survey (ACS) where a smaller sampling is done annually. This data is expressed as a 5-year adjusted average. The median annual household income for the Year 2000 Census and the past four rounds of ACS is expressed as:

Period	MHI	Margin of Error	% of State MHI
2000	$22,409		47.2%
2005-09	$25,488	+/- $ 5,305	42.2%
2006-10	$25,988	+/- $ 6,619	45.4%
2007-11	$34,323	+/- $ 6,366	55.6%
2008-12	$36,111	+/- $15,650	58.8%

An estimated 38.6% of families and 43.7% of the population were considered in the 2006-10 ACS to live below the poverty line. Based on the Census data listed

above, Kettleman City can be viewed as a severely disadvantaged community with a median household income less than 60% of the statewide median.

4. Monthly sewer rates and water rates, if known.

The monthly residential water rate averages approximately $41.00 per month and the residential sewer rate is $24.00 per month. This is approximately 1.4% and 0.8% respectively for water and sewer service of the 2007-11 estimated median household income for the community.
The commercial water rates vary from $120 to $600 dollars per month and the sewer rates vary from $45 to $1,900 depending on water usage.

5. Billing methods for the community systems.

Members of the Kettleman CSD system pay their monthly water bills in cash or by check or money order in person at the District Office; or by mail to the Districts P.O. Box.

6. Are systems in the black or in debt?

The Kettleman CSD system financially operates in the black. As can be seen from the following table, the District is operating on a sound financial basis.

Kettleman City CSD Financials for FY Ending 6/30/12			
	Water	*Sewer*	*Total*
Cash (including reserves) 7/1/2011	$944,536	$1,266,448	$2,210,984
Operating Income	$392,895	$468,668	$861,563
Operating Expense	$416,723	$430,402	$847,125
Depreciation	$79,025	$19,006	$98,031
Operating Expense (w/o Dep)	$337,698	$411,396	$749,094
Non-operating Revenue	$127,103	$27,727	$154,830
Non-operating Expenses	$27,166	$0	$27,166
Debt Repayment	$23,500	$0	$23,500
Capital Improvements (net reimbursement)	$104,193	-$7,252	$96,941
Miscellaneous net cash	$9,668	-$37,350	-$27,682
Cash end of year at 6/30/12	$1,190,031	$1,306,845	$2,496,876

It should be noted that all numbers, with the exception of the cash balances are based on the accrual method of accounting.

7. Are systems run as a business or are the systems dealt with more issue by issue as they come up?

The Kettleman City Community Services District operates as a business. However, often times, the CSD deals with issues as they arise.

8. Range of household budgets in the community.

Unknown
Kettleman City is severely disadvantaged, with 2006-10 ACS MHI indicating an MHI of 45.4% of the statewide MHI. The 2006-10 ACS indicates the following range of household incomes in the community:

Kettleman City CDP, California	Annual Household Income Estimate	Margin of Error
Less than $10,000	2.6%	+/-4.4
$10,000 to $14,999	17.5%	+/-17.7
$15,000 to $24,999	23.7%	+/-19.3
$25,000 to $34,999	19.0%	+/-16.1
$35,000 to $49,999	5.5%	+/-7.1
$50,000 to $74,999	21.2%	+/-18.8
$75,000 to $99,999	0.0%	+/-13.6
$100,000 to $149,999	10.6%	+/-14.0
$150,000 to $199,999	0.0%	+/-13.6
$200,000 or more	0.0%	+/-13.6
Median income (dollars)	25,988	+/-6,619

An estimated 43% of households have annual incomes less than $25,000 and 62% of households have annual incomes less than $35,000. The 2006-10 ACS indicates that 9.4% +/- 11.1% of Kettleman City residents live below the poverty line. As such, there is very little disposable income in the community.

9. Population served.

The 2010 United States Census reported that Kettleman City had a population of 1,439. The racial makeup of Kettleman City was 478 (33.2%) White, 4 (0.3%) African American, 8 (0.6%) Native American, 1 (0.1%) Asian, 0 (0.0%) Pacific Islander, 887 (61.6%) from other races, and 61 (4.2%) from two or more races. Hispanic or Latino of any race were 1,383 persons (96.1%).

The average household size was 4.11. There were 367 housing units, of which 135 (38.6%) were owner-occupied, and 215 (61.4%) were occupied by renters. The homeowner vacancy rate was 0.7%; the rental vacancy rate was 1.4%. 564 people (39.2% of the population) lived in owner-occupied housing units and 875 people (60.8%) lived in rental housing units.

10. Short description of water systems and sewer systems including number of connections adequacy of backup systems and MCL challenges if known.

Currently, there are 326 residential, 23 commercial, and 7 industrial consumers within the CSD which can vary each month.

The KCCSD currently supplies water to the community that is derived from two active wells. These wells currently provide 315 acre feet of water per year. There are two active wells that terminate above the Corcoran Clay at a depth of 480 feet. Well No.1 is located on Maud Street at the District Office Site. The original design capacity was 450 gpm and has reduced over time produces approximately 200 gpm. Well No.2 is located on Becky Street near the Kings County Fire Station. The original design capacity was 450 gpm and has reduced over time to 250 gpm. The District has problems in meeting primary drinking water quality standards. Water produced from both wells exceeds the MCL for benzene and recently arsenic. Groundwater treatment plants have been installed at both sites in June 1998 that removes the benzene from the water supply. In addition, the District has been addressing secondary water quality issues including water color, odor caused by hydrogen sulfide, and iron. These water quality issues and recent health concerns have made the construction of a surface water treatment plant to treat California Aqueduct water to be a top priority for the District and community as a whole

Currently, water is stored in three water tanks to meet water demand and fire hydrant flow requirements. Summer peak flow demands and limited storage tanks also place a strain upon the District's water system and leaves it vulnerable to possible shortages. Because of this limiting factor, little to no substantial growth has occurred in Kettleman City over the last several years.
The Kettleman Community Service District provides sewer service. The current capacity of the sewer infrastructure in Kettleman has a design average flow rate is .223 mgd and a design peak flow rate of 0.669 mgd based upon the original wastewater discharge requirements. The future wastewater discharge requirements will reduce the design average flow rate to meet water quality requirements.

11. Existing governing body such as County Service District, Public Utility District, Mutual water system, etc.

The Kettleman City Community Services District provides water and sewer service as well as park maintenance to the unincorporated community of Kettleman City. The District is governed by a 5-member Board of Directors.

12. Decision making process:

The Kettleman City CSD Board of Directors is in charge of the decision making process related to the community's water system. This applies to policy decisions and other major decisions. The District Office Manager, Rosa Maldonado, provides the overall management of the system.

13. Discussion of operation and maintenance personnel for each community.

1 Office Manager
1 Clerical Assistant
1 Contracted System Operator – Tito Balling, California Water Service Co.
2 Full-time Maintenance Persons

14. Discuss how district is managed such as independent manager, County personnel involved, and CDPH personnel involved.

District has 1 full-time Office Manager accountable to the Board of Directors; and 1 full-time Clerical Assistant.

Water and sewer rates are set by the Board subject to the requirements of Proposition 218.

Since the KCCSD water system has more than 200 connections, and is monitored directly by the State Department of Public Health for compliance with EPA's Safe Drinking Water Act. The District Wastewater Treatment and Disposal Facility has a Waste Discharge Permit from the Central Valley Regional Water Quality Control Board and as such is monitored by that enforcement agency for compliance with permit requirements.

15. Discuss problems that have been solved by community that could be applied as solutions by other communities.

The Kettleman City CSD is in the midst of a long process to convert from a contaminated and limited groundwater supply to the acquisition and treatment of a surface water supply via the California Aqueduct.

16. Discuss largest unresolved problems/issues for the community and what is being considered to solve these problems, if any.

Community Challenges:

Water quality and quantity. The KCCSD currently supplies water to the community from two active wells. Together, these wells produce 315 acre feet of water per year, with a pumping capacity of 200 gpm from the Maud Street well and 250 gpm from the Becky Pease Street well. The water quality, however, is contaminated with Benzene and Arsenic levels exceeding MCLs; as well as secondary water quality issues. Groundwater treatment plants remove the benzene contaminating both wells. There is currently no treatment for arsenic. Three water storage tanks meet water demand and fire hydrant flow requirements. Summer peak flow demands and limited storage tanks also place a strain upon the District's water system and leaves the system vulnerable to possible shortages. Little growth has occurred in Kettleman City over the last several years due to these limiting factors.

Deteriorated water infrastructure system. Much of the water distribution system has been in place for over fifty years. Pipe lines have often been found to be deteriorated and even noted as non-existent with only a rust lined tunnel conveying water.

Solutions:

Redevelopment Area. An option no longer available to Kettleman City was Kings County's first and only established Redevelopment Area. The tax increment funding from tax appreciation within the area would have provided the impoverished community of Kettleman City with a unique and valuable funding source.

Water Treatment Facility. The Kettleman City Community Services District is currently in the process of developing plans for the construction of a new surface water treatment facility that will serve to greatly improve the community's water quality and quantity. The County of Kings has devoted 3 million dollars towards the new facility and has secured a five acre site south of the residential area and near the aqueduct. The County has also made available to the community an additional 2.7 million dollars worth of State water allocations (300 acre feet of water) to the community on an annual basis that will be delivered through the aqueduct.

LAMONT

2000+ Connections Range
(3,500 Water Connections; 3200 Sewer Connections)

Location and Introduction

The Kern County community of Lamont is located in the southern portion of Kern County, 7 miles southeast of the City of Bakersfield, in the southern edge of the San Joaquin Valley. This part of Kern County consists of alluvial fan topography from the Caliente Creek and Kern River watersheds and is within the Garlock Fault earthquake fault zone (AECOM, 2010).

Lamont PUD's service area encompasses about 4 square miles, but its sphere of influence is much larger, incorporating about 21 square miles. Included within the service area is the town of Weedpatch, located about 2 miles distant from the main portion of Lamont. (See Figures 1 & 2 below.) The combined population of Lamont and Weedpatch CDPs is 17,778 (US Census, 2010). The community is unincorporated, leaving the LPUD with the dubious distinction of being the primary entity of local government.

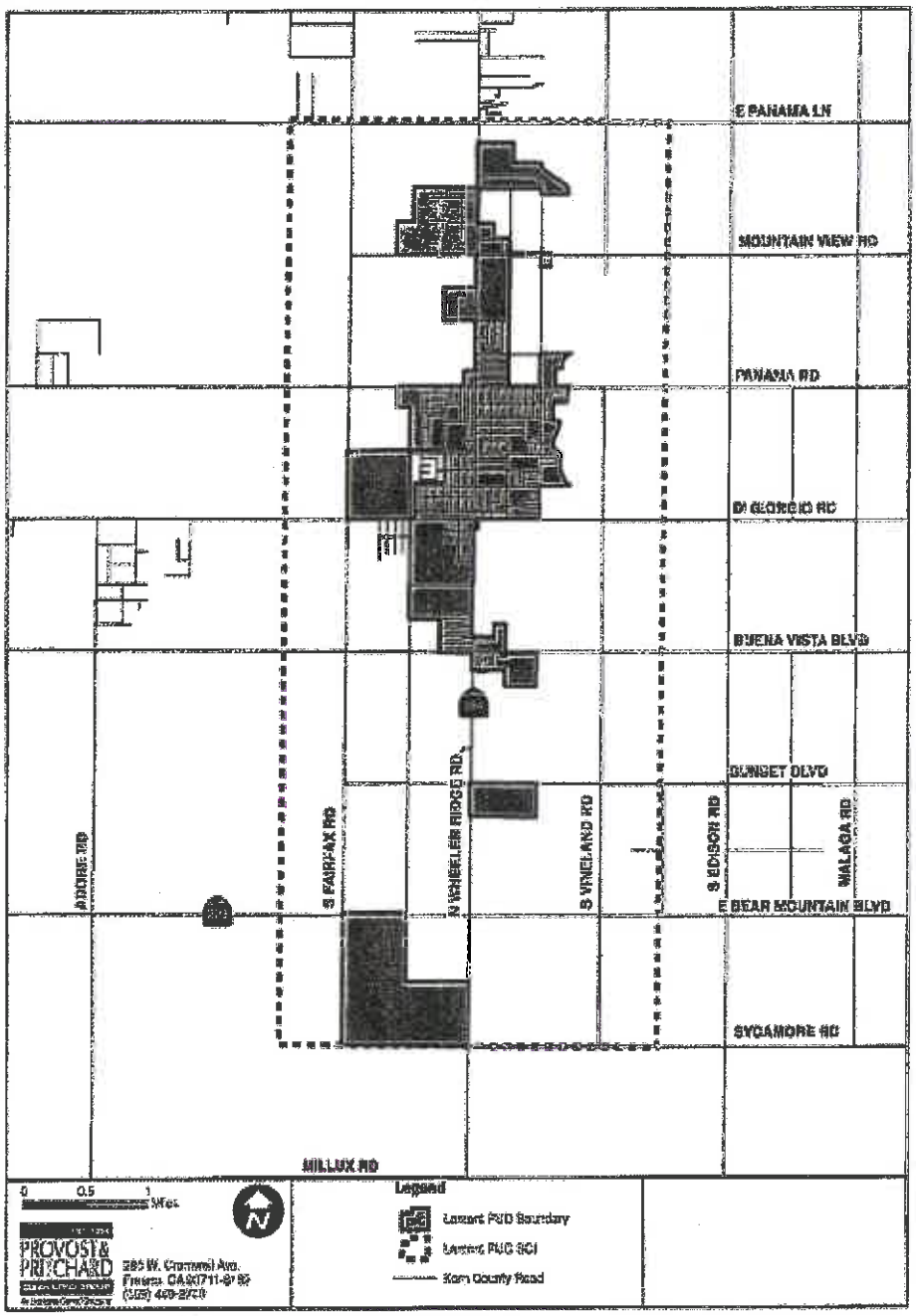
FIGURE 1: Aerial Photo of Lamont PUD Service Area, Including Weedpatch

FIGURE 2: Boundary/SOI Map from LAFCO Municipal Services Review

LAMONT PUBLIC UTILITY DISTRICT

2022 MUNICIPAL SERVICE REVIEW

Figure 2 – Boundary & Sphere of Influence



1. When was community established and why

The area where the town of Lamont was to be built was surveyed in 1874. A power line brought electricity to the area in 1912. A gradual influx to the Lamont area came after 1917.

In a joint project, the Southern Pacific and Santa Fe brought the railroad to Lamont in 1923, although it was only used during fruit season. The two railroad companies handled the operation of the line in alternate years. The old part of town was built along the railroad tracks. The oil industry has had oil rigs in the area since the 1920s.

2. How old are the systems

The Lamont Public Utility District was formed on November 3, 1943. Unfortunately the written history of the District has disappeared over the years, so the ages of most system components are not readily known.

3. Median household income

Per the last decennial census to calculate median household income, the 2000 Census indicated the median annual income for households in the Lamont Census Designated Place (CDP), was $25,578 or 53.9% of the statewide median household income at that time. Since then the US Census Bureau no longer asks the income question in the decennial census, but rather collects income data through the continually occurring American Community Survey (ACS) where a smaller sampling is done annually. This data is expressed as a 5-year adjusted average. The median annual household income for the Year 2000 Census and the past four rounds of ACS are expressed as:

Period	MHI	Margin of Error	% of State MHI
2000	$25,578		53.9%
2005-09	$31,311	+/- $2,639	51.8%
2006-10	$33,799	+/- $1,796	59.0%
2007-11	$35,168	+/- $2,715	57.1%
2008-12	$34,256	+/- $4,409	55.8%

As such, Lamont's median household income is well below the 60 percent of the statewide median household income threshold, justifying a determination that Lamont is a severely disadvantaged community.

4. Monthly sewer rates and water rates, if known.

The monthly water rate is based on meter size. A ¾ inch meter costs $22.86 dollars per month, plus a usage charge of $0.41/100 cubic feet. The average charge is approximately $41.32. The monthly sewer rate is $15.40 dollars per month. This is approximately 1.4 % and 0.5 % respectively for water and sewer service of the 2007-11 estimated median household income for the community.

5. Billing methods for the community systems *Does the community use the property tax rolls to collect annually or semi-annually. Other services that might be on the same bill. Are bill paid by mail or is there an office drop off point. Discuss how this works for very small communities that do not have a formal billing process.*

Lamont PUD mails out water and sewer utility bills to its customers on a monthly basis. Water and sewer service customers have the option of writing a check or obtaining a money order and then mailing payment to the District. The other option, which approximately 30% of customers opt for, is to pay their monthly water and sewer bills by cash, check or money order during normal business hours (8 to 5) Monday through Friday.

6. Are systems in the black or in debt?

The amount of revenue collected to cover water and sewer system expenses is sufficient to cover operating costs, debt service, debt reserve and put aside funds annually for reserves. In the fiscal year 2010, the District's financial situation was as follows:

Description	Water System	Sewer System
Cash beginning of year	$	$ 4,137,490
Operating Income	$ 2,996,312	$ 948,790
Operating Expense	$ 1,516,953	$ 753,019
Depreciation	$	$ 240,379
Operating Exp. (w/o Dep.)	$	$ 512,640
Non-operating Revenue	$ 224,049	$ 333,947
Non-operating Expenses	$ 41,830	$ 143,000
Cash end of year	$	$ 1,452,545
Change in Net Assets	$	$
Interest Paid	$ 0	$ 312,042

It should be noted that all numbers, with the exception of the cash balances are based on the accrual method of accounting.

7. Are systems run as a business or are the systems dealt with more issue by issue as they come?

The Lamont PUD District operates as a business and is generally successful, although turnover in management has resulted in inconsistency.

A recent (2012) Municipal Services Review (MSR) by Kern County LAFCO makes the following conclusion:

...[Responsible fiscal management has allowed the District to fund infrastructure improvements, operations and maintenance while maintaining reasonable rates for those receiving services. The District anticipates that this success will continue for the foreseeable future." (Kern County LAFCO, 2012)

8. **Range of household budgets in the community** *Discuss how much is spent on utilities such as sewer and water, if known. Are there discretionary funds in the typical households. If water or sewer rates go up what might get cut.*

Lamont is severely disadvantaged, with 2006-10 ACS MHI indicating an MHI at less than 60% of the statewide MHI. The 2006-10 ACS indicates the following range of household incomes in the community:

Lamont CDP, California	Annual Household Income Estimate	Margin of Error
Less than $10,000	11.1%	+/-.3.8
$10,000 to $14,999	6.0%	+/- 2.5
$15,000 to $24,999	14.2%	+/- 3.9
$25,000 to $34,999	22.0%	+/- 4.7
$35,000 to $49,999	16.5%	+/- 3.6
$50,000 to $74,999	19.1%	+/- 4.3
$75,000 to $99,999	2.8%	+/- 1.7
$100,000 to $149,000	6.6%	+/- 2.6
$150,000 to $199,999	1.8%	+/- 1.3
$200,000 or more	0.0%	+/- 1.2
Median Income (dollars)	$33,799	+/- $1,796

An estimated 53% of households have annual incomes less than $35,000. In addition, 27.2% +/- 4.9% of Lamont's residents live below the poverty level. As such, there is very little disposable income in the community.

9. **Population served.**

The 2010 United States Census reported that Lamont had a population of 15,120. The racial makeup of Lamont was 6,677 (44.2%) White, 130 (0.9%) African American, 230 (1.5%) Native American, 72 (0.5%) Asian, 9 (0.1%) Pacific Islander, 7,351 (48.6%) from other races, and 651 (4.3%) from two or more races. Hispanic or Latino of any race were 14,293 persons (94.5%).

The average household size was 4.44. There were 3,598 housing units, of which 1,536 (45.1%) were owner-occupied, and 1,869 (54.9%) were occupied by renters. The homeowner vacancy rate was 1.5%; the rental vacancy rate was 3.3%. 7,065 people (46.7% of the population) lived in owner-occupied housing units and 8,054 people (53.3%) lived in rental housing units.

10. Short description of water systems and sewer systems including number of connections adequacy of backup systems and MCL challenges if known.

The water supply and distribution system consists of seven active wells, four well-site storage tanks, one 1M gallon ground-level storage tank and two booster pumps, and thirty-eight miles of distribution lines. Each well also has a chlorination injection system to provide disinfection. (Kern County Grand Jury, Special Districts Committee, 2002; Kern County LAFCO, 2012) Arsenic contamination is pervasive throughout the system. Of four wells that were contaminated, two have been taken off-line.

From 2012 Municipal Services Review: The District operates a primary-level wastewater treatment plant (WWTP) located on the northwest and southwest corners of Wildman Road and East Bear Mountain Road. The operational capacity of this facility is 2.0 million gallons per day (MGD) as explained below. Inflow at the WWTP averages 1.4MGD, and peaks at 1.7MGD. In 2000, the District was issued a Cease-and-Desist Order (C&D) from the Regional Water Quality Control Board (RWQCB) for failure to meet treatment and disposal requirements. In 2007 the District undertook a major wastewater collection system upgrade, including installation of more than 7,500 feet of trunk sewer main and 4,000 feet of effluent distribution lines. The project was funded in large part through the USDA's Rural Development loan program, and allowed the District to meet RWQCB operating standards. Upon the successful completion of the project, the C&D was lifted.

In June of 2012, the RWQCB imposed a new Cease & Desist Order limiting future outflows of treated effluent to 2.0MGD until such time the District submits an alternative disposal plan to replace or supplement its contract with CRR&R, under which CRR&R disposes of 100% of the District's treated effluent. The District is examining conceptual options, should an alternative become necessary. (Kern County LAFCO, 2012) In October of 2011, two CRR&R workers died from inhalation of hydrogen sulfide gas after entering an underground storm drain system to clean it. Numerous OSHA citations and fines were levied, and the Kern County Board of Supervisors revoked CRR&R's conditional use permit, putting the LPUD in a bind as to what to do with their effluent. The facility was supposed to close, but the company filed a legal challenge to the shut-down order. A judge issued a stay on the closure order, and the company has thus far continued operating at the site (Ferguson, 2012).

The street lighting system has 300 streetlights (Kern County Grand Jury, Special Districts Committee, 2002) but the LPUD's role in streetlights is as an intermediary between the community and PG&E (Kern County LAFCO, 2012).

11. Existing governing body such as County Service District, Public Utility District, Mutual water system, etc.

The Lamont Public Utility District provides water and sewer service to the large unincorporated community of Lamont and the neighboring community of Weedpatch. The District is governed by a 5-member board of directors.

12. **Decision making process** *Is there a board of directors, designated lead home owner, long time unofficial leader, or is there a lack of good decision making process. History on this would be good.*

The Lamont Public Utility District Board of Directors is in charge of the decision making process related to the community's water system. This applies to policy decisions and other major decisions. The District General Manager provides the overall management of the system.

As a side note, the District used to contract with a private company to manage and operate the District's activities. At the expiration of the five-year contract, the contract was not renewed. Two interim general managers were hired consecutively, until a permanent GM was hired in January 2013.

13. **Discussion of operation and maintenance personnel for each community**

    Part-time or full time personnel, contractors used, any shared human resources with other communities or agencies.

In addition to the GM, the District employs one office manager and two office clerks, all full-time. There are four field staff, some part-time, some full-time. The District does its own billing, and contracts with an outside agency for engineering (AECOM), legal (Wall, Wall & Peake) and audits.

14. **Discuss how district is managed such as independent manager, County personnel involved, CDPH personnel involved** *Is the California Public Utilities Commission involved on rate setting or is it a local decision?*

The District is regulated by CDPH, Tehachapi District Office in Bakersfield. Management is an internal function, although they did experiment with contracted management firms in the past.

No CPUC. Most of their functions are entirely internal (budgeting, billing, operations, etc).

15. **Discuss problems that have been solved by community that could be applied as solutions by other communities.**

Lamont has an economy of scale that puts it in a relatively stable financial position. The District has sufficient resources to deliver reliable services and finance its own operations, including qualified operators. Emergencies are dealt with timely.

The District operates one coagulation-filtration arsenic treatment plant at one well site. The operation is successful and the cost scale is low enough to be comfortably absorbed by the District's operations. The remaining arsenic-contaminated well is being replaced with a new well, funded by Safe Drinking Water SRF.

Lamont's agreement with CRR&R to use all of its treated wastewater effluent has been a successful strategy for LPUD, until the recent legal problems resulting from the death of two

CRR&R workers. Now that the future of the recycling facility is in question, the District is in a situation of not having a Plan B. Various options are being considered, including the purchase of the recycling plant by LPUD.

16. Discuss largest unresolved problems/issues for the community and what is being considered to solve these problems, if any.

Lamont continues to cope with arsenic contamination in two active wells (two have been taken off line due to arsenic).

The District is struggling to find a solution to the CRR&R disposal problem, described above. They did not have a Plan B in place in case the facility became unable to accept LPUD's effluent, which is a real possibility at this point.

LPUD also has a lot of problems with illegal connections, undocumented connections, and connections which were not properly assessed at installation. They have hired a public utilities consulting firm to review tax data for parcels within the district. The board has also taken action to retroactively assess many accounts, which has created a public relations challenge.

Lanare

51-200 Connections Range
(165 Connections)

Location and Introduction

The remote, rural Fresno County unincorporated community of Lanare is located on Mt. Whitney Avenue four miles west of Riverdale and approximately 30 miles southwest of the City of Fresno. The District encompasses approximately 346 acres (two square miles) and has a current population of 589 according to the 2010 Census.

1. When was community established and why?

Established as a farm working colony, "The Town of Lanare" was named in honor of Llewellyn A. Nares, who owned the Rancho Laguna de Tache Mexican land grant and developed the community in the early 1900's. The Laton and Western Railway, developed to promote agriculture in the SJV, extended to Lanare in 1911. A post office operated there from 1912-1925. As was true for many of the SJV colonies established in the early 1900's, the early Lanare residents, African American farm laborers, contributed significantly to Valley agricultural industry which, "after many years of bitter controversy over the use of water" supported a "transition to irrigated orchards, vineyards and row crops."(http://www.co.fresno.ca.us/CountyPage.aspx?id=19947, Fresno County History, 1950 California Blue Book)

According to the "History of Fresno County, California: With Biographical Sketches...Vol 1", (Vandor, Paul E), Lanare experienced a "splendid growth of late" circa 1920, as described in the biography sketch of George Finis Craig, a farmer and businessman of

the era who, along with his wife, was "nicely domiciled" in Lanare upon retirement. Mr. Craig's relocation from Riverdale to Lanare was described as "Riverdale's loss is Lanare's gain." (pg 1088, http://books.google.com/books).

The reason for researching and including this bit of Lanare history is to emphasize that while Lanare's current condition is very different from its more developed neighbor Riverdale, the community did have its heyday at one time. Residents of Lanare today are striving to revitalize the esthetics, economy, and general life-style of the community they love. Successful and well managed water and waste water systems will play an integral role in their efforts.

"The 2000 Census reported a population of 540 residents and an average household density of 4.29 in Lanare. The community of Lanare has not experienced significant growth compared to more urban areas of Fresno County. The growth rate of Lanare between 2000 and 2008 was estimated to be approximately 2 percent. It is anticipated that the growth in the future will continue to be low. Growth in the community is limited by capacity of the water supply." (Provost and Pritchard, TMF Capacity Assessment for a New Community Water System, August 2008)

2. How old are the systems?

The Lanare Community Services District was formed in 1971. The District's water distribution system currently consists of two wells, Well #1, drilled in 1972, located near the intersection of Mt. Whitney and Garfield Avenues and Well #2, drilled in 1979, located at the Community Center. When the system was new, the two wells produced up to 700 gallons per minute. As of 2008, production had dropped to 408 gallons per minute.

With CDBG funds, Lanare constructed an Iron Coagulation Arsenic Treatment Plant in 2006 to address its arsenic levels. This plant was built with a 220 gpm capacity, and a 450 gpm booster station to provide sufficient domestic water and fire flow. The system also has two 4,000 gallon hydro-pneumatic tanks and a single, bolted steel 150,000 gallon ground level storage tank. However, due to inadequate collection and management of water fees and an untimely EPA arsenic standards change which led to treatment costs significantly higher than planned for, the District accrued unmanageable debt in a short amount of time causing the treatment plant to close within 0ne year of start-up in 2007.

The water system is currently operating with Wells #1 and #2, each metered to the hydro-pneumatic tanks where the water flows directly to the distribution system, bypassing the Treatment Plant, Ground Level Storage Tank and Booster Station.

At the time of the preparation of this Community Profile, the California Department of Public Health funded a *Lanare Public Water System Improvements Proposition 84 Feasibility Study,* in the amount of $500,000.Applied for by the water system Receiver and conducted by Nolte Vertical Five (NVF) engineering, the study reviewed four alternatives.

1. Full consolidation with nearby Riverdale PUD
2. Interconnection (Partial consolidation) with nearby Riverdale PUD
3. Current Water Treatment Plant (WTP) Rehabilitation and Restart
4. Construct two new wells, each designed and equipped with sufficient capacity to satisfy maximum day demand with one well out of service for maintenance or repairs.

The test well pulled water from three different strata producing water with the following arsenic levels.

Strata Depth	Arsenic (ppb)
640-690 ft.	5.4
790-810 ft.	31
950-970 ft.	3.4

Using a weighted scale, NVF considered impact on service charges for rate payers, effectiveness of the chosen alternative's ability to solve the arsenic problem, and construction costs. Alternative Four (4), the construction of two new wells was chosen to be the preferred alternative by the engineer.

3. Median household income

Per the last decennial census to calculate median household income, the 2000 Census, the median annual income for households in the Census Designated Place that incorporates the community of Lanare, was calculated at $26,275 or 55.5% of the statewide median household income at that time. Since then the US Census Bureau no longer asks the income question in the decennial census, but rather collects income data through the continually occurring American Community Survey (ACS) where a smaller sampling is done annually. This data is expressed as a 5-year adjusted average. The median annual household income for the Year 2000 Census and the past four rounds of ACS is expressed as:

Period	Area	MHI	Margin of Error	% of State MHI
2000	**CDP**	$26,275		55.5%
2005-2009	**CDP**	$36,806	+/-$10,029	60.9%
2006-2010	**CDP**	$42,813	+/-$12,201	70.3%
2007-2011	**CDP**	$43,136	+/-$19,194	70.0%
2008-2012	**CDP**	$45,690	+/- $33,944	74.4%

It appears that the fourth most recent (2005-19 ACS) data for the CDP is the most accurate. The margin of error is still at 27.2%, but this is more accurate than the 2006-10, 2007-11 and the later 2008-12 ACS data which have margins of error of 28.5%, 44.5% and 74.3% respectively.

Due to the high margins of error in the ACS data, California Rural Legal Assistance Corporation conducted a community survey in 2010 to more accurately determine the community's median household income. Eighty-one (81) of the community's 154 households responded to the survey's income question with annual incomes ranging below $11,000 to over $75,000. This equates to a 52.6% response rate. Based on data collected, the community's annual median household income was determined to be $26,000 or 42.6% of the statewide median household income.

Due to the much greater response rate from the community survey versus the 3% a year over five year response rate from the ACS, the survey results should be considered more reliable than the more sparse census data. Therefore, Lanare should be viewed as a severely disadvantaged community with a median household income less than 60% of the statewide median.

4. Monthly sewer rates and water rates, if known

The current monthly water rate for a residential water connection is $54.00 per month for 0-20,000 gallons, with an additional $1.50 per 1000 gallons for 20,001-40,000 gallons and another $5.00 per 1000 gallons for 40,001-50,000 as set by the Proposition 218 process in 2010.

Commercial rates are $300.00 for 0-40,000 gallons with an additional $10.00 for every 1,000 gallons 40,001 and up.

Customers were charged metered rates beginning June of 2013. One of the challenges with meters in Lanare is that more than one home on a property is sometimes connected to the same meter causing two or more households to share one base amount of water. This was because some households did not choose to pay for connection from the meter to the house when meter installation took place in January 2013. Meters are available at no charge since they were purchased for each household with the grant funds. Households can still install individual household meters, but now it is considerably more expensive than if the individual meters had been installed at the time of construction.

Currently there is no sewer system in Lanare. However, some residents have expressed an interest in the construction of a community-wide waste water system. Residents state there are numerous dilapidated At the time of the preparation of this community profile, the Board of Directors of the Lanare Community Services District in

considering pursuing funding to initiate a sewer system feasibility study through the State Water Resources Control Board and the Kings Basin Integrated Regional Water Management Authority.

5. Billing methods for the community systems.

Due to being placed in Receivership, the District no longer manages the water system. The Receiver, California Water Services based in Coalinga mails out water customer bills on a monthly basis. Customers pay by mailing a check or money order, or paying cash in the office.

One of the great challenges for the Lanare CSD when the District previously operated the water system was the billing process. According to the Fresno Grand Jury Report (2007-2008) accurate records were not kept, there was inconsistent billing and collections, with some households that should have been paying not being billed. Collectively these practices contributed to lost revenues needed to run the water system. Placing the water system into receivership has rectified these inconsistencies. The Receiver ensured that all properties connected to the water system are billed accurately and consistently. If bills are not paid, the Receiver discontinues water service.

Water meters were installed on customer service connections during the period from January 2013 through May 2013. Initially the meters were read, but water service customers were still charged a flat rate to allow residents to learn how to monitor water usage. Unfortunately, when water use was billed according to metered rates starting June 2013, most residents were caught by surprise and found themselves with exorbitant water bills. The Receiver noted 40 out of 154 homes exceeded the base water amount of 20,000 gallons in June, 2014. CDPH contracted with Nolte Vertical Five (NV5) to provide free water audit services to help residents locate possible leaks and learn how to reduce water rates. The Receiver talked with residents on a one-on-one basis to help them learn how to reduce water usage. NV5 has provided free low-flow shower heads for residents that participated in the free water audits. Twenty four audits were requested and completed. The percentage of households exceeding the base allotment (approximately 46%) continued throughout the summer months. But between water audits, with increased awareness and cooling temperatures, the number of households above the base 20,000 gallon allotment was reduced to only 4 customers in January 2014.

To help residents increase knowledge of water conservation practices and reduce water bills, the Lanare CSD, assisted by Self-Help Enterprises and NV5 (funded by CDPH) intend to develop additional Water Conservation classes. CDPH has also committed to fund additional free water audits.

Based on 165 connections, the table below shows average water use per customer. Customers received their first metered bill for the month of June in July 2013. As previously stated, twenty four water audits were conducted August 2013. (Gallons used not available for June).

Month	Gallons used	Average gallons per customer	Average Monthly Temperature
April	3,231,000	21,630	68
May	4,721,000	30,656	73
July	3,675,300	23,866	87
August	3,056,000	19,844	83
September	2,779,000	18,004	78
October	2,101,000	13,643	67
November	1,419,000	9,214	59
December	1,459,000	9,474	48

In regards to billing, under the monitoring of CDPH, it was the objective of the Receiver, under court order, to rectify previous billing errors and establish an effective billing system that will "ultimately return the system to the community in a sound fiscal state." (Status Report to CDPH and Court, December 31, 2012). These steps will assist the Lanare CSD is regaining control of the water system, if they desire to do so and are deemed capable of doing so in the future.

Though the Lanare CSD does not currently operate the water system, the District still owns and manages the Lanare Community Center. In order to sustain the Community Center, the Lanare CSD and community residents conduct frequent fundraisers to financially maintain this valuable resource and focal point for Lanare.

6. Are systems in the black or in debt?

As of January 2014, after being operated by California Water Services for a period of 41 months, the Lanare Water System is now operating in the black for annual operations, but is still not treating water for arsenic contamination and still has an outstanding debt of $76,167.34 to repay.

The current rates have, to date, been adequate to cover operations by Receiver, including emergency repairs, and will begin paying down the CSD debt.

Lanare water system's 2013 Financial Report

Description	Water System	
	Annual Projection	*2013 Actual through 12/31/13*
Working Capital from 2012	$ 8,000	$8,000
Water User Fees*	$113,748	$117,941
Operating Expense**	$116,121	$94,224
Debt Payments	$0	$0
Capacity Reserves***	$2,500	$10,000
Project Profit/(Loss)	$1,031	$17,524

*Combined flat rate and metered rates for Residential and Ag/Commercial fees
**Wages/Salaries/Benefits, Office and General Operations, Operations & Maintenance, Utility Costs
***$30,000 Reserve required by Court before Debt repayment can begin

Lanare water system's Projected 2014 Budget: (Based on assumption that all accounts remain current throughout the year.)

Description	Water System
Working Capital from 2013	$ 18,619
Water User Fees*	$117,941
Operating Expense**	$115,352
Capacity Reserves***	$0
Debt Payments****	$15,233
Project Profit/(Loss)	$ 18,619

*Combined Residential Meter, Ag Meter revenues, estimated excess usage charges.
**Wages/Salaries/Benefits, Office and General Operations, Operations & Maintenance, Utility Costs
***$30,000 Reserves required prior to debt payment were met in 2013. Additional deposits will be made to Capacity Reserves as funds allow.
****Debt repayment plan begins January 2014.

DEBT: "As of November 30, 2009 the District had a total debt of $158,910.The reported debt as of November 30, 2008 was $138,228." (CDPH findings, Betsy Lichti, 2010) Prior to the Receiver managing the water system in 2010, the Lanare CSD had no identified ability to reduce payment or debt reduction plan in place. Below is a chart of debts, payments, and remaining debt. As of January 1, 2014, the total remaining debt related to the water system is $76,164.34. Other CSD debt is unknown.

At the time Fresno County Court deemed California Water Services to be the Receiver, the Receiver was ordered to accrue a Capacity Reserves of $30,000 before (previous debt) vendors could be paid. In order to continue needed services with some of the vendors, and to eliminate some smaller debts, the Receiver requested accelerated debt repayment to some vendors. The Court agreed to some of the requests, so some vendors received payment in 2011-2012. Once the Capacity Reserve of $30,000 was met in December 2013, the Receiver divided the remaining debt into an equal number of payments (60 months) per vendor to be paid by January 1, 2019 at the current water rate. This debt is being paid down as part of the monthly service fees charged to customers. It is the goal of the Receiver to have the water system debt free within the five year period.

Payee/Vendor	Original Debt	Current Debt*	When/How Paid
Water System operator- Ken Souza	$30,000 (salary)	$0	Debt forgone in legal suit
Fresno County Planning & Development Notice of Violation (NOV). Penalty for failure to complete final inspection of water system treatment plant.	$10,000	$0	2010 Waived by County
Gleim Crown Pump	$957	$0	April 2011 By Court Order- to resume needed services. Water service fees collected after Receivership began.
Bank of the West	$6,112	$0	August 2012 By Court Order Water service fees collected after Receivership began.
Self Help Enterprises (SHE)	$10,000	$0	2012 CDPH SRF funds
Turnipseed Electric	$4,611.34	$4,611.34	Begin payments (60 months) January 2014
Dovali Construction(settlement)	$20,000	$20,000	Begin payments (60 months) January 2014
California Water Services	$51,553	$51,553	Begin payments (60 months) January 2014

*Current as of January 2014

REPAIRS: Since the 2007 closure of the arsenic treatment plant, the following repairs and upgrades have been made to the Lanare water system.

Grant (fully grant)	Purpose	Date	Amount
Emergency Prop 84	Bypass treatment plant to distribution system	2007	$5000
Emergency Prop 84	Upgrade system to ensure adequate water supply	2009	$30,000
Emergency Prop 84	Electric panel replacement	2011	$22,595
Emergency Prop 84	Repair water line leaks	---	---
DWR Prop 50 & CDPH SRF	Meters installed	2012	$313,000
Prop 84	Water System Improvements Feasibility Study	2012-2013	$50,000

7. Are systems run as a business or are the systems dealt with more issue by issue as they come?

Under Receivership, the water system is run on an enterprise model. Operators, employed by the California Water Services company, monitors, bills, and maintains the system on a regular basis as required by court order. Prior to this, the Lanare CSD did not run the system on the enterprise model. Lack of sufficient revenues generated by water fees combined with unexpected expenses incurred running the arsenic water treatment plant led to a shortage of funds intended to properly operate the water system. The Lanare Board attempted to meet operational costs with funds designated for other purposes.

8. Range of household budgets in the community

The 2008-2012 ACS data provides the following range of household incomes in the community:

Lanare CDP, California	Annual Household Income Estimate	Margin of Error
Total Households		
Less than $10,000	9.3%	15.9%
$10,000 to $14,999	18.5%	20.5%
$15,000 to $24,999	14.8%	17.7%
$25,000 to $34,999	0.0%	28.6%
$35,000 to $49,999	26.9%	33.7%
$50,000 to $74,999	22.2%	23.7%
$75,000 to $99,999	8.3%	15.4%
$100,000 to $149,000	0.0%	28.6%
Median Income (dollars)	$45,690	$33,944
Mean Income (dollars)	$38,102	$12,456

Unfortunately, the figures listed above are only useful to indicate how small a sampling must have been done in the Lanare Census Designated Place to have margins of error greater in many instances that the estimates given.

Lanare families in general don't have any room for flexibility in their budgets. Many families depend on farm labor for their major source of revenue so their incomes fluctuate seasonally. There are also many residents who depend on fixed-income sources such as disability and social security.

9. Population served

The 2010 United States Census reported that Lanare had a population of 589. The Fresno LAFCo 2007 MSR states the expectation in 1974 was that Lanare's population at that time of 315 "would dwindle to 220 by 1990." In contrast, Lanare population nearly doubled during that period and has grown since.

Two significant contributions to an increase in population and improvement in housing were the dedication of some new residents to build and maintain newly constructed homes and a Self-Help Enterprises (SHE) housing development during the 1970's. The current LCSD Board President is the proud owner of a SHE home, built by her parents during her infancy and since inherited from them.

Based on the 2010 Census population of 589, the racial makeup of Lanare was 181(30.7%) White, 57 (9.7%) African American, 5 (0.8%) Native American, 2 (0.3%) Asian, 0 (0.0%) Pacific Islander, 300 (50.9%) from other races, and 44 (7.5%) from two or more races. Hispanic or Latino of any race was 519 persons (88.1%).

10. Short description of water systems and sewer systems including number of connections, adequacy of backup systems and MCL challenges if known

The LCSD has 163 active connections servicing primarily residences (154), three or four commercial properties and churches and one Community Center. The community is served by two wells which bypass the arsenic treatment plant. Each well is capable of meeting domestic flow requirements when the other well is not operational. Both wells produce water with arsenic concentrations nearing 30ppb, significantly higher than the arsenic Maximum Contaminant Level of 10ppb.

The majority of Lanare's water system was installed in the early 1970's, with the addition of a new distribution system and arsenic treatment plant in 2006.The treatment plant went on line in October 2006, but was closed down in less than a year in July 2007 due to insufficient revenue to pay for treatment expenses and significant accrued debt. Using old distribution lines, the water system currently delivers water from two wells which exceeds the arsenic MCL.

Water meters, installed in December 2012, are read manually.

As noted earlier, a feasibility study was completed in December 2013 which evaluated four alternatives to the community's water supply issues. The alternatives included the drilling of two new wells with arsenic below the MCL; rehabilitation and reactivation of the existing arsenic treatment plant; as well as partial and full consolidation with the Riverdale Public Utility District.

The community is served by private on-site septic tanks for sewage disposal and there is no community sewer.

11. Existing governing body such as County Service District, Public Utility District, Mutual water system, etc.

The independent Lanare Community Services District serves the unincorporated Fresno County community of Lanare. The District is governed by a five member board of directors elected at large by the district residents. However, as stated, the water system is operated by a Court appointed Receiver, California Water Services. It is estimated that the Receiver will operate the water system until a water supply solution is reached for the community. Construction of which ever solution is selected is estimated to be completed mid-to end year 2016. At this point, it is uncertain which entity will operate the water system after that time.

12. Decision making process

The Lanare Community Services District was formed one year prior to the construction of the original water system. The District managed the water system until the time the system went into receivership in 2010. Overuse of treated water, mismanagement of funds and billing procedures, inattentiveness to proper procedures, a change in federally regulated standards for arsenic at the same time the treatment plant began were all parts of the demise of water system operations prior to receivership.

According to a report by Veronica Garibay, which at the time of her quote was an employee of California Rural Legal Assistance, the arsenic standard change was originally planned to take effect in March of 2001. However, "due to the high cost of compliance for small drinking water systems" the effective date was postponed to February of 2002. "At the time, EPA and other agencies cautioned that arsenic treatment may be unaffordable for small water systems." (Garibay)

Concern has been expressed that perhaps the engineering Study that determined the best option for water source for Lanare did not sufficiently consider operation and maintenance costs for the increased arsenic standards, the low income level of the community, the economy of scale based on the number of connections, the level of water consumption in this community, nor a more detailed study of existing service lines to all connections. In retrospect, community leaders feel more attention to these elements in the Study might have prevented or minimized the financial crisis that ensued.

The operations of the new arsenic treatment plant which increased costs from $1,000 per month with old system compared to $12,800 per month for treated water system was the tipping point combined with other issues to create the inability of the CSD to continue managing the public water system in Lanare.

Currently all decisions are made by a combination of the Receiver and CDPH, approved by the Court system through a series of quarterly and annual reports submitted by the Receiver. CPDH and the Receiver, through direct contact and with the assistance of Self-Help Enterprises (SHE) and The Leadership Counsel for Justice and Accountability (LCJA) attempt to involve the Lanare CSD Board and community as much as possible.

One challenge of the water system being operated and managed by a private water company that was appointed as Receiver is a sense of mistrust among some residents toward the managers. It's been stated that since the Receiver was not chosen or elected by the residents, as the CSD had been, some community members feel some "operating policies are unfair or unfairly applied." (Garibay) The Receiver, on the other hand, has expressed a desire to "get things in order" (pay the accrued debt, make sure all users pay their fees, etc.) in such a manner that the District could be re-appointed to manage the system in the future if they chose to. At the time of this writing, the CSD Board is working closely with the Receiver to rectify some of these issues. But even the CSD Board struggles with the "trust factor" due to a history of mistrust between the community and previous CSD Boards.

13. Discussion of operation and maintenance personnel for each community

The water system is run by a private water management and operations company, California Water Services with its headquarters located in Coalinga approximately 40 miles away, manages and operates other small water systems throughout the San Joaquin Valley. California Water Services maintains the water system including both wells, the hydro pneumatic tanks and lines, conducts periodic required monitoring, reads the meters, manages the billing and payment process, and provides information to residents on best practices for water conservation. The arsenic treatment plant is currently non-operational.

The Lanare CSD and the community have expressed a desire to regain management of their water system. The California Department of Public Health (CDPH) is willing to consider the CSD eventually regaining control of the system. However, leadership, operational, and managerial capacity of the Board will first need to be developed and demonstrated. CDPH has tasked and funded SHE to assist the Board in developing TMF capacity.

The Receiver, California Water Services, has agreed to continue managing the Lanare water system until 2016. The Receiver, Self Help Enterprises and CDPH are committed to assisting Lanare residents and CSD Board members increasing their capacity to manage the system. LCJA has, and will continue to work with the community to support

these efforts as well. It is expected that CDPH will re-assess and make a determination of the Lanare CSD's capacity to re-gain management of the water system over the course of the next few years.

Another option could be for the community and Board to decide to contract with a private management firm, like the current Receiver California Water Services to manage the water system after improvements are made.

A third option would be for another District such as the Riverdale PUD to completely or partially manage the Lanare water system.

Independently, an evaluation of Lanare's consolidation with the Riverdale water system has been conducted as part of the CDPH funded feasibility study. The analysis conducted by the engineering firm Nolte Vertical Five (NV5) indicated that consolidation, either complete or partial, to be more costly to Lanare's water users in the long run as compared to either rehabilitating the old Water Treatment Plant (WTP) or utilizing two new wells found to have water well below the Arsenic MCL levels. This evaluation takes into account a structure in which water from Riverdale would be sold to Lanare at 150% the Riverdale charge rate. The first and significant challenge of this option is the Riverdale Public Utilities Board's position that providing water and/or waste water services to its neighbor Lanare would create a liability and service burden on their own systems and management operations. However, at the time of this writing all options are still under consideration.

Sewer- While community members have expressed an interest in building a community-wide a waste water system to eliminate dependence on individual failing septic systems, the inability of the Board to manage the water system puts strain on the ability of the Board to develop, manage and operate a waste water system.

One solution to the management and operations of both water and waste water services for Lanare could be a connection or consolidation with the nearby and larger town of Riverdale. Distance between the two communities as well as Riverdale being up-gradient from Lanare (causing increased pumping costs for waste water) are challenges that would need to be evaluated.

One other note of interest is that if the Board and community were in support of private management, and if the community chose to construct their own waste water treatment plant, a private company might be attracted to managing both systems.

14. Discuss how district is managed such as independent manager, County personnel involved, CDPH personnel involved

The LCSD water system has 154 connections, (not more than 200). Because the Lanare water system is being managed by a Court appointed Receiver, the system is

directly regulated by the State Department of Public Health in monitoring compliance for and in enforcing EPA's Safe Drinking Water Act.

All billing, reporting, monitoring and administering of the water system is currently being conducted by the Receiver, under the oversight of CDPH and Fresno County Superior Court.

15. Discuss problems that have been solved by the community that could be applied as solutions by other communities.

In regards to drinking water, the Lanare CSD has not been successful in solving its water systems delivery, operations or management problems. However, new test wells have produced water well below the arsenic MCL. A decision of which alternative to choose, based on the Study, is pending.

The story of how and why the water system was placed in receivership is noteworthy and can be used as an example of situations to be weary of and not to repeat.

Currently, Lanare has not as yet been successful in pursuing funding for waste water system options. A start at these efforts was the completion of a preliminary feasibility study in 2013 by the Kings Basin IRWM Authority as part of a disadvantaged community pilot project funded by DWR.

16. Discuss largest unresolved problems/issues for the community and what is being considered to solve these problems, if any.

Meters- It is recommended that each dwelling be connected to separate meters to provide each household its own base amount of water. The expense to hire a licensed contractor to connect the meter to the private line which needs to be installed at the property owners' expense has been a challenge. Several property owners have managed to do so. Several others have not. Meters were purchased for each dwelling and are available from the Receiver.

Arsenic- The two wells currently serving Lanare both produce water over twice the MCL of 10 ppm. Based on past experience, arsenic treatment is too expensive for Lanare residents to afford. Two new test wells drilled in the fall of 2013 encountered water in deeper strata's below the arsenic MCL. A decision of which alternative to choose, based on feasibility study recommendations, is pending.

Management of water system-

Management of small community water systems by volunteer board members who frequently don't possess the technical, managerial or financial knowledge or skills

necessary has been and is an ongoing problem not just for Lanare, but for many rural communities.

Veronica Garibay noted that at the time of the arsenic treatment plant installation, "the Lanare CSD was run by an all-volunteer board of directors that consisted of five residents from the local community, and the lack of resources and technical assistance for the board impacted its ability to build the CSD's technical, managerial, and financial capacity to operate and maintain a state of the art arsenic treatment plant effectively. " (Garibay)

Currently the Lanare CSD Board of Directors agrees with CDPH that it is appropriate for a Receiver to continue to manage the water system for the time being. New Board members were elected in November 2013 with the desire to develop the Technical, Managerial and Financial (TMF) capacity to eventually operate and manage the water system in the future. There is potential assistance from Self-Help Enterprises, CDPH and perhaps Rural Community Assistance Corporation, to develop management capacity.

Challenges include the lack of trust between a number of community members and previous and current management. From an outsiders perspective, this appears to come from the frustration from some community members to effectively engage in the decision making process for their own future. Community members are concerned that they are paying high water rates for water they "can't drink". There are feelings among some community members that "nothing is being done to help us" and frustration on all levels on the length of time it takes to achieve solutions.

Progress is being made on moving forward to meet these challenges, some more than others. With the discovery of "good" water in Lanare from the 2013 test well drilled on the community center property, support to develop the TMF capacity of local leaders is key as decisions are made for the future.

Laton

201-500 Connections Range
(461 Connections)

Location and Introduction

The community of Laton is located just north of the Kings River in the south-central portion of Fresno County adjacent to the Kings County boundary between State Routes 41 and 43.

1. When was community established and why.

The community of Laton was established in the late 19th Century and named after Charles A. Laton. Laton and the surrounding farming lands were carved out of the old Mexican Land Grant, Lagune de Tache, which consisted of more than 48,000 acres. The Grant was given to Manuel Castro in 1846 and was the only Mexican Land Grant in the central valley. By January 1, 1902, Laton had about 60 people residing in the town, as well as 10 homes and 7 businesses. Today the community has close to 500 homes along with several businesses and has a population of approximately 1,824 people. . Laton is also home to Laton High School, Conejo Middle School and Laton Elementary School.

2. How old are the systems?

The Laton Community Services District was established on December of 1981. The District provides water and sewer services, trash collection, street lighting and fire protection to the community. The District's community water system was initially built in 1963. The water distribution system was replaced in the early 1980's. Most recent waterline replacement was on Latonia Street from Armstrong to De Woody. The most recent improvement to the wastewater system was the replacement of roughly 0.2 miles of pipeline between Pio Pico and Armstrong Roads on Murphy Avenue. The community's wastewater system was constructed in the early 1960's. The treatment process consists of an extended aeration activated sludge plant followed by evaporation-percolation-ponds for disposal.

3. Median household income.

Since then the US Census Bureau no longer asks the income question in the decennial census, but rather collects income data through the continually occurring American Community Survey (ACS) where a smaller sampling is done annually. This data is expressed as a 5-year adjusted average. The median annual household income (MHI) for the past four rounds is expressed as:

Period	Area	MHI	Margin of Error	% of State MHI
2005-09	**CDP**	$54,792	+/- $15,587	90.7%
2006-10	**CDP**	$50,515	+/- $14,372	83%
2007-11	**CDP**	$51,250	+/- $29,979	83.2%
2008-12	**CDP**	$34,500	+/- $21,701	56.2%

Obviously, the large margin of error for the various ACS does not provide an accurate representation of the community's true median household income. It may be necessary to conduct a community survey to provide more accurate and representative income information for the community. It should be noted the most recent ACS data indicates that Laton is a Severely Disadvantaged Community with a MHI less than 60% of the statewide median.

4. Monthly sewer rates and water rates, if known.

The current monthly water rate for a residential water connection is $27.50 plus $.65 per 100 cubic feet of water used. The average monthly water user charge is estimated at $35.00-$40.00. The monthly sewer rate is $40.00 per dwelling.

5. Billing methods for the community systems. *Does the community use the property tax rolls to collect annually or semi-annually. Are there other services that might be on the same bill? Are bills paid by mail or is there an office drop off point? Discuss how this works for very small communities that do not have a formal billing process.*

The District financially operates its water and sewer system with fees collected from its users. Property taxes collected by the District fund the local volunteer fire department. Monthly bills are generated for water and sewer services, trash collection and street lighting. A typical home pays about $95.00 per month for these services. The office manager generates bills, collects payments, and makes deposits to the West American Bank in Hanford. Residents can mail or drop off payments at the LCSD office.

6. Are systems in the black or in debt?

The District used to use its reserves to pay the difference between the bills and the revenue collected by their fees. Since that was unsustainable, in 2008 the District increased water and sewer rates through the Proposition 218 process. After the rate increase took effect, the District has been able to cover expenses and fund the depreciation accounts. The District's capital improvements are reviewed annually and undertaken according to needed funding availability.

Description	Water and Sewer	Other Services	All Services	All Services Cash Flow
Cash beginning of year	-	-	-	$442,825
Operating Income	$459,268	$129,537	$588,805	581,235
Operating Expense	$439,727	$131,682	$571,409	-
Depreciation	$71,492	$2,207	$73,699	-
Operating Exp. (w/o Dep.)	$368,235	$129,475	$497,710	$511,536
Non-operating Revenue	$173,662*	$59,694	$233,356	$104,688
Non-operating Expenses	$675	$0	$675	$5,489
Cash end of year	-	-	-	$611,723
Change in Cash Balance	-	-	-	$168,898

*Includes $125,128 grant revenue received

It should be noted that all numbers, with the exception of the cash balances are based on the accrual method of accounting.

7. **Are systems run as a business or are the systems dealt with more issue by issue as they come?**

The District operates as a business. The District Board adopts annual budgets that cover all aspects of District expenses. Reserves are set up to cover capital improvement plan replacement expenses such as pumps, pipelines, etc.

8. **Range of household budgets in the community.** *Discuss how much is spent on utilities such as sewer and water, if known. Are there discretionary funds in the typical households. If water or sewer rates go up what might get cut.*

Based on census data alone, Laton is barely considered a disadvantaged or a severely disadvantaged community, with 2008-12 ACS MHI indicating an MHI at about 56.2% of the statewide MHI. The 2008-12 ACS indicates the following range of household incomes in the community:

Laton CDP, California	Annual Household Income Estimate	Margin of Error
Less than $10,000	3.6%	+/- 4.2
$10,000 to $14,999	7.8%	+/- 8.1
$15,000 to $24,999	13.4%	+/- 11.8
$25,000 to $34,999	25.4%	+/- 15.1
$35,000 to $49,999	11.5%	+/- 7.9
$50,000 to $74,999	12.3%	+/- 10.0
$75,000 to $99,999	7.5%	+/- 5.9
$100,000 to $149,999	7.3%	+/- 5.8
$150,000 to $199,999	6.7%	+/- 7.3
$200,000 or more	4.5%	+/- 6.8
Median Income (dollars)	$34,500	+/- $21,701

An estimated 50.2% of households have annual incomes less than $35,000

9. **Population served.**

The 2010 United States Census reported that Laton had a population of 1,824. The racial makeup of Laton was 1,001 (54.9%) White, 4 (0.2%) African American, 13 (0.7%) Native American, 10 (0.5%) Asian, 0 (0.0%) Pacific Islander, 744 (40.8%) from other races, and 52 (2.9%) from two or more races. Hispanic or Latino of any race was 1,393 persons (76.4%).

The average household size was 3.85. There were 493 housing, of which 290 (61.2%) were owner-occupied, and 184 (38.8%) were occupied by renters. The homeowner vacancy rate was 1.4%; the rental vacancy rate was 2.6%. 1,017 people (55.8% of the population) lived in owner-occupied housing units and 807 people (44.2%) lived in rental housing units.

10. Short description of water systems and sewer systems including number of connections adequacy of backup systems and MCL challenges, if known.

The LCSD has 462 active connections servicing 435 residential properties, 24 businesses and 3 churches. The majority of the distribution system was installed in the early 1960's. The District currently has three wells in which it supplies its resident's needs with. Well #6 is located East of the CSD office on E. Latonia St, Well #5 is located between S. Fatima Ave and S. Fairway Ave on E. Murphy St and Well #4 is located on S. Fatima Ave and E. Letson Ave, just west of the railroad tracks. Well #4 is their oldest well and pumps around 400 gpm, Well #5 and #6 are newer and are more efficient, each of these two producing approximately 500 gpm each. All three well pumps are operated in the 40 to 60 psi range. The District only runs two wells at a time, resting the third. The maintenance crew rotates the wells every 2 months. Water quality from all three wells meets Title 22 Drinking water requirements, so there are no MCL violations. Each hydro pneumatic tank located next to the wells have a capacity of 8,000 gallons that provide a limited amount of water to the system, in the event of a power outage. Also, well #6 has standby power available during power outages.

The community's sewer system has not been upgraded in the last 50 years primarily because there have not been any major issues with the system. The treatment process consists of an extended aeration activated sludge plant followed by evaporation-percolation-ponds for disposal. The wastewater treatment plant has a permitted capacity of 200,000 gallons per day and currently receives a flow of about 138,000 gallons per day, allowing for additional development.

11. Existing governing body such as County Service District, Public Utility District, Mutual water system, etc.

The Laton Community Services District provides water and sewer services along with trash service, street lighting and fire protection to the unincorporated Fresno County community of Laton. The District is governed by a 5-member board of directors.

12. Decision making process. *Is there a board of directors, designated lead home owner, long time unofficial leader, or is there a lack of good decision making process. History on this would be good.*

The Laton CSD Board of Directors is in charge of the decision making process related to the community's water and wastewater systems. This applies to policy decisions and other major decisions. However, there is a General Manager that can approve payments or billing up to the total cost of $2,000. Consideration of any expenses in excess of $2,000 goes to the board for a decision. The District Office Manager oversees administrative matters of the District.

13. Discussion of operation and maintenance personnel for each community.

Part-time or full time personnel, contractors used, any shared human resources with other communities or agencies.

The District has one full-time office manager and one part-time office worker. They also employ two full-time maintenance system employees.

The District operates their wastewater treatment plant and water system and contracts with California Water Services when they need to chlorinate the water. California Water Services has certified operators and Laton CSD employs two site operators.

14. Discuss how district is managed such as independent manager, County personnel involved, CDPH personnel involved. *Is the California Public Utilities Commission involved on rate setting or is it a local decision?*

The District is run as an independent entity. The District's office manager takes care of the everyday tasks such as billing, resident concerns and administrative matters. The board approves policies, rate increases and oversees the management of revenues and expenses.

15. Discuss problems that have been solved by community that could be applied as solutions by other communities.

The District has undertaken the Proposition 218 process twice since 2008 to raise water and sewer fees and has engaged in litigation over rate increases. The experience gained by the District may assist other agencies that face similar issues.

16. Discuss largest unresolved problems/issues for the community and what is being considered to solve these problems, if any.

The Laton Community Services District has a need to rehabilitate at least portions of the wastewater treatment plant which was built in1962. Though capacity is not an issue at the wastewater treatment plant, the deterioration of old equipment and facilities is. There is a need to upgrade facilities including controls and flow meters to meet current standards. Due to a lack of funding to resolve these issues, the majority of the treatment plant has been "band aided" in order to keep it going.

Some of the other issues within the community of Laton are lack of a storm water collection system, old roads, need for more street lighting, and a need for more commercial development. A storm water master plan was prepared by Fresno County in the late 70's and thereafter a storm water drainage basin was constructed in the community. Unfortunately, due to lack of funding the Community Services District has not been able to provide the community of Laton with a storm water collection system to connect to the existing drainage basin. Due to the community's poor drainage that can adversely affect roadways the County has limited resources put into the community's roads.

Although the community of Laton has existing street lights, they only cover about a third of the community, leaving most of the community in the dark. Most of the lights were installed on existing power poles, therefore any new street lights would require light poles and wiring to provide power to the lights.

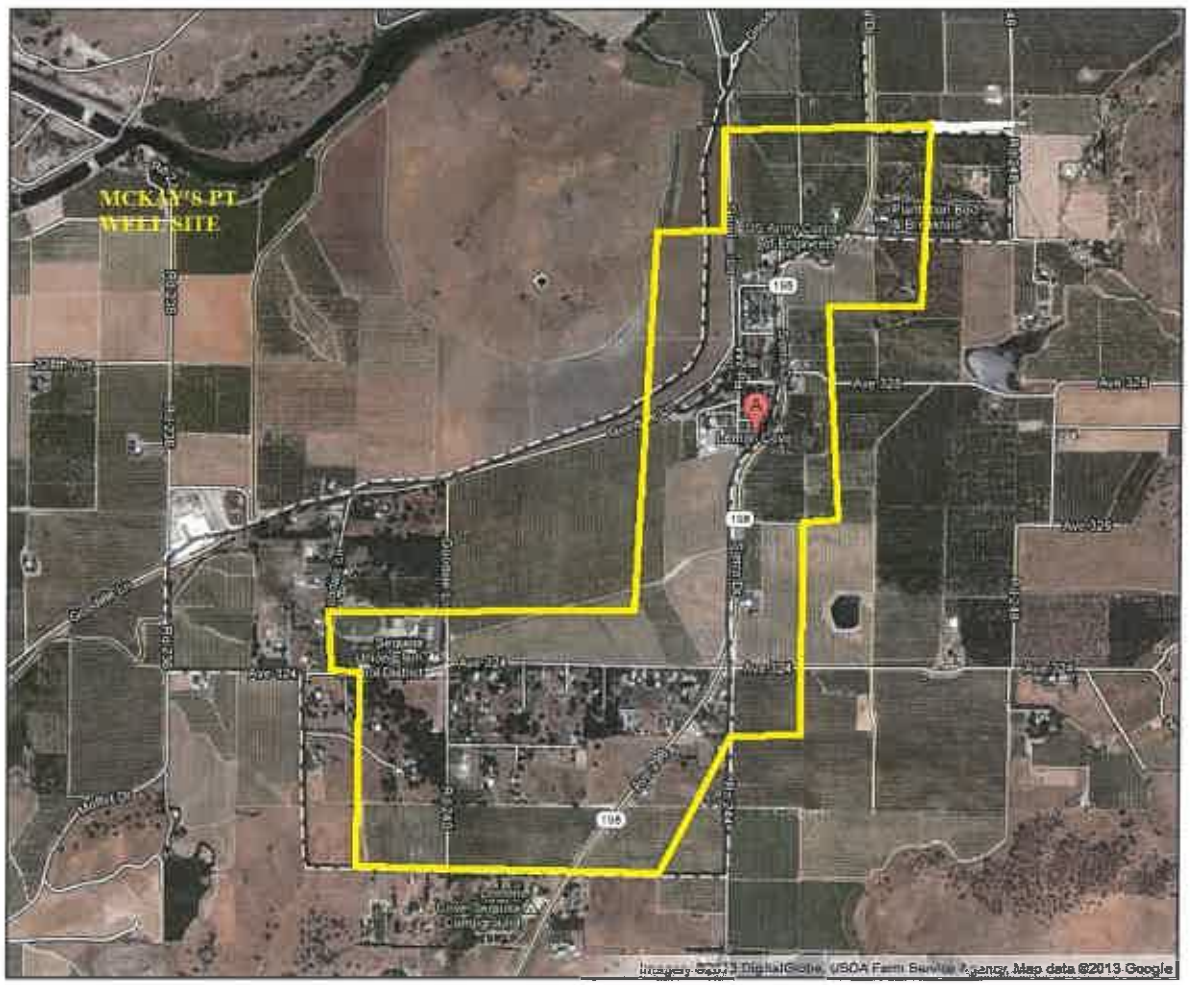
The community of Laton also suffers from lack of commercial development. Currently Laton has 2 mini marts and some small businesses such as a tire shop, beauty shop and a mechanic shop. However, for most daily items residents have to go out of town which takes away from the community's revenue. Laton hopes to have more development come in to the town and one day have a gas station and other businesses.

LEMON COVE

15-50 Connections Range
(50 Connections)

Location and Introduction

The Tulare County community of Lemon Cove is located along State Highway 198 approximately 17 miles northeast of the City of Visalia and 6 miles southeast of the City of Woodlake. The current well site is located at McKay's point, which is about 1.5 miles northwest of town. Lemon Cove has coped with persistent nitrate contamination for many years. Domestic water service is provided by the Lemon Cove Sanitary District, which also provides sewer service.



The map above shows the boundaries of the greater Lemon Cove community as the Sphere of Influence of the Lemon Cove Sanitary District. Within this area is the much smaller boundary of the actual District in the town site of Lemon Cove.

1. When was community established and why.

Lemon Cove was first called Lime Kiln due to the lime deposits discovered in the vicinity in 1859. The community was on the route to the Mineral King silver rush of the 1870's. Also in the 1870's lemon trees were successfully transplanted to the Lemon Cove area thereby helping give the community its current name. The Pogue family that brought lemons to the area built there house in the community 1879 which later became a hotel and still stands as the Lemon Cove Woman's Club building. The community grew at one time to a population of 500 before dwindling to the current population. Over the years the community has become a home to those who work in agriculture in the surrounding area.

2. How old are the systems?

The community's water system was operated for decades as a private enterprise. In the late 1980's efforts were made to incorporate the water system into the structure of the Lemon Cove Sanitary District which had been providing sewer service for many years to roughly the same residents. The California Department of Health Services funded both the LCSD and the County of Tulare in a joint project (in which the County was lead agency) to drill a new water well near McKay's Point, install a transmission/distribution line through the rural residential area of Lemon Cove outside the Sanitary District and replace the water distribution system within the town site of Lemon Cove governed by the Lemon Cove Sanitary District. This is the currently operating one well system that serves the town site today. There are fire hydrants in the area outside the District, though no connections to dwellings in this area were made due to the excessiveness of the nitrate MCL by water produced from the systems sole well.

The community sewer system was originally built in the early 1900s. The original collection system consisted of concrete pipe that, over the years, gradually disintegrated due to hydrogen sulfide gas generated from wastewater piped through the system. In the early 1980s the District successfully applied for funding from the Farmers Home Administration (USDA) and replaced the collection system with PVC piping.

3. Median household income

Per the last decennial census to calculate median household income, the 2000 Census indicated the median annual income for households in the community of Lemon Cove as well as the surrounding area, was $28,333 or 59.7% of the statewide median household income at that time. Since then the US Census Bureau no longer asks the income question in the decennial census, but rather collects income data through the continually occurring American Community Survey (ACS) where a smaller sampling is done annually. This data is expressed as a 5-year adjusted average. The median annual household income for the Year 2000 Census and the past four rounds of ACS is expressed as:

Period	MHI	Margin of Error	% of State MHI
2000	$28,333		59.7%
2005-2009	$40,125	+/- $8,879	66.4%
2006-2010	$41,705	+/- $21,145	72.8%
2007-2011	$32,500	+/- $21,446	52.7%
2008-2012	$29,688	+/- $17,913	48.4%

Based on the Census data listed above, Lemon Cove can be viewed as a severely disadvantaged community with a median household income less than 60% of the statewide median. However, because of the high margin of error in the ACS data, a community survey is now (February 2014) underway.

4. Monthly sewer rates and water rates, if known.

The Lemon Cove Sanitary District provides both water and sewer service to the townsite of Lemon Cove. The water and sewer bills are collected on the tax rolls. The charge averaged on a monthly basis is $24.14 for water ($7 base plus $0.50 per 100CF) and $9.00 for sewer. This is approximately 0.8% and 0.3% respectively for water and sewer of the 2007-11 estimated median household income for the community.

5. Billing methods for the community systems. *Does the community use the property tax rolls to collect annually or semi-annually? Are there other services that might be on the same bill? Are bills paid by mail or is there an office drop off point. Discuss how this works for very small communities that do not have a formal billing process.*

The Lemon Cove Sanitary District collects charges for water and sewer service on the property tax rolls. As such charges are added to the tax bills sent out to property owners by the Tulare County Tax Collector. This District's method of billing is unique and very cost effective. The District saves substantial time and expense by not having a monthly charge and receipting system. Because overall annual costs and charges are relatively low, it does not seem to put a strain on customers to make what amounts to an annual water and sewer charge of $290 and $108 respectively. This amounts to 0.8% and 0.3% of the community's MHI.

This revenue is deposited into the District's account at the Tulare County Treasurer's office in Visalia. The District (which utilizes the County of Tulare Treasury as its depository) pays its bills by utilizing the County's Auditor-Controller's office to issue warrants (checks). Payment vouchers and an Order to Disburse Funds are approved monthly by the Board of Directors directing the County to issue warrants. When issued, the warrants are mailed to the LCSD thence the District general manager mails the warrants to vendors. This warrant process, depending on the dates vouchers are

submitted takes anywhere from 2 to 4 weeks to issue a warrant. Though somewhat time consuming, this process consists of some additional oversight and documentation for each payment issued.

One significant reason that Lemon Cove SD has been able to keep its rates so low is that they rely almost entirely on volunteer labor. A board member carries the distribution system and sewer treatment licenses and performs the general maintenance for free. The system is bare-bones, with no treatment on the water side and only simple facultative treatment for wastewater.

Additionally, the District receives approximately $4,500 annually in property tax revenues, which augments the budget and keeps rates lower for customers.

6. Are systems in the black or in debt?

In general, the system operates in the black, but in recent years they have been operating at a loss. They have cash in reserves, which helps them weather ups and downs. During FY 2009 and FY 2012, for example, the district took a $10,000 loss in each year, which prompted the first rate increase since 1992.

In the fiscal year 2011-12, the District's financial situation was as follows:

Description	Water System	Sewer System
Cash beginning of year	$ 46,452	$ 81,873
Operating Income	$ 4,052	$ 3,834
Operating Expense	$ 14,045	$ 10,319
Depreciation	$ 4,278	$ 3,463
Operating Expense (w/o Dep.)	$ 9,767	$ 6,856
Non-operating Revenue	$ 3,388	$ 3,387
Non-operating Expenses	$ 0	$ 0
Cash end of year	$ 44,412	$ 82,299
Change in Net Assets	$ (6,605)	$ (3,098)
Interest Paid	$ 0	$ 0

It should be noted that all numbers, with the exception of the cash balances are based on the accrual method of accounting.

7. Are systems run as a business or are the systems dealt with more issue by issue as they come

The LCSD District operates as a business, but has its challenges (see comments above regarding annual losses).

A 2006 Municipal Services Review (MSR) by Tulare County LAFCO makes the following conclusions:

- Due to the District's limited financial resources, it is recommended that the District work with the development community to construct infrastructure improvements that would increase the capacity of the District's water and sewer systems. Master planning infrastructure out to the District's SOI Boundary would provide a baseline for the infrastructure needs within its SOI, in addition to identifying any existing deficiencies.

- It is recommended that the District work with federal, state, and local government, and the development community to secure funding for the construction of water and sewer infrastructure improvements that would serve new development sites as a way of avoiding unnecessary costs.

- Master planning could help the District avoid unnecessary costs by allowing the District

- Sufficient time to set aside funding needed for future capacity improvements that would allow for development within the community.

8. Range of household budgets in the community

Lemon Cove is a disadvantaged, with 2008-12 ACS MHI indicating a MHI at 48.4% of the statewide MHI. The median household income within the townsite served by the Lemon Cove Sanitary District is suspected to be significantly lower than that of the overall area covered in the Census Designated Place boundary. The 2008-12 ACS for the CDP indicates the following range of household incomes in the community:

Lemon Cove CDP, California	Annual Household Income Estimate	Margin of Error
Less than $10,000	10.1%	+/- 14.0%
$10,000 to $14,999	19.0%	+/-20.1%
$15,000 to $24,999	16.5%	+/-20.8%
$25,000 to $34,999	17.7%	+/- 21.1%
$35,000 to $49,999	22.8%	+/-21.3%
$50,000 to $74,999	3.8%	+/- 7.1%
$75,000 to $99,999	7.6%	+/-9.8%
$100,000 to $149,999	2.5%	+/-5.6
Median income (dollars)	**25,988**	**+/-6,619**

An estimated 63.3% of households have annual incomes less than $35,000. The 2008-12 ACS indicates that 46.0% +/- 25.7% of Lemon Cove residents live below the poverty line.

There is no natural gas service in Lemon Cove so residents spend more of their disposable income on energy services than in other similar communities. This means that there are fewer dollars available for each family to cover water utility and drinking water costs.

9. Population served.

The 2010 United States Census reported that Lemon Cove Census Designated Place (an area larger than but including the LCSD) had a population of 308. The racial makeup of Lemon Cove was 261 (84.7%) White, 0 (0.0%) African American, 5 (1.6%) Native American, 3 (1.0%) Asian, 2 (0.6%) Pacific Islander, 12 (3.9%) from other races, and 25 (8.1%) from two or more races. Hispanic or Latino of any race were 76 persons (24.7%).

The average household size was 2.57. There were 153 housing units in the Lemon Cove CDP, of which 77 (64.2%) were owner-occupied, and 43 (35.8%) were occupied by renters. The homeowner vacancy rate was 0%; the rental vacancy rate was 6.0%. 202 people (65.6% of the population) lived in owner-occupied housing units and 106 people (34.4%) lived in rental housing units.

10. Short description of water systems and sewer systems including number of connections adequacy of backup systems and MCL challenges, if known.

The Lemon Cove Sanitary District provides water and sewer service to the community. The water system is supplied with one well drilled near McKay's Point which produces water exceeding the MCL for nitrate. After pumping into a ground level storage tank, booster pump and hydropneumatic tank, the water is transported 1.5 miles past the Sequoia Union School, Veteran's Memorial Building and a residential area before it reaches the Lemon Cove Sanitary District which encompasses the town of Lemon Cove. The District has no back-up source of water, but has applied to Tulare County Environmental Health for permission to test out a well which was drilled but never used (due to borderline nitrates).

The community sewer system was originally built in the early 1900s. The original collection system consisted of concrete pipe that, over the years, gradually disintegrated due to hydrogen sulfide gas generated from wastewater piped through the system. In the early 1980s the District successfully applied for funding from the Farmers Home Administration (USDA) and replaced the collection system with PVC piping. The treatment plant consists of a facultative treatment pond followed by an evaporation percolation pond for disposal.

The LCSD has 50 active connections servicing 47 residences, 1 commercial establishment, the Lemon Cove Women's Club and Post Office.

11. Existing governing body such as County Service District, Public Utility District, Mutual water system, etc.

The Lemon Cove Sanitary District provides water and sewer service to the unincorporated community of Lemon Cove. The District is governed by a 5-member board of directors.

12. Decision making process *Is there a board of directors, designated lead home owner, long time unofficial leader, or is there a lack of good decision making process. History on this would be good.*

The Lemon Cove CSD Board of Directors is in charge of the decision making process related to the community's water system. This applies to policy decisions and other major decisions. The District Secretary on a volunteer basis provides the overall management of the system.

13. Discussion of operation and maintenance personnel for each community.

Part-time or full time personnel, contractors used, any shared human resources with other communities or agencies.

The District has no direct employees and pays no salaries. All general operations are performed by volunteers. A board member holds the distribution and wastewater treatment licenses. Pipe & pump companies are called out on an as-needed basis.

14. Discuss how district is managed such as independent manager, County personnel involved, CDPH personnel involved. *Is the California Public Utilities Commission involved on rate setting or is it a local decision?*

The District is managed by the board, and especially by the Board Secretary.

Since the LCSD water system has less than 200 connections, the system is monitored by the Tulare County Health & Human Services Agency, Tulare County Public Health Environmental Health Division. Tulare County is the Local Primacy Agency under the State Department of Public Health in monitoring compliance for and in enforcing EPA's Safe Drinking Water Act. The District has a Waste Discharge Permit from the Central Valley Regional Water Quality Control Board and its wastewater system is regulated by that agency.

No CPUC. Most of their functions are entirely internal (budgeting, billing, operations, etc). The exception is their banking relationship with the Tulare County Treasurer.

15. Discuss problems that have been solved by community that could be applied as solutions by other communities.

Lemon Cove has done very well operating with volunteer labor that is educated and capable (but this is not sustainable, as there appears to be no next generation of volunteers). They also benefit from a property tax increment that is collected by the County and automatically sent to LCSD.

The agreement with Tulare County, described below, had promise but is a cautionary tale about the enforceability of such agreements.

16. Discuss largest unresolved problems/issues for the community and what is being considered to solve these problems, if any.

In 1990, Lemon Cove Sanitary District entered into an agreement with Tulare County to jointly own and operate the Lemon Cove water system, and a Joint Powers Authority was supposed to be developed. This agreement came about because both the LCSD and Tulare County had applied in 1983 for separate grants (each approximately $400,000) to address the nitrate problem in and around Lemon Cove (at the time of application & grant award, neither entity was aware of the other's application). At the urging of DWR (the funding agency) the agreement was struck to jointly operate a system that would serve an area greater than the small Lemon Cove town-site.

Unfortunately, according to Lemon Cove's board of directors, the terms of the agreement have not been followed. Nonetheless, the McKay's point well was built 2 miles out of town, and the LCSD has been the sole operator of a single-well system with over three miles of pipeline. The Lemon Cove Sanitary District has been the sole entity contributing to the operation of the system and, due to nitrate contamination of the well, none of service connections outside the LCSD have been activated (31 meters in this area were installed). LCSD has been the only entity named on the Compliance Order that has been issued (by the County's Environmental Health Department) to LCSD.

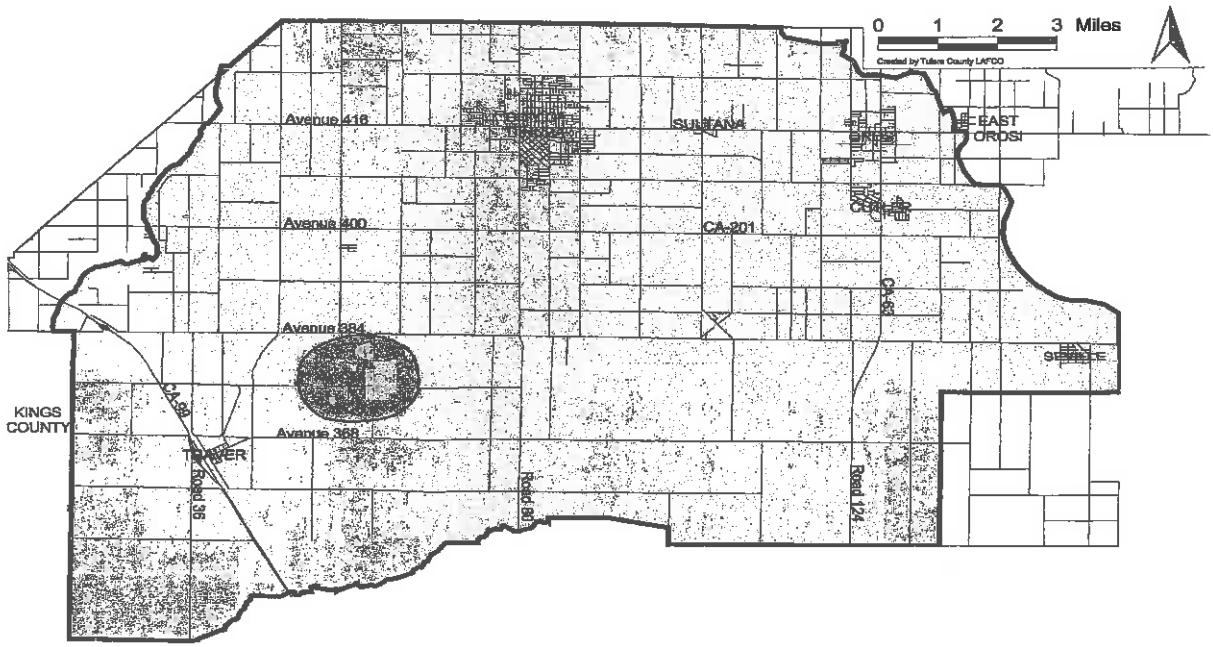
The nitrate problem persists and it is well-documented that the entire area is plagued with high nitrate levels. It will be challenging to identify test well sites when an anticipated SRF planning grant is received.

LONDON

201-500 Connections Range
(453 Connections)

Location and Introduction

The Tulare County community of London is located in Tulare County between the cities of Visalia and Dinuba. The community is located in the Southeast quarter of Section 2, Township 17 South, Range 23 East, MDB&M. Avenue 384 runs in an east-west direction and is located one-half mile north of the community. Highway 99 which runs generally in a northwest-southeast direction approximately 4 miles west of the community.



1. When was community established and why.

The community of London has been in existence at least since the dust bowl era of the 1930's. Like many San Joaquin Valley settlements, London was a place where poor farmworker families could settle and many have migrated to. The London Community Services District was formed in 1952 to provide the following services to the residents of London:

a. To supply the inhabitants of the District with water for domestic use, irrigation, sanitation, industrial use, fire protection and recreation
b. The collection, treatment or disposal of sewage waste, and storm water of the District and its inhabitants

c. The collection or disposal of garbage or refuse matter
d. Protection against fire
e. Public recreation by means of parks, playgrounds, swimming pools or recreation buildings
f. Street lighting
g. Mosquito abatement
h. The equipment and maintenance of a police department or other police protection to protect and safeguard life and property

Of these original patent powers, the District currently only provides water, wastewater and park services to its residents.

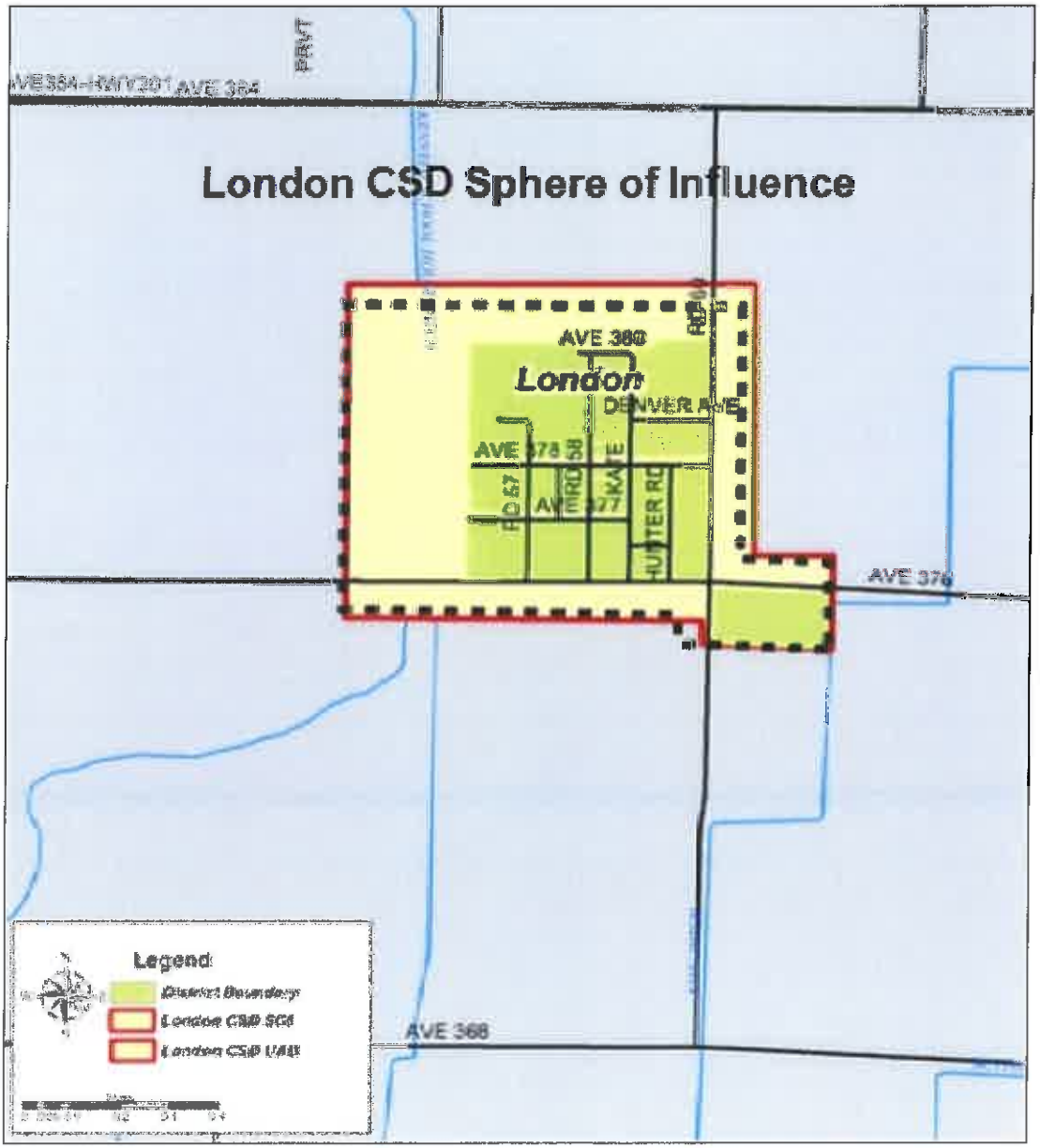
2. How old are the systems?

The District's existing water distribution system is old and predominantly consists of undersized pipelines. The majority of the distribution system was installed in the early 1950's. During the pipeline installation, there were very few sectionalizing valves installed in the distribution system. Due to the lack of sectionalizing valves, the District is unable to isolate portions of the water system to repair pipeline and service lateral leaks. This requires the draining of the entire or at least the majority of the water system to repair a leak. This can result in all of the residents being without water until the leak is repaired and the distribution system recharged. With the large water demands and small diameter pipelines, the residents experience low pressures.

The individual water services were installed directly on the water mains without service saddles. Many of the service connections are composed of polybutylene which is prone to cracking and eventual failure. Due to the materials and installation procedures utilized, the District has experienced numerous leaks on the water services. Repairs to the water services also require the draining of the entire water system. The District is now involved in a CDPH Safe Drinking Water State Revolving Fund (SDWSRF) funded replacement project where a large portion of the water distribution system within the county road right-of-way is being replaced. There is still additional work needed in the public right-of-way as well as on private property house service connections between the homes and service box shutoff valves.

The District's water distribution system currently has a number of wharf head fire hydrants in the distribution system. The project will include the installation of new AWWA fire hydrants with shutoff valves. The hydrants will be installed in accordance with Tulare County development standards.

The District's wastewater system was reportedly originally built in the 1960's. The wastewater collection system is gravity all the way to the head works of the wastewater treatment and disposal facility located just southeast of the community. There have been various improvements at the treatment facility with the most recent improvements occurring in 2010.



The London Community Services District boundary and sphere of influence are delineated in the boundary map shown above.

3. Median household income

Per the last decennial census to calculate median household income, the 2000 Census indicated the median annual income for households in Tulare County Census Tract 3.02 Block Group 2 that incorporates the community of London, was $21,678 or 45.6% of the statewide median household income at that time. Since then the US Census Bureau no longer asks the income question in the decennial census, but rather collects income data through the continually occurring American Community Survey (ACS) where a smaller sampling is done annually. This data is expressed as a 5-year adjusted average. The median annual household income for the Year 2000 Census, past four rounds of ACS are expressed as:

Period	Area	MHI	Margin of Error	% of State MHI
2000	CTBG	$21,678		45.6%
2005-09	CTBG	$38,701	+/- $5,934	64.1%
2006-10	CDP	$29,853	+/- $16,344	52.1%
2007-11	CDP	$33,382	+/- $7,879	54.2%
2008-12	CDP	$26,683	+/- $5,599	43.5%
2013 Survey		$17,000		27.7%

Also shown above are the results of a 2013 Income Survey conducted by Self-Help Enterprises under the direction of the California Department of Public Health (CDPH) which indicated an annual Median Household Income (MHI) of $17,000 for the London community. For this reason, London can be viewed as a severely disadvantaged community with a median household income significantly less than the 60% of the statewide median household income threshold for severely disadvantaged communities.

4. Monthly sewer rates and water rates, if known

The current monthly water rate for a typical residential water connection is $34.00. The monthly sewer rate is $36.00 per dwelling. These rates are 2.4% and 2.5% respectively of the median household income for the community as determined in the 2013 survey.

5. Billing methods for the community systems. *Does the community use the property tax rolls to collect annually or semi-annually? Are there other services that might be on the same bill? Are bills paid by mail or is there an office drop-off point? Discuss how this works for very small communities that do not have a formal billing process.*

The District financially operates its water and sewer systems primarily as enterprise funds with almost all operating revenue generated from customer user fees with some some property taxes. Customers pay in arrears for water and sewer service. The office manager generates bills, collects payments, and makes deposits to the Tulare County Treasurer's office in Visalia. Residents can mail or drop off payments at the LCSD office, but with no post office in town, most people drop off payments at the office. The office accepts cash, checks and money orders. The District (which utilizes the County of Tulare Treasury as its depository) pays its bills by utilizing the County's Auditor-Controller's office to issue warrants (checks). Payment vouchers and an Order to Disburse Funds are approved monthly by the Board of Directors directing the County to issue warrants. When issued, the warrants are mailed to the London CSD. Thereafter the District general manager mails the warrants to vendors. This process takes anywhere from 2 to 4 weeks to issue a warrant depending on the dates vouchers are submitted. Though somewhat time consuming, this process consists of some additional oversight and documentation for each payment issued.

6. **Are systems in the black or in debt?**

Currently, the London CSD operates financially in the black. In the fiscal year 2012-13, the District's financial situation was as follows:

Description	Water System	Sewer System	2013 Revenue All Services
Cash beginning of year	-	-	$658,539
Operating Income	$196,374	$188,321	
Operating Expense	$124,236	$220,826	
Depreciation	$2,462	$65,194	
Operating Expense (w/o Dep)	$121,774	$155,632	
Non-operating Revenue	$72,138	$32,505	
Non-operating Expenses	$17,083	($1,025)	
Cash end of year	-	-	$756,228
Change in Net Assets	-	-	
Interest Paid	-	($3,892)	

It should be noted that all numbers, with the exception of the cash balances are based on the accrual method of accounting.

7. **Are systems run as a business or are the systems dealt with more issue by issue as they come?**

The LCSD District operates as a business, however, the District does have its challenges. A favorable Municipal Services Review (MSR) conducted by the Tulare County LAFCO in 2012 makes the following evaluation and conclusion regarding London CSD Management Efficiencies:

> *"Based upon information made available, it appears that the provision of domestic water service and sanitary sewer collection are managed in an efficient manner that meets the needs of the community and ratepayers."*

8. **Range of household budgets in the community** *Discuss how much is spent on utilities such as sewer and water, if known. Are there discretionary funds in the typical households? If water or sewer rates go up what might get cut.*

London is severely disadvantaged, with 2013 survey data indicating a median household income at about 27.7% of the statewide median household income. The 2008-12 ACS indicates the following range of household incomes in the community:

London CDP, California	Annual Household Income Estimate	Margin of Error
Less than $10,000	12.2%	+/- 7.0
$10,000 to $14,999	11.4%	+/- 7.1
$15,000 to $24,999	22.1%	+/- 9.8
$25,000 to $34,999	16.1%	+/- 9.0
$35,000 to $49,999	12.9%	+/- 8.8
$50,000 to $74,999	13.9%	+/- 7.4
$75,000 to $99,999	2.7%	+/- 3.0
$100,000 to $149,999	8.8%	+/- 8.8
Median Income (dollars)	$33,382	+/- $7,879

An estimated 74.7% of households have annual incomes less than $35,000. The 2008-12 ACS indicates that 46.6% +/- 12.5% of London residents live below the poverty line. As such, there is very little discretionary and/or disposable income for households in the community.

London families in general don't have any room for flexibility in their budgets. Many families depend on farm labor for their major source of revenue so their incomes fluctuate seasonally. In addition, many residents depend on fixed-income sources as a means of support; such as disability and/or social security.

9. Population served

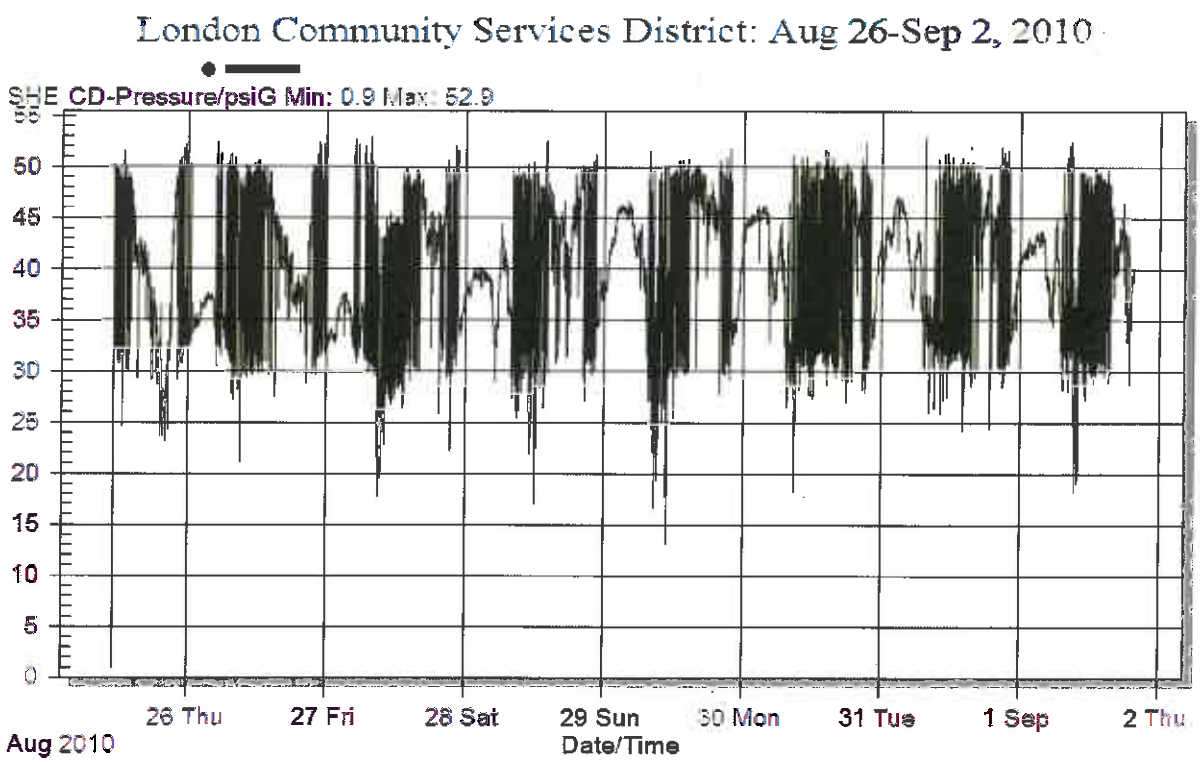
The 2010 United States Census reported that London has a population of 1,869. The racial makeup of London was 761 (40.7%) White, 6 (0.3%) African American, 46 (2.5%) Native American, 0 (0.0%) Asian, 0 (0.0%) Pacific Islander, 976 (52.2%) from other races, and 80 (4.3%) from two or more races. Hispanic or Latino of any race were 1,737 persons (92.9%).

The average household size was 4.76. There were a total of 408 housing units in the London CSD service area, of which 157 (39.9%) were owner-occupied, and 236 (60.1%) were occupied by renters. The homeowner vacancy rate was 0.6%; the rental vacancy rate was 1.7%. A total of 691 people (37.0% of the population) lived in owner-occupied housing units and 1,178 people (63.0%) lived in rental housing units.

10. Short description of water systems and sewer systems including number of connections adequacy of backup systems and MCL challenges if known

The District's present water system consists of groundwater wells, distribution pipelines, individual services, fire hydrants and appurtenances. The water supply is developed exclusively through the pumping of groundwater. The sewer system includes the operation and maintenance of the wastewater collection system as well as the treatment and disposal facility.

Although the 2010 U.S. Census indicates that the total number of housing units in the London CSD service area is 408; according to the London CSD District Office Manager the total number of "active service connections" in the London CSD service area is 453. This discrepancy may be due to the fact that Census takers may not count or consider multiple homes on one lot. However, the London CSD has indicated that there are 453 active connections servicing 453 residences, 2 stores, 3 churches; a community center, and a pre-school. The majority of the distribution system was installed in the early 1950's and there are very few sectionalizing valves installed in the system. The installation of sectionalizing valves is necessary to have a functional water system. The polybutylene material used for the water services is failing and needs to be replaced. Furthermore, due to the lack of such valves, the District has been unable to isolate portions of the system to repair pipeline and service leaks. This requires the draining of the entire or at least the majority of the water system to repair a leak. This can result in all of the residents being without water until the leak is repaired and the distribution system recharged. The condition of supply wells, pumps and pipelines is very deteriorated and it is not uncommon for water system pressure to fall below the water works standard of 20 psi as shown in the graph below.



In summary, for years the majority of the water system consists of thousands of feet of undersized and deteriorating pipeline, three water wells and one hydropneumatic tank. The community lacks adequate fire protection due to lack of pressure in the system and

undersized wharf hydrants. The District has had to repair leaks in the distribution system both on water mains and service connections. A health risk is posed whenever the system is shut down due to leak repairs. The water lines have few gate valves so when leaks occur all or most of the system must be shut down. When the water system is shut down and the pressure drops, backflow conditions can occur that can allow seepage into the distribution system thereby creating a potential health hazard.

The wastewater system is comprised of a gravity sewer collection system that enters a head works where the influent wastewater is pumped to the lead treatment pond. The treatment ponds are aerated lagoons. After the influent is partially treated in the initial pond it flows by gravity into a number of polishing ponds. The treated wastewater effluent then flows by gravity into a series of evaporation percolation ponds.

11. Existing governing body such as County Service District, Public Utility District, Mutual water system, etc.

The London Community Services District provides water and sewer services to the unincorporated Tulare County community of London. For many years the Board operated with a 3 member board. The District is now governed by a 5-member Board of Directors.

12. Decision making process. Is there a Board of Directors, designated lead home owner, long time unofficial leader, or is there a lack of good decision making process. History on this would be good.

The London CSD Board of Directors is comprised of five (5) members who are in charge of the decision making process related to the community's water system. This applies to policy decisions and other major decisions. The District Office Manager provides the overall management of the system.

13. Discussion of operation and maintenance personnel for each community. *Part-time or full time personnel, contractors used, any shared human resources with other communities or agencies.*

The District employs one full-time office/general manager; and a second part-time office worker who handle the daily responsibilities of the District. The District contracts with a bookkeeping firm to keep the District's books and assist the office/general manager and clerical employee with issues that may arise; and a part-time maintenance system employee who is available for assistance at times when needed. In addition, the District contracts with California Water Services headquartered in Coalinga for operation of the Wastewater Treatment Plant facility.

14. Discuss how district is managed such as independent manager, County personnel involved, and CDPH personnel involved. Is the California Public Utilities Commission involved on rate setting or is it a local decision?

The London CSD water system has more than 200 connections; and therefore, is directly regulated by the State Department of Public Health in monitoring compliance for and in enforcing EPA's Safe Drinking Water Act. Furthermore, with the exception that the District conducts their banking with the Tulare County Treasurer most of their functions are entirely internal e.g., budgeting, billing, operations, etc. The California Public Utility Commission is in no way involved in the management of the District's water system since the District is a public agency.

The Central Valley Regional Water Quality Control Board regulates the District's wastewater system.

15. Discuss problems that have been solved by community that could be applied as solutions by other communities.

Water System: The District has been successful in receiving DWSRF grant and loan funding to drill a new well, build a water storage tank, and replace a large portion (roughly 12,000 feet) of the undersized and deteriorated water distribution system. Construction of this project is now (February 2014) underway. The additional water supply from the project will enhance operational flexibility and reduce system constraints by providing an adequate supply of water that meets Title 22 requirements. Replacement of pipeline in the distribution system including sectionalizing gate valves to isolate parts of the system during repairs will eliminate the need to shut down the whole system. Furthermore, the project improved and protected the water quality provided to residents of the community by preventing the water pressure from dropping below 20 psi which can cause backflow conditions that can lead to health hazards. Recently, the water system tested positive for coliform bacteria and a boil water notice was issued.

An application is pending for additional CDPH funding to drill another well and replace approximately an additional 12,000 lineal feet of undersized and deteriorated water distribution system; another new well and a storage tank. Additional funding for water meters and house service connections was also requested through the IRWMP program but did not internally rank high enough to be submitted to DWR by the Kings Basin IRWM Authority to be submitted to DWR.

Waste Water System: Exisitng Facilities: The existing wastewater collection, treatment, and disposal system was initially constructed in the 1960's. The United States Department of Agriculture funded improvements in the 1990's including rehabilitation of the lift station, replacement of the aeration system, installation of a force main from the lift station to the treatmnt ponds, instllation of pond transfer pipes, and installation of percollation/evaporation ponds. The Waste Water Treatment Plant (WWTP) includes a lift station with flow measurement, five aeration lagoons (A1-A5), and nine percolation/evaporation ponds (S1-S9).

Project Objectives: The purpose of the District's Waste Water Project was to provide adequate treatment to meet the present permitted capacity of 0.3 million gallons per day (MGD). The Waste Water Project will comply with the District's Waste Disharge Requirements (WDR) Order No. 96-172, and meet biochemical oxygen demand (BODs) requirements, provide sludge removal flexibility, provide removal in the rotation of treatment ponds, recondition pond sideslopes, and reduce energy consumption by installing a more efficient aeration system.

In addition, the project improved the effluent water quality by improving the aeration efficiency and improving the pond operation flexibility. The flexibility of utilizing various ponds will ensure proper cleaning and maintenance of the treatment ponds and will reduce long-term potential for levee damage, which could result in leaks or spills. Furthermore, the improvement will allow the District to add single family resiedntial units inside the existing established development boundary up to the present discharge limit of 0.3 MGD.

In summary, the project included replacement of aeration equipment and associated electrical equipment, repair, and reshaping embankments of six ponds (A1, A2, A3, A4, A5,A6), adjustment to existing pond transfer pipes, and additional piping to improve operational flexibility of the treatment ponds.

16. Discuss largest unresolved problems/issues for the community and what is being considered to solve these problems, if any.

The 2011 LAFCO MSR makes the following comment regarding the current status of the London CSD water distribution system:

"*The London CSD water system is currently un-metered, which does not promote water conservation. The District should consider evaluating the potential water savings and the projected total cost to water users in the community resulting from the installation of water meters. The District would likely need funding assistance through state and/or federal grant/loan programs to install water meters. User fees would also likely need to be increased. A cost/benefit analysis resulting from the installation of water meters should be performed. A fully metered water system could serve as a water conservation measure by minimizing over usage and/or wasting of water.*"

Comparable communities have shown a 15% reduction of water after billing on metered rate. In addition, the replacement of "leaky lines" will assist with water conservation. Currently, the District is undergoing a construction project to replace a large portion of the water distribution system. Another project to replace even more pipelines is in the application stage. The District is seeking funds to install customer water meters. The District has also requested that Tulare County apply for CDBG funds to fund on-site water connections for those low-income dwellings which do not now have separate water connections.

MATHENY TRACT

201-500 Connections Range
(276 Connections)

Location and Introduction

The Tulare County community of Matheny Tract is comprised of two groupings of dwellings located south of the City of Tulare just east of Pratt Road. All residences, and a few commercial locations, are provided potable water service by Pratt Mutual Water Company. The community is located adjacent to the Tulare city limits and within its Sphere of Influence, but residents consider themselves to be part of a separate community, not part of Tulare. Many residents have lived in Matheny Tract for many years; a 2012 survey found that 51% had lived there longer than ten years. 34% had lived in Matheny Tract for more than twenty years. Most children attend Palo Verde School, not part of the Tulare City School District, and many of their parents attended Palo Verde, too. The planned domestic water interconnection with the City of Tulare is agreeable to many residents because annexation will not be required as a condition of water service. The planned points of connection are indicated on the aerial photo below.

1. When was community established and why.

Matheny Tract is an aging unincorporated Tulare County subdivision. There are two parts to Matheny Tract, the southern and smaller portion laid out as Tulare County Tract 53 in 1946 and the northern portion laid out as Tract 104 in 1947 by E.S. Matheny and Grace L. Matheny.

2. How old are the systems?

The community of Matheny Tract is provided water by the Pratt Mutual Water Company (PMWC). Matheny Tract is located adjacent to and south of the City of Tulare in Tulare County (see attached map). The Median Household Income for the Matheny Tract is $29,605 as determined by the American Community Survey (2007-2011 Summary Data). Approximately 2,000 people live in this area. Matheny Tract is a disadvantaged community. Pratt Mutual Water Company has 309 active service accounts servicing approximately 321 units in Matheny Tract.
Pratt Mutual Water Company currently has three wells. Wells 1 and 2 were drilled in 1961 (at the establishment of the water system) and Well 3 was drilled in 1976. Most of the distribution system piping dates to the 1960s.
One of these wells (#2) has been condemned by the State Department of Health Services due to nitrate contamination exceeding the maximum contaminant level (MCL) of 45 ppm. The remaining two wells (#1 and #3) are now out of compliance with the new arsenic standard of 10ppb. Arsenic levels for Well #3 have ranged from 12 to 21 ppb, averaging 15.5 ppb for tests in recent years. Arsenic levels for Well #1 have ranged from 9 to 12 ppb, averaging 10.95 ppb in recent years. To make matters worse the two operating wells can barely keep up with capacity needs during summer months. PMWC has had to lower the pumps on both remaining wells in order to draw from the dropping water table. There is a history of water outages and/or low pressure conditions have occurring during times that the remaining well's pump is out of service for repair. If one of these wells goes down, they do not have enough capacity to serve water to the community.

To solve these problems, it is proposed that facilities be put in place that will provide for the consolidation of the City of Tulare water system with the Pratt Mutual Water Company. The proposed project would include the replacement of the existing water distribution system, construction of water transmission main lines, two points of connection to Tulare's water distribution system, and water meters and appurtenances.

Pratt Mutual Water Company has completed planning and design work for this interconnection project, with SRF and Prop 84 planning grants. (SRF was the bulk of the funding; with 20% Prop 84 leveraging 80% SRF grant). As of April 2013, they have a Letter of Commitment for Prop 84 construction funding. The amount available through Prop 84 ($4.9M) is very close to the engineer's estimate. With CDPH's approval, the

PMWC board plans to put the project out to bid and hope that bids are low enough to meet the Prop 84 funding cap. If they are not, then additional SRF funding will be sought. It's possible that SRF funding would have to be a loan to the City of Tulare, which will cause some challenges.

3. Median household income.

Please note that Matheny Tract (as only "Matheny") was designated as a Census Designated Place immediately prior to the 2010 census.

The US Census Bureau no longer asks the income question in the decennial census, but rather collects income data through the continually occurring American Community Survey (ACS) where a smaller sampling is done annually. This data is expressed as a 5-year adjusted average. The median annual household income for the past three rounds of the ACS is expressed as:

ACS Years	MHI	Margin of Error	% of State MHI
2006-10	$33,309	+/- $9,419	54.7%
2007-11	$29,605	+/- $8,216	48.0%
2008-12	$28,750	+/- $2,662	46.8%

It appears that the most recent (2008-12 ACS) data for the CDP is the most accurate. The margin of error is only 9.3%, but this is more accurate than the prior 2007-11 and the later 2006-10 ACS data which have margins of error of 27.8% and 28.3% respectively. For this reason, Matheny Tract can be viewed as a severely disadvantaged community with a median household income less than 60% of the statewide median.

4. Monthly sewer rates and water rates, if known.

No sewer. Water rates are $40/month unmetered. There is a seasonal adjustment of $5 additional during the summer months.

5. **Billing methods for the community systems.** *Billing methods for the community systems. Does the community use the property tax rolls to collect annually or semi-annually? Are there other services that might be on the same bill? Are bills paid by mail or is there an office drop off point. Discuss how this works for very small communities that do not have a formal billing process.*

Pratt Mutual contracts with the bookkeeping firm M Green & Company located in the neighboring City of Tulare. M Green & Company does the bookkeeping, billing and receives payment at its office. Customers have the option to pay by mail, to pay in person at the Pratt Mutual WC office (only open one afternoon per week), or at the local

store. The store sells money orders to water company customers to pay monthly water bills and then holds the money orders for the water company to collect. The store likely receives some additional business when at least some customers come to pay their water bills. The water company office is located adjacent to the store (this office is rented for $550 per month). Office staffing is done on a volunteer basis by the water company secretary/treasurer.

6. Are systems in the black or in debt?

Pratt MWC has built up a sizable reserve and has over $190,000 in cash (about $100,000 of this amount is shareholder equity). They are capable of handling moderate emergencies without financial assistance, and recently replaced a well pump that had gone out. Water revenue in 2012 was $135,000; operating expenses were just over $141,000. The water company has no paid employees. The water company carries no debt at this time.

7. Are systems run as a business or are the systems dealt with more issue by issue as they come up?

The Pratt MWC operates as a business, but has its challenges. Its economy of scale allows for relative ease in maintaining the system and handling repairs, even expensive ones. On the other hand, as a mutual lacking the regulation of a special district, there seems to be some degree of temptation to make a personal profit from the water company.

There have been problems over the years, with board members paying themselves hefty salaries (allegedly $2000+ per month) and allegations of theft. Currently, the water company is run by a truly volunteer board. Despite past problems, the water company is in good financial standing and can weather financial and technical ups and downs pretty well.

8. Range of household budgets in the community. *Discuss how much is spent on utilities such as sewer and water, if known. Are there discretionary funds in the typical households? If water or sewer rates go up what might get cut.*

A community survey conducted in 2011-12 by CRLA asked about household finances and budgets. Households reported spending $55/month on average for gas (natural gas) and $106 for electricity, or $159 average if paid together. The water bill is a $40 flat fee.

Most households are very low-income and would be negatively impacted by any significant increase in utility rates. However, most people seem to be in favor of a sewer system which would have a monthly fee.

Matheny Tract is severely disadvantaged, with 2008-12 ACS MHI indicating an MHI of 46.8% of the statewide MHI. The 2008-12 ACS indicates the following range of household incomes in the community:

Matheny CDP, California	Annual Household Income Estimate	Margin of Error
Less than $10,000	3.8%	+/-3.5
$10,000 to $14,999	4.7%	+/-4.1
$15,000 to $24,999	31.5%	+/-12.1
$25,000 to $34,999	22.7%	+/-12.9
$35,000 to $49,999	13.2%	+/-9.3
$50,000 to $74,999	6.3%	+/-4.6
$75,000 to $99,999	10.7%	+/-9.1
$100,000 to $149,999	3.2%	+/-5.1
$150,000 to $199,999	0.0%	+/-11.1
$200,000 or more	3.8%	+/-5.1
Median income (dollars)	$28,750	+/-2,662

An estimated 40.0% of households have annual incomes less than $25,000 and 62.7% of households have annual incomes less than $35,000. As such, there is very little disposable income in the community.

9. Population served.

Approximately 1,200 residents are served by the Pratt Mutual Water Company.

In a survey conducted by CRLA in 2011-12, 68% of respondents self-identified as Hispanic or Latino. 5% identified as American Indian or Alaska Native; 1% as Asian; 1% as African-American. 36% identified as white, but some subset of these may have also identified as Hispanic.

10. Short description of water systems and sewer systems including number of connections adequacy of backup systems and MCL challenges if known.

Pratt Mutual Water Company currently has three wells, but only one is in use. One of these wells (#2) was condemned by the State Department of Health Services due to

nitrate contamination exceeding the maximum contaminant level (MCL) of 45 ppm. The remaining two wells (#1 and #3) are out of compliance for the arsenic standard in effect January 2006 when the MCL for arsenic was lowered from 50ppb to 10ppb. Arsenic levels for Well #3 have ranged from 12 to 21 ppb, averaging 15.5 ppb for tests run over the past nine years. Arsenic levels for Well #1 have ranged from 9 to 12 ppb, averaging 10.95 ppb over the past nine years. To make matters worse the two operating wells can barely keep up with capacity needs during summer months. PMWC has had to lower the pumps on both remaining wells in order to draw from the dropping water table. Water outages and/or low pressure conditions have occurred during times that the remaining well's pump is out of service for repair.

Wells 1 and 2 were drilled in 1961 (at the establishment of the water system) and Well 3 was drilled in 1976. Most of the distribution system piping dates to the 1960s. Well 3 is the sole active well: Well 2 was condemned due to nitrates (2002) and Well 1 was put on standby status in 2009, also due to nitrate contamination. Both Well 1 and Well 3 have arsenic contamination in excess of the MCL. The system has about 276 unmetered services.

11. **Existing governing body such as County Service District, Public Utility District, Mutual water system, etc.** *Existing governing body such as County Service District, Public Utility District, Mutual water system, etc.*

The Pratt Mutual Water Company provides water to the community of Matheny Tract. The governing Board of the PMWC is comprised of five directors. The board designates its officers which are a president, vice-president and a secretary/treasurer (at this time, one person fills both roles).

12. **Decision making process.** *Is there a board of directors, designated lead home owner, long time unofficial leader, or is there a lack of good decision making process. History on this would be good?*

Control of Pratt Mutual Water Company has been fought over for years. Recently (in the past 2-3 years) there were even two boards attempting to function contemporaneously and to dominate each other. This was based on an erroneous interpretation of the water company's bylaws, which provided for an "executive board." Some chose to interpret the "executive board" as a <u>second</u> board with authority over the regular board. (The bylaws actually provided for an executive board which could be appointed from among the members of the board of directors, which could make expedient decisions in day-to-day operations or other designated tasks.) For a while (about 6 months) the two boards tried to operate simultaneously, competing for control. Finally an attorney was hired and the matter was settled (the self-crowned "executive board" relented and relinquished their claims).

The mutual is so large (for its type) that there is a consistent problem with getting enough stakeholder participation to carry out director elections. It's my sense that this lack of community interest just concentrates power at the board level. The board has little choice but to simply keep appointing itself to power.

13. **Discussion of operation and maintenance personnel for each community.** *Part-time or full time personnel, contractors used, any shared human resources with other communities or agencies.*

There are no direct employees of Pratt MWC. The water company uses contracted services for operation (California Water Services/Tito Balling) and for bookkeeping (M Green & Company). They also use a pipe company, Andrews Backhoe, for repairs and have a relationship with an attorney in Tulare.

14. **Discuss how district is managed such as independent manager, County personnel involved, and CDPH personnel involved.** *Is the California Public Utilities Commission involved on rate setting or is it a local decision?*

There is no manager. The board president makes a lot of decisions. The board meets monthly. The secretary-treasurer staffs the office a few hours a week, unpaid.

15. **Discuss problems that have been solved by community that could be applied as solutions by other communities.**

One major advantage that Pratt MWC has is its relatively large rate-payer base. They can afford to pay contracted operator & bookkeeper, taking the most challenging aspects of management out of the hands of the board.
Matheny Tract has had success in working with the City of Tulare for consolidation. A water system consolidation (no annexation, but the City will own & operate the water system) is planned for a summer 2013 construction start. (Planning activities were funded by CDPH under Prop 84 and SRF.) They are also looking at a sewer collection system that would also connect to the City of Tulare. The City's wastewater treatment plant is located near the community, and there is a brand-new industrial waste trunk line in Pratt St, adjacent to the community.

16. **Discuss largest unresolved problems/issues for the community and what is being considered to solve these problems, if any.**

Planning money has been committed for a sewer system project from a combination of funding from the Strategic Growth Council and the SWRCB Small Community Wastewater Grant Program. This planning funding with Tulare County serving as

grantee will be in the form of grant. Upon completion of the planning phase, funding will be needed for the design and construction phases.

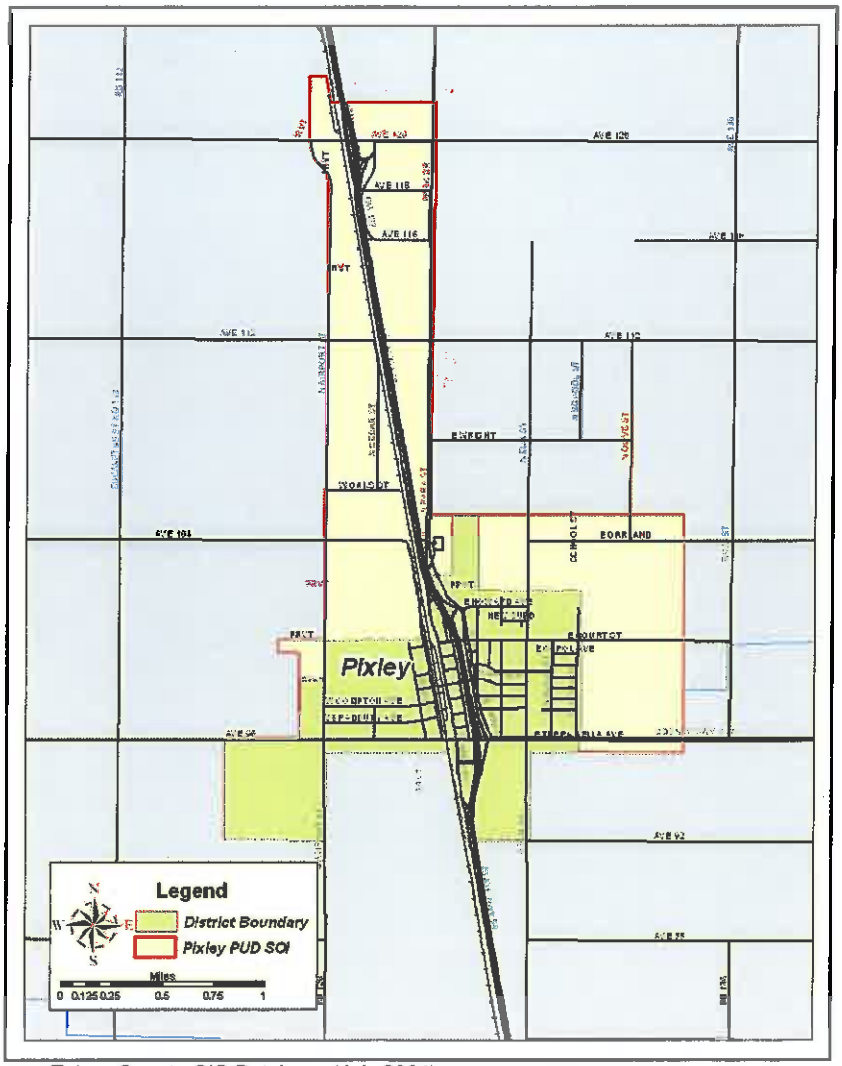
The community needs streetlights, storm drain, sidewalks, etc. A community committee has been working on these issues, among others. A community needs survey was done by the Community Equity Initiative at CRLA in 2011-12. 83% of respondents said that they would prefer a public sewer to their private septic systems. Streetlights, street drainage and water improvements were also highly desired by the community.

PIXLEY

501-2000 Connections Range
(837 Connections)

Location and Introduction

The Tulare County community of Pixley is located 18.4 miles south of the City of Tulare and 14.2 miles north of the City of Delano along US Highway 99.



Tulare County GIS Database (July 2004)

1. When was community established and why.

The town was named after Frank M. Pixley who was the State Attorney General in 1860-1861. It was through his influence that the Southern Pacific Railroad built a depot and a three story hotel in Pixley.

2. How old are the systems?

According to the PPUD Chief Operator, in the 1940's the community's water system was operated by the Pixley Mutual Water Company. The Pixley Public Utility

District was formed on January 28, 1947 and took over the operations of the water system and later built the community's sewer system. When the Highway 99 freeway was built some of the water distribution system was upgraded. The Sewer Treatment Plant was totally rebuilt in 2007. The older primary treatment process with ponds and a clarigester was replaced with an activated sludge treatment process designed to remove nitrogen from the effluent.

3. Median household income.

Per the last decennial census to calculate median household income, the 2000 Census indicated the median annual income for households in the Pixley Census Designated Place (CDP) that incorporates the community of Pixley, was $23,304 or 59.1% of the statewide median household income at that time. Since then the US Census Bureau no longer asks the income question in the decennial census, but rather collects income data through the continually occurring American Community Survey (ACS) where a smaller sampling is done annually. This data is expressed as a 5-year adjusted average. The median annual household income for the Year 2000 Census and the past four rounds of the ACS is expressed as:

Period	MHI	Margin of Error	% of State MHI
2000	$23,304		59.1%
2005-09	$30,521	+/- $7,769	50.5%
2006-10	$35,759	+/- $7,268	62.4%
2007-11	$27,532	+/- $3,656	44.7%
2008-12	$28,977	+/- $3,624	47.2%

Based on the Census data listed above, Pixley can be viewed as a severely disadvantaged community with a median household income less than 60% of the statewide median.

4. Monthly sewer rates and water rates, if known.

The District's water rates include a "base rate" that is determined by meter size. For residential customers, ¾ to 1-inch meters are utilized, and have a monthly base rate of $29.00. The metered water rate is $29.00 for the first 28,500 gallons and thereafter $2.00 per 1,000 gallons. The monthly residential sewer rate is $36.55 dollars.

These rates are approximately 1.3 % and 1.6 % respectively for water and sewer service of the 2007-11 estimated median household income for the community.

5. Billing methods for the community systems.

The Pixley PUD mails out water and sewer utility bills to its customers on a monthly basis. Members of the Pixley Public Utility District system can pay their monthly water bills in person at the District Office by check or money order by mail sent to the District's post office box.

6. **Are systems in the black or in debt?**
Both the water and sewer systems financially operate in the black relative to system operations. However, cash for flow for capital projects has created a cash loss for the fiscal year ending June 30, 2012:

Description	All Funds	Water System	Sewer System
Cash beginning of year	$ 1,886,023		
Operating Income	$ 870,729	$ 410,499	$ 460,230
Operating Expense	$ 735,151	$ 263,575	$ 471,576
Depreciation	$ 134,604	$ 15,894	$ 118,710
Operating Exp. (w/o Dep.)	$ 600,547	$ 247,681	$ 352,866
Non-operating Revenue	$ 205,961	$ 187,442	$ 18,519
Non-operating Expense	$ 0		
Capital Expenditures	$ 1,069,850		
Payments Long Term Debt	$ 24,692		
Reconciliation Adjustment	$ (21,574)		
Cash end of year	$ 1,246,050		

It should be noted that all numbers, with the exception of the cash balances are based on the accrual method of accounting.

7. **Are systems run as a business or are the systems dealt with more issue by issue as they come up?**
The Pixley Public Utility District operates strictly as a business; and they include their district legal counsel at all regular Board Meetings to ensure that the Board is in compliance to all federal and state laws and regulations

8. **Range of household budgets in the community.**

Pixley is a severely disadvantaged community, with 2007-11 ACS MHI indicating an MHI of approximately 45 % of the statewide MHI. The 2007-11 ACS indicates the following range of household incomes in the community:

Pixley CDP, California	Annual Household Income Estimate	Margin of Error
Less than $10,000	11.3%	+/- 8.1
$10,000 to $14,999	4.7%	+/- 4.0
$15,000 to $24,999	22.9%	+/- 8.9
$25,000 to $34,999	20.9%	+/- 9.4
$35,000 to $49,999	14.2%	+/- 6.9
$50,000 to $74,999	13.7%	+/- 8.2
$75,000 to $99,999	9.5%	+/- 6.5
$100,000 to $149,000	0.7%	+/- 1.2
$150,000 to $199,999	1.1%	+/- 1.5
$200,000 or more	1.0%	+/- 1.5
Median income (dollars)	$27,532	+/- $3,656

An estimated 59.8% households have annual incomes less than $35,000. The 2007-11 ACS indicates that 42.2% +/- 10.9% of Pixley residents live below the poverty line. As such, there is very little disposable income in the community.

9. Population served.

The 2010 United States Census reported that Pixley had a population of 3,310. The racial makeup of Pixley was 1,473 (44.5%) White, 90 (2.7%) African American, 28 (0.8%) Native American, 16 (0.5%) Asian, 0 (0.0%) Pacific Islander, 1,587 (47.9%) from other races, and 116 (3.5%) from two or more races. Hispanic or Latino of any race was 2,675 persons (80.8%).

The average household size was 4.15. There were 875 housing units, of which 433 (54.3%) were owner-occupied, and 365 (45.7%) were occupied by renters. The homeowner vacancy rate was 1.6%; the rental vacancy rate was 9.2%. 1,691 people (51.1% of the population) lived in owner-occupied housing units and 1,619 people (48.9%) lived in rental housing units.

10. Short description of water systems and sewer systems including number of connections adequacy of backup systems and MCL challenges if known.

Number of water/sewer connections: 837

MCL challenges: Arsenic levels in water produced from three of the four District wells exceed the Maximum Contaminant Level.

Existing Facilities:

The water supply facilities include 4 wells (Numbers 1, 2A, 3A, and 4). The 4 wells have a pumping capacity of 2,782 gpm. The existing chemical makeup of the water from Wells No's 1, 2A, 3A, and 4 have Arsenic levels of 25, 20, 18 and 3 ppb, respectively, with three of the wells above the new Federal limit of 10 ppb. These existing 3 wells require treatment for Arsenic removal. Well No's 1, 2A, 3A, and 4 were constructed in 1962, 1999, 1999, and 1978, respectively. The domestic water system presently serves approximately 2,829 people or 815 connections, of which only 380 are metered.

District Water Use:

The Community of Pixley currently has four operational domestic wells. Well 1 has an estimated flow rate of 824 gpm. Well No. 2A is the largest producing well with a flow rate of 852 gpm. The four wells have a total pumping capacity of 2,782 gpm. This condition is adequate for the current population; however, is insufficient under fire flow condition. Based on meter readings at the wells during the summer of 2007, the maximum month demand was 33,497,000 gallons in June. The average day demand during the maximum month was 1,080,548 gallons per day. The peak day demand was 2,088,000 gallons on May 29, 2007.

The District has completed the Proposition 218 process that now allows the District to charge a volumetric rate for water service. The District has now completed the installation of customer meters on all of its services which allows for this new volumetric rate to be charged.

11. Existing governing body such as County Service District, Public Utility District, Mutual water system, etc.

The Pixley Public Utility District is a special independent district which operates the water and sewer system for the unincorporated community of Pixley.

12. Decision making process:

The Pixley Public Utility District is governed by a five member board.

13. Discussion of operation and maintenance personnel for each community.

1 full-time Office Manager
1 full-time Administrative Assistant
1 full-time Chief Water/Sewer System Operator
1 full-time Water/Sewer System Maintenance Person

14. Discuss how district is managed such as independent manager, County personnel involved, CDPH personnel involved.

The District Office is managed by 1 full-time Office Manager
Water rates are a local decision and must comply with Proposition 218 requirements.

15. Discuss problems that have been solved by community that could be applied as solutions by other communities.

The District has lifted its building moratorium after the RWQCB ended its cease-and-desist order. This was a result of the District obtaining funding from both the USDA Rural Utility Service and the State Water Resources Control Board to build a new wastewater treatment plant at the site of the old deteriorated and undersized facility. The District built an activated sludge treatment plant designed and operated to remove nitrogen from the wastewater. This system could be looked at as a method for small systems to comply with RWQCB requirements for nitrogen removal to protect the groundwater.
Three of the District's water wells produce water that exceeds the arsenic MCL of 10ppb. The District has applied for and received a Proposition 84 planning grant from CDPH to cover the majority of planning costs for the project. Through the Central Valley Regional Water Quality Control Board (RWQCB), the District also received a Supplemental Environmental Project (SEP) "grant" from California Dairy Industries as a result of a settlement with that company and the RWQCB. The combination of funding from CDPH and the SEP was utilized to drill a water test

well and will be utilized to drill one or two more test wells in addition to the covering the costs of design of three new water production wells. It is anticipated that the District will apply to CDPH for additional Proposition 84 funding to cover the costs of construction the proposed three new production wells.

16. Discuss largest unresolved problems/issues for the community and what is being considered to solve these problems, if any.

Now that the District has resolved its wastewater plant issues related to capacity and reconstruction of the facility to reduce potential nitrate contamination of groundwater from the plant effluent, the District is concentrating on resolving the drinking water arsenic content that exceeds both federal and state maximum contaminant levels on 3 of the water system's 4 wells. As stated in the above section, the Pixley PUD has been awarded funding to address this issue and the planning phase of this project is currently under-way

PLAINVIEW

201-500 Connections Range
(239 Connections)

Location and Introduction

The Tulare County community of Plainview is located along both sides of Road 196 approximately 10 miles south of the City of Exeter in Tulare County, and Southwest of the City of Lindsay.

Water System Boundary Lines

Plainview Mutual Water Company WS#: 541039 & Plainview - Central Water System WS#: 5400682

Legend:
Plainview Mutual Water Company = Plainview - Central Water System =

Plainview Mutual Water Company back-up well and 3,000 gallon hydropneumatic tank with 15 hp submersible pump and electric control panel

1. When was community established and why.

Plainview was laid out as two Tracts (125 and 150) in the late 1940's each on a two 20 acre piece of ground at what is now the northwest corner of the intersection of Avenue

196 and Road 196. The Tracts consisted of a total of 219 lots, Plainview Mutual Water Company (PMWC): 177 lots and CWS: 42 lots); most of which were residential with a few commercial establishments located on Road 196. At one time there was a lumber yard and a post office in the community. Many dust bowl refugees located here, purchasing a parcel or two and built their homes, some of which were originally tents.

2. How old are the systems?

The original developers of the subdivision organized the Plainview Mutual Water Company (PMWC) to provide water to Plainview residents. In the late 1940's two wells were drilled and a water distribution system installed. During these times, it was difficult to obtain adequate materials, and a large part of the system was built using recycled oil field piping. The MWC is located East of Road 196 and provides water to approximately 194 residential properties and a grocery store. The Central Water System (CWS) provides water to the western portion of the community (west of Road 196) with approximately 44 houses. This water system was apparently built in the 1960's. The current operating well was drilled in 1984 replacing the system's original well.

3. Median household income.

Per the last decennial census to calculate Median Household Income (MHI), the 2000 Census indicated the MHI for households in Tulare County Census Tract 33 Block Group 2 that incorporates 11 square miles and the community of Plainview, was $28,056 or 59.1% of the statewide median household income at that time. Since then the US Census Bureau no longer asks the income question in the decennial census, but rather collects income data through the continually occurring American Community Survey (ACS) where a smaller sampling is done annually.

The ACS data is expressed as a 5-year adjusted average. The median annual household income for the past four rounds of ACS data is expressed as:

Period	Area	MHI	Margin of Error	% of State MHI
2005-2009	CTBG	$34,766	+/- $7,818	57.6%
2006-2010	CDP	$21,012	+/- $4,789	36.7%
2010 Survey		$15,500		25.5%
2007-2011	CDP	$19,922	+/- $6,296	32.3%
2008-2012	CDP	$15,804	+/- $7,909	25.7%

Prior to the community's designation as a CDP, it was suspected that the census data for the block group showed a higher income level than actually exists within the service area of the Plainview MWC. Therefore, a community survey was conducted by Self-Help Enterprises between December 2010 and April 2011. The Median Household Income (MHI) was determined by the survey to be **$15,500** (**25.5%** of 2010 CA MHI [$60,883]). For these reasons, it is obvious that Plainview can be viewed as a severely

disadvantaged community with a median household income less than 60% of the statewide median.

4. Monthly water rates and sewer rates, if known.

Water Rate: The current water rate for the traditional boundaries of the PMWC which lies east of Road 196 is a flat rate of $30.00 per month. This is approximately 2.32% of the Median Household Income (MHI) for the community per survey results. The flat rate for the newly acquired "Central Water System" located west of Avenue 196 is $46.50 which represents 3.5% of the MHI based on community survey results.

Sewer Rate: There is no sewer service in Plainview. The community is dependent on individual septic tank systems for sewage disposal. However, in June of 2012 the County of Tulare applied for a Planning Grant to the State Water Resources Control Board (SWRCB) on behalf of the Plainview community for a new Wastewater System and was successful in their effort receiving an award in the amount of $453,000. Furthermore, the Preliminary Engineering Report (PER) that will be conducted on the new wastewater system will identify all of the various options and alternatives available; including new forms of governance structure if necessary.

5. Billing methods for the community systems.

Plainview Mutual Water Company has contracted with the City of Lindsay to collect and bill customers of both the Plainview Mutual Water Company and the Central Water System. However, the current contract with the City of Lindsay for billing services will be terminated by March 1, 2014. A new contract is currently being negotiated with the Strathmore Public Utility District (SPUD) for billing services. Currently, customers of the Plainview Mutual Water Company and the Central Water System pay a flat rate for water service. However, customer billing for water usage will eventually be on a volumetric basis once water meters are activated on the east side of Road 196. There is a need to install meters on the western (old Central Water System) portion of the water system to eventually meters all customers.

6. Are systems in the black or in debt?

Financially, the Plainview Mutual Water Company is currently operating in the black. The Mutual Water Company has taken in more operating and non-operating income than it has expended for the fiscal year ending June 30, 2013.

7. Are systems run as a business or are the systems dealt with more issue by issue as they come up?

The water system operations are currently run as a business enterprise. The following table lists annual financial information for the fiscal year ending June 30, 2013:

Description	Water System	
Cash beginning of year	$	70,568
Operating Income	$	66,646
Operating Expense	$	156,059
Depreciation	$	111,889
Operating Exp. (w/o Dep.)	$	44,170
Non-operating Revenue	$	2,500
Non-operating Expenses	$	1,640
Cash end of year	$	87,259

8. Range of household budgets in the community. Discuss how much is spent on utilities such as sewer and water, if known. Are there discretionary funds in the typical households? If water or sewer rates go up what might get cut?

Plainview is a disadvantaged community, with 2008-12 ACS MHI indicating an MHI of approximately 25.7% of the statewide MHI. The 2008-12 ACS indicates the following range of household incomes in the community:

Plainview CDP, California	Annual Household Income Estimate	Margin of Error
Less than $10,000	20.0%	+/-12.8
$10,000 to $14,999	28.0%	+/-11.4
$15,000 to $24,999	15.1%	+/-10.1
$25,000 to $34,999	12.0%	+/-9.1
$35,000 to $49,999	12.9%	+/-10.1
$50,000 to $74,999	2.7%	+/-3.7
$75,000 to $99,999	4.9%	+/-4.6
$100,000 to $149,999	0.0%	+/-15.3
$150,000 to $199,999	4.4%	+/-6.8
$200,000 or more	0.0%	+/-15.3
Median Income (dollars)	$15,804	+/-7,909

An estimated 63.1% households have annual incomes less than $25,000 and 75.1% households have annual incomes less than $35,000. The 2008-12 ACS indicates that 69.4% +/- 12.0% of Plainview residents live below the poverty line. As such, there is very little disposable income available to families; and in the high percentage of farmworker families in the community do not have flexibility in their household budgets.

Additionally, many of the residents are on fixed incomes such as Social Security and/or Disability.

9. Population served.

The 2010 United States Census reported that Plainview had a population of 945. The racial makeup of Plainview was 358 (37.9%) White, 8 (0.8%) African American, 20 (2.1%) Native American, 2 (0.2%) Asian, 0 (0.0%) Pacific Islander, 517 (54.7%) from other races, and 40 (4.2%) from two or more races. Hispanic or Latino of any race were 865 persons (91.5%).

The average household size was 4.52. There were 224 housing units, of which 107 (51.2%) were owner-occupied, and 102 (48.8%) were occupied by renters. The homeowner vacancy rate was 2.7%; the rental vacancy rate was 3.7%. 485 people (51.3% of the population) lived in owner-occupied housing units and 460 people (48.7%) lived in rental housing units

10. Short description of water systems and sewer systems including number of connections adequacy of backup systems and MCL challenges if known.

Water System: The Plainview Mutual Water Company (PMWC) water system was almost completely renovated in 2010. The PMWC water system consists of two wells (1 new and the other about 50 years old) equipped with new electrical panels, two new chlorinators, and two 8,000 gallon hydropneumatic tanks. In addition, a new back-up diesel generator was installed at the primary well site. Undersized wharf hydrants were replaced with standard AWWA approved fire hydrants. Furthermore, water lines which were once located in the alleyways behind the houses (which were in close proximity to failing septic tanks and often directly below gray water discharge) were abandoned. New water mains were installed in front of homes located in the county road right-of-way. These improvements reduced the possibility of sewage effluent seeping into the distribution system when the water system is shut down and/or when water pressure drops.

In 2012, the Plainview Mutual Water Company (PMWC) purchased the Central Water System (CWS) from a private owner. Thus, adding an additional 44 new connections and 170 residents to the PMWC economy of scale; and in 2013 CWS added an additional lot to their customer roster as the Valley Fuel Mini-Mart opened for business. Thus, the overall total number of connections in CWS increased to 45. The CWS, though adjacent to the traditional boundaries of the mutual water company, is isolated from the rest of the system. The CWS was originally supplied by a well (Well #1) drilled to a depth of 452 feet. This well was abandoned in 1984 when the currently active well (Well #2) was drilled to a depth of 326 feet by the casing hammer method. Well #2 has a 12-inch casing and 52 concrete annular seal with perforations ranging between depths of 220 to 330 feet. The well is equipped with a 20 hp submersible pump (that

can reportedly produce up to 540 gpm) and a 3,000 hydropneumatic tank. The CWS distribution system consists of 1,700 feet of 4-inch and 400 feet of steel water main.

Unfortunately, water pumped from CWS Well #2 has exceeded the nitrate Maximum Contaminant Level set by EPA and CDPH. Attached is a table listing nitrate levels in water pumped from the well from 1984 through March 2012. This table shows that the well has produced water exceeding the nitrate MCL 10 times over this period.

Central Water System - Plainview Nitrate Levels in Active Well Nitrate MCL = 45 ppm	
Date	Community Well (ppm)
6/20/1984	70
7/24/1984	64
5/13/1985	73
1/6/1991	20
10/23/1996	21
1/16/1998	19
1/4/1999	24
1/3/2000	22
2/12/2002	21
2/10/2003	25
8/22/2007	22
5/27/2008	46
7/23/2009	26
6/11/2010	52
4/26/2011	33
5/2/2011	69
6/15/2011	60
11/1/2011	46
3/27/2012	48
Times Exceeding MCL	10

Sewer System: There is no community-wide sewer system in place that serves the community of Plainview. The community depends on individual on-site septic tank systems for wastewater disposal. Average lot size in the community is approximately 7,000 square feet, which is well below the minimum requirement of 12,500 square feet of area required by the County of Tulare for septic systems in communities with a community water system. These small lot sizes are too small to support efficient septic tank effluent leaching. There is also insufficient space available on most lots for replacement of on-site systems that have been in existence for over 50 years.

In addition to the relatively small lot sizes, another restriction for septic system effluent leaching is the preponderance of tight soil conditions in the community. Natural Resources Conservation Service soils maps indicate two soil types in the community: (1) the Flamen loam; and (2) the Quonal-Lewis association (see attached Custom Soil Resource Report). Both of these soils types have duripans.

In a community survey conducted between December 2010 and April 2011, residents were also asked questions concerning the adequacy of current on-site wastewater/septic systems. The following is a tabulation of some of the responses:

- Seventy-four percent (74%) of Plainview residents (n= 142) indicated a desire for a public sewer system;
- Twenty-six percent (26%) of Plainview residents (n=48) indicated having had their septic tank pumped within the last three years;
- Twenty percent (20%) of Plainview residents (n=36) indicated they have had problems with their septic systems since having their leach fields or seepage pits repaired or replaced; and
- Nineteen percent (19%) of Plainview residents (n= 36) indicated that their sewage disposal system has given them problems.

11. Existing governing body such as County Service District, Public Utility District, Mutual water system, etc.

The existing governing body in the community of Plainview is a Mutual Water Company.

12. Decision making process – Is there a board of directors, designated lead home owner, long time unofficial leader, or is there a lack of good decision making process? History on this would be good.

The Plainview Mutual Water Company-Central Water System Board of Directors is comprised of five (5) members who are in charge of the decision-making process related to the community's water system. This applies to policy decisions and other major decisions as well. Board members are elected and/or re-elected annually at the Annual Board Meeting held during the month of August. The Plainview Mutual Water Company-Central Water System Board is the only organization in existence in the community of Plainview. The Board's Articles of Incorporation (AOI) indicate that the entity was initially formed to provide water to the community. However, in 2013 the Board's formation documents were reviewed by their legal counsel and in her legal opinion she felt that although the Board's AOI were formed to provide water to the community; the AOI were written in such a manner as to not preclude the mutual from entering into other endeavors and/or contracts that would benefit the Plainview community e.g., a park, or a community center, etc.

Problems with loss of funds:

According to California Assembly Bill 54 (Solorio) - AB54 does not preclude a board member of a mutual water company from receiving financial compensation for conducting board business. This can be a potential area of concern for the mutual water

company as this can be viewed as a "conflict of interest." In addition, caution needs to be taken that it does not lead to the misuse of public funds; or that overpayment for work occurs simply because the rate of compensation was not discussed and contractually entered into by the board and the individual "prior to" any work actually being performed.

The Plainview Mutual Water Company is not without history when it comes to problems with loss of funds and/or misuse of funds. In 2009, the Board President hired family members to perform what he referred to as "*trabajo por la mesa*" which in English translates to "*work for the board.*" The problem was that contracts were never entered into; and therefore, individuals were paid excessively high wages for work "completed". In addition, high compensation was paid to family members on numerous occasions for travel and mileage supposedly for conducting board business. It was alleged, that the former Board President misused over $50,000 of the community's money. Legal proceedings eventually ensued with the County of Tulare District Attorney's Office. The prior Board President resigned from the board upon strong encouragement from the mutual legal counsel.

There is no happy ending to this story. In summary, a Detective of the Tulare County Sheriff's Department interviewed the former Board President and it was even recorded and video-taped where the former Board President admitted directly to the detective that he paid family members and others who in turn returned the cash back to him and he would decide "how much" to give them because he was receiving Social Security. However, the District Attorney's legal opinion was that he could not prosecute the former Board President "*because the Articles of Incorporation and By-Laws 'did not specify' the exact amount of compensation that would be paid by the Board for work that is performed for the mutual water company.*" Moral of the story: With respect to mutual water companies be certain that compensation levels for Board members and hired help are clearly spelled out in the mutual By-Laws.

13. Discussion of operation and maintenance personnel for each community. Part-time or full-time personnel, contractors used, any shared human resources with other communities or agencies.

- One (1) contracted Water System Operator.
- One (1) contracted Certified Public Accountant.
- One (1) contracted billing billing/receiving entity (City of Lindsay through February 2014 and from then on the Strathmore Public Utility District)

14. Discuss how District is managed such as independent manager, County personnel involved, and CDPH personnel involved. Is the California Public Utilities Commission involved in rate setting or is it a local decision?

- The District Mutual Water Company is managed by a five (5) member Board of Directors.
- Rate setting is a local decision by the Board.

15. Discuss problems that have been solved by communities that could be applied as solutions by other communities.

Quite a few problems have been solved. For example, the Mutual Water Company received CDBG Program grant funds with a relatively small loan, via the County of Tulare to drill test wells and connect low income households to the replacement water distribution system; as well as a USDA $1,000,000 grant a new well and a CDPH SDWSRF grant ($1,000,000) and loan ($274,000) package to replace the water distribution system and make well site improvements.

The MWC recently purchased a neighboring private water system located west of Road 196 and therefore increased their scale of economy by forty-five (45) new customers.

16. Discuss largest unresolved problems/issues for the communities and what is being considered to solve these problems, if any.

Water System: The Mutual Water Company's purchase of the private water system to the west of Road 196 has made the local Board aware of the deficiencies of that separate portion of the water system. Water quality analysis has indicated that the well serving this area has tested above the Maximum Contaminant Level (MCL) for nitrate. In addition, the water distribution system in this western portion of the community is in need of repair and/or replacement. Lastly, a connection between the two systems may be warranted to provide a more reliable supply of potable water to the western portion.

Sewer System: In order to resolve the community's wastewater issues, the community and the Plainview Mutual Water Company have petitioned the County of Tulare to seek a solution. In June 2012, the County of Tulare submitted a planning application to the State Water Resources Control Board (SWRCB) to investigate options to solve these problems on a community wide basis. The SWRCB has approved the County of Tulare's Plan of Study application and awarded Tulare County $453,000 to for the planning phase for a new wastewater system to eventually serve the very needy community of Plainview.

Rexland Acres

Connections Range
(688 Connections to community sewer)

1. When was community established and why.

This unincorporated community of 3,400 people was originally southeast of Bakersfield in Kern County. Bakersfield has now grown around the community. This tract of 886 parcels contains about 840 single family homes, a school, park, six churches, and twenty nine commercial properties ranging from a fast food stand to garages and a propane service. The area also has two small motels and about 67 cabin rental units. Rexland Acres was originally settled like many other Valley dust bowl communities in the 1930's and was built out by the 1970's. The residential properties range in size from 6,000 square feet to one half acre.

2. How old is the system.

The water system was installed at least by the 1960's. The sewer system was constructed in 2008.

3. Median household income.

Per the last decennial census to calculate median household income, the 2000 Census indicated the median annual income for households in Kern County Census Tract 31.03 which includes Rexland Acres and the surrounding area was $24,750 or 52.2% of the statewide median household income at that time. Since then the US Census Bureau no longer asks the income question in the decennial census, but rather collects income data through the continually occurring American Community Survey where a smaller sampling is done annually. This data is expressed as a 5-year adjusted average. The median annual household income for the Year 2000 Census and the last three rounds of the American Community Survey is expressed as:

Period	Area	MHI	Margin of Error	% of State MHI
2000	CT31.03	$24,750		52.3%
2006-10	CT31.03	$35,464	+/-$ 6,085	58.2%
2007-11	CT31.03	$36,713	+/-$10,636	59.6%
2008-12	CT31.03	$31,825	+/-$ 6,358	51.8%

Based on the Census data listed above, Rexland Acres can be viewed as a severely disadvantaged community with a median household income less than 60% of the statewide median.

The 2008-12 ACS indicates that 25.3% +/- 8.4% of Rexland Acres residents live below the poverty line.

4. Monthly sewer rates and water rates, if known.

The water system operated by California Water Service Company has the following metered rate structure:

Readiness to serve charge:

5/8" x ¾" meter	$13.40
¾" meter	$20.10
1" meter	$33.06

Quantity rates:

First 1.300 cubic feet, per 100 cubic feet	$1.4921
Next 2,100 cubic feet, per 100 cubic feet	$1.6178
Over 3,400 cubic feet, per 100 cubic feet	$1.8847

The portion of the community served by the sewer is charged an average $38.50 per month for sewer service. The billing charge covers operating costs as well as debt service costs for the wastewater system's loan repayment.

5. Billing methods for the community systems.

Monthly water payments are collected by mail by California Water Service Company. Sewer system charges are collected by the County with property taxes payments.

6. Are systems in the black or in debt?

Money collected from water system users is adequate to pay California Water Service operation costs and a profit. There is a reserve for system repairs. The large number of greater Bakersfield users served by California Water Service allow for lower costs and the collection of funds for repairs and reserve. The sewer rates established by the County cover costs for the 688 properties and 746 homes with sewer service, including repayment for a USDA loan and funds for future repairs.

7. How are the systems operated? Are budgets and rates set? Is adequate money collected to pay bills? Is money set aside in a reserve? Review and approve claims for payment? Does the Board meet regularly? Etc...

Water system: The water system is a for profit corporate entity subject to PUC regulation.

Sewer system: The County of Kern CSA #11.4 collects assessments with the tax bill to pay for operations, reserve, replacement, and to repay a USDA project loan. The collection of these assessments pays for the sewer collection system operations and fees to treat the wastewater at the regional Kern Sanitation Authority wastewater

treatment plant. The collection system maintenance is contracted out to a licensed and insured operator.

Septic systems: Properties not in the sewer system service area have septic systems and must pay for pumping, repairs, and replacement as needed.

8. Range of household incomes in the community.

Rexland Acres is a severely disadvantaged community, with 2008-12 ACS MHI indicating a median household income of $31,825 +/- $6,358 or 51.8% of the statewide MHI. The 2008-12 ACS indicates the following range of household incomes in the community:

Kern County CT 31.03, California	Annual Household Income Estimate	Margin of Error
Less than $10,000	9.7%	+/-6.4
$10,000 to $14,999	4.3%	+/-2.7
$15,000 to $24,999	18.6%	+/-8.4
$25,000 to $34,999	21.5%	+/-6.6
$35,000 to $49,999	17.9%	+/6.2
$50,000 to $74,999	17.5%	+/-8.2
$75,000 to $99,999	8.4%	+/-5.0
$100,000 to $149,999	2.0%	+/-2.4
$150,000 to $199,999	0.0%	+/-3.6
$200,000 or more	0.0%	+/-3.6
Median income (dollars)	$31,825	+/-6,358
Mean income (dollars)	$39,452	+/-5,420

An estimated 54.5% of households have annual incomes less than $25,000 and 72% of households have annual incomes less than $35,000. The 2008-12 ACS indicates that 25.3% +/- 8.4% of Rexland Acres residents live below the poverty line. As such, there is very little disposable income in the community.

9. Population served.

The water system serves the entire Rexland Acres community with a population of 3,400. The County sewer system does not serve the entire community due to a lack of support of installing the sewer system in certain portions of the community. The estimated population of those served by the sewer system is 2,830, roughly 80% of the community.

10. Short description of water systems and sewer systems including number of connections adequacy of backup systems and MCL challenges if known.

Water is supplied by California Water Service Company that uses well and Kern River water supplies. Local Rexland Acres wells have become contaminated with nitrates

and E Coli. The area developed first in the north containing larger more irregular lots; as development moved south, the lots became uniform, but smaller.

Prior to the installation of the sewer system, the community depended entirely on on-site septic tank systems for sewage disposal. The following is a description of the conditions prior to the installation of the community wide sewer system:

In 1998, the Rexland Acres Committee and volunteers, under the guidance of Self-Help Enterprises, conducted a Septic Tank performance survey. Survey results documented 32% of systems had pumped their tanks two or more times in three years, and 22% of all systems were pumping their septic tank at least every year or more. These pumping rates are much higher than the normal range of pumping a septic tank once every three to five years. Residents paid an average of $185 to pump their septic tank. Forty percent of area systems were running laundry grey-water onto lawns, in most cases to avoid overloading the septic system. Many residents in the southern two thirds of Rexland Acres have small lots, many only 6,000 square feet in area) with little or no room to build new leach fields to correct these problems. Often there was only room for a seepage pit to replace the failed leach field. Those that built seepage pits often reported hitting water 30 to 40 feet down and then filled the pit with gravel and connected the pit to the septic tank discharge line. This could lead to direct contamination of the aquifer. Nitrate levels in two community water wells more than doubled in twenty years. The school's well was shut down in the early 1990's after it was contaminated with fecal bacteria. Based on the septic tank survey and local groundwater contamination, the Kern County Environmental Health Services determined these conditions posed a public health hazard to the community.

The Committee and SHE worked with the County to define the Project area, circulate petitions and enable a vote by property owners to confirm Project support.

Thus defined the County obtained Federal and State grants and a Federal Loan to design and build the Project; including the construction of 8 and 10 inch diameter sewer collection system, two lift stations to pump the wastewater five miles through an 8 inch force main to the Kern Sanitation Authority wastewater treatment plant. Construction started in 2007 and was completed in 2008. Using a combination of CDBG and private funds; six hundred and eighty eight properties were connected to the sewer collection system. The Project serves about 677 homes with 2,872 residents, a school with 700 students and faculty, several small businesses and churches, and the Rexland Acres park and recreation center.

11. Existing governing body such as County Service District, Public Utility District, Mutual water system, etc.

The water system is owned by the California Water Service Company, a for profit corporate entity subject to PUC regulation.

The sewer system is County owned via a County Service Area that was originally established for street lighting. Maintenance of the sewer collection system is provided by contracting with a private company.

12. Decision making process.

The water system is owned by the California Water Service Company, a for profit corporate entity subject to PUC regulation. Customers are notified of rate changes and can comment on them to the CPUC and water company.

The sewer system is County-owned via a County Service Area that is administered by County staff and governed by the Kern County Board of Supervisors. The County Board of Supervisors holds weekly public meetings. Rate increases are subject to Proposition 218 requirements and allows for user input and protest, even a vote, if certain requirements are met.

13. Discussion of operation and maintenance personnel for each community.

California Water Service uses its own personnel to maintain and operate the system. Major construction work is contracted out to a private firm(s).

Sewer collection system operation and maintenance work is contracted out by the County. User fees and loan payments are collected with the County taxes as an assessment of $462 per year (averaging $38.50 per month) for each house. Larger users such as the school and grocery store pay a proportionately higher rate based on their sewage flows.

14. Discuss how system is managed such as independent manager, County personnel involved, and CDPH personnel involved.

See #13 above.

15. Discuss problems that have been solved by community that could be applied as solutions by other communities.

Sewer: Start at #10. In Rexland Acres, failing septic systems had been a problem since the 1970's.

Top down decision making failed: In the 1970's, the County attempted to start a community-wide sewer system in response to the septic system problems. The northern parts of Rexland Acres opposed the sewer since they had few septic problems due to larger lot sizes. In addition, fears that the area would be annexed into the City, taxes raised and large animals would be banned helped stoke opposition. The community wide sewer was voted down.

Community decision making works: In 1998, the area's County supervisor held a community meeting to discuss local issues. About 300 people showed up; the majority

reported problems with septic systems. Self-Help Enterprises (SHE) asked for interested community members to work together on this problem. The residents met and formed the Rexland Acres Committee to look into solving the septic tank problems. The Committee's investigations found that many instances of septic tank pumping were not being reported to the County by some pumping companies, as required; leaving little written evidence of the septic system problems. Documentation was needed to verify the area had a potential pollution problem and to qualify for project funding.

The Committee with the assistance of a third party technical assistance provider, SHE, prepared a septic tank survey to document problems, if any, the septic systems were having. Committee members and residents from all parts of Rexland Acres were trained by SHE staff to develop and conduct a septic tank performance survey. Having trained surveyors from all parts of the community, including those for and against a sewer system; helped educate the Rexland Acres community members about area problems or lack of problems; notified residents about local issues being dealt with; allowed community members on both sides of the sewer issue to work together and provided residents to record septic system performance, as well as document their preference for septic systems or a community sewer. After almost nine months, a detailed confidential septic tank performance survey obtained 722 complete responses of the 902 Rexland Acres septic systems (an 80% response rate) and was finished. The Survey results, tabulated by the Committee and SHE, allowed the Committee to map areas that had problems, identify the number of septic systems, measure interest for and against sewer, and document the population, race and other details of Rexland Acres residents. Maps based on the Survey results, were prepared that identified the areas of Rexland Acres that overwhelmingly needed and wanted a sewer system, as well as the areas that preferred keeping their septic systems.

SHE secured a grant thru a local health clinic to pay for an engineering report to evaluate Project alternatives (1. No Project, Connecting to: 2. Bakersfield, 3. the Kern Sanitation Authority and 4. Lamont PUD). and costs to solve the septic system problems. The Committee and SHE met with City and County to discuss these alternatives and gather evidence on costs and conditions for sewer service. The Committee held community meetings to review the engineers report and project alternatives, meet and discuss the details of the two likely alternatives: 1. Connecting to the City of Bakersfield treatment plant and 2.) Connecting to the Kern Sanitation Authority (KSA) treatment plant. The community opted for connection to the County KSA wastewater plant since that was less expensive and would not require annexation to the City. The Committee used the Septic survey to identify areas for sewer that needed and wanted it.

A petition, required and prepared by the County, was circulated by the Committee, residents and the County. The signatures of 400 property owners (60%) in two thirds of the proposed service area were obtained, allowing the County to issue ballots for the KSA project. A large majority approved the Project, since it concentrated on putting community sewer in the areas that needed and wanted it. This was successful through the tireless efforts of the Rexland Acres Committee and volunteers with some help from the County and SHE. Their outreach to area residents and work with the County

Supervisor allowed for a locally crafted boundary and project based on local input from the Survey, community meetings and the Petition.

Support from the residents for an identified Project, enabled the County to move forward and complete the environmental documentation, apply for and secure funding from the State, USDA and a congressional appropriation from Congressman Bill Thomas, obtain an engineering firm, design and bid the Project. The Committee maintained contact with the County and engineer to keep track of the work, comment on design, and hold meetings to locate property connections to the sewer and keep the community informed. Often they lobbied the County to ensure the selected alternative was pursued and that design and bids were completed within the funding agency required timeframe. Since Committee members lived in Rexland Acres they could be contacted by residents about Project questions and concerns, research and provide accurate information, hold meetings to act on project issues, and serve as a channel to provide community feedback to the County and other agencies as well as mobilize residents for meetings and project concerns.

For ten years the Rexland Acres Committee notified residents and property owners, held community meetings to discuss the Survey, Engineers report, Project alternatives, each alternatives' costs and conditions, petitions, Project choices, funding, updates, petitions, ballots, design review, sewer line connections, construction progress, sewer hook-up funding applications, solicit contractor hook-up proposals and finally celebrate project completion in 2009.

Throughout the 10 years of its existence the Committee membership varied due to interest, residency and even death. However new people and leaders stepped forward to carry the ball and keep the $9,145,142 Project moving forward. SHE provided technical assistance to the Committee and County during this time. The Rexland Acres Community wastewater project shows that guidance, involvement and decision making by the local community and working from the ground up with the County can get things done right.

16. Discuss largest unresolved problems/issues for the community and what is being considered to solve these problems, if any.

Parts of the Community are still on septic systems. Pending future problems and interest, in the unsewered areas of the community, residents can document the problem and petition the County (or City) for assistance (funding applications) to solve the problem by extending sewer service to this area if and when there is support.

RICHGROVE

501-2000 Connections Range
(581 Connections)

Location and Introduction

Richgrove, an unincorporated community in Tulare County, is located in the southern portion of Tulare County, just north of the Tulare County/Kern County line. Nearby cities and communities include Ducor, approximately 8 miles to the northeast; Delano approximately 10 miles to the west; Terra Bella, approximately 12 miles to the northeast; Poplar-Cotton Center approximately 18 miles to the north; and Porterville approximately 20 miles to the northeast. The Richgrove CSD, which was formed in March 1977, has a primary function of providing domestic water and sanitary sewer service for the community.

Other services within the Richgrove community are provided either by Tulare County or privately owned and operated utility companies. Richgrove is an agriculturally oriented service community surrounded on all sides by lands in agricultural production, and vacant lands. Richgrove is a vibrant Hispanic community with a strong agricultural industry including many grape vineyards, citrus orchards, and row crops. The Richgrove CSD provides residents and businesses within the community with domestic water and sanitary sewer service.

1. When was community established and why

The community was built alongside the railroad track and historically has been a shipping and packing location for the grapes, nuts and citrus that is grown in the area. The old hotel still stands which is now a boarding house. Richgrove is a farmworker town and most people who live there are employed in agricultural-related jobs.

2. How old are the systems?

Until the 1970s, the town's water was provided by the Richgrove Mutual Water Company. In the late 1970s, the system's two wells were found to produce water exceeding the nitrate and DBCP health standards. In order to qualify for State Safe Drinking Water Bond Law Grant funds, the community formed a CSD in 1976 which then took over the assets of the old MWC. The District received a $400,000 grant and $200,000 loan from the State which was used to drill a new well (#3), install a 292,000-gallon standpipe storage tank and replace most of the water distribution

system. The old wells #1 and 2 and underground cistern used for storage were then abandoned.

Well No. 4 was drilled in the mid-1980s. A CDBG grant of about $200,000 was approved to drill this new water well to replace Well #2 that exceeded the DBCP standard of 1ppb. Unfortunately, after EPA/State DBCP standard was lowered to 0.2 ppb, this new well exceeded this lower level. This well is only used in emergencies such as fire.

In the 1990s, Well No. 5 was drilled. A CDBG funded Planning and Technical assistance grant was used to investigate the best location to drill this new well. Self-Help Enterprises, with assistance of an engineer and hydro geologist, prepared a report which recommended the drilling of a new well about 3/4 mile west of town. The CSD Board decided to drill the well in the community. A State Safe Drinking Water Program grant of about $320,000 was approved to drill the new well. Well No. 5 is the District's only water source that meets state and federal standards.

Currently, the CSD is preparing to drill a new well located 2 miles west of Richgrove, which will also serve the Rodriguez Labor Camp.

The District's sewer collection and wastewater treatment and disposal facility were constructed in 1985. A totally new collection system was installed to replace the many failing septic systems in the community. Treatment is accomplished in two aerated lagoons and the treated effluent is piped to a storage pond approximately a half mile to the east where it is then distributed to approximately 65 acres of land where feed, fiber or fodder crops are grown. The plant was designed to treat an average daily flow of 220,000 gallons per day. The average flow for the year 2008 was 300,000 gallons per day, well over the permitted level. The Central Valley Regional Water Quality Control Board has cited the District for this excess flow and directed the District to build additional facilities of adequate capacity. The proposed project would include improvements to the plant headworks, additional treatment ponds, an additional storage pond and the purchase of eight acres of land for the additional treatment ponds and 140 acres for irrigation disposal.

3. Median household income.

Per the last decennial census to calculate median household income, the 2000 Census indicated the median annual income for households in Richgrove, was $22,885 or 48.2% of the statewide median household income at that time. Since then the US Census Bureau no longer asks the income question in the decennial census, but rather collects income data through the continually occurring American

Community Survey (ACS) where a smaller sampling is done annually. This data is expressed as a 5-year adjusted average. The median annual household income for the Year 2000 Census and the past four rounds of the ACS is expressed as:

Period	MHI	Margin of Error	% of State MHI
2000	$22,855		48.2%
2005-2009	$27,386	+/- $4,681	45.3%
2006-2010	$28,261	+/- $5,020	49.3%
2007-2011	$29,776	+/- $3,176	48.3%
2008-2012	$29,537	+/- $2,556	48.1%

Based on Census data, Richgrove can be viewed as a severely disadvantaged community with a median household income less than 60% of the statewide median.

4. Monthly sewer rates and water rates, if known.

The monthly metered water rate for a typical residential sized connection is $28.00 for the first 10,000 gallons and thereafter $1.00 per 1,000 gallons. The monthly sewer rate per dwelling is $24.25 dollars per month. This is approximately at least 1.1 % and 1.0 % respectively for water and sewer service of the 2007-11 estimated median household income for the community.

5. Billing methods for the community systems.

The Richgrove CSD mails out water and sewer utility bills to its customers on a monthly basis. Water and sewer service customers have the option of writing a check or obtaining a money order and then mailing payment to the District's post office box. The other option, which approximately half of customers opt for, is to pay their monthly water and sewer bills as cash, check or money order when the office is open between the hours of 10:00 am and 5:00 pm.

6. Are systems in the black or in debt?

The District's primary revenue sources are derived from water and sewer user fees, and modest levels of property tax income. The District generates approximately $340,000 annually from current water and sewer user fees. This revenue is used for the ongoing operations of the District's utilities, including salaries and employee benefits, services and supplies, repayment of long term debts, and capital equipment replacement (through depreciation of assets). In the fiscal year 2011-12, the District's financial situation was as follows:

Description	All Funds; Combined Water & Sewer
Cash beginning of year	$ 268,053
Operating Income	$ 341,918
Operating Expense	$ 312,352
Depreciation	Not noted in financial statement
Operating Expense (w/o Dep)	N/A
Non-operating Revenue	$180,935 (includes property tax rev of $144,300)
Cash end of year	$ 295,247

It should be noted that all numbers, with the exception of the cash balances are based on the accrual method of accounting.

7. Are systems run as a business or are the systems dealt with more issue by issue as they come up?

The Tulare County LAFCO MSR makes the following conclusion:

> ...[The] District is financially stable with regard to its water and sewer operations, and continues to meet its long term debt obligations. The District's annual revenues cover the annual operating expenses of the District.
>
> Although the District continues to meet its annual operation and maintenance requirements,
> including long term debt obligations, the District's reserve funds are not sufficient to meet capital improvement needs for the District's water and sewer systems. For example, the District has approximately $150,000 available for capital sewer system improvements, while
> the actual cost of increasing the capacity of the District's WWTF could be upwards of $600,000 according to the "*Wastewater Treatment Facility Performance and Capacity Study*". This is an indication that the District would need to seek additional outside funding to upgrade and increase the capacity of its WWTF.

This is an accurate conclusion. The District does do a good job meeting its current obligations but could not undertake any significant capital improvements without assistance. It is difficult for the District even to invest in preliminary engineering and design without grants.

An additional handicap has been recurring employee theft. At least twice in the past 15 years, significant losses have been attributed to theft. The more recent episode, from about 2008-2011, went undetected in part because the District fell behind on its annual audits.

8. Range of household budgets in the community.

Richgrove is severely disadvantaged, with 2008-12 ACS MHI indicating an MHI at 48.1% of the statewide MHI. The 2008-12 ACS indicates the following range of household incomes in the community:

Richgrove CDP, California	Annual Household Income Estimate	Margin of Error
Less than $10,000	10.5%	+/-5.0
$10,000 to $14,999	2.7%	+/-2.5
$15,000 to $24,999	25.8%	+/-7.0
$25,000 to $34,999	21.5%	+/-6.0
$35,000 to $49,999	14.4%	+/-5.3
$50,000 to $74,999	13.4%	+/-4.9
$75,000 to $99,999	3.8%	+/-3.0
$100,000 to $149,999	4.3%	+/-3.9
$150,000 to $199,999	3.6%	+/-4.1
$200,000 or more	0.0%	+/-6.2
Median income (dollars)	29,537	+/-2,556

Based on ACS data, an estimated 60.5% of households have annual incomes less than $35,000 and an estimated 40.3% +/- 7.7% of residents live below the poverty line. As such, there is very little disposable income in the community

9. Population served.

The 2010 United States Census reported that Richgrove had a population of 2,882. The population density was 6,376.2 people per square mile. The racial makeup of Richgrove was 1,068 (37.1%) White, 20 (0.7%) African American, 38 (1.3%) Native American, 140 (4.9%) Asian, 7 (0.2%) Pacific Islander, 1,521 (52.8%) from other races, and 88 (3.1%) from two or more races. Hispanic or Latino of any race were 2,705 persons (93.9%).

The average household size was 4.82. There were 610 housing units at an average density of 1,349.6 per square mile, of which 271 (45.3%) were owner-occupied, and 327 (54.7%) were occupied by renters. The homeowner vacancy rate was 0%; the rental vacancy rate was 0.3%. 1,247 people (43.3% of the population) lived in owner-occupied housing units and 1,635 people (56.7%) lived in rental housing units.

10. Short description of water systems and sewer systems including number of connections adequacy of backup systems and MCL challenges if known.

The Richgrove CSD has 581 water connections servicing 586 residences (includes 86 apartments) and a number of commercial and institutional customers. The District also provides sewer service to all of these users with the exception of the cold storage houses located west of the old railroad tracks.

Richgrove's water system is supplied from groundwater from 2 wells. The District has a third well which is offline due to contamination from hydrogen sulfide. The two active wells have had exceeding amounts of arsenic and DBCP, and the District needs an alternative source of water. Unfortunately, Richgrove is located above a groundwater trough where water tables are deep and contamination is pervasive. The District's new well is planned for two miles to the west of town, near the intersection of Avenue 8 and Road 192. The new well, once constructed, would serve not only Richgrove but also the Rodriguez Labor Camp, located near the new well site, and a couple of agricultural businesses also located near the well site (domestic/office purposes only).

Richgrove's sewer system has met the community's needs since its construction in 1985, but it needs to be upgraded to expand capacity and remove nitrogen from the effluent. Treatment is currently accomplished in two aerated lagoons and the treated effluent is piped to a storage pond approximately a half mile to the east where it is then distributed to approximately 65 acres of land where feed, fiber or fodder crops are grown. The plant was designed to treat an average daily flow of 220,000 gallons per day. The average flow for the year 2008 was 300,000 gallons per day, well over the permitted level. The Central Valley Regional Water Quality Control Board has cited the District for this excess flow and directed the District to build additional facilities of adequate capacity. The proposed project would include improvements to the plant headwork's, additional treatment ponds, an additional storage pond and the purchase of eight acres of land for the additional treatment ponds and 140 acres for irrigation disposal.

11. Existing governing body such as County Service District, Public Utility District, Mutual water system, etc.

The Richgrove Community Services District provides water and wastewater service to the unincorporated community of Richgrove. The District has a five member board.

12. Decision making process:

The Richgrove CSD Board of Directors (a five-member board) is in charge of the decision making process related to the community's water and wastewater systems. This applies to policy decisions and other major decisions. The District Office Manager provides the overall management of the system.

13. Discussion of operation and maintenance personnel for each community.

- 1 Full-time Office Manager: Accepts payments, keeps the books, prepares checks for payments, compiles board packets and agendas, maintains correspondence with funding and regulatory agencies, assigns tasks to maintenance person, maintains District files; enters billing and metering information into utility billing software.
- 1 Full-time Maintenance Person: Cleans and maintains well sites and other District-owned land; performs routine checks and maintenance of all system components (both water and wastewater); notes data from flow meters on wells and influent meter at sewer plant; reads customer water meters and records data; other tasks as assigned.
- 1 Contracted System Operator: Routinely visits once to twice per week to provide oversight of the system; responds to emergencies as needed. Supervises field work of Maintenance position.

14. Discuss how district is managed such as independent manager, County personnel involved, and CDPH personnel involved.

The District has one office manager that is accountable to the Board of Directors. It appears that the office manager fills the role of a general manager. The District lacks the resources to hire a full time general manager and there is not a need for full time management.

Since the water system has more than 200 connections, the system reports directly to the Department of Public Health which monitors the District for compliance with and in enforcing EPA's Safe Drinking Water Act.

15. Discuss problems that have been solved by community that could be applied as solutions by other communities.

Over the years, various board members and staff have struggled yet persevered to seek resources to solve their water and sewer issues. The water system is greatly improved compared to the system the District took over in the late 1970's. That

said, there is still need to make improvements which the District Board is pursuing through applications to CDPH. The District does have one well which currently meets drinking water standards; however, a more reliable supply is needed. The District's application to CDPH was strengthened by its willingness to provide water service to Rodriguez Labor Camp, thus forming a consolidation which garnered extra points, benefiting both communities.

16. Discuss largest unresolved problems/issues for the community and what is being considered to solve these problems, if any.

- The largest unresolved water problem for Richgrove is the persistent groundwater contamination that plagues the District's wells. Richgrove's location over a groundwater trough has made it difficult to find consistently reliable sources of water. To address this problem, the District is locating its next well two miles west of town in an area with better groundwater.

- The District needs to do a rate analysis for the water system which is underfunded; CDPH recognizes this and is requiring a rate study as part of the financial clearance for the Prop 84 grant the District seeks.

- The flow to wastewater plant exceeds allotted capacity by RWQCB. District needs to plan for and implement an expansion of wastewater capacity. This will likely result in upgrading the treatment process to remove nitrogen from the effluent which will be more costly to operate than the current system.

SULTANA

51-200 Connections Range
(160 Connections with 242 housing units)

Location and Introduction

The Tulare County community of Sultana is located along Avenue 416 and roughly half way between the City of Dinuba and the town of Orosi.

1. When was community established and why.

The railroad was built in the 1870's through the area now known as Sultana. The Sultana town site was not laid out until 1912 decades after the nearby town sites of Dinuba and Orosi were settled. Sultana was a shipping point for local farm growers and packing sheds. Currently, the community of Sultana has a one (1) post-office, one (1) elementary school; two (2) churches; ten (10) commercial businesses; and two (2) grocery store/gas station mini-marts that serve both of the communities of Sultana and Monson.

2. How old are the systems?

Water System: Due to the drought of 1976-77 many private domestic wells in Sultana were going dry. In response the community organized a Community Services District (District) that was formed in 1978. The District applied to the then Farmers Home Administration (USDA) and received a 50-50 grant/loan to construct a community water system. A single well drilled at that time (Well #1) supplied

water to the community for many years. In the 1980's the District received CDBG funding and drilled a second well. This additional supply was important to both provide additional capacity as well as serving a backup source if one well went down. Unfortunately, the Well #1 became contaminated with nitrate. In 2005, Well #1 was removed from service due to high Nitrate levels (59 mg/L). Additionally, Well No.2 has not been in operation since 2005 due to DBCP levels above the MCL and overall poor well production. The District successfully applied for Safe Drinking Water Program funding from the State and received a grant to drill Well #3 in 1996 which currently is the only source of potable water for the community. As of the date of this report, the District is operating with only one well, Well #3 with Well #2 marginally serving as a back-up albeit contaminated source. The system is not equipped with a reliable backup source of water thus adversely affecting the reliability of the community's water supply. The District contracts with one (1) part-time individual to operate and maintain the District's water system.

Sewer System: In response to septic system problems, in the 1980's the District applied for and received funding through both the USDA and the SWRCB's previous Clean Water Grant Program to build a community sewer system and transport the wastewater to the Cutler-Orosi Wastewater Facility for treatment and disposal. In addition, the District contracts with one (1) part-time individual to operate and maintain the District's sewer collection system including two sewer lift stations.

3. Median Household Income (MHI).

Per the last decennial census to calculate median household income, the 2000 Census, the median annual income for households in Tulare County Census Tract 3.01 Block Group 1 that incorporates the community of Sultana, was calculated at $30,987 or 65.2% of the statewide median household income at that time. Since then the US Census Bureau no longer asks the income question in the decennial census, but rather collects income data through the continually occurring American Community Survey (ACS) where a smaller sampling is done annually. This data is expressed as a 5-year adjusted average. For Sultana, this comparative data is for Census Tract 3.01 Block Group 1 for the 2005-09 ACS and since then the Sultana Census Designated Place (CDP).

The median annual household income for the Year 2000 Census and the past four rounds of the ACS (3 of which as a CDP) is expressed as:

Period	Area	MHI	Margin of Error	% of State MHI
2000	CT3.01BG1	$30,987		65.2%
2005-2009	CT3.01BG1	$42,321	+/- $18,575	70.1%
2006-2010	CDP	$44,250	+/- $23,185	77.2%
2007-2011	CDP	$30,956	+/- $9,518	50.2%
2008-2012	CDP	$31,528	+/- $15,709	51.3%

It appears that the second most recent (2007-11 ACS) data for the CDP is the most accurate. The margin of error is still at 30%, but this is more accurate than the prior 2006-10 and the later 2008-12 ACS data which both have margins of error of 50% or more. For this reason, Sultana can be viewed as a severely disadvantaged community with a median household income less than 60% of the statewide median.

4. Monthly sewer rates and water rates, if known.

Currently, the monthly flat water rate per household is $27.13 per month which is 1.1 percent of the community's median household income. The monthly sewer rate is $40.02 dollars per month which is 1.6 percent of the community's median household income.

5. Billing methods for the community systems.

The District sends out bills for flat rate water and sewer charges by mail on a monthly basis. Customer payments are accepted only by check or money order when they are mailed to the Districts' post office box. The District utilizes QuickBooks® for its billing and receipting of customer user charges.

6. Are systems in the black or in debt?

The District's sewer system fund is operating close to even. However, the water system fund is operating at a deficit. In FY 2012-13 it was necessary for the District to make a short term loan of $25,000 from the sewer fund to the water fund to help with cash flow. The cash balance in the sewer enterprise fund is almost four times that of the water enterprise fund. According to the District's 2012-2013 audit report, the District has a balance owed of $43,721 and $48,000 respectively for water and sewer bonds as of the end of the fiscal year.

Fiscal year 2012-13 Audit indicates that the District's financial situation was as follows:

Description	Water System	Sewer System	All Funds
Cash beginning of year	$30,817	$110,947	$141,764
Operating Income	$64,573	$100,894	$165,267
Operating Expense	$98,831	$113,241	$212,072
Depreciation	$23,417	$ 24,017	$ 47,434
Operating Expense (w/o Dep)	$75,414	$ 89,224	$164,638
Non-operating Revenue	$ 2,641	$ 3,292	$ 5,933
Non-operating Expenses	$31,617	$ 9,055	$ 40,672
Cash end of year	$33,845	$104,467	$138,312

It should be noted that all numbers, with the exception of the cash balances are based on the accrual method of accounting.

7. Are systems run as a business or are the systems dealt with more issue by issue as they come up?

The system operates as a business and is overseen by a five (5) member Board of Directors. The District prepares and adopts an annual budget and has audits conducted on an annual basis. The District Board and its contracted operators do their best to keep the system operating smoothly, but when repairs are necessary and when emergencies arise they are dealt with as the needs arise.

8. Range of household budgets in the community.

Sultana is a severely disadvantaged community. The 2007-11 American Community Survey (ACS), indicates a Median Household Income (MHI) for the community of Sultana at about 50.2% of the statewide MHI.

In addition, the 2007-11 ACS indicates the following range of household incomes in the community:

Sultana CDP, California	Annual Household Income Estimate	Margin of Error
Less than $10,000	2.7%	+/-5.3
$10,000 to $14,999	7.1%	+/-11.6
$15,000 to $24,999	34.5%	+/-18.2
$25,000 to $34,999	16.8%	+/-16.6
$35,000 to $49,999	6.2%	+/-7.8
$50,000 to $74,999	15.0%	+/-14.3
$75,000 to $99,999	2.7%	+/-4.5
$100,000 to $149,999	15.0%	+/-14.6
$150,000 to $199,999	0.0%	+/-27.6
$200,000 or more	0.0%	+/-27.6
Median income (dollars)	$30,956	+/-$9,518

Based on the 2007-11 ACS data, an estimated 44% of households have annual incomes less than $25,000; and 61% of households have annual incomes less than $35,000. The ACS data also indicates that 33.0% +/- 19.6% of Sultana residents live below the poverty line. As such, there is very little disposable income available to families who reside in the community.

9. Population Served.

The 2010 United States Census reported that Sultana had a population of 775. The racial makeup of Sultana was 315 (40.6%) White, 0 (0.0%) African American, 3 (0.4%) Native American, 6 (0.8%) Asian, 0 (0.0%) Pacific Islander, 424 (54.7%) from other races, and 27 (3.5%) from two or more races. 695 persons or 89.7% of the population identified themselves as Hispanic or Latino.

According to 2010 United States Census data, the average household size was 3.52 within 242 individual housing units, of which 75 (34.1%) were owner-occupied; and 145 (65.9%) were occupied by renters. The homeowner vacancy rate was 4.9%; the rental vacancy rate was 3.2%. 254 people (32.8% of the population) lived in owner-occupied housing units and 521 people (67.2%) lived in rental housing units.

10. Short description of water systems and sewer systems including number of connections, adequacy of backup systems, and MCL challenges if known.

Water System:

Currently, the District's water system serves one-hundred and sixty (160) water connections providing water to two-hundred forty-two (242) residences; one (1) post office; nine (9) commercial establishments; two (2) gas station/grocery stores; one (1) church; one (1) packing house; and the Monson-Sultana School.

The water system is currently supplied by one primary active well (Well #3) which was drilled in 1996 to a depth of 430 feet; has an annular seal to a depth of 250 feet with a 14-inch casing installed to a depth of 430 feet perforated between 260 and 420 feet. The well is equipped with a 60 hp oil lubricated turbine pump and 5,500 hydropneumatic tank. A natural gas generator is located at the well site to provide power when electrical service is interrupted. The District's backup well (Well #2) was drilled to a depth of 358 feet; has an annular seal to a depth of 60 feet with a 14-inch casing installed to a depth of 332. This well was equipped with a 75 hp oil lubricated turbine pump and also a 5,500 hydropneumatic tank.

Water pumped from the District's primary well (Well #3) meets all Title 22 standards. However, the system's backup well (Well #2) has produced water exceeding the DBCP Maximum Contaminant Level set by EPA and CDPH. Attached is a table listing DBCP and nitrate levels from Well #2 from 1993 through September 2012. This table shows that Well #2 has produced water exceeding the DBCP MCL 5 times over this period (see Table below).

Sultana Community Services District DBCP and Nitrate Levels in Well #2		
DBCP MCL = 0.2 ppb	DBCP MCL = 0.2 ppb	Nitrate MCL = 45 ppm
Date	*DBCP*	*Nitrate*
	(ppb)	(ppm)
8/23/1993		11.7
11/27/1996		**18.0**
12/31/1998	ND	22.0
6/25/1999	ND	
9/30/1999		23.0
2/22/2000	0.13	23.0
5/8/2001	0.56	20.0
11/12/2007	0.50	35.0
12/1/2009	0.45	1.3*
6/2/2011	0.46	44.3
2/2/2012		43.9
9/26/2012	0.45	
Times Exceeding MCL	**5**	**0**
* Questionable Test result		

Based upon this data, it appears that if the primary well goes down Sultana will lack a source and supply of potable drinking water.

Sewer System: The District also provides sewer service to all of the above water service users as well. The sewer system was constructed in the early 1980s. The sewer collection system consists of SRD-35 PVC mains. There is one sewer lift station in the community and another at the end of the collection system that pumps wastewater into a force main which transports the sewage to the Cutler Orosi Wastewater Joint Powers Authority (COWJPA) Wastewater Treatment and Disposal Facility. The District pays a monthly fee to the COWJPA for treating the wastewater.

11. Existing Governing Body such as County Service District, Public Utility District, Mutual Water System, etc.

The Sultana Community Services District (SCSD) provides water and wastewater service to the unincorporated community of Sultana. The District governing body is comprised of a five member board all of which are elected positions. The Cutler Orosi Wastewater Joint Powers Authority (COWJPA) which treats the District's wastewater has a separate board comprised of representatives of the Cutler and Orosi Public Utility Districts.

12. Decision Making Process – Is there a Board of Directors, designated lead homer owner, long time unofficial leader, or is there a lack of good decision making process.

The Sultana CSD Board of Directors is comprised of five (5) members who are in charge of the decision making process related to the community's water and wastewater systems. This applies to policy decisions and other major decisions. The District Office Manager in conjunction with the Board President provides the overall management of the system.

13. Discussion of operation and maintenance personnel for each community. Part-time or full time personnel, contractors used, any shared human resources with other communities or agencies.

The District contracts for the following services:

One (1) Part-time Bookkeeper.

One (1) Part-time Office Manager

One (1) Part-time Water System Operator

One (1) Part-time Sewer System Operator

14. Discuss how district is managed such as independent manager, county personnel involved, and CDPH personnel involved. Is the California Public Utilities Commission involved on rate setting or is it a local decision?

The District employs one (1) part-time Office Manager that is accountable to the Board of Directors; who are responsible for setting water rates. Apparently the Office Manager fills the role of a General Manager. The District lacks the resources to hire a full-time manager and there is not a need for full-time management.

Since the District's water system has less than 200 connections, the system is monitored by the Tulare County Health & Human Services Agency, Tulare County Public Health Environmental Health Division. Tulare County is the Local Primacy Agency under the State Department of Public Health in monitoring compliance for and in enforcing EPA's Safe Drinking Water Act.

15. Discuss problems that have been solved by communities that could be applied **as solutions by other communities.**

The District was originally formed after the drought of 1977 to install a water distribution system when many of the individual water wells serving homes in the community went dry. The District was formed with the power to provide sewer

service as well. Construction of the community's sewer system was completed in the early 1980's to correct failing on-site septic systems with connection to "regional" Cutler-Orosi treatment and disposal facility.

16. Discuss largest unresolved problems/issues for the communities and what is being considered to solve these problems, if any.

Water System: As of the date of this report, the Sultana Community Services District is operating with only one (1) well (Well No.3) capable of providing potable water. Although the water quality and volume produced by Well No. 3 appear to be adequate at this time, the system is not equipped with a reliable backup source of water. The District needs a reliable water supply including a second source that meets drinking water standards. Alternative solutions include the drilling of a new water well or an interconnection to the City of Dinuba if that City can receive funding to drill a new well. A longer term solution could also be a connection with the regional surface water plant that is proposed for the north Tulare County area by the Alta Irrigation District. The major objective is to provide a safe, reliable source of drinking water for the residents of Sultana. The Sultana Community Services District is also considering extending water service to the community of Monson if a reliable source of water can be secured. Monson is a smaller community located about 4 miles south of Sultana where the approximately 50 homes are dependent on private domestic wells, many of which produce water that is contaminated with high nitrate levels.

Sewer System: The Service Agreement between Sultana CSD and the Cutler-Orosi Joint Powers Wastewater Authority for treatment and disposal of wastewater states that the Sultana CSD has a designated capacity of 156 Equivalent Dwelling Units (EDU's). This level reflects the original capacity purchased by Sultana CSD, plus an additional 10 EDU's allocated in settlement of a lawsuit with the District. In addition, based upon the last report to the Authority, Sultana CSD is currently discharging their maximum capacity of EDU's. Hence, the Sultana CSD has no additional allocated contract capacity available. If Sultana is to grow, the District will either need to purchase capacity from the Cutler-Orosi Joint Powers Wastewater Authority when additions are made I the future or the District will need to secure capacity at another treatment plant such as the City of Dinuba. Besides the negotiating and costs involved, this would also necessitate the construction of miles of sewer line.

TEVISTON

51-200 Connections Range
(105 Connections with 136 Dwellings)

Location and Introduction

The Tulare County community of Teviston is located between the communities of Pixley and Earlimart along US Highway 99.

1. When was community established and why.

Teviston was laid out in the late 1870s by the Southern Pacific Railroad between the towns of Pixley and Alila (now Earlimart). In this earlier era, the area was selected as a good location to grow eucalyptus trees for use by the railroad. There are still signs of remnant eucalyptus groves in the community. However, the lumber was found to be

unsuitable for railroad ties and the soil too alkaline for commercial farming so development of the townsite did not occur. In 1938, an 80-acre parcel was purchased in Teviston by JJ Freeman, an African-American minister from Oklahoma, who encouraged other African-American families from Oklahoma, Texas and the Midwest to take advantage of available farm work. Reverend Freeman first provided a farm labor camp and later began selling parcels of land to the dust bowl immigrants. Through the last years of the depression and until the years following World War II, Teviston was one of the few places in Tulare County where African-Americans could own land, so the community grew. One hundred years after the initial American wave of settlement in California, these men and women remained true pioneers, continuing until 1959 to live in conditions generally associated with early settlers. While Americans were enjoying the rapidly accelerating affluence of the 50's, Teviston residents were hauling water in milk cans from the neighboring community of Pixley three miles away. Kerosene lamps were used for lighting at night and most houses depended on pit privies for sanitation.

Today Teviston is divided by Highway 99 and the Railroad. On the eastern side of Highway 99 and the Railroad, Teviston is bounded on the south by Deer Creek in an area some call Alkali Flats south of Avenue 72. The northern boundary is Avenue 84. The eastern boundary is Road 136. On the western side of Highway 99 Teviston is bounded by Avenue 72 on the south and Road 80 on the north and stretching west to Road 124.

2. How old are the systems?

Water System: In the 1950s efforts in the community were assisted by the American Friends Service Committee to help develop a community water system. One of the first steps was the formation of a Community Services District in November 1956. The District covers a portion of the overall community of Teviston and is located east of Highway 99 with the intersection of Avenue 80 and Road 132 located roughly in the center. The newly formed district borrowed funds to drill a community well. However, it wasn't until four years after that a water distribution system was built to supply at least part of the community with drinking water.

The District's initial water distribution system was primarily constructed in the early 1960's. The pipeline system consisted of a mix of asbestos-cement, galvanized and plastic pipe varying in size from 1-1/2 to 6 inches. The distribution system was suffering from numerous breaks and leaks. The galvanized pipeline portions of the system had been corroded by the "hot" alkali soil. These frequent leaks, often in close proximity to septic tank systems, created a potential health hazard to Teviston's water consumers. The District also had few sectionalizing shut off valves which necessitated shutting down the whole system to make repairs.

Efforts in the early 1970s were unsuccessful in annexing a portion of Teviston located west of the Highway. However, this proposed area then became part of the District's Sphere of Influence (see LAFCO MSR Map Figure 8.1). For years the system operated with one source of water, the well located on Avenue 80. Hence, with no backup source when a breakdown in the pump occurred, the community would be out of water, sometimes days at a time. In the 1970's the District convinced Tulare County to apply for HUD Community Development Block Grant (CDBG) funds to drill a second well for the community. A $31,700 CDBG grant was approved and the District, putting over $8,000 of its reserves in to the project and securing a $9,500 National Demonstration Water Project grant was able to drill its second "North" well (located just west of Road 32 and north of Avenue 80) which provided much needed backup to the system.

During the late 1990's the District successfully applied to USDA Rural Development and received a 75% grant and 25% loan to upgrade the efficiency of the systems two well pumps, replace almost all of the water distribution system with 6-inch PVC piping, install sectionalizing gate valves, install new house services, and install customer water meters. The water system supplies water to about 136 homes, four churches and the Teviston Community/Child Care Centers.

Currently, the system is down to operating only one (1) well again. The original South Well's casing has apparently collapsed after 50 years of use and is no longer operational. The North Well is the only source of water for the community now and the system has no back-up; and therefore, is vulnerable to water outages. One such outage occurred in August, 2012 when the water level in the North Well dipped below the pumping level. This caused damage to the pump and required a lengthening of the pump shaft below the lower water level. As a result, the community was out of running water for approximately four (4) days.

Sewer System: Teviston is an unsewered community and residents depend on septic systems for wastewater disposal.

3. Median Household Income (MHI).

The Teviston community is split into two Census Tract Block Groups that encompass a much larger area than the actual community. The Teviston Community Services District is located in a portion of Tulare County Census Tract 42, Block Group 1. The 1990 annual median household income for this Block Group was $18,810. To more accurately determine the Median Household Income and other demographics for the community, a special survey was conducted by Self-Help Enterprises and the Teviston Betterment Association in the Spring of 1995. The results of this survey indicated that the actual Annual Median Household Income figure for the District was only **$9,000** at the time. Another Census was conducted in the year 2000, which indicated that the Median Household Income for Census Tract 42, Block Group 1 was determined to be $24,432 and

$24,500 (51.6% of statewide median household income) for CT42, BG1 at that time. More recent data from the 2006-09 Census Bureau's American Community Survey indicates a Median Household Income of $24,627 +/-$3,701 (40.0% of statewide median household income) for CT42, BG1. Though these numbers are very low, they again cover the larger area encompassed by the Census Tract Block Group (CTBG) that is not totally representative of the community of Teviston.

For the Year 2010 Census, the greater Teviston area became a Census Designated Place (CDP). For the Teviston CDP, the median annual household income for the past three rounds of the ACS is expressed as:

Period	Area	MHI	Margin of Error	% of State MHI
2006-2010	CDP	$23,050	+/- $8,292	37.9%
2007-2011	CDP	$25,532	+/- $13,446	41.4%
2008-2012	CDP	$25,063	+/- $10,819	40.5%

Based on all of the above ACS data, Teviston can be viewed as a severely disadvantaged community with a median household income less than 60% of the statewide median.

4. Monthly sewer rates and water rates, if known.

Water Rates: The monthly water rate charged by the Teviston Community Services District is a base rate of $55.00 dollars per month for the first 15,000 gallons; and $1.00 for every 1,000 gallons thereafter.

Sewer Rates: There is no sewer service in the community of Teviston. All residents are on individual septic tanks.

5. Billing methods for the community systems.

The District staff read water meters and calculates each customer's water usage. In addition, District staff sends out monthly bills to its customers by mail as close to the first of the month as possible. Payments in the form of check and/or money order can be mailed to the District's Post Office Box in Pixley; or can be paid in person at the District's office located at the Teviston Community Center. Office hours for receipt of payment are from 1:00 pm to 5:00 pm Monday through Thursday. If paid at the District Office, the District Office accepts cash, checks and money orders for payment.

6. Are systems in the black or in debt?

The amount of revenue collected to cover water system expenses is sufficient to cover operating costs, debt service. A debt reserve of 10% of the debt service payment is

collected to cover future USDA loan payments and can be used, with the prior permission of USDA, to cover emergency repair expenses.

In the fiscal year 2009-10, the District's financial situation was as follows:

Description	Water Systems
Cash beginning of year	**$ 1,900**
Operating Income	$ 88,068
Operating Expense	$ 91,902
Depreciation	$ 16,390
Operating Exp. (w/o Dep.)	$ 75,512
Non-operating Revenue	$ 245
Non-operating Expenses	$ 6,914
Cash end of year	$ 7,227

It should be noted that all numbers, with the exception of the cash balances are based on the accrual method of accounting.

7. Are systems run as a business or are the systems dealt with more issue by issue as they come up?

The Teviston CSD District operates as a business, but has its challenges. After the older South Well's casing collapsed a few years ago, the District has been without a back-up source of water. The District has been able to locate an affordable funding source to either repair the South Well (if possible) or drill a new well. The District Board and management operate the water system finances as an enterprise fund, collecting water related revenue to cover water related expenses. Water rates have increased significantly over the years.

8. Range of household budgets in the community.

Data from the Year 2000 Census indicates the following ranges in income for East Orosi families. More recent census data shows the median household income level since the 2000 Census have remained almost the same, so it is reasonable to use these earlier numbers:

Teviston is severely disadvantaged, with 2006-10 ACS MHI indicating an MHI at less than 40% of the statewide MHI. The 2006-10 ACS indicates the following range of household incomes in the community:

Teviston CDP, California	Annual Household Income Estimate	Margin of Error
Less than $10,000	0.0%	+/-13.6
$10,000 to $14,999	17.3%	+/-17.1
$15,000 to $24,999	47.1%	+/-19.2
$25,000 to $34,999	0.0%	+/-13.6
$35,000 to $49,999	18.8%	+/-15.6
$50,000 to $74,999	7.0%	+/-6.2
$75,000 to $99,999	8.1%	+/-8.4
$100,000 to $149,999	0.0%	+/-13.6
$150,000 to $199,999	1.8%	+/-3.1
$200,000 or more	0.0%	+/-13.6
Median income (dollars)	23,050	+/-8,392

An estimated 64% of households have annual incomes of less than $25,000. However, roughly 17% of households have annual incomes over $50,000. The 2006-10 ACS indicates that 42.0% +/- 23.2% of Teviston residents live below the poverty line.

A breakdown of similar household income levels for families in other Tulare Lake Basin communities shows the following budgets. There is some discretionary funding, but it is limited.

9. Population served.

The 2010 United States Census reported the greater Teviston area had a population of 1,214. The racial makeup of Teviston was 449 (37.0%) White, 50 (4.1%) African American, 9 (0.7%) Native American, 10 (0.8%) Asian, 0 (0.0%) Pacific Islander, 640 (52.7%) from other races, and 56 (4.6%) from two or more races. Hispanic or Latino of any race was 1,039 persons (85.6%).

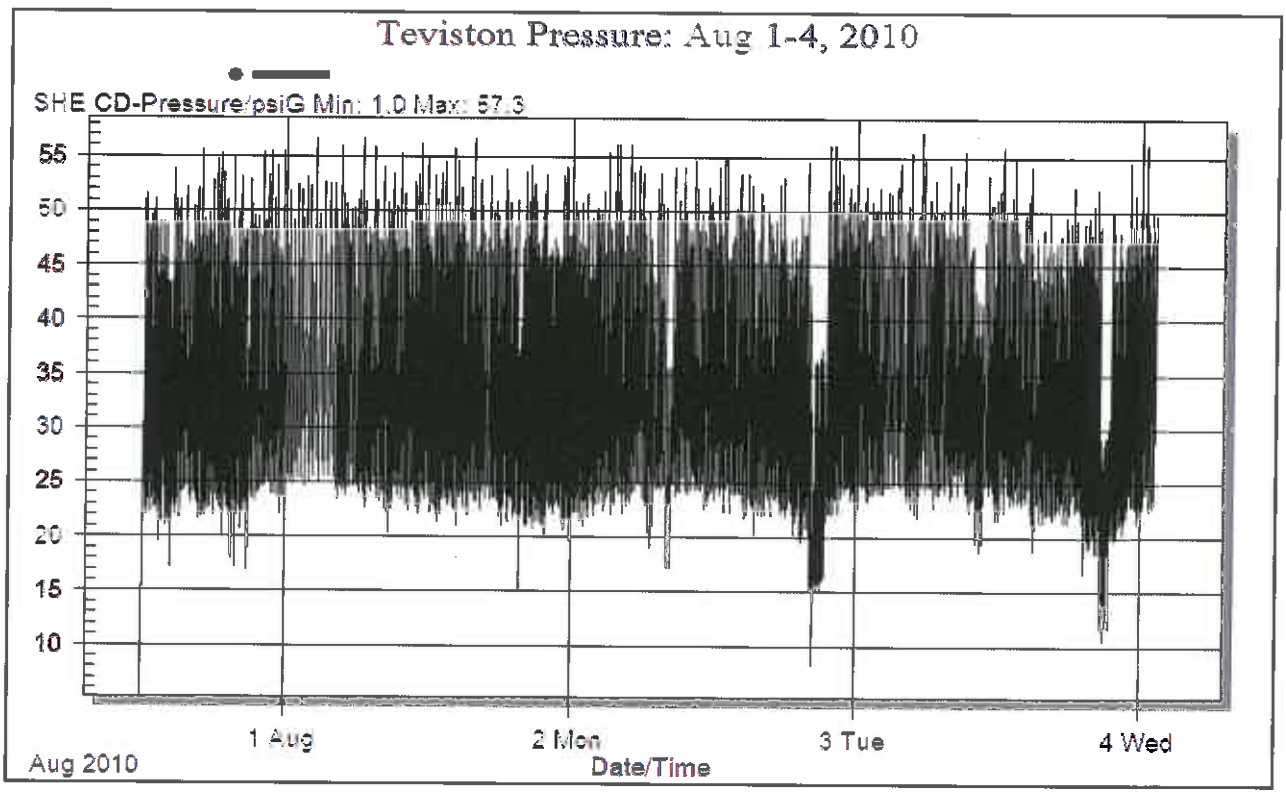
The average household size was 4.12. There were 135 housing units, of which 129 (43.7%) were owner-occupied, and 166 (56.3%) were occupied by renters. The homeowner vacancy rate was 7.2%; the rental vacancy rate was 5.1%. 500 people (41.2% of the population) lived in owner-occupied housing units and 714 people (58.8%) lived in rental housing units.

10. Short description of water systems and sewer systems including number of connections adequacy of backup systems and MCL challenges if known.

Water System: The Teviston Community Services District's water system consists of two wells located approximately 700 feet from each other, each equipped with a 60 hp turbine oil lubricated pump and 5,000 gallon hydro-pneumatic tank. The system is down to one operating well again.

The original (South) Well's casing has apparently collapsed after 50 years of use and is no longer operational. Currently, the North Well is the only source of water for the community. In addition, the system has no back-up water supply and is vulnerable to water outages. The water distribution system was almost completely replaced in 1998 with 6-inch PVC piping, new sectionalizing gate valves, new house services and customer water meters.

The water system currently supplies water to approximately one-hundred and thirty-five (135) homes, four (4) churches; and the Teviston Community/Child Care Centers. The lack of a backup water supply with only one (1) well pump operating can stress the system; and it is not uncommon for water system pressure to fall below the water works standard of 20 psi during the summer months (see graph below).



Water Quality (MCL Challenges): The quality of water has met primary drinking water quality standards and though the community is near other communities with nitrate and/or arsenic MCL concerns, the Teviston community has consistently produced water that complies with both the nitrate and arsenic Maximum Contaminant Levels.

There are also a number of dwellings in the Teviston area that are provided water by private domestic wells.

Sewer System: All of the community is unsewered and relies on septic tank systems.

11. Existing governing body such as County Service District, Public Utility District, Mutual water system, etc.

The existing governing Board in the community of Teviston is the Teviston Community Services District which provides water service to that area within its boundaries of the unincorporated community of Teviston.

12. Decision making process:

The Teviston CSD Board of Directors is comprised of five (5) Board Members who are in charge of the decision making process. This applies to policy decisions and other major decisions. The District Office Manager with assistance of the Board President provides the overall management of the system.

13. Discussion of operation and maintenance personnel for each community.

- 1 Part-time District Office Manager;
- 1 Part-time District Officer Manager Assistant; and
- 1 Part-time Contracted Water System Operator

14. Discuss how district is managed such as independent manager, County personnel involved, and CDPH personnel involved.

The District has one part-time office manager that is accountable to the Board of Directors. It appears that the office manager fills the role of a general manager with the assistance of the Board President. The District lacks the resources to hire a full time manager and there is not a need for full time management. Since the TCSD water system has less than 200 connections, the system is monitored by the Tulare County Health & Human Services Agency, Environmental Health Division. Tulare County is the Local Primacy Agency under the State Department of Public Health in monitoring compliance for and in enforcing EPA's Safe Drinking Water Act.

15. Discuss problems that have been solved by community that could be applied as solutions by other communities.

The District received a 75% grant and 25% loan from USDA for its water project built in the late 1990s. On May 17, 1996, USDA Rural Development obligated a $372,000 grant and $130,000 loan to the project. Projects solely funded by USDA in disadvantaged communities have been less common in recent years; however, this traditional funding approach can be a great option for rural communities.

16. Discuss largest unresolved problems/issues for the community and what is being considered to solve these problems, if any.

The water system's original well (South Well) that is now over 50 years old has collapsed. Therefore, the water system is down to one operating well again. The North Well is the only source of water for the community. Thus, the system has no back-up; and is therefore vulnerable to water outages. In August of 2012, one such outage occurred when the water level in the North Well dipped below the pumping level. This caused damage to the pump and required a lengthening of the pump shaft below the lower water level. The community was out of running water for four (4) days.

A planning application has been submitted to CDPH in April 2013 to cover the costs of a feasibility study to investigate and design the best options for a secondary source of potable water for the community. At the time of the preparation of this community profile (February 2014), this application is still pending.

TOOLEVILLE

51-200 Connections Range
(76 Connections)

Location and introduction:

Tooleville is a small rural community located on the east side of Spruce Road roughly a mile and a half east of the city of Exeter in Tulare County. Homes in Tooleville are located along Alfred Avenue on the north and Morgan Avenue on the south, with a few homes fronting Spruce Road.

1. When was community established and why

Tooleville (named for the Toole family) was a farmworker settlement established by Dust Bowl migrants in the 1940s. It remains largely a farmworker town, but the population has shifted to be about 75% Hispanic.

2. How old are the systems

The water system was originally installed in the 1960s. Both wells date to that time. The Tooleville Mutual Nonprofit Water Association owns and operates the community's water system which serves 77 residential lots and one small business (currently vacant). The distribution system was replaced in 2009. The Morgan well's pressure tank was replaced in 2011.

3. Median household income

Per the last decennial census to calculate median household income, the 2000 Census indicated the median annual income for households in Tulare County Census Tract 14 Block Group 4 that incorporates the community of Tooleville, was $29,330 or 61.8% of the statewide median household income at that time. Since then the US Census Bureau no longer asks the income question in the decennial census, but rather collects income data through the continually occurring American Community Survey (ACS) where a smaller sampling is done annually. This data is expressed as a 5-year adjusted average. In 2010 Tooleville became a Census Designated Place (CDP). The median annual household income for the Year 2000 Census and the past four rounds of the ACS (3 as a CDP) is expressed as:

Period	Area	MHI	Margin of Error	% of State MHI
2000	CT14BG4	$29,330		61.8%
2005 Survey		$15,500		26%
2005-09	CT14BG4	$52,083	+/- $74,732	88.4%
2006-10	CDP	$43,977	+/- $101,562	72.2%
2007-11	CDP	$25,882	+/- $11,659	42.0%
2008-12	CDP	$28,333	+/- $3,445	46.1%

It is obvious that the two earlier ACS estimates of MHI did not receive input from enough Tooleville households to be representative. The 2005-09 and 2006-10 had margins of error of 143.5% and 230.9% respectively. The 2007-11 and 2008-12 ACS estimates appear to be much more representative. By comparison, a 2005 community survey conducted by Tulare County and Self-Help Enterprises indicated the median household income at that time was $15,500 which was roughly 26% of the statewide income at that time. It is recommended that the 2005 survey data be adjusted to the year 2010 for comparison purposes. With a CPI increase of 10.4% from 2005 to 2010, this would equate to $17,118 in 2010 or 30% of the $57,287 statewide MHI at that time. By comparison, the 2007-11 ACS figure is 42% of the statewide median household income during that period.
As such, Tooleville's median household income is well below the 60 percent of the statewide median household income threshold, justifying a determination that Tooleville is a severely disadvantaged community.

4. Monthly sewer rates and water rates, if known.

The Tulare County Service Area #1 Tooleville Zone of benefit provides sewer service to the community. The monthly sewer rate is $59.25. The Tooleville Mutual Nonprofit Water

Association, Inc. provides water service with a current flat rate of $40/month. This is approximately 1.6% and 1.01% paid for sewer and water respectively of the 2006-10 estimated median household income for the community. Combined, the utility rate is equivalent to 2.7% of area MHI.

5. Billing methods for the community systems. *Does the community use the property tax rolls to collect annually or semi-annually? Are there other services that might be on the same bill? Are bills paid by mail or is there an office drop off point. Discuss how this works for very small communities that do not have a formal billing process.*

The Tooleville Mutual Nonprofit Water Association, Inc. was formed in 2004. This formalized structure replaced an informal ownership framework that had been around since the 1960's. The Water Company operates its water system totally as an enterprise fund with all operating revenue generated from customer user fees. Customers pay in arrears. The water system's bookkeeper generates bills, collects payments, and makes deposits to a bank account. Residents mail payments to the Water Company's post office box in Exeter. The Company only accepts checks and money orders.

Tooleville is also served by a wastewater collection and treatment system that is operated by Tulare County (Tulare County Service Area #1 Tooleville Zone of Benefit). User fees for wastewater are collected via property taxes.

6. Are systems in the black or in debt?

The Tooleville sewer system is in debt to Tulare County, which has been subsidizing the operation of the plant for years. Repeated efforts on the part of the County to increase the user fees have been blocked by residents under Prop 218. Residents have blocked proposed increases in 2010, 2011 and 2012. As a result, the County keeps piling up "debt" against the system.

The Tooleville Mutual Nonprofit Water Association is not in debt at this time. Their recent distribution system improvement was paid for with a USDA grant. In the fiscal year 2010-11, the water system's financial situation was as follows:

Description	Water System
Cash Beginning of Year	$ 31,204
Operating Income	$ 35,030
Operating Expense	$ 38,602
Depreciation	$ 12,456
Operating Expense (w/o Dep)	$ 26,146
Nonoperating Revenue	$ 0.00
Nonoperating Expenses	$ 0.00
Cash End of Year	$ 35,735
Change in Net Assets	$ (8,067)

It should be noted that all numbers, with the exception of the cash balances are based on the accrual method of accounting.

7. Are systems run as a business or are the systems dealt with more issue by issue as they come

The water system is improving its financial situation and has been able to build up sufficient reserves to handle moderately sized emergencies without relying on outside help, such as the $25,000 pressure tank replacement required in 2011. However, since the community is built out and no new connections are ever added, there is no source of funds for capital reserves (i.e. no capacity fees at hookup). Any capital improvements must be done with outside funding, and the small ratepayer base (and severely low incomes) makes most loan funding unaffordable.

8. Range of household budgets in the community. *Discuss how much is spent on utilities such as sewer and water, if known. Are there discretionary funds in the typical households. If water or sewer rates go up what might get cut.*

The following census data from the 2007-11 American Community Survey has been marginal in its accuracy to reflect income ranges for Tooleville (note high margins of error):

Tooleville CDP, California	Annual Household Income Estimate	Margin of Error
Less than $10,000	19.0%	+/-30.0
$10,000 to $14,999	0.0%	+/-41.8
$15,000 to $24,999	20.7%	+/-33.3
$25,000 to $34,999	29.3%	+/-36.3
$35,000 to $49,999	19.0%	+/-28.4
$50,000 to $74,999	12.1%	+/-20.2
$75,000 to $99,999	0.0%	+/-41.8
$100,000 to $149,999	0.0%	+/-41.8
$150,000 to $199,999	0.0%	+/-41.8
$200,000 or more	0.0%	+/-41.8
Median income (dollars)	25,882	+/-11,659

For that reason, the results from the 2005 Community Income Survey shown below appear to be more representative in determining income ranges for Tooleville residents:

Tooleville SURVEY, California	Annual Household Income Estimate
Less than $10,000	3.2%
$10,000 to $14,999	44.3%
$15,000 to $24,999	32.8%
$25,000 to $34,999	14.8%
$35,000 to $49,999	4.9%
$50,000 to $74,999	0
$75,000 to $99,999	0
$100,000 to $149,999	0
$150,000 to $199,999	0
$200,000 or more	0
Median income (dollars)	$15,500

Other data from the 2005 Community Survey included:

Households using bottled water	49
Households treating own water	19

Survey data indicates that an estimated 80% of households have annual incomes less than $25,000 and 95% of households have annual incomes less than $35,000. As such, there is very little disposable income in the community.

9. Population served

The 2010 United States Census reported that Tooleville had a population of 339. The racial makeup of Tooleville was 145 (42.8%) White, 5 (1.5%) African American, 19 (5.6%) Native American, 8 (2.4%) Asian, 2 (0.6%) Pacific Islander, 148 (43.7%) from other races, and 12 (3.5%) from two or more races. Hispanic or Latino of any race were 279 persons (82.3%).

The average household size was 4.35. There were 82 housing units, of which 49 (62.8%) were owner-occupied, and 29 (37.2%) were occupied by renters. The homeowner vacancy rate was 0%; the rental vacancy rate was 6.5%. 205 people (60.5% of the population) lived in owner-occupied housing units and 134 people (39.5%) lived in rental housing units

10. Short description of water systems and sewer systems including number of connections adequacy of backup systems and MCL challenges if known.

The Tulare County Service Area #1 Tooleville Zone of benefit provides sewer service to the community. The Tooleville Mutual Nonprofit Water Association, Inc. has 76 connections servicing 77 residences. The system has two water wells that supply the community. The Alfred Avenue well was drilled to a depth of 310 feet with an annular seal to a depth of 90 feet. This is an open bottom well with no perforations and no gravel pack. It is equipped with a 7.5 hp submersible pump and 3,500 gallon hydro pneumatic tank. The Morgan Avenue well was drilled to a depth of 320 feet with an annular seal to a depth of 99 feet. This is an open bottom well with no perforations and no gravel pack. It is equipped with a 7.5 hp submersible pump and 1,200 gallon hydro pneumatic tank. Interestingly, for about

the past three years, the nitrate levels in both wells have dropped below 45ppm. Water pumped from the wells has intermittently exceeded the nitrate Maximum Contaminant Level set by EPA and CDPH. The chronic on again and off again problem with Tooleville's water quality has been the nitrate levels of water produced from the community's two wells. Attached is a table listing nitrate levels from both wells from 1978 through October 2012. This table shows that both wells have produced water exceeding the nitrate MCL 9 times over this period.

Tooleville Water System
Nitrate Levels in Active Wells
Nitrate MCL = 45 ppm

Date	Alfred Well (ppm)	Morgan Well (ppm)
8/3/1978	43.0	39.0
6/28/1982	43.0	44.0
7/27/1982		40.0
8/26/1982	40.0	42.0
10/17/1984		5.5*
9/30/1988	28.0	40.0
2/27/1992	42.0	40.0
1/5/1995	42.0	42.0
1/3/1997		70.0
2/13/1997		85.0
6/2/1997		87.0
2/25/1998		85.0
2/15/2000	45	
4/19/2000	47.9	
8/30/2001	54	71.7
9/17/2001	43	
2/14/2002	45	
5/9/2002		67.1
7/23/2003	55.4	
1/20/2005		46.2
5/24/2006	46.2	43.1
7/27/2006	68	47
9/28/2006	55.7	
11/29/2006	34.1	65
1/25/2007	40.3	
4/26/2007	51.9	
5/23/2007		41.7
12/26/2008	40.5	30.2
6/5/2009	47	42
6/23/2010	18	39
9/28/2010	40	42
11/22/2010	38	37
2/25/2011	39	
6/24/2011	45	37
9/2/2011	42	41
10/7/2011	38	41
2/9/2012	40	38
5/10/2012	44	39
7/13/2012	45	38
10/23/2012	39	42
Times Exceeding MCL	**9**	**9**

* Questionable Test result

The distribution system was replaced entirely in 2009 with a USDA grant. Unfortunately, total coliform bacteria has plagued the system since that time. It is unknown whether the

system was not sufficiently flushed at installation, or whether there is a cross-contamination problem (at least two old wells are known to exist and the water company has been unable to prove that they are connected to household plumbing that could be creating a cross-contamination situation). Routine flushing at hydrants on a monthly basis seems to be keeping the problem in check, but on average there are about two bacteriological violations per year.

11. Existing governing body such as County Service District, Public Utility District, Mutual water system, etc.

The Tooleville Mutual Nonprofit Water Association, Inc. is governed by a 5 member Board of Directors. Like many mutuals, Tooleville has a hard time keeping its board of directors full, but the past 5 or so years have seen only a little bit of turnover. It helps that the board pays a monthly stipend to directors who are present at each month's meeting. The stipend is $40, equivalent to one month's water bill. To deter rumors that directors get "free water," each director actually receives a check, not a waiver of their bill.

12. Decision making process. *Is there a board of directors, designated lead home owner, long time unofficial leader, or is there a lack of good decision making process? History on this would be good.*

The board currently meets every other month. There are a couple of families, the Enloes and the Baileys, who have lived in Tooleville since time immemorial and have long-term knowledge of the water system. Both families remain involved in running the water system, or at least staying in touch with what is happening. This is a valuable resource. Again, like many Mutuals, it is rare to get a majority of shareholders at annual meetings, so the bylaws were amended to require only a 20% presence to achieve a quorum.

13. Discussion of operation and maintenance personnel for each community. *Part-time or full time personnel, contractors used, any shared human resources with other communities or agencies.*

The water system has two professional support personnel: a bookkeeper who is actually an employee of the company, and a D3 operator who is a contractor. The operator calls out a well or pipe repair company as needed for major repairs.

14. Discuss how district is managed such as independent manager, County personnel involved, and CDPH personnel involved. *Is the California Public Utilities Commission involved on rate setting or is it a local decision?*

The board makes the decisions at its semi-monthly meetings. The bookkeeper receives the mail, so she makes sure that state filings happen, that taxes are filed, bills paid and revenue deposited, etc. The operator visits weekly or as needed to check the system, flush lines, pull samples, etc. Tulare County takes bacteriological samples. As a Mutual, the system is not regulated by the PUC.

Since the Tooleville Mutual Nonprofit Water Association, Inc. has less than 200 connections, the system is monitored by the Tulare County Health & Human Services Agency, Tulare County Public Health Environmental Health Division. Tulare County is the Local Primacy Agency under the State Department of Public Health in monitoring compliance for and in enforcing EPA's Safe Drinking Water Act.

15. Discuss problems that have been solved by community that could be applied as solutions by other communities.

The local Board and water company membership have made strides towards the eventual resolution of their water system problems. They have successfully applied for CDBG and USDA funding that was used to drill a water test well and replace the water distribution system. The Tooleville Mutual Nonprofit Water Association, Inc. has also successfully applied for and received a commitment for a Proposition 84 planning grant from CDPH to design a source of water by drilling a new well on the west side of Exeter (where higher-quality water is known to exist), wheeling that water through that city to a connection point where a transmission line would transport water to the Tooleville water distribution system.

16. Discuss largest unresolved problems/issues for the community and what is being considered to solve these problems, if any.

The Tooleville Mutual Nonprofit Water Association, Inc. water system has had sporadic nitrate problems and uncertainty since the late 1990s. Low system pressure was frequently a problem until the distribution system was replaced, and that seems to have helped.

Consolidation with the City of Exeter could be a good way to resolve the water quality problems of residents served by the Tooleville Mutual Nonprofit Water Association, Inc. Unfortunately, however, both communities are more or less opposed to full consolidation. Exeter maintains that it does not have the resources to own or manage Tooleville's system. It also remains concerned about the charter city prevailing wage exemption that Exeter fears could be lost to them if they serve an outlying community. This problem was theoretically resolved by SB2X9 in 2009 but it has not yet been tested in court, so Exeter prefers to err on the side of caution in this case. For its part, Tooleville's board of directors is not interested in being a charity case, and would prefer to continue owning and operating their own system. A partial consolidation has also been considered (buying water in bulk through a master meter) but is not currently favored, due to risk on the part of the water company (which would have to cover every month's bill, regardless of collection problems or other revenue issues) and Exeter's unwillingness to help with billing and maintenance. As a result, the only option for a long term water source (that would not intermittently be contaminated with nitrate levels over the MCL) appears to be the drilling of a water well west of Exeter and wheeling potable water through the city's distribution system and then on to Tooleville.

TRACT 92

51-200 Connections Range
(86 Connections, 93 residences)

Location and introduction:

The Tulare County community of Tract 92, also known as Union Addition is located between the City of Visalia and City of Farmersville roughly a half mile south of Caldwell Avenue along Road 148.

1. When was community established and why

Tract 92, also known as Union Addition, was laid out in the 1940's. It is a residential subdivision.

2. How old are the systems

The Tract 92 CSD was formed in 1961 to operate a community water system. Previous to this residents depended on private domestic wells for their water. Though the water system has existed for 50 years, there are still scores of old abandoned private wells that have not been used for decades. As such, these old wells have the potential to serve as conduits for contaminated water to enter local groundwater supply.

3. Median household income

Per the last decennial census to calculate median household income, the 2000 Census indicated the median annual income for households in Tulare County Census Tract 16.02 Block Group 2 (as of 2012, Block Group 4) that incorporates the community of Tract 92, was $21,406 or 45.1% of the statewide median household income at that time. Since then the US Census Bureau no longer asks the income question in the decennial census, but rather collects income data through the continually occurring American Community Survey (ACS) where a smaller sampling is done annually. This data is expressed as a 5-year adjusted average. The median annual household income for Tulare County Census Tract 16.02 Block Group 2 in the 2005-09, 2006-10 and the 2007-11 ACS is expressed as:

Period	MHI	Margin of Error	% of State MHI
2005-09	$32,400	+/- $10,516	53.6%
2006-10	$36,538	+/- $11,066	60.0%
2007-11	$31,149	+/- $7,262	50.5%

As such, Tract 92's median household income overall is less than the 60 percent of the statewide median household income threshold, justifying a determination that Tract 92 is a severely disadvantaged community.

4. Monthly sewer rates and water rates, if known.

There is no sewer service in Tract 92. The community is dependent on individual septic tank systems for sewage disposal. The current monthly flat water rate is $18 for small parcels and $21 for large parcels (the average has been calculated to be $22.51). This is approximately 0.74% of the 2006-10 estimated median household income for the community.

5. Billing methods for the community systems

The Tract 92 CSD bills its customers on a quarterly basis. The secretary sends bills, collects payments through the mail and keeps the books. Several members of the community choose to pay in advance.

6. Are systems in the black or in debt?

The Tract 92 CSD does not currently carry any debt. Its rates have been kept artificially low by not making any capital improvements for many years. The District does not maintain an office or any staff, apart from the secretary who is paid a nominal amount each month (about $215). For the past three years, the District has also contracted with a D1 operator who checks on the system, pulls samples and operates the chlorinator. He is paid about $400 per month.

In the fiscal year 2010-11, the District's financial situation was as follows:

Description	Water System	
Cash beginning of year	$	72,116
Operating Income	$	22,803
Operating Expense	$	22,300
Depreciation	$	944
Operating Exp. (w/o Dep.)	$	22,300
Non-operating Revenue	$	1,842
Non-operating Expenses	$	0
Cash end of year	$	74,498
Change in Net Assets	$	2,345
Interest Paid	$	0

It should be noted that all numbers, with the exception of the cash balances are based on the accrual method of accounting.

7. Are systems run as a business or are the systems dealt with more issue by issue as they come

The District operates as a business, but has its challenges. For example:

A recent (2011) Municipal Services Review (MSR) by Tulare County LAFCO makes the following conclusion:

> ...The District has appropriate mechanisms in place that ensure that funding is available for any increase in demand and for capital expenditures. The TCSD limits its expenditures to salaries/benefits and supplies and seeks grant monies for any infrastructure improvements. This further ensures that the TCSD is in a good position, by having enough cash on hand available, to absorb any shock in demand increases or other unforeseeable changes.

8. **Range of household budgets in the community** *Discuss how much is spent on utilities such as sewer and water, if known. Are there discretionary funds in the typical households. If water or sewer rates go up what might get cut.*

Tract 92 is a severely disadvantaged community, with 2006-10 ACS MHI indicating an MHI at 60% of the statewide MHI. The 2006-10 ACS indicates the following range of household incomes in the community:

Tulare County CT 16.02, California	Annual Household Income Estimate
Less than $10,000	13%
$10,000 to $14,999	6%
$15,000 to $24,999	18%
$25,000 to $34,999	20%
$35,000 to $49,999	17%
$50,000 to $74,999	12%
Median income (dollars)	$36,538

An estimated 37% of households have annual incomes less than $25,000 and 57% of households have annual incomes less than $35,000. As such, there is very little disposable income in the community.

9. **Population served**.

The Census Tract Block Group that includes Tract 92 had a population of 1,195 in the 2010 Decennial Census.

The population within the District boundaries is estimated to be 500 persons (District estimate based on number of connections and estimate of persons per household).

The typical District customer lives full-time in the tract. Most of the dwellings are owner-occupied with approximately 10% of them serving as rental units. The majority of residents are over 45 years of age. (Tulare County LAFCO, Municipal Services Review.)

10. **Short description of water systems and sewer systems including number of connections adequacy of backup systems and MCL challenges if known.**

The Tract 92 CSD has 86 active connections servicing 93 residences and one church.

The system currently consists of (2) drilled vertical wells, the east well (Well #1) and the west well (Well #2). Both wells are located within the same locked chain-link fenced enclosure. Well #1 was drilled to a depth of 248 feet and has a 12-inch casing perforated between a depth of 196 and 223 feet. It is equipped with a 40 hp oil-

lubricated turbine pump, pressure relief valve and sample tap. Well #2 is an open bottom well that was drilled to a depth of 180 feet deep and has an 8-inch casing with a 30 foot annular seal. This well is equipped with a 15 hp submersible pump, single check valve and sample tap. Both wells empty into a single 5,000-gallon pressure storage tank. The wells are rotated on a constant basis to ensure equal usage during each month except July and August when only one pump is in use. Water is distributed via 6-inch mains from the well, to a 4-inch main from the storage tank to 2-inch laterals for connection distribution. (Tulare County LAFCO, Municipal Service Review and Tulare County Health Department records.)
The water system has been found to be in violation of the Total Coliform Rule, and has been forced to install continuous chlorination to deal with this problem. The LMI Hypochlorinator was installed in November 2007 due to repeat positive total coliform violations between April and October 2001.

There is no community wide sewer system in Tract 92. The community depends on individual on-site septic tank systems for wastewater disposal.

11. Existing governing body such as County Service District, Public Utility District, Mutual water system, etc.

The Tract 92 Community Services District provides water service to the unincorporated community of Tract 92 (AKA Union Addition). The District is governed by a 5-member board of directors that meets quarterly.

12. Decision making process *Is there a board of directors, designated lead home owner, long time unofficial leader, or is there a lack of good decision making process. History on this would be good.*

The Tract 92 CSD Board of Directors is in charge of the decision making process related to the community's water system. This applies to policy decisions and other major decisions. The District General Manager provides the overall management of the system.

13. Discussion of operation and maintenance personnel for each community

Part-time or full time personnel, contractors used, any shared human resources with other communities or agencies.

The District has a contracted operator who puts in five to ten hours per month maintaining the Tract 92 system. The operator has a full-time job not related to water, and is a part-time operator for a couple of other systems in Tulare County.

14. Discuss how district is managed such as independent manager, County personnel involved, CDPH personnel involved *Is the California Public Utilities Commission involved on rate setting or is it a local decision?*

The District has no manager or day-to-day staff. The district's secretary (not a board member) is the primary point of contact and does all the billing.

Since the Tract 92 CSD water system has less than 200 connections, the system is monitored by the Tulare County Health & Human Services Agency, Tulare County Public Health Environmental Health Division. Tulare County is the Local Primacy Agency under the State Department of Public Health in monitoring compliance for and in enforcing EPA's Safe Drinking Water Act.

No CPUC. Most of their functions are entirely internal (budgeting, billing, operations, etc).

15. Discuss problems that have been solved by community that could be applied as solutions by other communities.

Tract 92 has been making strides towards the eventual resolution of their bacteriological problem. The District has successfully applied for and received a planning DWSRF grant/loan from CDPH and a CDBG P&TA grant to plan and design improvements to the water system to resolve the bacteriological problem. In addition, the District has applied for CDPH Prop 50 funds for construction of the recommended improvements.

16. Discuss largest unresolved problems/issues for the community and what is being considered to solve these problems, if any.

Tract 92 has planning money available from the State Revolving Fund and is working toward obtaining a funding agreement (FA). However, they will have to raise their rates significantly in order to qualify for grant funding through SRF. The Board has decided that they are willing to do this.

Using Community Development Block Grant funding from Tulare County, a technical report was prepared by Provost & Pritchard in 2012, recommending a hybrid approach to a replacement water source. In accordance with the board's preference, the recommendation is to drill one new well within the community, and install a sizable storage tank. For backup supply and fire flow, a connection to California Water Service Company that owns and operates the water system in nearby Visalia is recommended. This solution allows the community to retain control of their water system, while keeping capital costs lower and providing redundancy. This arrangement also provides for the possibility of future consolidation with California Water Service.

The 2011 LAFCO MSR makes the following comments regarding the operation of the District:

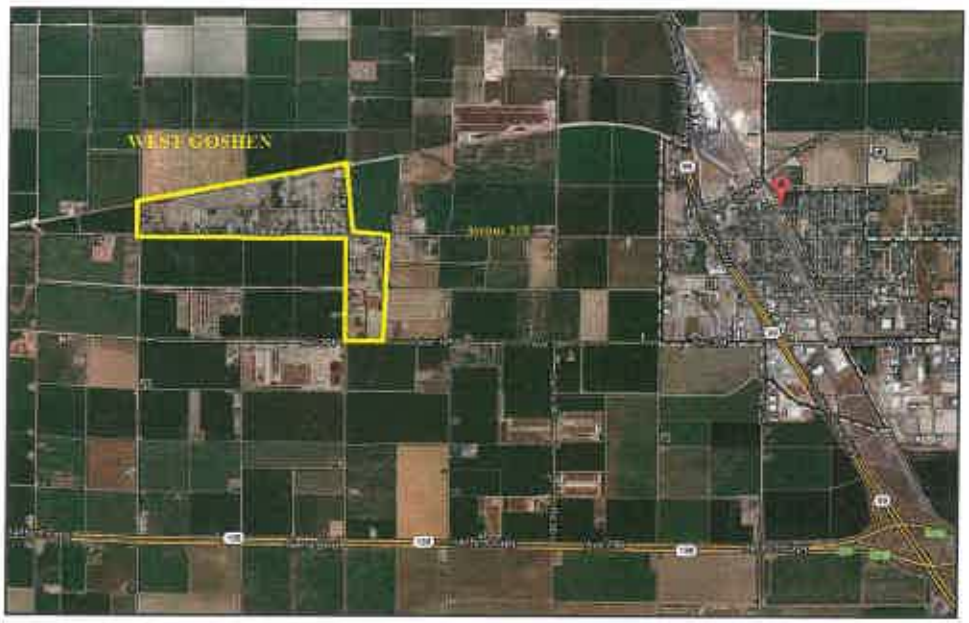
> The TCSD is tested on a regular basis and according to the most recent Sanitary Survey report prepared by Tulare Environmental Health and conversations with its staff the TCSD is not categorized as a "violator" meaning it has successfully passed each test listed above and continues to be in compliance with the Safe Drinking Water Act regulations. In addition the TCSD has fully cooperated with LAFCO while preparing this MSR. LAFCO does recommend, as with all other Group 4 CSDs, that TCSD establish a website where basic information can be archived, such as meeting minutes, agendas, cancellation notices and also notices of violation. This will not only promote district transparency and accountability, but also minimize the health risk to customers by providing a means of informing them of contamination violations in a timely manner. The cost of creating and maintaining a webpage is a legitimate obstacle that must be considered. Financially strapped districts like the TCSD; however, can work with districts in a similar situation to combine their resources and raise the funds necessary to create and maintain a very simple, no-frills webpage that will house basic information for each district such as minutes, agendas, notices of violation and cancellation notices. Alternatively, these districts can use their consolidated resources to pay another governmental agency (such as LAFCO or Tulare County) to house basic information for each district on their own website.

WEST GOSHEN

51-200 Connections Range
(86 Connections)

Location and introduction:

The Tulare County community of West Goshen is located approximately a mile and a half west of the town of Goshen along Avenue 308, just east of the border with Kings County.



1. When was community established and why.

The central portion of West Goshen was laid out by Edwin and Grace Matheny in 1952 as Tulare County Tract 188. It is unknown if this or neighboring properties were settled earlier. West Goshen as were many other rural San Joaquin Valley communities was originally settled by immigrants from Oklahoma, Arkansas and neighboring dust bowl states.

2. How old are the systems?

The mutual water company was incorporated in 1967 to meet the water supply needs of a concentrated area of homes west of the community of Goshen, known as West Goshen. The community's two wells were drilled in 1968 and 1976, respectively, and the distribution system was constructed in late 1968 and 1969. The distribution system is composed of AC transmission lines, cast iron fittings and polyethylene service laterals. It is not "looped" (i.e. it has dead ends). The two wells both feed into a 5,000 gallon hydro-pneumatic tank. Both wells are at or nearing the end of their useful lives. Apparently local soils have a high "blue sand" content that is very sticky, passes through gravel pack and wreaks havoc on pump bowls.

In Well 1, a five-year old turbine pump recently failed due to sanding and multiple compression breaks in the casing. The well was one-third-filled in with gravel and sand, material that was extremely difficult to airlift out. (This was a known condition prior to this

outage.) Repairs are ongoing and the well is currently offline. Well #2 (equipped with a small 15hp submersible) supplied water until the motor burned out on Oct 31. The pump was replaced with CDPH emergency grant funding and the community is once more relying on it (it's a backup source and is not used under normal circumstances). Both wells are contaminated with nitrate that slightly exceeds the MCL.

3. Median household income

Per the last decennial census to calculate median household income, the 2000 Census indicated the median annual income for households in Tulare County Census Tract 9 Block Group 3 that incorporates the community of West Goshen, was $36,528 or 76.9% of the statewide median household income at that time. Since then the US Census Bureau no longer asks the income question in the decennial census, but rather collects income data through the continually occurring American Community Survey (ACS) where a smaller sampling is done annually. This data is expressed as a 5-year adjusted average. In 2010 West Goshen became a Census Designated Place (CDP). The median annual household income for the Year 2000 Census of the larger Tulare County Census Tract 9 Block Group 3, the past four rounds (one as a Census Tract Block Group and 3 as a CDP) of the ACS, and the community survey conducted in 2013 is expressed as:

Period	Area	MHI	Margin of Error	% of State MHI
2000	CT9BG3	$36,528		76.9%
2005-09	CT9BG3	$52,500	+/- $13,971	86.9%
2006-10	CDP	$41,250	+/- $8,558	72.0%
2007-11	CDP	$24,083	+/- $35,214	39.1%
2013 Survey		$21,000		34.2%
2008-12	CDP	$14,208	+/- $27,289	23.1%

Earlier Census Tract Block Group data and even CDP data from the ACS with high margins of error were not very representative of the community's true annual median household income. For this reason, a community survey was conducted in May 2013 by Rural Community Assistance Corporation assisted by Self-Help Enterprises and funded by CDPH. The annual Median Household Income was found to be $21,000. As such, West Goshen's median household income is well below the 60 percent of the statewide median household income threshold, justifying a determination that West Goshen is a severely disadvantaged community.

4. Monthly sewer rates and water rates, if known

Water rates are $45.00. The rate was temporarily increased to $50.00 as a result of recent well failures. West Goshen homes are served by on-site septic tank systems so there is no sewer charge.

5. Billing methods for the community systems.

Rates are flat so there is no meter reading. This mutual water company has no authority to collect taxes so all billing is done directly (by mail). A treasurer/bookkeeper is paid a small stipend to mail bills, collect payments via the PO Box, and keep the books. She is not a

professional bookkeeper, but a (former) community resident who has some skill with books. There is no office or any central location at all; files are kept rather haphazardly by current board members. There is a desire to construct a shed at the well site where tools and records could be stored, but it hasn't happened yet. In the past, files have allegedly been damaged by flood or fire, and probably some have been destroyed and/or lost.

6. Are systems in the black or in debt?

Currently, the system carries no debt, but they struggle to keep afloat. In 2007, the water company nearly defaulted on year 39 of a 40-year USDA loan because the board of directors walked away. A new board stepped up and the payment was made, but there was virtually no money in the bank at the time. They've slowly built up a small reserve, but usually when repairs are needed, they are forced to make payment arrangements with the vendor/consultant.

7. Are systems run as a business or are the systems dealt with more issue by issue as they come up? *Are systems run as a business or are the systems dealt with more issue by issue as they come up?*

The water company does put money into reserves but they haven't yet managed to put away enough to carry them through any but the most minor of operational problems.

8. Range of household budgets in the community. *Discuss how much is spent on utilities such as sewer and water, if known. Are there discretionary funds in the typical households? If water or sewer rates go up what might get cut.*

The following table represents income distribution as documented by a 2013 household survey conducted by RCAC and funded by CDPH.

West Goshen MWC Service Area, California	Number of Households	Annual Household Income Estimate
Less than $10,000	5	8.5%
$10,000 to $14,999	12	20.3%
$15,000 to $24,999	18	30.5%
$25,000 to $34,999	13	22.0%
$35,000 to $49,999	7	11.9%
$50,000 to $74,999	2	3.4%
$75,000 to $99,999	1	1.7%
$100,000 to $149,999	1	1.7%
$150,000 or more	0	0.0%
Median income (dollars)		$21,000

Survey data indicates that an estimated 59% of households have annual incomes less than $25,000 and 81% of households have annual incomes less than $35,000. As such, there is very little disposable income in the community.

There is no natural gas service in West Goshen so residents spend more of their disposable income on energy services than in other similar communities. This means that there are fewer dollars available for each family to cover water utility and drinking water costs.

9. Population served

The 2010 United States Census reported that West Goshen had a population of 511. The racial makeup of West Goshen was 276 (54.0%) White, 2 (0.4%) African American, 10 (2.0%) Native American, 7 (1.4%) Asian, 0 (0.0%) Pacific Islander, 195 (38.2%) from other races, and 21 (4.1%) from two or more races. Hispanic or Latino of any race was 358 persons (70.1%).

The average household size was 3.68. There were 143 housing units, of which 72 (51.8%) were owner-occupied, and 67 (48.2%) were occupied by renters. The homeowner vacancy rate was 1.4%; the rental vacancy rate was 4.3%. 269 people (52.6% of the population) lived in owner-occupied housing units and 242 people (47.4%) lived in rental housing units.

10. Short description of water systems and sewer systems including number of connections adequacy of backup systems and MCL challenges if known.

The water system is supplied with two water wells located on the same property. The South well (Well #1) is the system's primary well. It was drilled to a depth of 350 feet, has a 12-inch casing and annular seal to a depth of 50 feet. The well is equipped with a 60 hp oil lubricated turbine pump and sand separator. The North well (Well #2) is the system's backup well. It was drilled to a depth of 208 feet, has an 8-inch casing and annular seal to a depth of 52 feet. The well is equipped with a 15 hp submersible pump. Both wells discharge into a shared 5,000 gallon hydro-pneumatic tank.

Water pumped from the wells has shown indications of exceeded the nitrate Maximum Contaminant Level set by EPA and CDPH. Attached is a table listing nitrate levels from both wells from 2004 through December 2012. This table shows that Well #1 and Well #2 have produced water exceeding the nitrate MCL once and 3 times respectively over this period.

West Goshen Water System
Nitrate Levels in Active Wells
Nitrate MCL = 45 ppm

Date	South Well #1 (ppm)	North Well #2 (ppm)
3/30/2004		25.6
12/22/2009		58
12/19/2010	36	
12/29/2010		50
6/12/2012	51	
12/12/2012		49
Times Exceeding MCL	**1**	**3**

In addition to the nitrate MCL violation and well/pump failures noted in the first paragraph of this document, the community also faces capacity challenges. In the late 1990s, when there were about 80 households on the system, the addition of any more customers was discouraged in a report by Ingram Digital Electronics.

Nonetheless, there are now just over 100 homes on the system and the board of directors is very concerned about overburdening the system. A new well has been recommended for years, to be located somewhere in the southeastern area of the system. (It's unknown why Well 2, the backup well, was located only 100' from Well 1, and on the same site. This provides little in the way of redundancy or additional supply, since both wells feed into the same tank and the same lines.) Capacity concerns are only worsened by the fact that many parcels in West Goshen are on the large side, with livestock, pasture and gardens, including marijuana gardens, making a big demand on water supplies.

Beginning in August 2012, the two wells began to fail. The first water outage occurred in August when severe sanding damaged the pump bowls on Well #1. The community immediately switched to using Well #2, the small backup well which has been rarely used. Well #1 was eventually shown to have multiple compression breaks and the bottom 135' of drilled depth was filled in with sand. After considerable effort and several failed attempts, the sand was blown out, and gravel was reached about 15' shy of the drilled depth. When blowout of the gravel was attempted, it immediately filled back in, so clearly the gravel pack was falling into the casing.

By Oct 31, the backup well's pump had failed. It was replaced by a small CDPH emergency grant, but when the replacement pump failed in January 2013, it became clear that Well #2 was also failing, allowing serious sand intrusion. In addition to ruining the new pump, the sand had half-filled the 5,000-gallon pressure tank and packed the 8" pipes downstream of the tank for at least 100 yards. It took just over 48 hours to clear the tank and lines and get water flowing again. The temporary solution (still in place as of this writing, May 7) is a rental pump, placed as shallow as possible in Well #1.

CDPH has taken a strong interest in West Goshen's crisis. The department has recruited California Water Service Co. (Cal Water) to the project, and Cal Water has responded positively. Personnel from Cal Water have supported the WGMWC with the sanding problem and especially with the subsequent total coliform violations that have plagued the system ever since the pipes had to be opened up in January to clear the sand pack. Cal Water installed an emergency chlorination system and has agreed to a master meter consolidation. Funding is in place from CDPH Emergency grant funds (Prop 84), a Supplemental Environmental Project through the Regional Water Quality Control Board, and numerous in-kind contributions from Tulare County and Cal Water.
The master meter solution was approved by the community, with reservations. The financial risk involved in a master meter (read: one bulk water bill to be divided and shared by the whole community) is intimidating, especially since the unmetered water company does not know how much water it consumes. Individual homes are unmetered, so proportional division of the bill based on consumption is not possible. "Middleman" costs such as insurance, bookkeeping and billing will persist, driving up the cost even further.

Finding the master-meter consolidation less than perfect CDPH has committed to trying to find a way to fund a bigger, more permanent project. They are looking at funding a full consolidation project through the Safe Drinking Water State Revolving Fund, which would include not only the 12" main line, but also a replacement distribution system and household meters. This would hopefully result in a dissolution of the WGMWC. Cal Water

has yet to formally agree to this arrangement, but things look positive. An income survey is underway to determine whether WG is a severely disadvantaged community, which would make 100% grant from SDWSRF much easier.

11. Existing governing body such as County Service District, Public Utility District, Mutual water system, etc.

The West Goshen Mutual Water Company is the only formal entity that exists in West Goshen. The directors are elected by the shareholders of the Company.

12. Decision making process. *Is there a board of directors, designated lead home owner, long time unofficial leader, or is there a lack of good decision making process? History on this would be good.*

There have been peaks and valleys of community participation in the water system's activities and the efforts and quality of board leadership and staff capabilities. Several years ago (2008), the MWC was in crisis due to a lack of trust between the residents and board. Payments dropped off and bills were going unpaid including the USDA loan that was due at the time. Through much effort, a new board was installed and confidence in the Board allowed rates to be increased to cover costs. Delinquencies dropped significantly, although they have not disappeared.

Two of the board members from the 2008-era board remain; the other three have resigned, one quite recently. They have been replaced by nomination and things seem to be progressing well enough. The board, especially the two members who have been on the board since 2008, express great enthusiasm for full consolidation with Cal Water and dissolution of the mutual.

13. Discussion of operation and maintenance personnel for each community. *Part-time or full time personnel, contractors used, any shared human resources with other communities or agencies.*

Currently, one of the directors holds a D1 license and serves as the water system's operator. He receives no compensation for this service. The bookkeeper has received a stipend ($400/month), but she has recently indicated her intent to resign and the water company intends to enter into a contract with M. Green and Company in Tulare (the same bookkeeper that Pratt MWC in Matheny Tract uses). Their rates are competitive with the stipend that was being paid to the bookkeeper. For distribution system repairs, the company calls in Andrews Backhoe. For well repairs, they usually work with Ingram Equipment. They hired AECOM to do a brief engineering analysis in 2009 but have not maintained any further working relationship with them.

14. Discuss how district is managed such as independent manager, County personnel involved, CDPH personnel involved. *Is the California Public Utilities Commission involved on rate setting or is it a local decision?*

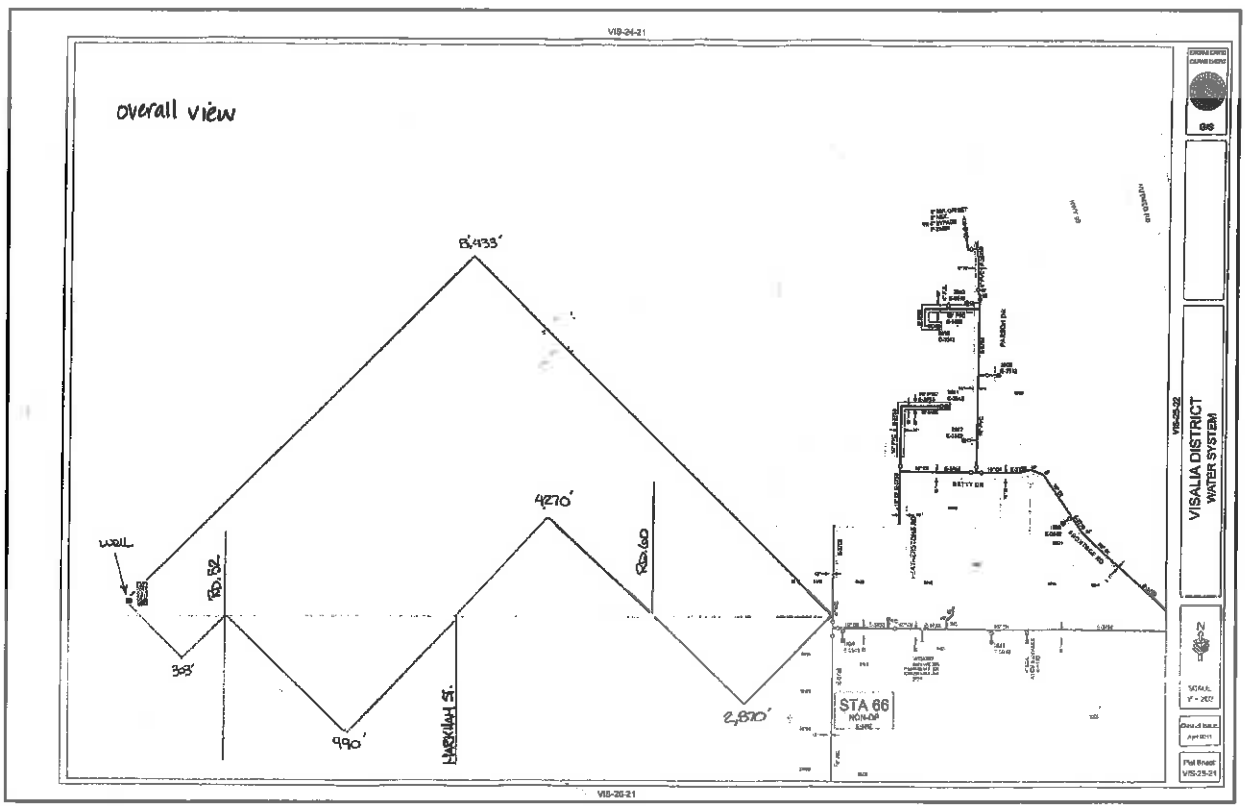
No CPUC; rates are a board decision and are not subject to Prop 218. There is no manager; all decisions are made by the board. Tulare County is LPA.

15. Discuss problems that have been solved by community that could be applied as solutions by other communities.

Having a board member serve as volunteer D1 operator is very helpful to West Goshen but is probably not practical in every community. The board holds its meetings in a nearby Subway restaurant, which seems to make people more comfortable attending meetings. When larger annual meetings of shareholders are held, they meet in a nearby church.

16. Discuss largest unresolved problems/issues for the community and what is being considered to solve these problems, if any.

West Goshen is in need of an alternate source of water. Both wells have begun to collapse, and both pumps have gone out. A temporary pump is installed in Well 1, and has gotten the community through about 10 months of planning and project development. The selected solution is to consolidate the water system with California Water Service, which serves the towns of Goshen and Visalia. They are located about 1.3 miles from Cal Water's Goshen water main. A rough sketch of the connection is shown below:



Emergency funding has been provided by the California Department of Public Health (SRF and Prop 84), with supplemental funding from the Regional Water Quality Control Board in the form of a Supplemental Environmental Project (SEP). This SEP is basically a contribution by an oil company in partial lieu of a fine that has been levied against the oil company by the Regional Board.

In this case, because of the urgent nature of the project, the planning and design phase was completed by Cal Water's engineering department. West Goshen MWC is the grantee for the construction funds issued by CDPH. CDPH district engineers have been directly involved in the project. The construction will be completed in two phases. The first phase will be a simple interconnection with a master meter, which will solve the most immediate problem of reliable and clean drinking water. The second phase, if there is sufficient funding, will replace the distribution system and install residential water meters, and should result in a full consolidation (i.e. Cal Water would assume ownership of the whole system.)

Comparison of Actual and Budgeted Expenses for County Operated Districts

This section will focus on pilot study topic (1) *Management and Non-Infrastructure Solutions*, and cover data relating to County Service Areas (CSA) and Maintenance Districts (MD). In the spirit of efficiency, this section will focus on CSAs located in Fresno and Tulare counties that are located in the Tulare Lake Basin Study Area. In addition, information is provided from county operated Maintenance Districts in neighboring Madera County. A cost efficiency comparison has been attempted based on the following operating costs categories: Administration costs, Books and Supplies costs, Maintenance costs, Office costs, Utilities costs, Water costs, and Miscellaneous costs. Immediately below are the cost categories and respective descriptions:

As noted in Appendix F, Administration costs would include expenses associated with the County District's administrative costs, such as insurance, publications and legal notices, administrative software, organizational software, financial software, etc. Associated costs vary slightly between jurisdictions, and may include other costs generally associated with the purchase of Books and some general office supplies items. Included in these costs would be professional memberships, training costs and training materials, and educational material, stationary, pens, paper, etc.

As noted in Appendix F, Books and Supplies costs may also include expenses associated with the County District's professional memberships, training and training materials, educational material, stationary, pens, paper, etc. Occasionally, depending on jurisdiction, some Books and Supplies' costs are grouped into the Administrative costs' category.

Also noted in Appendix F, Maintenance costs may include expenses associated with a County District's maintenance costs, such as equipment maintenance, facility maintenance, professional and specialized services, and other costs associated with the provision of a district's services. Some jurisdictions contract out the majority of this cost category. Typically, this category accounts for a majority of a CSA's operation and maintenance costs.

As noted in Appendix F, Office costs may include expenses associated with a County District's office expenses, such as office equipment, office space rental, furniture, computers and peripherals, etc. Some jurisdictions may also have some minor janitorial supplies in this category.

Also, as noted in Appendix F, Utilities costs may include expenses associated with a County District's utility expenses, such as electricity, gas, telephone, solar equipment leases, pest control services, etc.

As noted in Appendix F, Water costs may include expenses associated with a County District's water expenses, such as purchases or any off-setting of water costs. However, some utility water purchases may be grouped under Office Costs.

Noted in Appendix F, Miscellaneous costs may include expenses associated with a County District's miscellaneous expenses (or otherwise not categorized) expenses, which may include expenses that would not fit in any above categories, or expenses that do not offer a specific description as to their nature, such as "Special Departmental Expenses", "General Expenses", and "Miscellaneous Expenses". Some CSA's may choose to categorize professional membership and limited unforeseen operation and maintenance expenses in this category.

As previously mentioned, county operated districts were examined in Fresno, Tulare, and Madera counties. Effort was made to identify criteria that would translate into as accurate as possible

comparison; however, no two political jurisdictions are the same and differences in how costs are organized and categorized may account for discrepancies in varying costs categories. For example, although all three of these jurisdictions contract out some degree of their systems' operational and maintenance costs, without a more thorough examination of the specific duties' breakdown of these operational and maintenance contracts by individual system and jurisdiction, it would be difficult to ascertain an exact comparison of these systems' operational cost break down. In the spirit of efficiency, after having contacted all three of these jurisdictions for more detailed cost break downs of operational and maintenance costs, and, after having received limited, albeit valuable, responses from these the jurisdictions, it was opted to proceed with the provided three year data sets and budgets' breakdowns for each of the previously mentioned jurisdictions.

The **County of Fresno** provided a three year data and budget set for its 23 systems. Per County of Fresno designator, these 23 systems are designated Community Service Areas (CSA's) and are composed of 12 water systems, 5 sewer systems, and 6 combined water and sewer systems. A Departmental Work Plan (Budget Sheet) was provided for each of these CSA's. (See Tab, "Fresno County Budget Sheets.) Additionally, the Tab, "Worksheet", for the section corresponding to Fresno illustrates a budgetary breakdown of the each systems' costs. These systems' costs were further analyzed and used to extrapolate three year costs under the following subcategories: Annual Cost Per Connection-Water (WACPC), Average Monthly Cost Per Connection-Water (WAMCPC), Sewer Annual Cost Per Connection (SACPC), Sewer Average Monthly Cost Per Connection (SAMCPC), Combined Annual Cost Per Connection (CACPC), and Combined Average Monthly Cost Per Connection (CAMCPC). Additional analysis of these subcategorized system-specific costs (WACPC, WAMCPC, SACPC, SAMCPC, CACPC, and CAMCPC) allowed for County-wide three year per connection cost averages for each of these subcategories. The following table illustrates the per connection cost breakdown for each of the data and budget sets that were provided for each Fiscal Year (FY) - FY 09-10 (Actual), FY 10-11 (Estimated), and FY 11-12 (Recommended):

Fresno County CSAs	FY09-10 Actual Average Cost	FY10-11 Estimated Budget Average	FY11-12 Recommended Budget Average	# of Systems	Actual FY09-10 Monthly Expenses	Estimated FY10-11 Monthly Budget	Recommended FY11-12 Monthly Budget	MAX Cost Per Connection	MIN Cost Per Connection
Water ACPC	$592.31	$731.79	$981.03	12	$7,107.71	$8,781.51	$11,722.34	$138.44	$13.48
Water AMCPC	$49.36	$60.98	$81.75	12					
SACPC	$1,022.16	$941.64	$829.77	5	$5,110.80	$4,708.18	$4,148.84	$142.85	$36.52
SAMCPC	$85.18	$78.47	$69.15	5					
COMB ACPC	$1,747.96	$1,810.94	$2,353.95	6	$10,487.89	$10,865.66	$14,123.71	$536.51	$90.06
COMB MCPC	$146.67	$150.91	$193.16	6					

Legend	
WACPC	Annual Cost Per Connection - Water
WAMCPC	Average Monthly Cost Per Connection - Water
SACPC	Annual Cost Per Connection - Sewer
SAMCPC	Average Monthly Cost Per Connection - Sewer
CACPC	Annual Cost Per Connection - Combined
CAMCPC	Average Monthly Cost Per Connection - Combined

As illustrated in the table above, the Actual WACPC for FY 09-10 is $592.31; the Estimated WACPC for FY 10-11 is $731.79; and the Recommended WACPC for FY 11-12 is $981.03. (Note that when Fresno County provided the data and budget sets for this study, the County had only identified FY 09-10 as Actuals; the budget for FY 10-11 was an estimated budget; and the budget for FY 11-12 was only a recommended budget.) Based these annual costs, Fresno County's Average Monthly Cost Per Connection for Water are: $49.36 for (Actuals) FY 09-10, $60.98 for (Estimated) FY 10-11, and $81.75 (Recommended), with a water system cost per connection range from $13.48 to $138.44 per month.

For Sewer, the Actual SACPC for FY 09-10 is $1022.66; the Estimated SACPC for FY 10-11 is $941.64; and the Recommended SACPC for FY 11-12 is $829.77. Based these annual costs, Fresno County's Average Monthly Cost Per Connection for Sewer are: $85.18 for (Actuals) FY 09-10, $78.47 for (Estimated) FY 10-11, and $69.15 (Recommended), with a sewer system cost per connection range from $36.52 to $142.85 per month.

For Combined Sewer and Water Systems, the Actual CACPC for FY 09-10 is $1747.98; the Estimated CACPC for FY 10-11 is $1810.94; and the Recommended CACPC for FY 11-12 is $2353.95. Based these annual costs, Fresno County's Average Monthly Cost Per Connection for Combined Water and Sewer systems are: $145.67 for (Actuals) FY 09-10, $150.91 for (Estimated) FY 10-11, and $196.16 (Recommended), with a combined sewer and water system cost per connection range from $90.06 to $536.51 per month.

The County of **Tulare** provided a three year data and budget set for its 11 systems. Per County of Tulare designator, these 11 systems are designated Zones of Benefits (ZOB's) of County Service Area #1 with County Service Area #2 operating the water and sewer system in Wells Tract. Both CSAs are composed of 3 water systems, 4 sewer systems, and 3 combined water and sewer systems. A Departmental Work Plan (Budget Sheet) was provided for each of these CSA's. (See Tab, "Tulare County Budget Sheets.) Additionally, the Tab, "Worksheet", for the section corresponding to Tulare illustrates a budgetary breakdown of the each system's costs were further analyzed and used to extrapolate three year costs under the following subcategories: Annual Cost Per Connection-Water (WACPC), Average Monthly Cost Per Connection-Water (WAMCPC), Sewer Annual Cost Per Connection (SACPC), Sewer Average Monthly Cost Per Connection (SAMCPC), Combined Annual Cost Per Connection (CACPC), and Combined Average Monthly Cost Per Connection (CAMCPC). Additional analysis of these subcategorized system-specific costs (WACPC, WAMCPC, SACPC, SAMCPC, CACPC, and CAMCPC) allowed for County-wide three year per connection cost averages for each of these subcategories. The following table illustrates the per connection cost breakdown for each of the data and budget sets that were provided for each Fiscal Year (FY) - FY 10-11 (Actual), FY 11-12 (Estimated), and FY 12-13 (Recommended):

Tulare County CSAs	FY10-11 Actual Average Cost	FY11-12 Estimated Budget Average	FY12-13 Recommended Budget Average	# of Systems	Actual FY10-11 Monthly Expenses	Estimated FY11-12 Monthly Budget	Recommended FY12-13 Monthly Budget	MAX Cost Per Connection	MIN Cost Per Connection
Water ACPC	**$1,057.59**	**$1,069.61**	**$1,786.12**	**3**	**$3,172.77**	**$3,208.83**	**$5,358.35**	**$142..33**	**$49.35**
Water AMCPC	$88.13	$89.13	$148.84	3					
Sewer ACPC	$1,154.98	$1,296.44	$1,704.78	7	$8,084.85	$9,075.08	$11,933.45	$127.37	$57.40
Sewer AMCPC	$96.25	$108.04	$142.06	7					
Combined CACPC	$860.16	$1,010.87	$2,026.37	1(3)	$860.16	$1,020.87	$2,026.37	$71.68	$71.68
Combined CAMCPC	$71.68	$85.07	$168.86	1(3)					

Legend	
WACPC	Annual Cost Per Connection - Water
WAMCPC	Average Monthly Cost Per Connection - Water
SACPC	Annual Cost Per Connection - Sewer
SAMCPC	Average Monthly Cost Per Connection - Sewer
CACPC	Annual Cost Per Connection - Combined
CAMCPC	Average Monthly Cost Per Connection - Combined

As illustrated in the table above, the Actual WACPC for FY 10-11 is $1,057.59; the Estimated WACPC for FY 11-12 is $1,069.61; and the Recommended WACPC for FY 12-13 is $1,786.12. (Note that when Tulare County provided the data and budget sets for this study, the County had only identified FY 10-11 as Actuals; the budget for FY 11-12 was an estimated budget; and the budget for FY 12-13 was only a recommended budget. Additionally, the recommended budget for FY 13-14 appears to be incomplete and appears to provide inaccurate data; for this reason it was used in the above table, although it is reflected in attached Worksheet.) Based these annual costs, Tulare County's Average Monthly Cost Per Connection for Water are: $88.13 for (Actuals) FY 10-11, $89.13 for (Estimated) FY 11-12, and $148.84 (Recommended) FY12-13, with a water system cost per connection range from $49.35 to $142.33 per month.

For Sewer, the Actual SACPC for FY 10-11 is $1,154.98; the Estimated SACPC for FY 11-12 is $1,296.44; and the Recommended SACPC for FY 12-13 is $1,704.78. Based these annual costs, Tulare County's Average Monthly Cost Per Connection for Sewer are: $96.25 for (Actuals) FY 10-11, $108.04 for (Estimated) FY 11-12, and $142.06 (Recommended) FY 12-13, with a sewer system cost per connection range from $57.40 to $127.37 per month.

For Combined Sewer and Water Systems, the Actual CACPC for FY 10-11 is $860.16; the Estimated CACPC for FY 11-12 is $1,020.87; and the Recommended CACPC for FY 12-13 is $2,026.37. Based these annual costs, Tulare County's Average Monthly Cost Per Connection for Combined Water and

Sewer systems are: $71.68 for (Actuals) FY 10-11, $85.07 for (Estimated) FY 11-12, and $168.86 (Recommended) FY 12-13, with a combined sewer and water system cost per connection range of $71.68 per month.

The County of **Madera** provided a three year data and budget set for its 44 systems. Per County of Madera designator, these 44 systems are designated Maintenance Districts (MD's) and are composed of 29 water systems, 14 sewer systems, and 1 combined water and sewer system. A Departmental Work Plan (Budget Sheet) was provided for each of these MD's. (See Tab, "Madera District – Data 2013", starting with page 11.) Additionally, the Tab, "Worksheet", for the section corresponding to Fresno illustrate a budgetary breakdown of the each systems' costs. These systems' costs were further analyzed and used to extrapolate three year costs under the following subcategories: Annual Cost Per Connection-Water (WACPC), Average Monthly Cost Per Connection-Water (WAMCPC), Sewer Annual Cost Per Connection (SACPC), Sewer Average Monthly Cost Per Connection (SAMCPC), Combined Annual Cost Per Connection (CACPC), and Combined Average Monthly Cost Per Connection (CAMCPC). Additional analysis of these subcategorized system-specific costs (WACPC, WAMCPC, SACPC, SAMCPC, CACPC, and CAMCPC) allowed for County-wide three year per connection cost averages for each of these subcategories. The following table illustrates the per connection cost breakdown for each of the data and budget sets that were provided for each Fiscal Year (FY) - FY 10-11 (Actual), FY 11-12 (Estimated), and FY 12-13 (Recommended):

Madera County MDs	FY10-11 Actual Average Cost	FY11-12 Estimated Budget Average	FY12-13 Recommended Budget Average	# of Systems	Actual FY10-11 Monthly Expense	Estimated FY11-12 Monthly Budget	Recommended FY12-13 Monthly Budget	MAX Cost per Connection	MIN Cost per Connection
Water ACPC	$645.63	$716.92	$1,107.05	29	$18,723.34	$20,790.74	$32,104.57	$208.15	$9.40
Water AMCPC	$53.80	$59.74	$92.25	29					
Sewer ACPC	$756.85	$519.33	$1,339.88	14	$10,595.89	$7,270.58	$18,758.28	$329.93	$9.17
Sewer AMCPC	$63.07	$43.28	$111.66	14					
Combined CACPC	$1,596.38	$1,655.81	$1,657.56	1	$1,596.38	$1,656	$1,657.56	$133.03	$133.03
Combined CAMCPC	$133.03	$137.98	$138.13	1					

Legend	
WACPC	Annual Cost Per Connection - Water
WAMCPC	Average Monthly Cost Per Connection - Water
SACPC	Annual Cost Per Connection - Sewer
SAMCPC	Average Monthly Cost Per Connection - Sewer
CACPC	Annual Cost Per Connection - Combined
CAMCPC	Average Monthly Cost Per Connection - Combined

As illustrated in the table above, the Actual WACPC for FY 10-11 is $645.63; the Estimated WACPC for FY 11-12 is $716.92; and the Recommended WACPC for FY 12-13 is $1107.05. (Note that when Madera County provided the data and budget sets for this study, the County had only identified FY 10-11 as Actuals; the budget for FY 11-12 was an estimated budget; and the budget for FY 12-13 was only a recommended budget Based these annual costs, Madera County's Average Monthly Cost Per Connection for Water are: $53.80 for (Actuals) FY 10-11, $59.74 for (Estimated) FY 11-12, and $92.25 (Recommended) FY12-13, with a water system cost per connection range from $9.40 to $208.15 per month.

For Sewer, the Actual SACPC for FY 10-11 is $756.85; the Estimated SACPC for FY 11-12 is $519.33; and the Recommended SACPC for FY 12-13 is $1,339.88. Based these annual costs, Madera County's Average Monthly Cost Per Connection for Sewer are: $63.07 for (Actuals) FY 10-11, $43.28 for (Estimated) FY 11-12, and 111.66 (Recommended) FY 12-13, with a sewer system cost per connection range from $9.17 to $329.93 per month.

For Combined Sewer and Water Systems, the Actual CACPC for FY 10-11 is $1,596.38; the Estimated CACPC for FY 11-12 is $1,655.81; and the Recommended CACPC for FY 12-13 is $1,657.56. Based these annual costs, Madera County's Average Monthly Cost Per Connection for Combined Water and Sewer systems are: $133.03 for (Actuals) FY 10-11, $137.98 for (Estimated) FY 11-12, and $138.13 (Recommended) FY 12-13, with a combined sewer and water system cost per connection range of $133.03 per month.

		Actual Average Monthly Cost per Connection	Estimated Average Budget Monthly Cost per Connection	Recommended Budget Average Monthly Cost per Connection	3-year Monthly Cost Average
Water	**Madera**	**$53.80**	$59.74	$92.25	$68.60
	Fresno	**$60.32**	$64.70	$98.11	$74.38
	Tulare	**$88.13**	$89.13	$148.84	$108.70
Sewer	**Madera**	**$63.07**	$43.29	$111.66	$72.67
	Fresno	**$85.18**	$78.47	$75.46	$79.70
	Tulare	**$96.25**	$108.04	$142.06	$115.45
Combined Sewer & Water	**Madera**	**$133.03**	$137.98	$138.13	$136.38
	Fresno	**$192.11**	$201.05	$228.51	$207.22
	Tulare	**$71.68**	$85.07	$168.86	$108.54

In reviewing the Actual Average Monthly Cost per Connection (AMCPC) for these various Maintenance Districts (MDs), Zones of Benefits (ZOBs) and Community Service Areas (CSAs) it should be noted that the three counties reviewed (Madera, Fresno, and Tulare) generally operate their water, sewer, and water/sewer combined systems under an enterprise fund premise. For the most part each service area uses the revenue that it generates for the service provided to pay for the operational costs of its respective service area system. However, there are zones of benefits that are unable to cover the operational costs of their service area system. In these cases, it is not uncommon that the service area's revenue deficit is absorbed by the respective County's General Fund. Due to this practice, and an unavailability of data in the service area operational costs data sets, it is difficult to ascertain a true revenue cost comparison of all these Counties.

	W	M % of	(+/-)			F % of	(+/-)			T % of	(+/-)		
	$53.80	89.19%	(-)	10.81%	F	112.12%	(+)	-12.12%	M	163.81%	(+)	-63.81%	M
F	$60.32	61.05%	(-)	38.95%	T	68.44%	(-)	31.56%	T	146.10%	(+)	-46.10%	F
T	$88.13												
	S												
M	$63.07	74.04%	(-)	25.96%	F	135.06%	(+)	-35.06%	M	152.61%	(+)	-52.61%	M
F	$85.18	65.53%	(-)	34.47%	T	88.50%	(-)	11.50%	T	113.00%	(+)	-13.00%	F
T	$96.25												
	C												
M	$133.03	69.25%	(-)	30.75%	F	144.41%	(+)	-44.41%	M	53.88%	(-)	46.12%	M
F	$192.11	185.59%	(+)	-85.59%	T	268.01%	(+)	-168.01%	T	37.31%	(-)	62.69%	F
T	$71.68												

Nevertheless, the above chart provides a partial comparison of the Actual Average Monthly Cost per Connection between the three Counties. Starting with AMCPC for water service, it appears that Madera County provides the least expensive water rates of the three counties reviewed. On average, water system customers in Madera County pay 10.81% less than customers in Fresno County and 38.95% less than customers in Tulare County; with Fresno County residents paying (on average) 31.56% less than Tulare County residents.

In reviewing AMCPC for sewer service, it appears that Madera County provides the least expensive sewer rates of the three counties reviewed. On average, sewer system customers in Madera County pay 25.96% less than sewer service customers in Fresno County and 34.47% less than sewer customers in Tulare County; with Fresno County residents paying (on average) 11.5% less than sewer customers in Tulare County.

It should be noted that, in reviewing the AMCPC of the combined water and sewer systems in the three counties, the data becomes a little confusing. Given the reduced number of combined systems (that is, systems that provide both sewer and water service to their zone of benefit) and given a limited comment response from staff of the three counties reviewed (data sets and write ups were sent out for comment, and, to date, no comments have been received) it would be difficult to ascertain a truly accurate representation of three county combined service cost comparison. This being said, and taking into account the

APPENDIX F

DECISION TREES

Appendix F – Supplemental Information

The descriptions provided here are intended to supplement the decision trees contained in this appendix. These are narrative descriptions of how to use each decision tree.

Step 1 and 1B – Management and Non-Infrastructure Solutions Evaluation

To initiate a management and non-infrastructure solution, a series of questions can be asked by owners, managers, board members, or operators. Is the supply greater than the demand? Does water quality meet the regulatory requirements? Is technical, managerial, and financial (TMF) capacity sufficient, and is the system operating efficiently? On the wastewater site, is the wastewater treatment and disposal capacity sufficient? Does effluent from the wastewater treatment plant meet waste discharge requirements? Is technical, managerial, and financial (TMF) capacity sufficient, and is the system operating efficiently?

If the answer to any of these questions is “no”, the community member, manager, board member, operator, or others should consider evaluating internal changes. If the answer to any of the questions above is “no”, the community member, manager, board member, operator, or others could also ask the next question, is there potential to coordinate with nearby water (or wastewater) systems? If the answer is “yes”, evaluate and consider implementing one or more of the various partnership alternatives.

If the answer is “no”, consider internal changes and/or move to the New Source Development, Technical Solutions, or Individual Households pilot decision trees.

If the reader is not sure how to answer any of the questions presented, they can do any of the following to help answer these questions:

- Complete Self Assessment Worksheet (see Appendix H);
- Review the most recent Sanitary Survey and/or Inspection Report completed for your system;
- Contact the California Department of Public Heath; or
- Contact the local County Environmental Health Department

Whether or not it is decided that a management and non-infrastructure solution is a potential alternative, the manager, board members, or operators can ask whether there are internal changes that could improve efficiency. If there are, these should be pursued.

Whether or not internal changes can be implemented, the manager, board members, owner, or operators should then evaluate the various levels of sharing that can be implemented. If the evaluation goes beyond informal cooperation, there will likely be the

need for a consultant or engineer, as well as legal counsel to help analyze the impacts of any possible changes.

Depending on the alternative(s) that the community decides to pursue, move to that respective decision tree.

Step 1C – Management and Non-Infrastructure Solutions Evaluation

Another type of management and non-infrastructure alternative may not involve partnering with another community. Step 1C is for communities that either (1) are served by a water system that is owned by a private entity, or (2) are on individual wells and septic systems, for which no entity exists with authority to provide water and/or sewer service.

If you are a private entity or a resident served by a private entity providing water and/or sewer service, would you be interested in transferring assets to a public entity? A private entity cannot “convert” to a public entity; however a public entity can be formed, assets transferred from the existing private entity to a new public entity, and the private entity can subsequently be dissolved. If the answer to this question is “yes”, encourage residents to pursue the formation of a legal public entity. If residents are interested in forming a public entity, move on to Step 3G to pursue formation of a legal entity. If the answer is “no”, consider pursuing another alternative.

If you are a private well or septic owner in a community where an entity does not existing for the purveyance of water or sewer service, are residents interested in forming a public entity to provide water and/or sewer service? If the answer to this question is “yes”, move on to Step 3G to pursue formation of a legal entity. If the answer is “no”, consider pursuing another alternative.

Step 3A – Internal Changes

The evaluation of Internal Changes can begin with the manager, operator, or board member asking various questions to assess the technical, managerial, and financial deficiencies in the system. The questions ask whether various necessary plans and procedures are in place. If the answer to any of the questions presented is “no”, then the system should move forward to implement the necessary plan or procedure until they are able to answer “yes” to all questions.

Step 3B – Informal Cooperation

The evaluation of Informal Cooperation can begin with the operator, manager, or board member asking the question, do we have equipment (or other resources) that could be shared with another water system? If the answer is “yes”, the operator, manager, and/or board member should begin to communicate with other communities. Based on their

communications, they should then ask, is there a community within 5-10 miles that has a need for this equipment? If “no”, continue communicating and considering other supplies that can be shared, and then ask the question again. If the answer is “yes”, continue to communicate and develop the relationship. Then, the operator, manager, and/or board member can develop an acceptable agreement for sharing this equipment or resource.

Alternatively, if the community has a need for a piece of equipment or other resource that could be shared, they can follow a similar process. Beginning with communicating with other nearby systems, is there a community within about 5-10 miles that has the needed equipments? Or, is there a community within about 5-10 miles that has a need for the same equipment? Are they willing to share this equipment (or share in the purchase for joint use)? If the answer is “yes”, continue communicating and developing the relationships until an acceptable agreement for this sharing is developed.

Step 3C – Contractual Assistance with a Private Third Party or Non-Profit Organization

The evaluation of Contractual Assistance with a private third party or non-profit organization can begin with the manager, operator, or board members asking a series of questions: Do we have an operator need that can be contracted with a private third party or non-profit organization? Do we have a management need that can be contracted? Do we have a bookkeeper need that can be contracted? Do we have any other needs that can be contracted? If the answer to any of these questions is “yes”, the manager and/or board members can move forward to find a reputable third party or non-profit organization to provide the desired contract services.

The manager and board members will need to work with the contract service provider to negotiate the terms of service, including:

- Define scope of work
- Define fees for the services to be provided
- Define responsibilities and liabilities of each party involved
- Define where each party involved can hold each other harmless
- Define insurance needs/ limits for the contractor
- Define cost sharing parameters
- Define conditions and parameters for dissolution of contract

Each party will then ask the question, are the terms of service acceptable? If the answer is “no”, continue to negotiate the terms, or consider a different contract services

provider. If the answer is “yes”, finalize the agreement for contract services. It is recommended that an attorney assist in this. If a rate adjustment is needed, the water provider must identify the rate structure and initiate the Proposition 218 process. An engineer and/or an attorney should be consulted to assist.

Step 3D – Contractual Assistance to Share Services and/or Staff

To evaluate Contractual Assistance to share services and/or staff between communities, the manager, board member, or operator can begin by asking, is there a service, equipment, or resource need that could be contractually shared between communities? If the answer is “yes”, communicate with other nearby communities. Then ask the question, is there a community within about 5-10 miles that currently has the resources needed? If not, is there a community within about 5-10 miles that has the same need? If the answer to either question is “yes”, is the community willing to enter into a contract to share such services?

If the answer is “yes”, the manager and/or board members will need to work with the manager and/or board members of the partnering community to negotiate the terms of service, including:

- Define scope of work
- Define fees for the services to be provided
- Define responsibilities and liabilities of each party involved
- Define where each party involved can hold each other harmless
- Define insurance needs/ limits for the contractor
- Define cost sharing parameters
- Define conditions and parameters for dissolution of contract

Each party will then ask the question, are the terms of service acceptable? If the answer is “no”, continue to negotiate the terms, or consider a different solution. If the answer is “yes”, finalize the agreement for contract services. It is recommended that an attorney assist in this.

Step 3E – Joint Powers Authority

To evaluate development of a Joint Powers Authority (JPA), the manager and/or board members of a community (or multiple communities) should begin by asking the question, is there a service need that could be shared between multiple communities? If the answer is “yes”, the communities must ask, are we a public agency or mutual water company? If the answer is “no”, the community cannot participate in a JPA. If the answer is “yes”, communicate with other communities. Then the manager or board

members (or facilitating entity) can ask, are there other public agencies or mutual water companies willing to collaborate to share this service?

If the answer is “yes”, the manager and/or board members from each entity will need to work with the contract service provider to negotiate the terms of service, including:

- Define scope of services to be provided
- Define fees for the services to be provided
- Define responsibilities and liabilities of each party involved
- Define where each party involved can hold each other harmless
- Define insurance needs/ limits for the contractor
- Define cost sharing parameters
- Define conditions and parameters for dissolution of JPA
- Define makeup of the Authority officers, board members, and management governance structure
- Define decision making process
- Define individual entity operations and services independent of the JPA

Each party will then ask the question, are the terms of service acceptable? If the answer is “no”, continue to negotiate the terms, or consider a different solution. If the answer is “yes”, finalize the joint powers agreement, with the assistance of an attorney. If a rate adjustment is needed, the water provider must identify the rate structure and initiate the Proposition 218 process. It will be necessary to utilize the services of an engineer and an attorney for this process. In most circumstances, each entity will be responsible for their own Proposition 218 process.

Step 3F – Ownership Transfer

To evaluate Ownership Transfer, the manager or board members can ask, is a city or large community potentially able to consolidate a community system into their operations and management system? If the answer is yes, a consultant will be required to work with the community to perform the following tasks:

- Analyze budgets and rate structures in each entity
- Explore how to combine financial obligations
- Develop a full list of responsibilities of the existing entity, including maintenance, testing, operations, management, financials, etc.

Based on the analysis performed, the consultant will help the manager and board member determine if the ownership transfer is financially feasible. If the answer is “yes”, the consultant can assist the communities to define the rules for ownership transfer (what is being transferred and what is not). They must also define issues such as annexation, service agreements, dissolution of consolidating system, schedule, and other considerations that must be taken into account when preparing to transfer ownership.

The consolidating entities must obtain LAFCo approval. Once approved, the rate structures must be identified and the Proposition 218 process must be initiated. Once everything is in place, they must obtain approval from regulatory and political agencies, and then finalize the ownership transfer. It will be necessary to utilize the services of an engineer, an attorney, and other consultants to properly proceed through the LAFCo process.

Step 3G – Formation of a Legal Entity

To evaluate formation of a legal entity, one or more concerned residents can begin to evaluate options for formation of an entity with the appropriate legal authority to enter into a contract with the State for funding opportunities. A non-profit organization specializing in community and water related issues can help initiate this process.

In order to form a legal entity, the geographic area to be served by the new entity will need to be identified. Public outreach will then need to be conducted to inform residents within the affected area about the benefits of forming a legal entity, and trying to get their support.

Formation of a legal entity will also involve petitioning the County Board of Supervisors, coordination with LAFCo, and preparation of environmental documents. There will be legal services and financial planning necessary prior to formation of the new entity. An attorney, engineer, and non-profit organization will be needed to assist with these activities.

Ultimately, and election will be held and the residents will need to approve formation of the entity, and elect an initial governing body. If formation of the new legal entity is approved by the voters, then the legal entity is formed. If not, residents can continue trying by performing additional outreach, possibly changing the parameters, and holding another election.

Legend – Symbols (Type of Action)

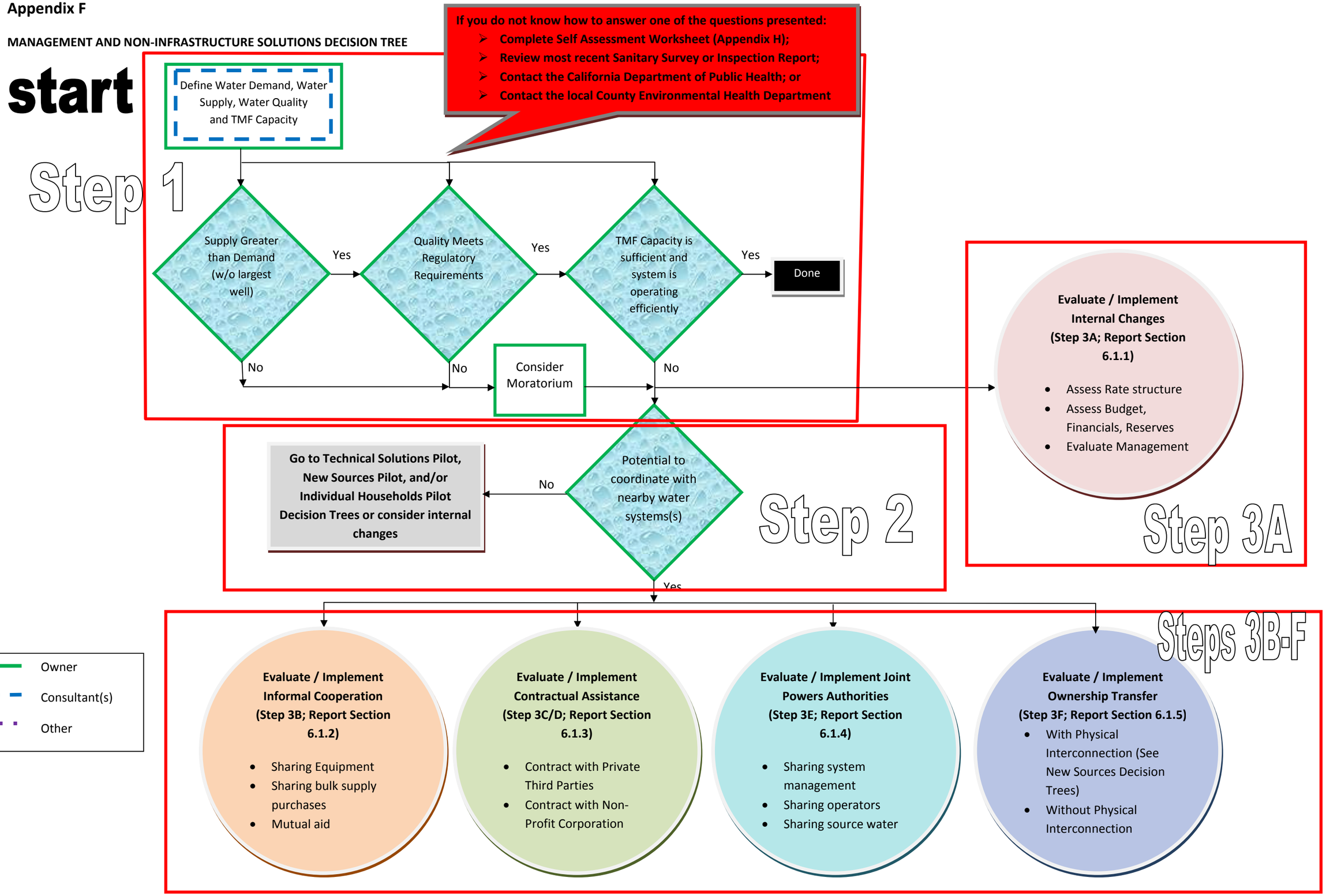
Flowchart Symbol	Name	Description	Notes
	Process	An operation or action step.	
	Terminator	A start or stop point in a process.	
	Decision	A question or branch in the process.	
	Connector	A jump from one point to another.	For example, a jump from one tree to another.
	Extract (Measurement, Finished Goods)	Extract (split processes) or more commonly – a measurement or finished goods	For example, an offer or acceptance of funds.
	Callout	Used to add comments to a flowchart.	
	Flow Line	Indicates the direction of flow for materials and/or information	

Legend – Line Types (Shape outline by entity making decision or action)

Flowchart Line Type	Name	Description	Notes
	Owner	Community, District, Individual	
	Consultant(s)	Engineers, attorneys, etc.	
	Other	Regulatory agencies, funding agencies, non-profit organizations	

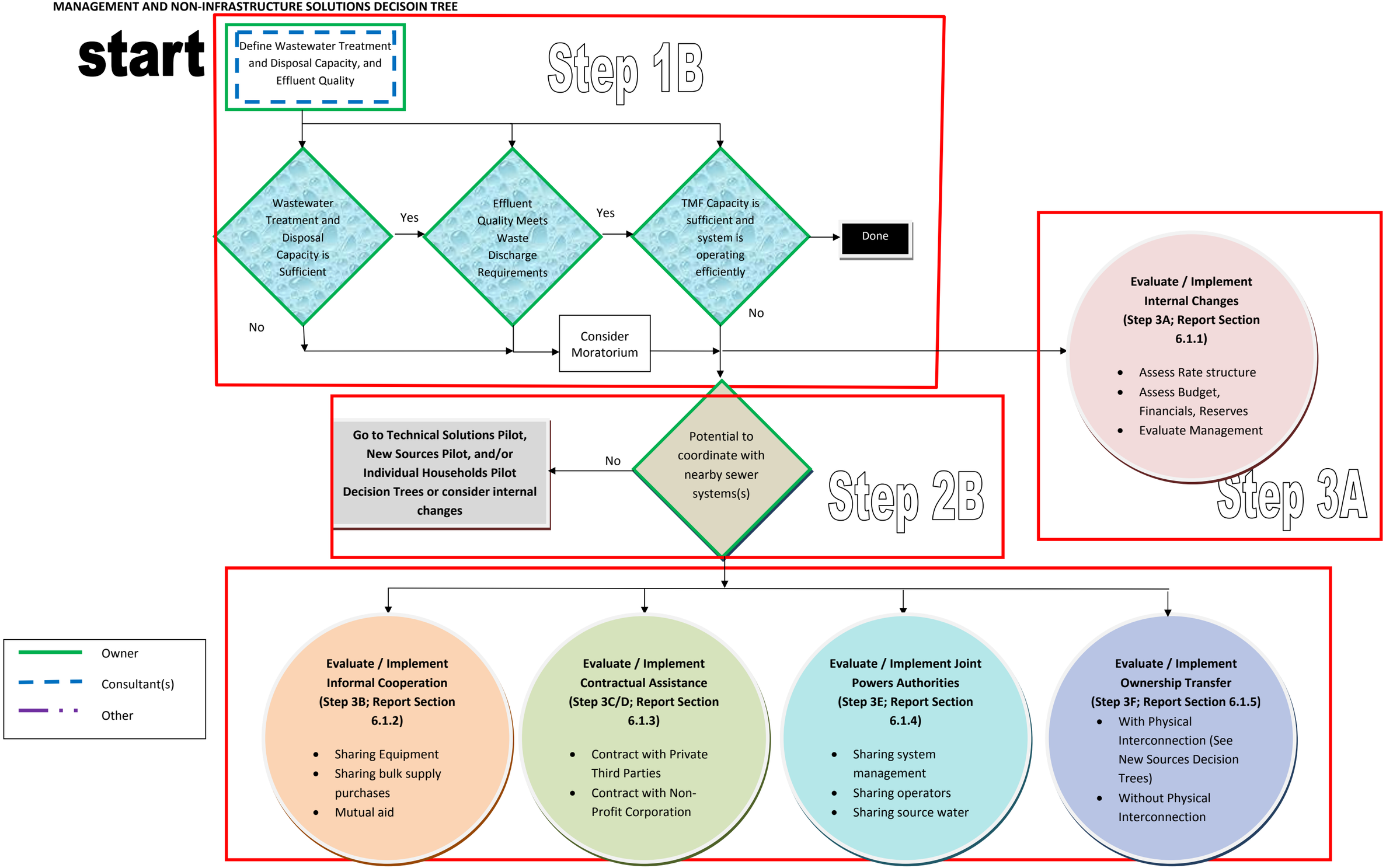
Appendix F

MANAGEMENT AND NON-INFRASTRUCTURE SOLUTIONS DECISION TREE



Appendix F

MANAGEMENT AND NON-INFRASTRUCTURE SOLUTIONS DECISOIN TREE



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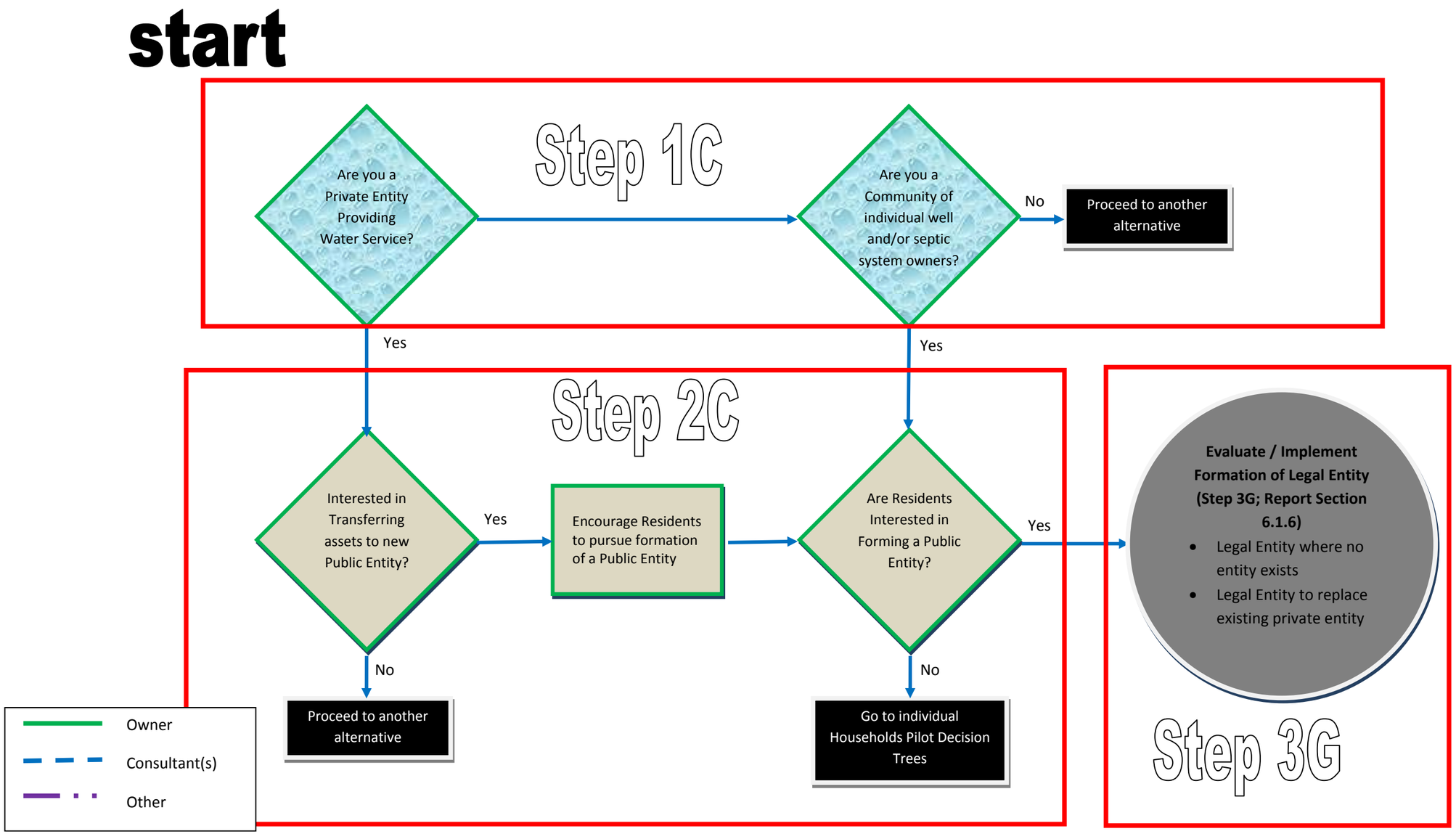
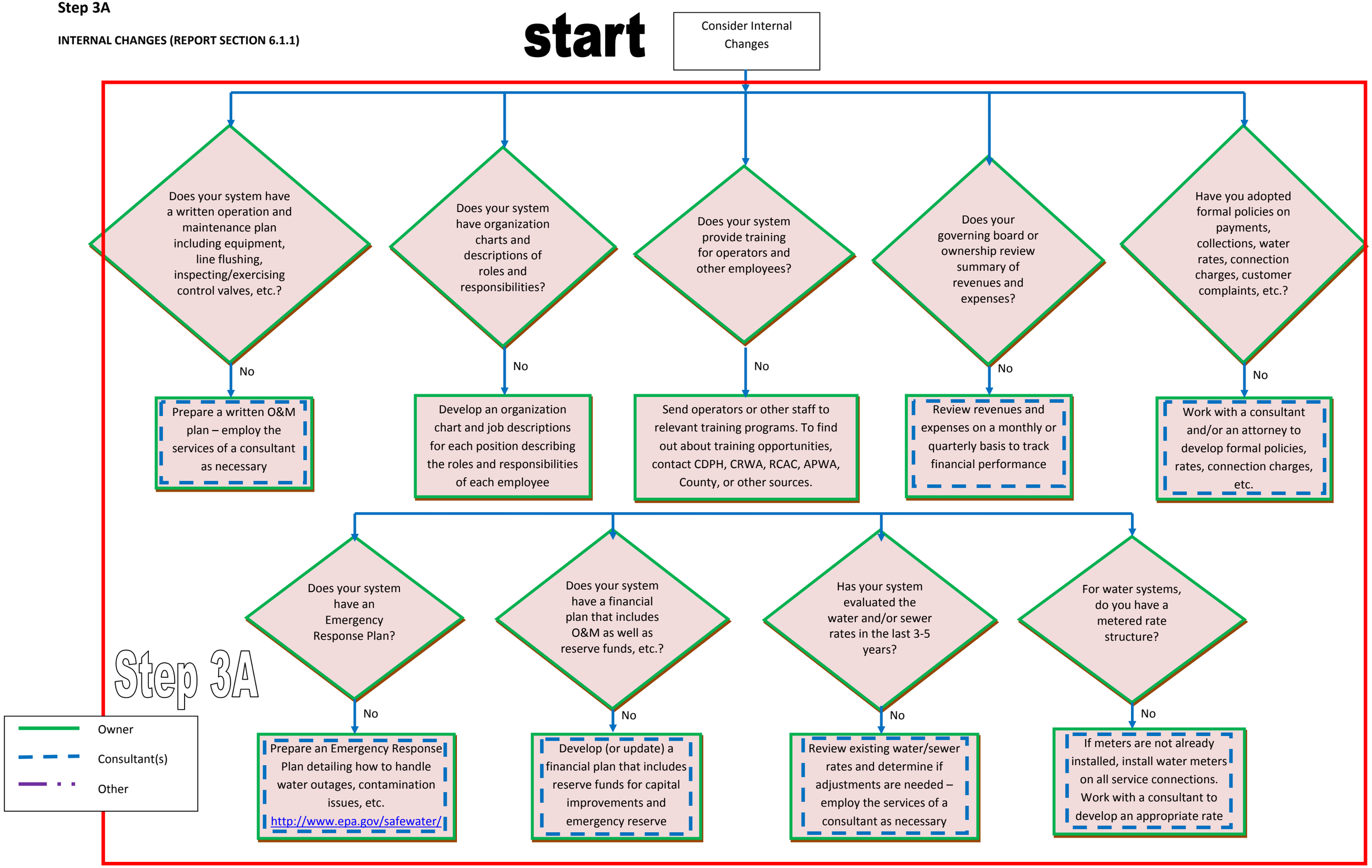


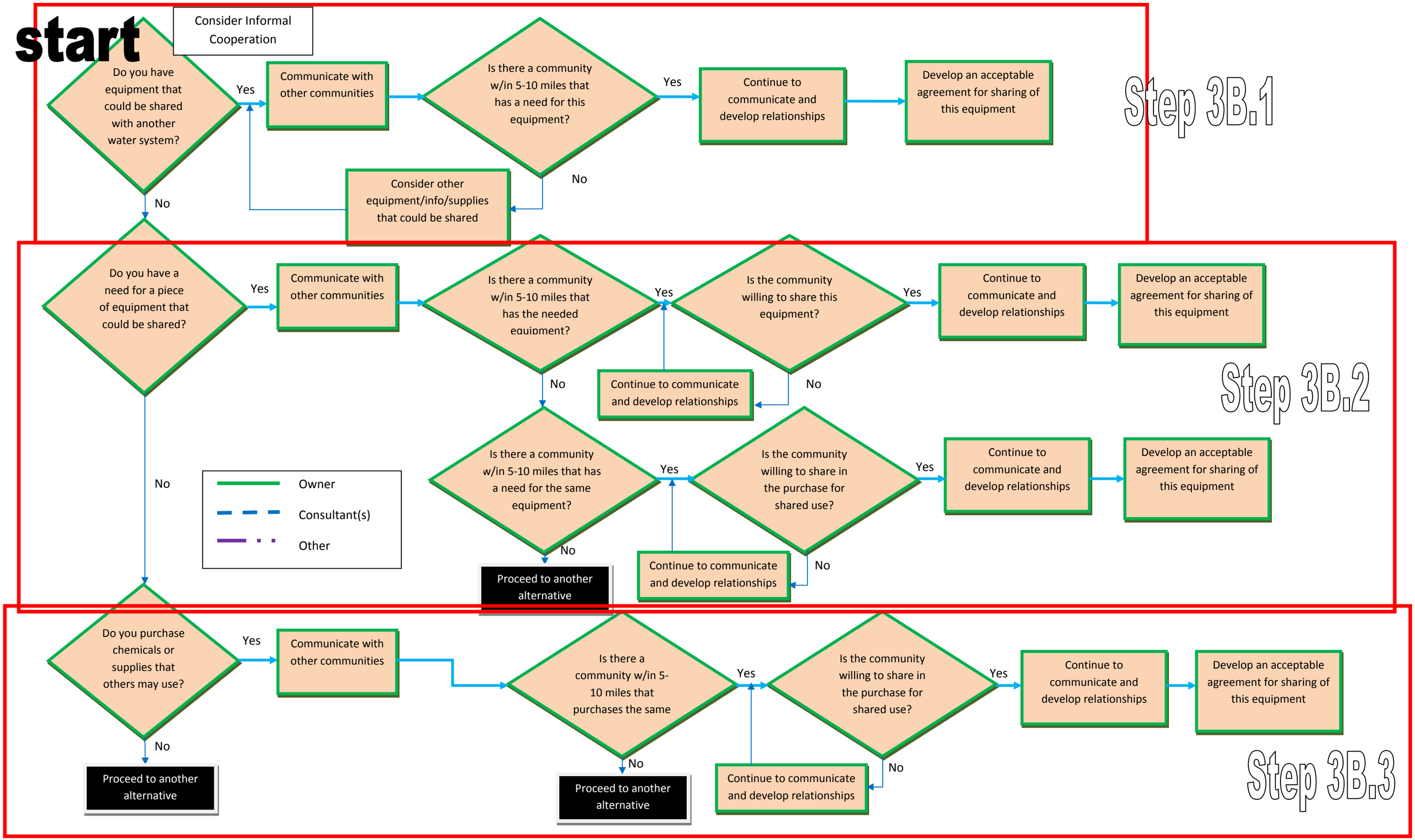
Step 3A

INTERNAL CHANGES (REPORT SECTION 6.1.1)



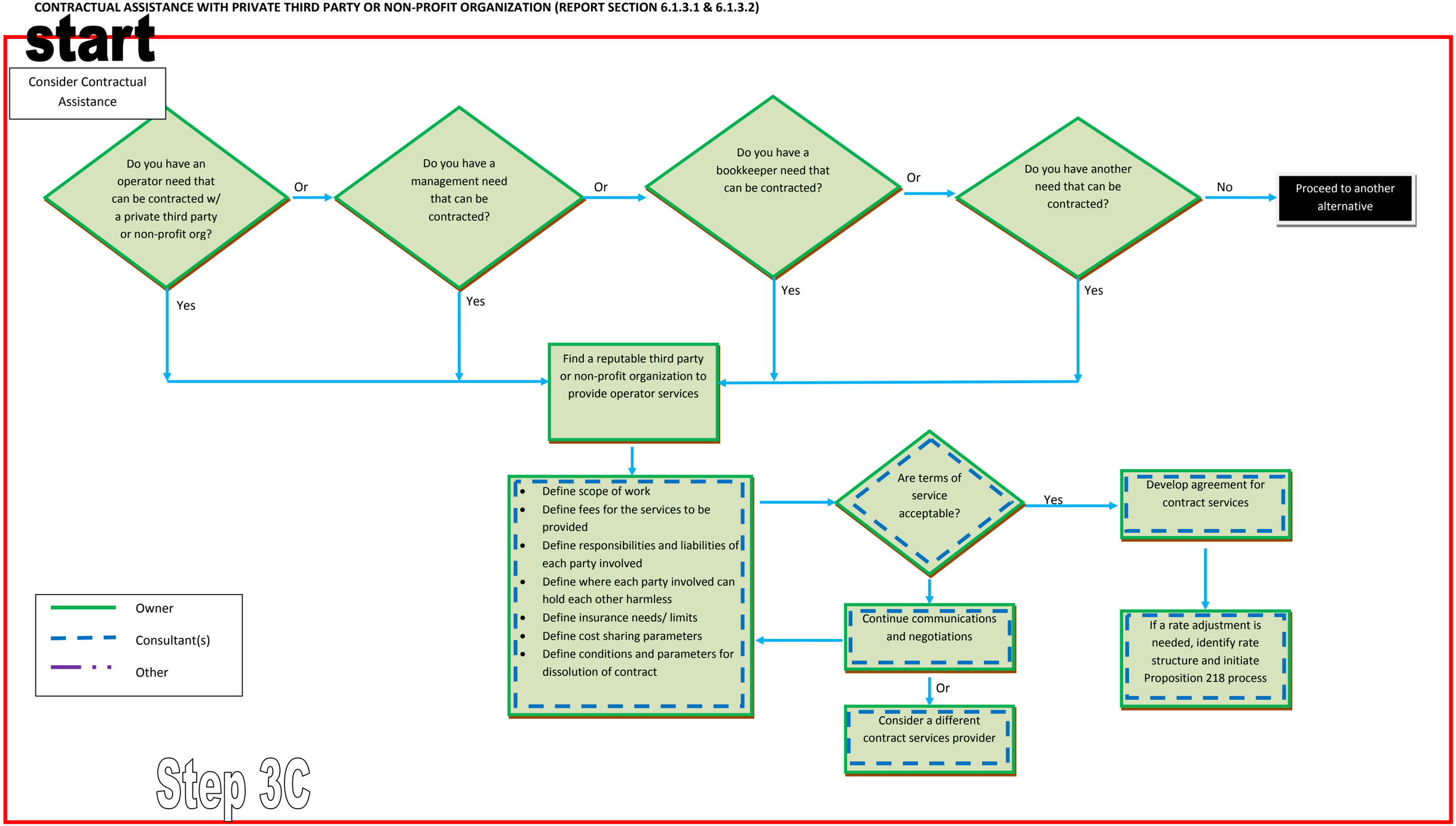
Step 3B

INFORMAL COOPERATION (REPORT SECTION 6.1.2)



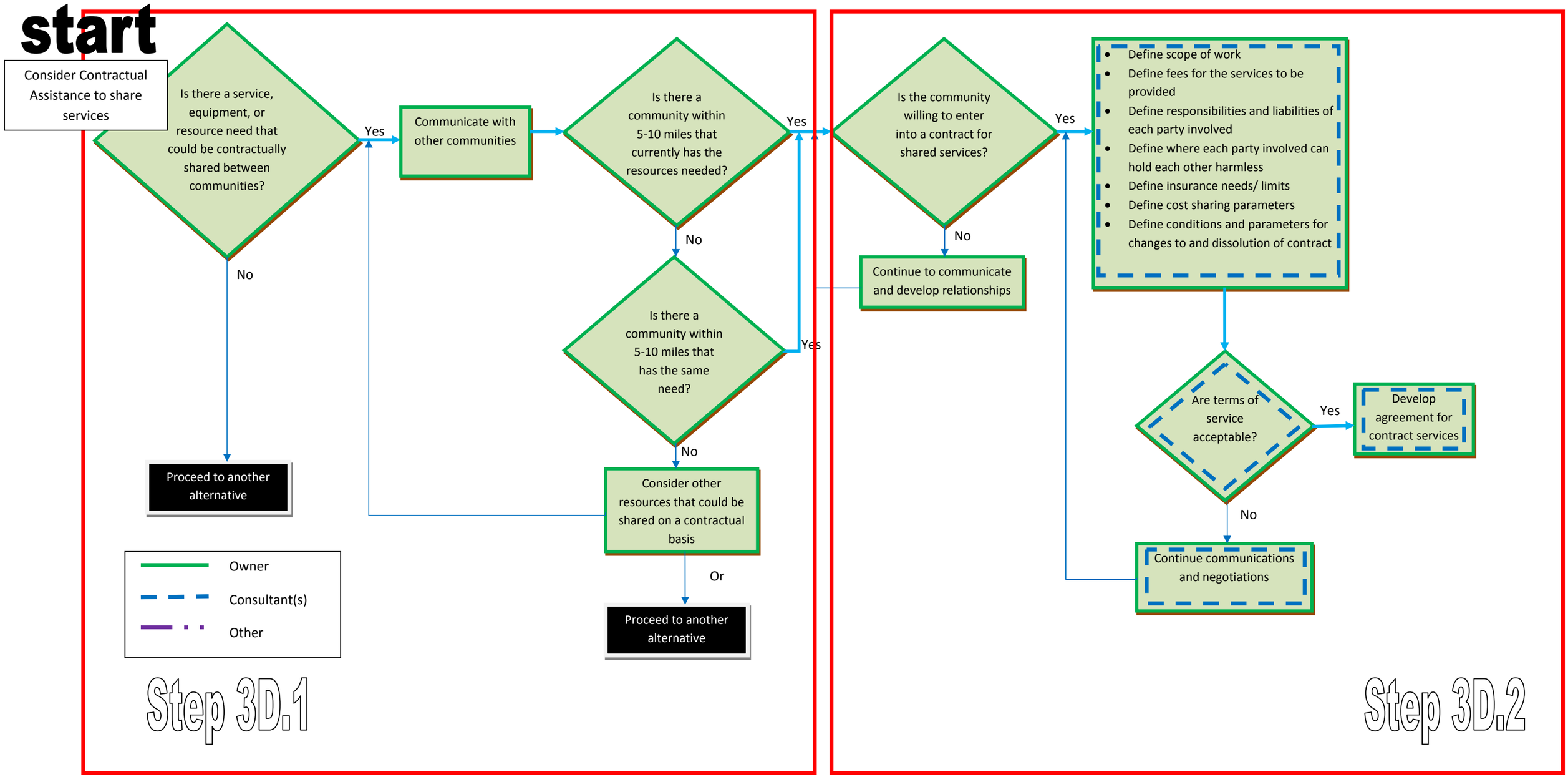
Step 3C

CONTRACTUAL ASSISTANCE WITH PRIVATE THIRD PARTY OR NON-PROFIT ORGANIZATION (REPORT SECTION 6.1.3.1 & 6.1.3.2)



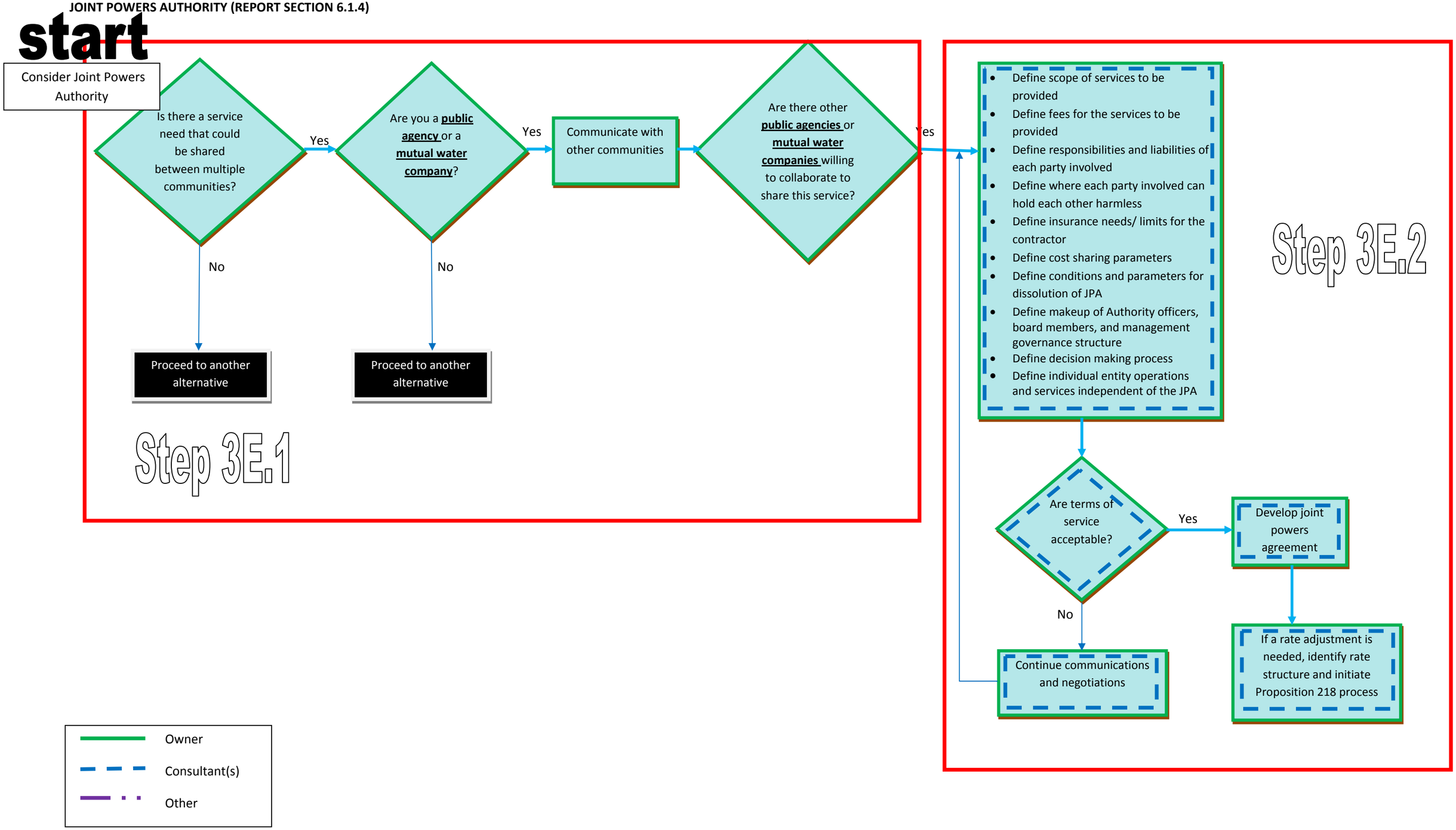
Step 3D

CONTRACTUAL ASSISTANCE TO SHARE SERVICES AND/OR STAFF (REPORT SECTION 6.1.3.3)



Step 3E

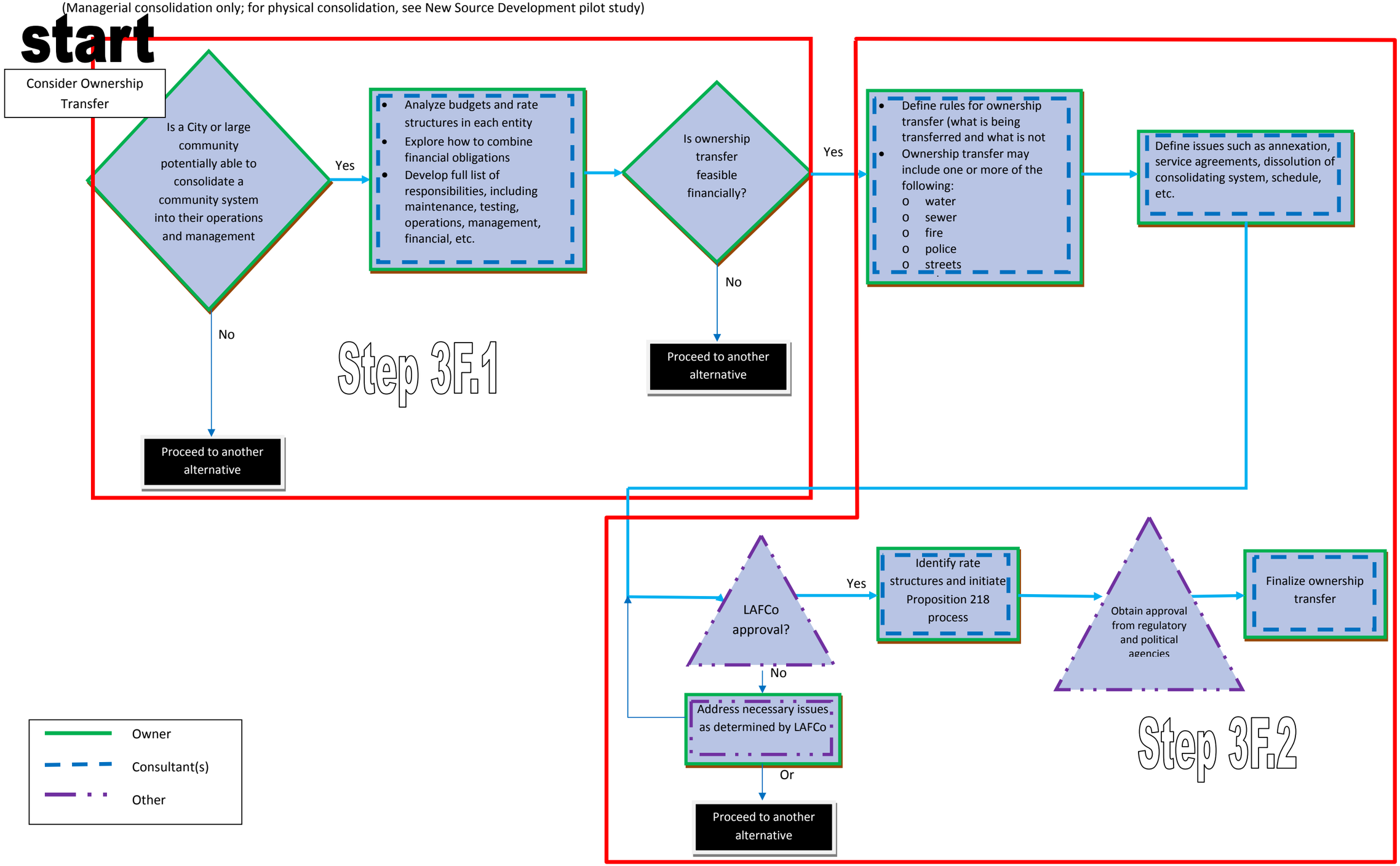
JOINT POWERS AUTHORITY (REPORT SECTION 6.1.4)



Step 3F

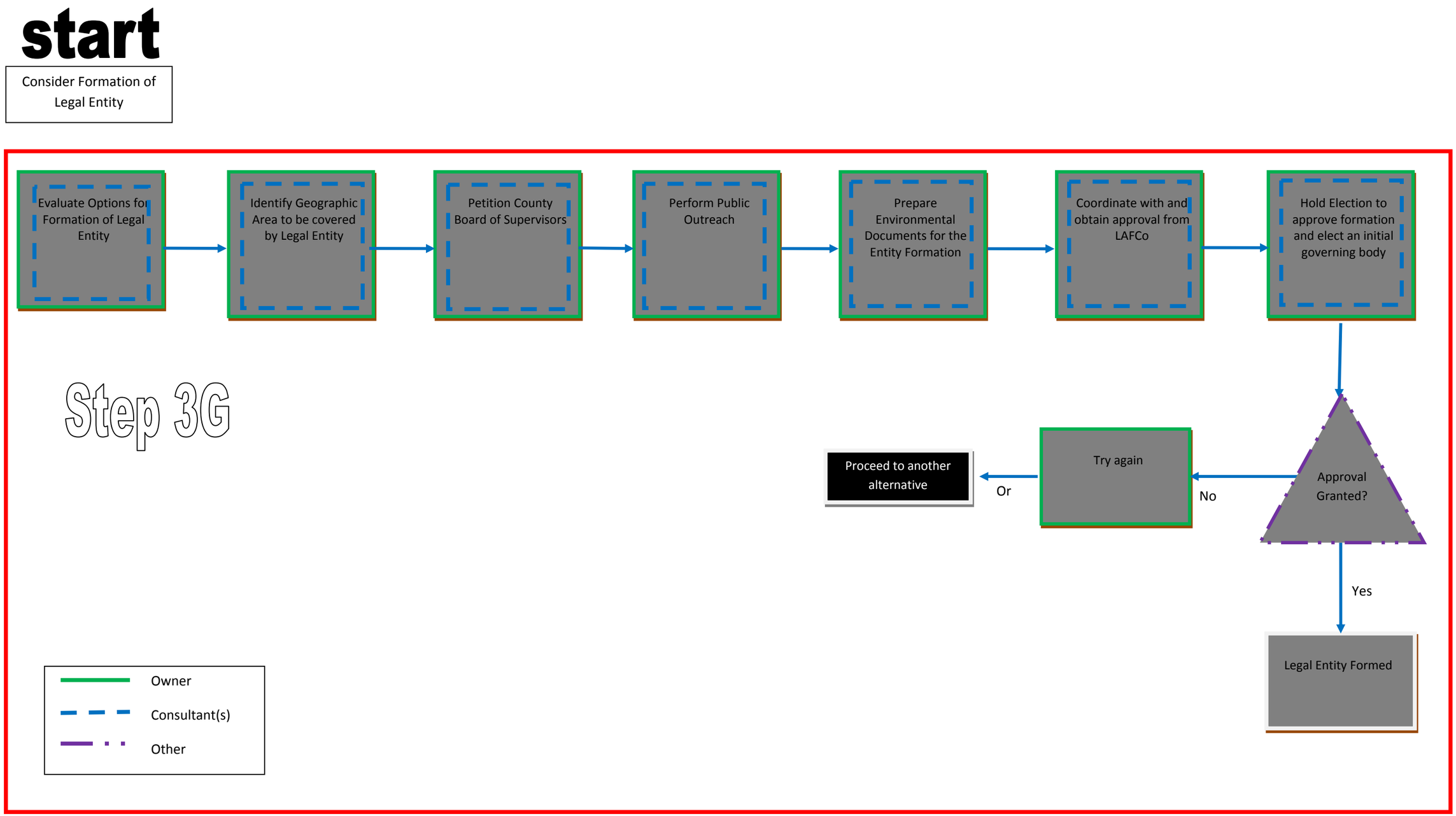
OWNERSHIP TRANSFER (REPORT SECTION 6.1.5)

(Managerial consolidation only; for physical consolidation, see New Source Development pilot study)



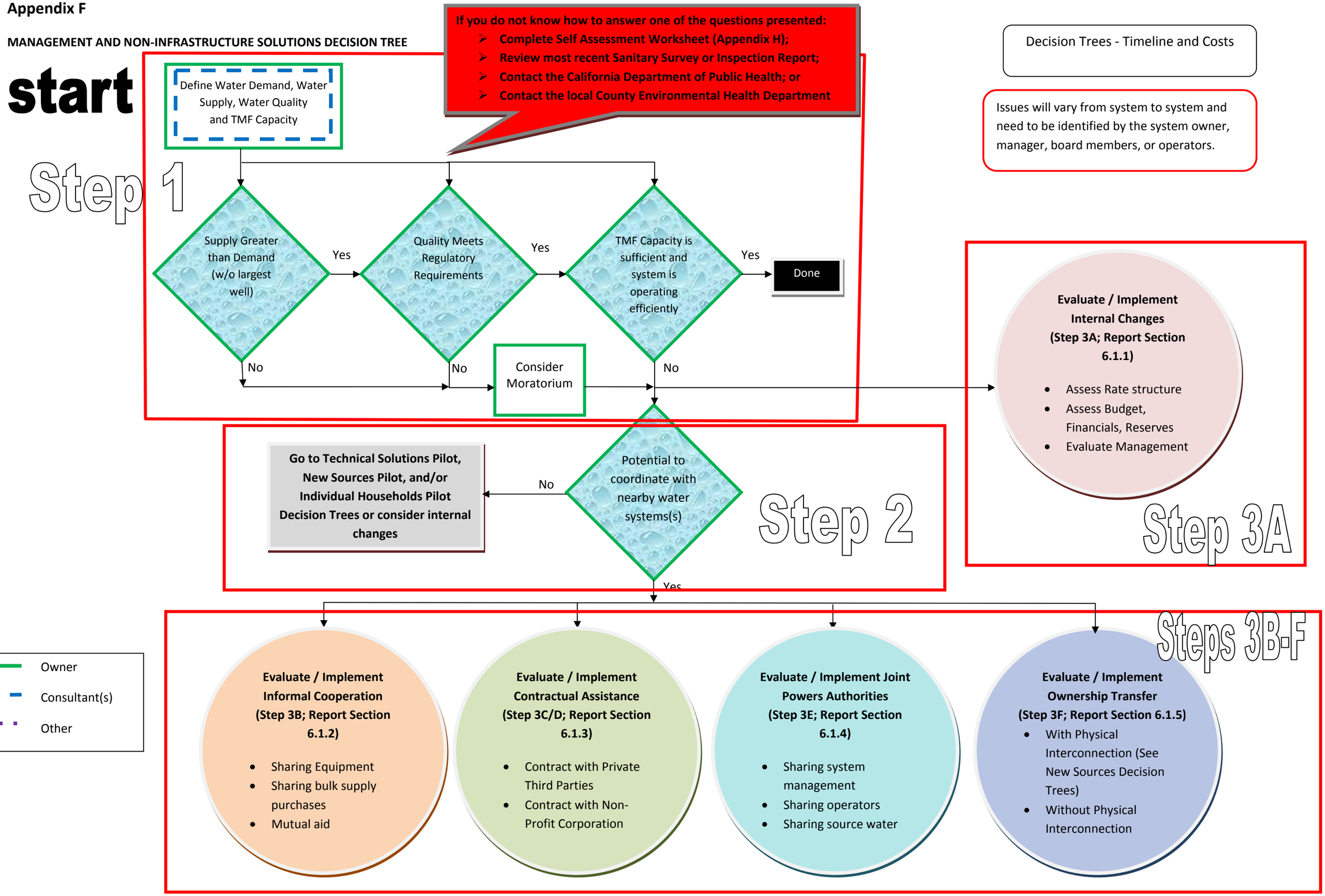
Step 3G

Formation of Legal Entity (REPORT SECTION 6.1.6)



Appendix F

MANAGEMENT AND NON-INFRASTRUCTURE SOLUTIONS DECISION TREE



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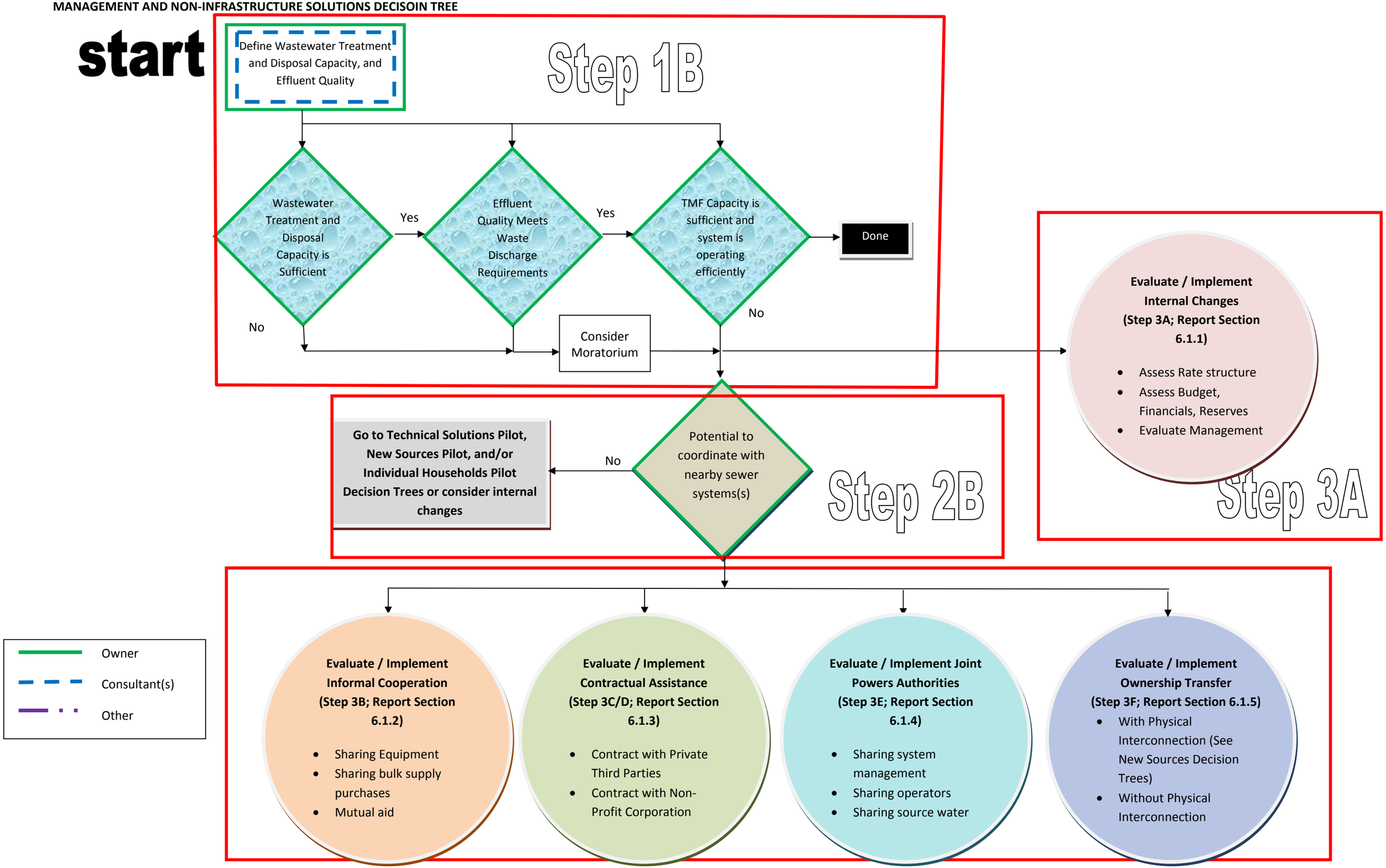
MANAGEMENT AND NON-INFRASTRUCTURE SOLUTIONS DECISOIN TREE



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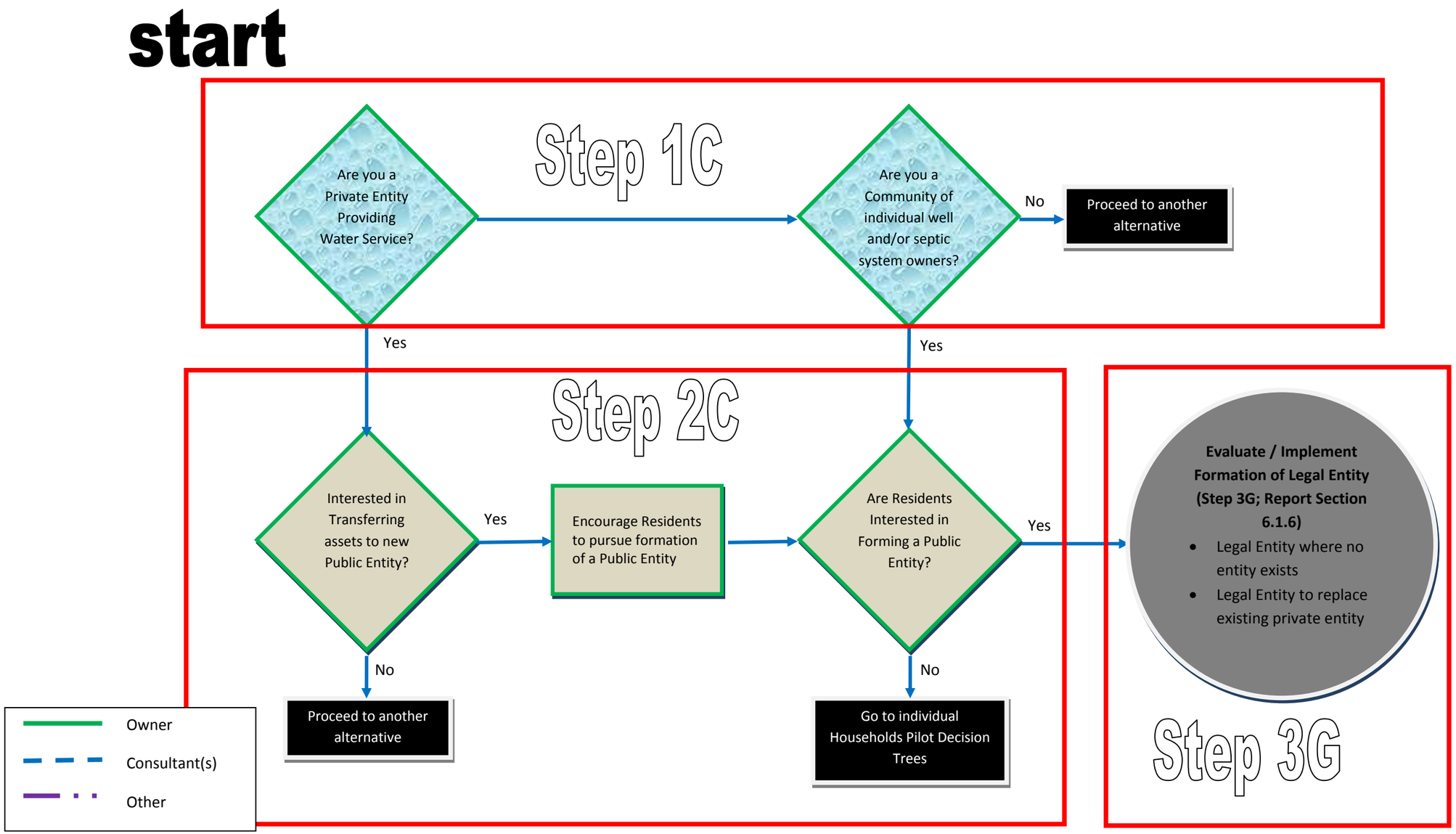
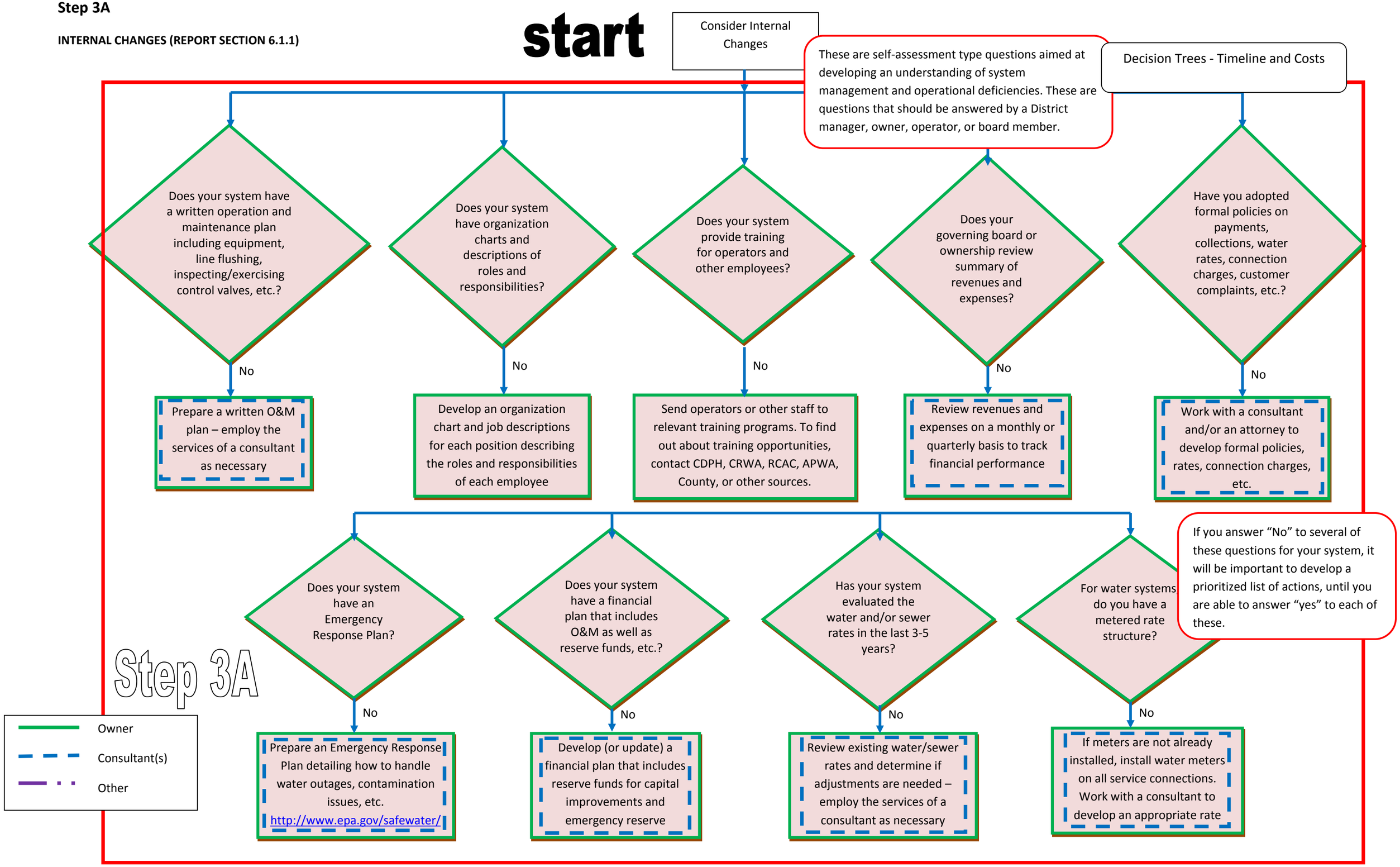


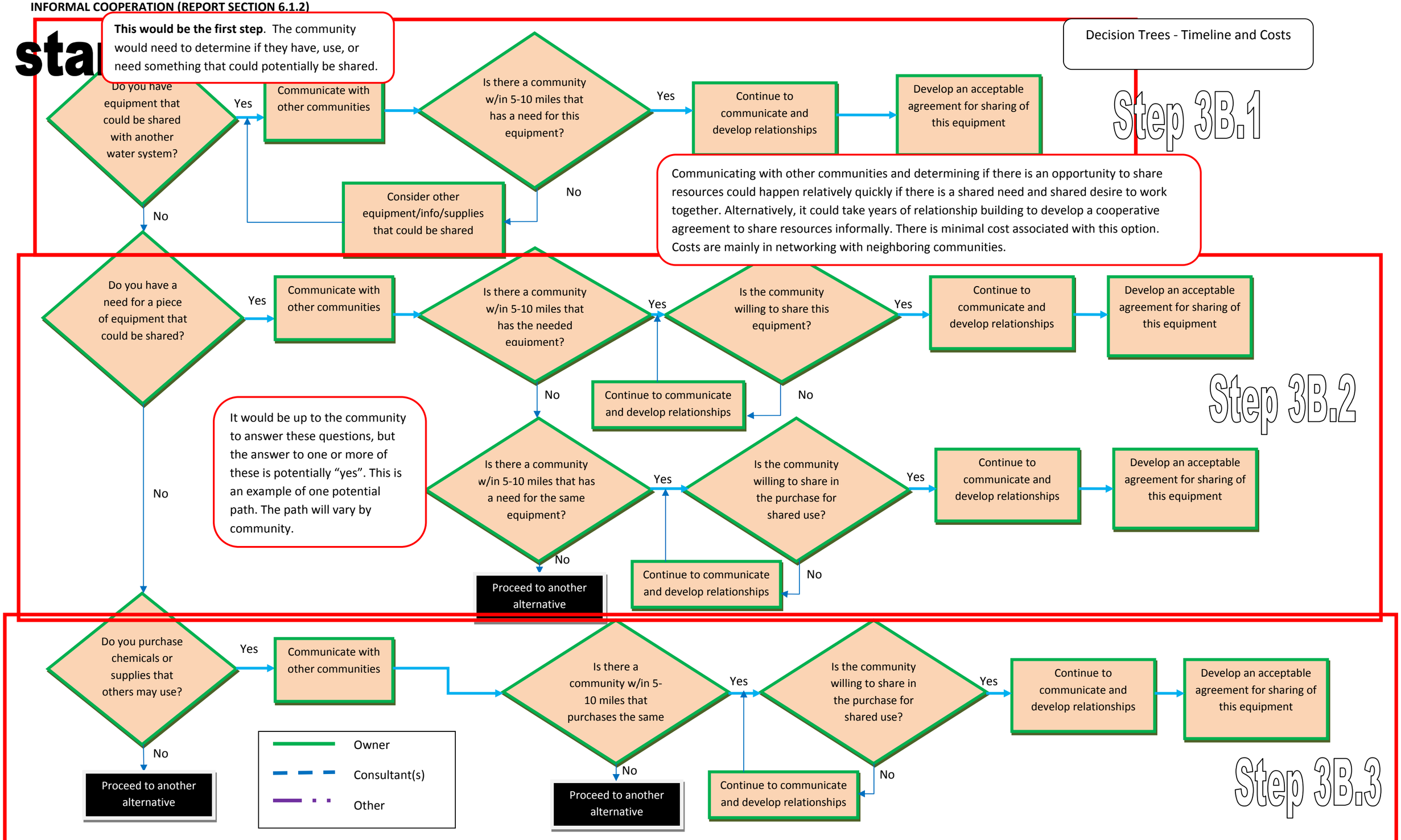
Step 3A

INTERNAL CHANGES (REPORT SECTION 6.1.1)



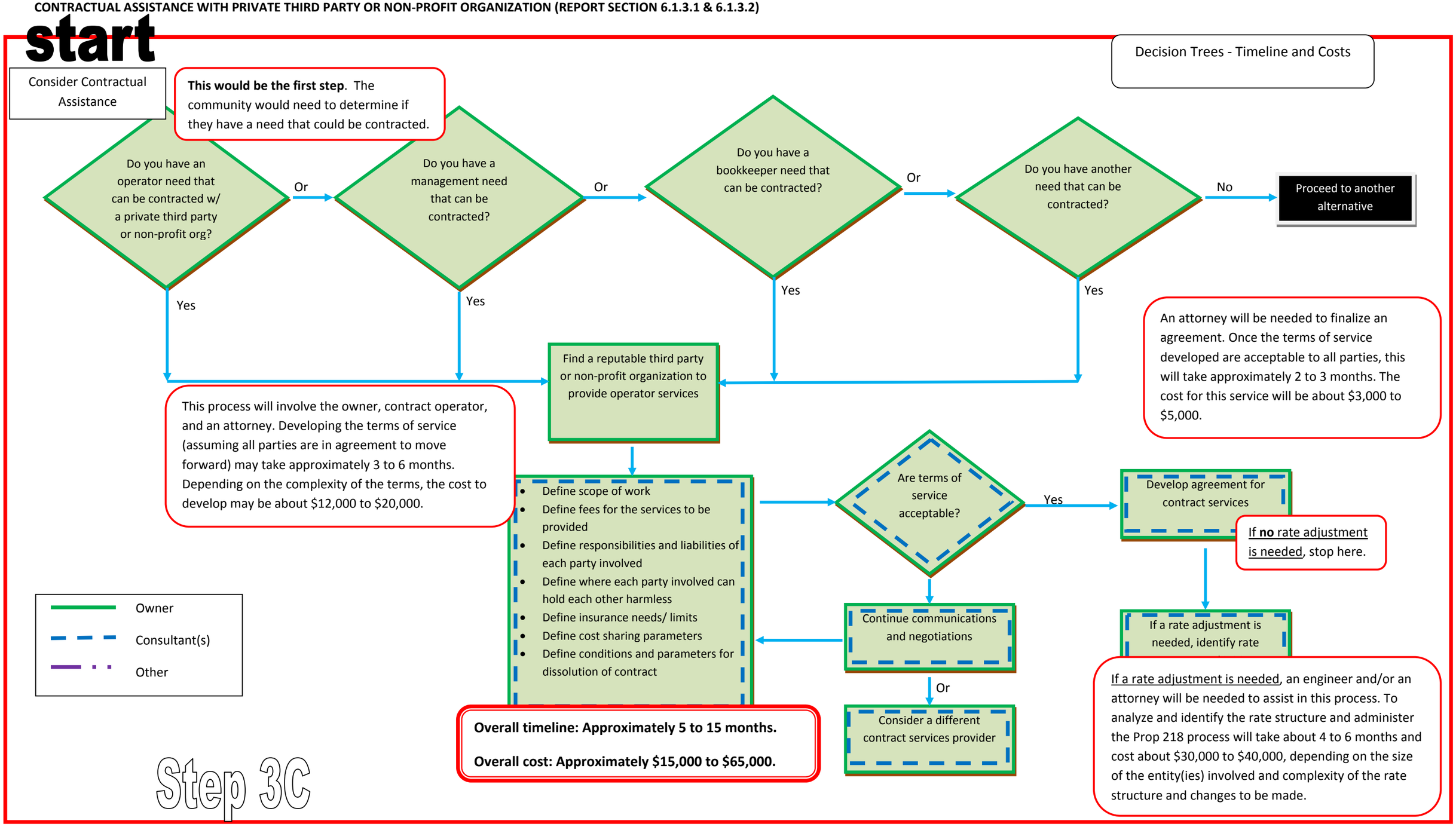
Step 3B

INFORMAL COOPERATION (REPORT SECTION 6.1.2)



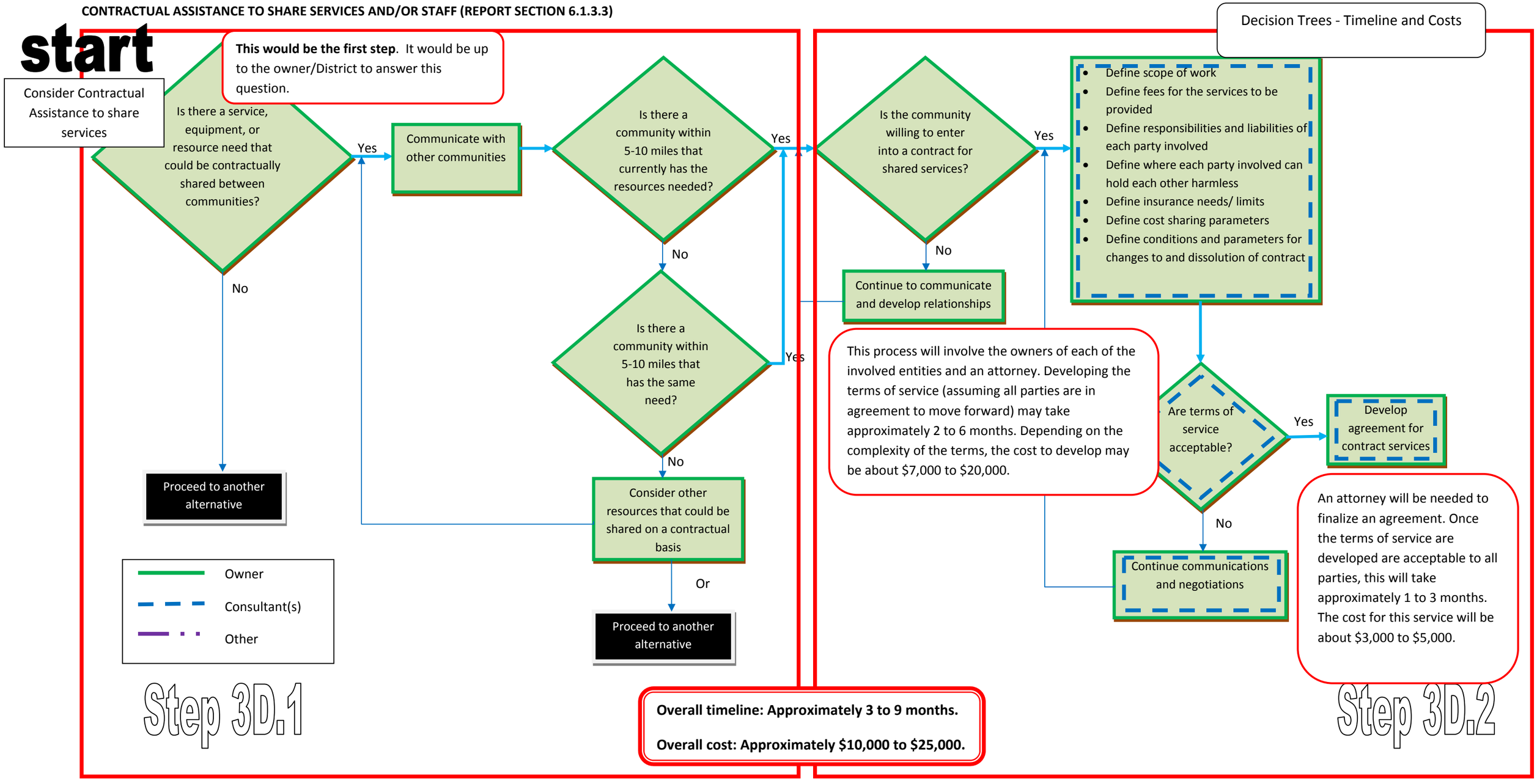
Step 3C

CONTRACTUAL ASSISTANCE WITH PRIVATE THIRD PARTY OR NON-PROFIT ORGANIZATION (REPORT SECTION 6.1.3.1 & 6.1.3.2)



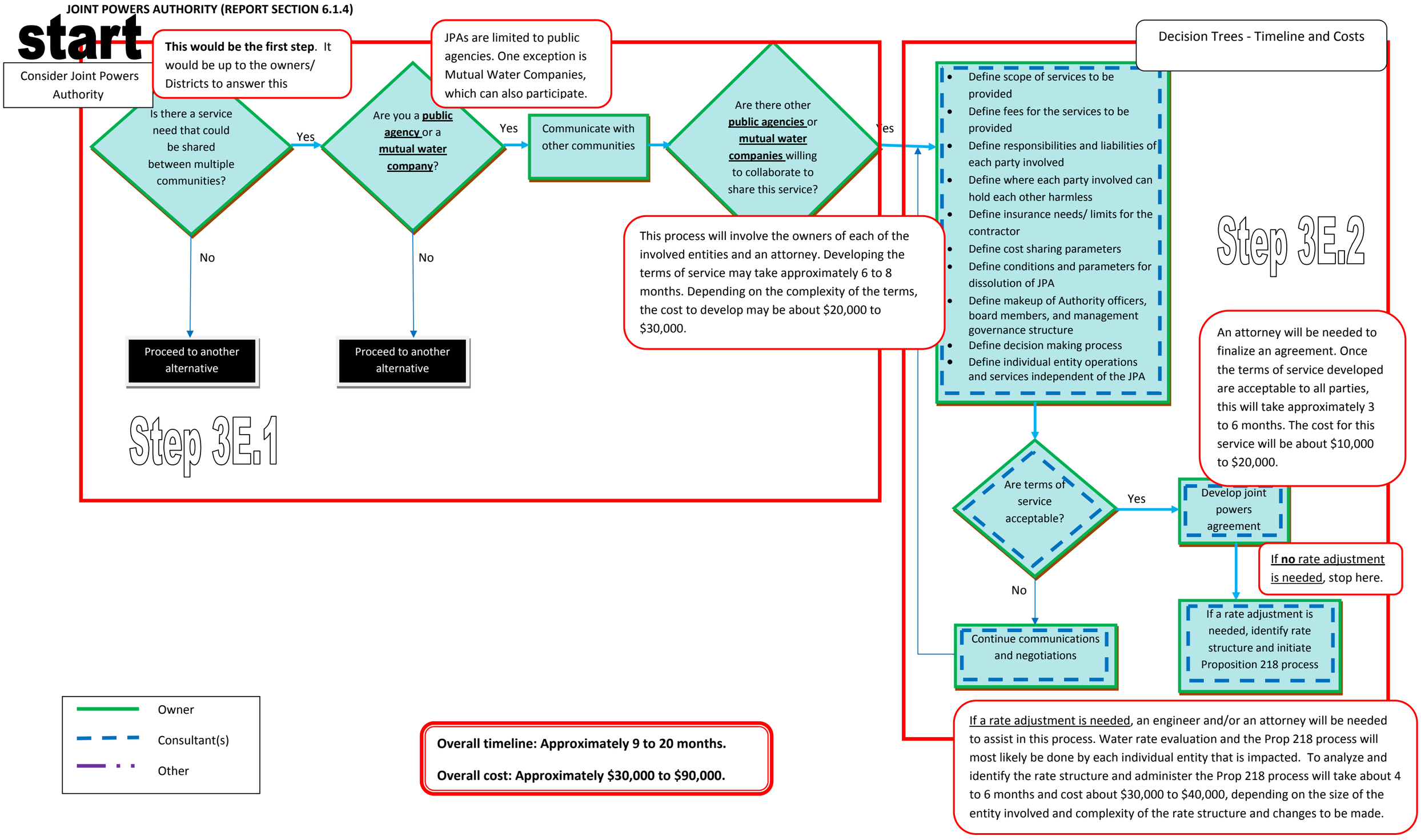
Step 3D

CONTRACTUAL ASSISTANCE TO SHARE SERVICES AND/OR STAFF (REPORT SECTION 6.1.3.3)



Step 3E

JOINT POWERS AUTHORITY (REPORT SECTION 6.1.4)



Owner

Consultant(s)

Other

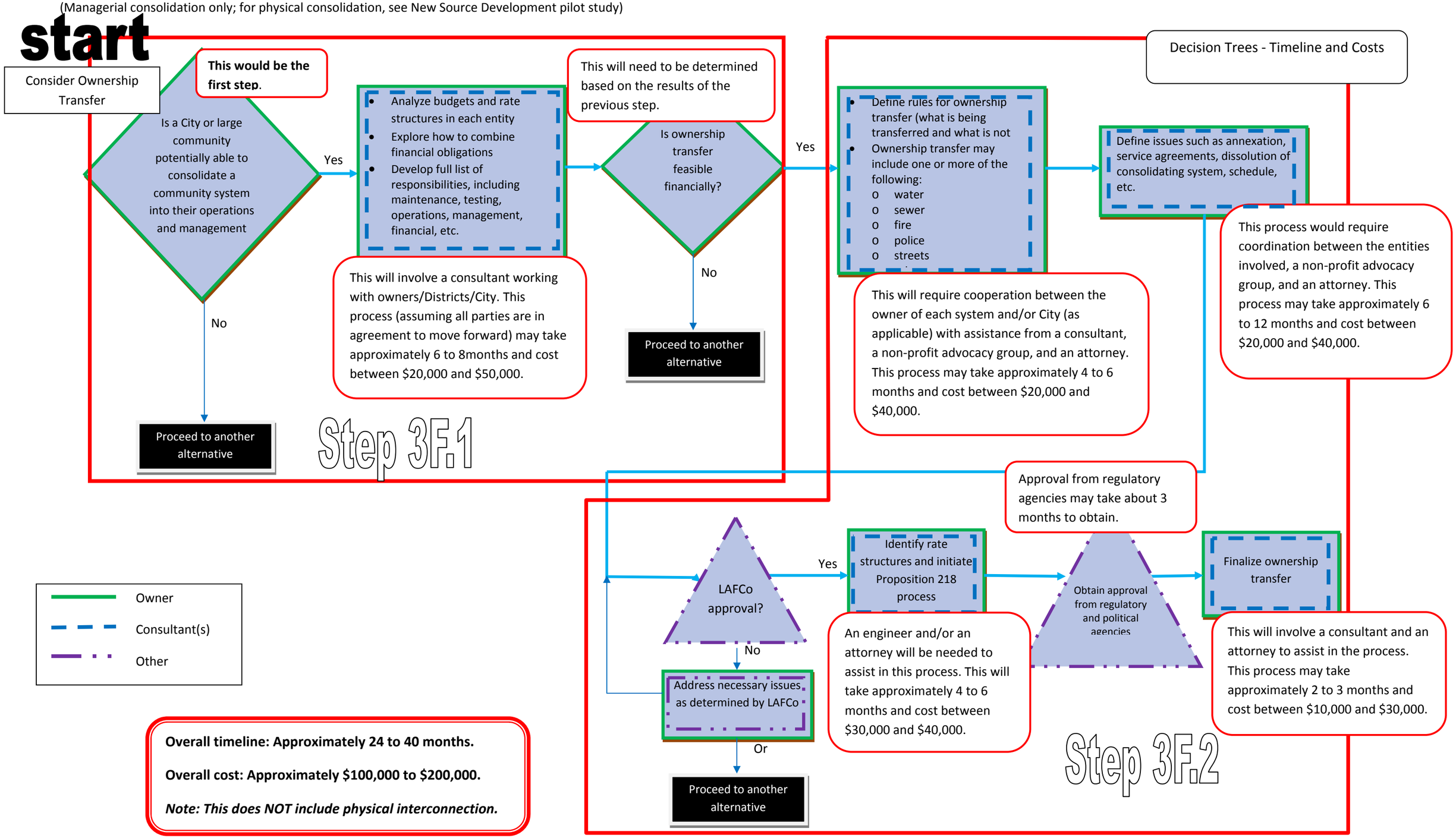
Overall timeline: Approximately 9 to 20 months.

Overall cost: Approximately $30,000 to $90,000.

Step 3F

OWNERSHIP TRANSFER (REPORT SECTION 6.1.5)

(Managerial consolidation only; for physical consolidation, see New Source Development pilot study)



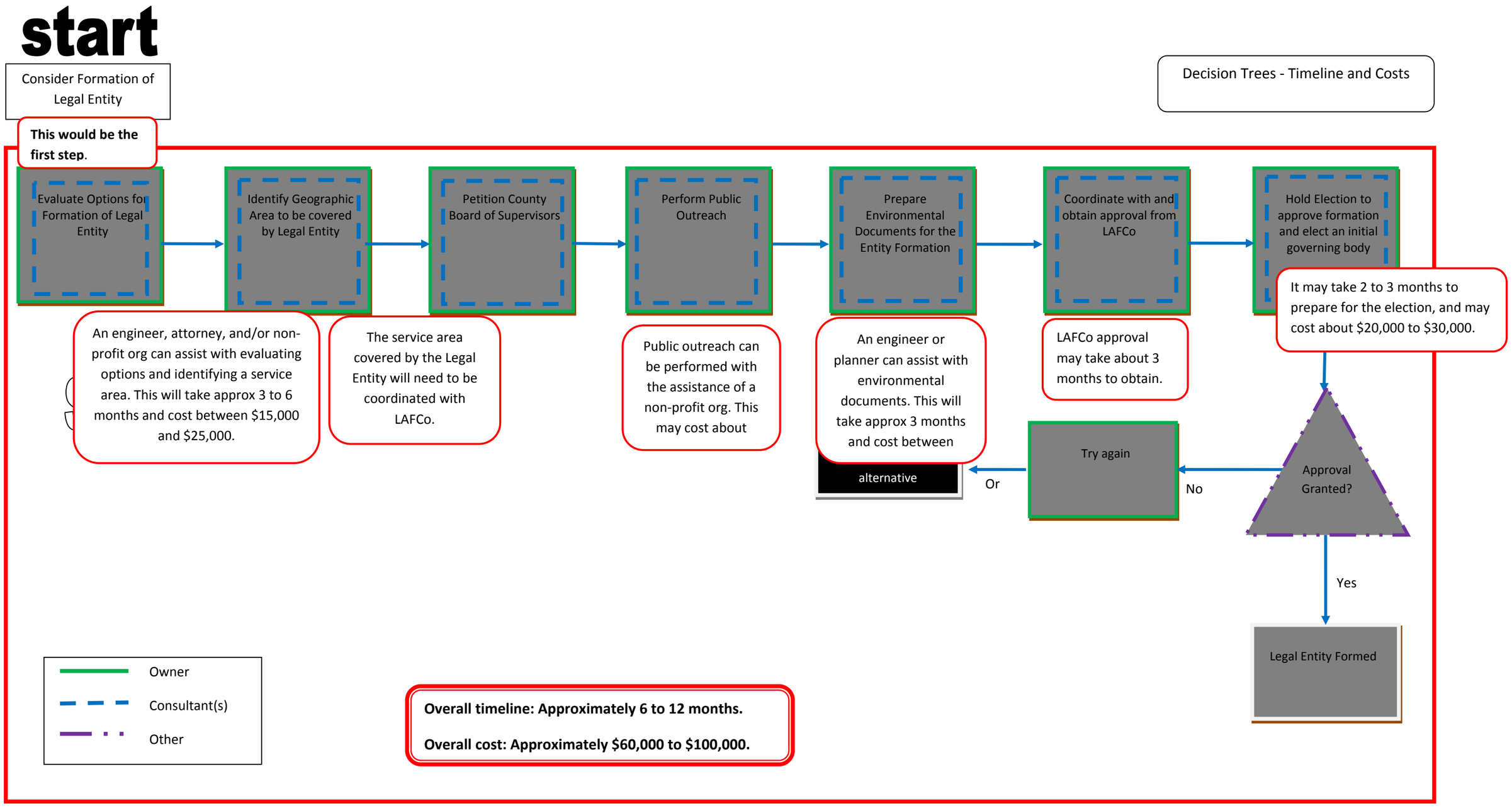
Overall timeline: Approximately 24 to 40 months.

Overall cost: Approximately $100,000 to $200,000.

Note: This does NOT include physical interconnection.

Step 3G

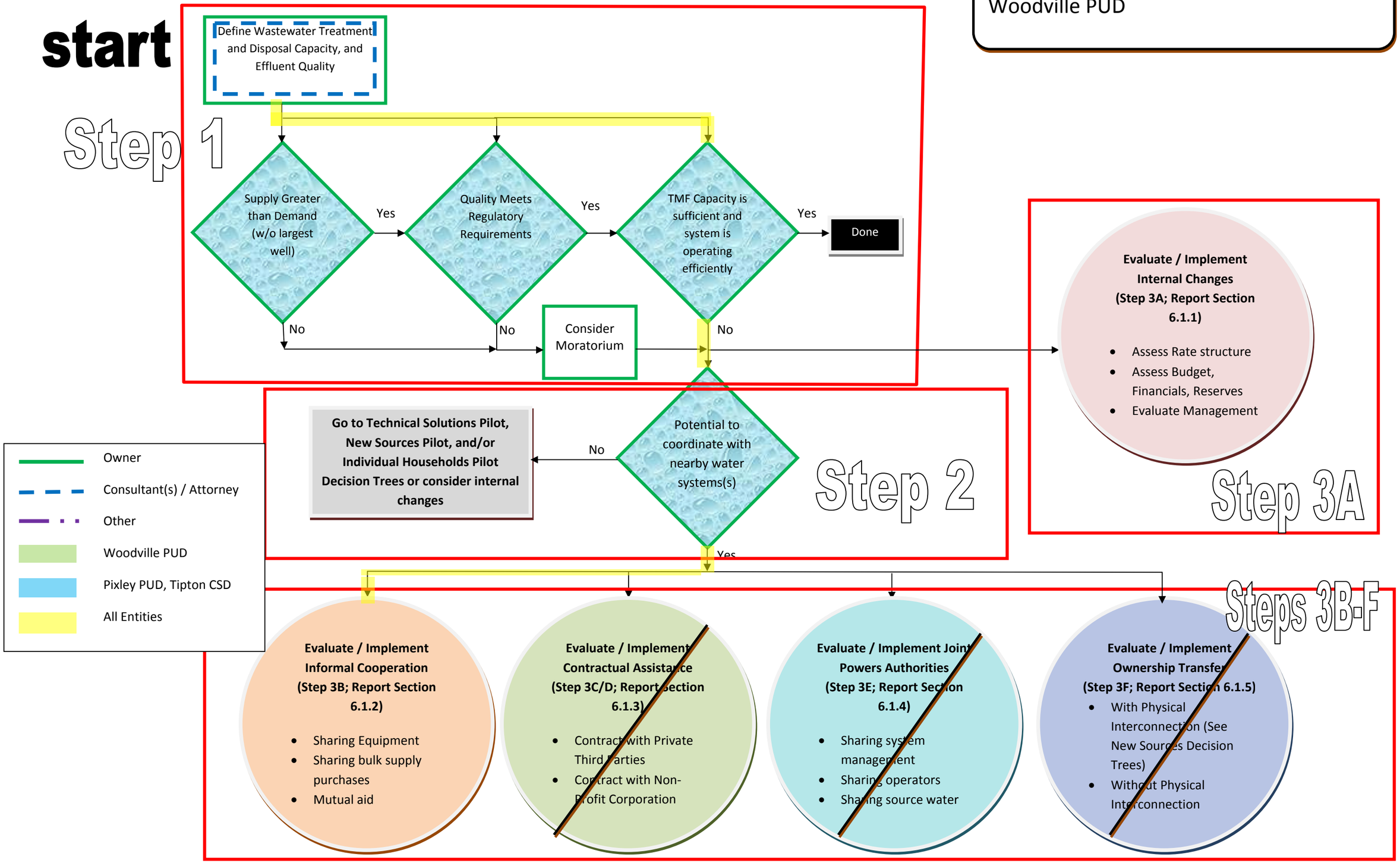
Formation of Legal Entity (REPORT SECTION 6.1.6)



Appendix F

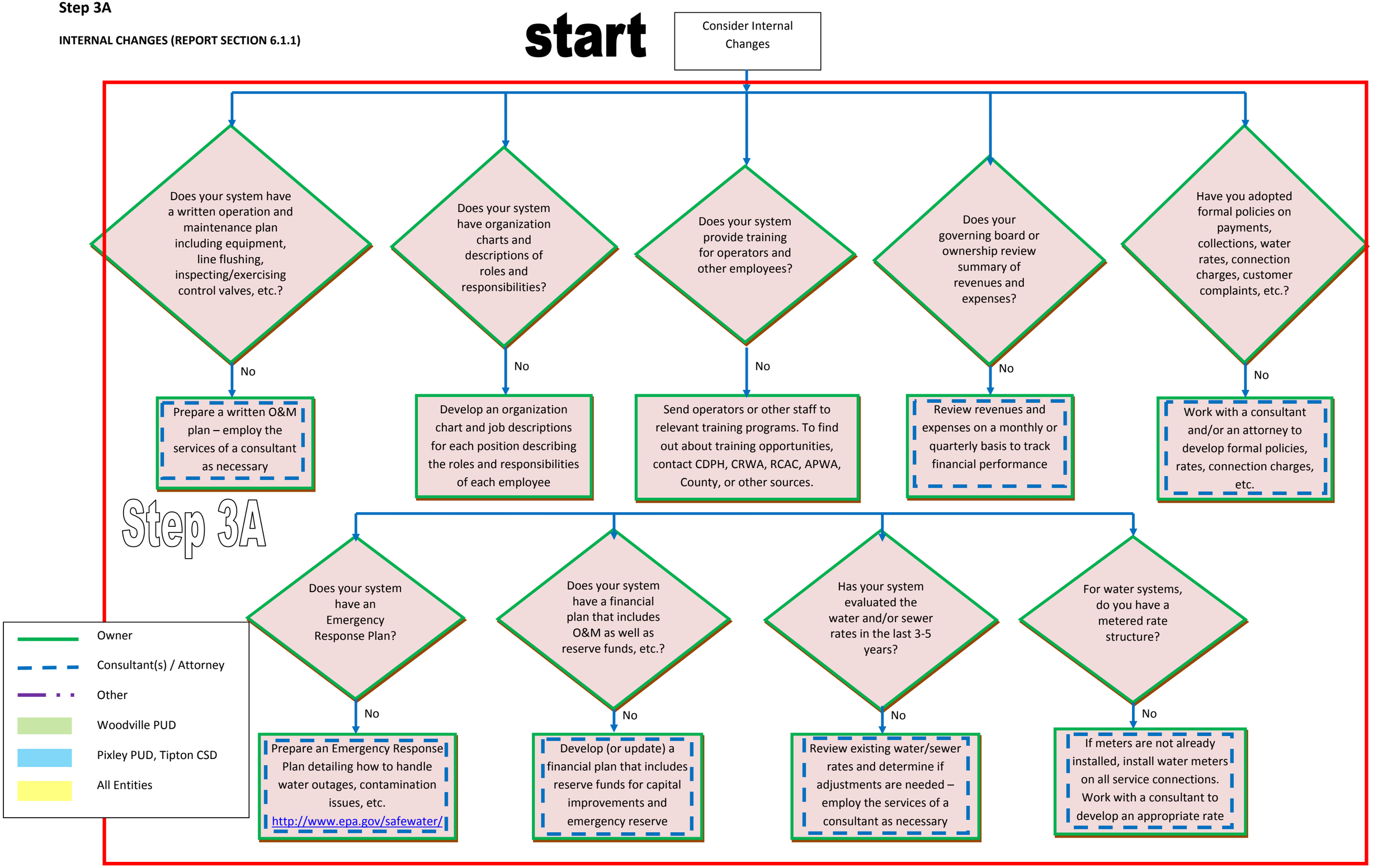
MANAGEMENT AND NON-INFRASTRUCTURE SOLUTIONS DECISION TREE

Case Study: Pixley PUD, Tipton CSD, Woodville PUD



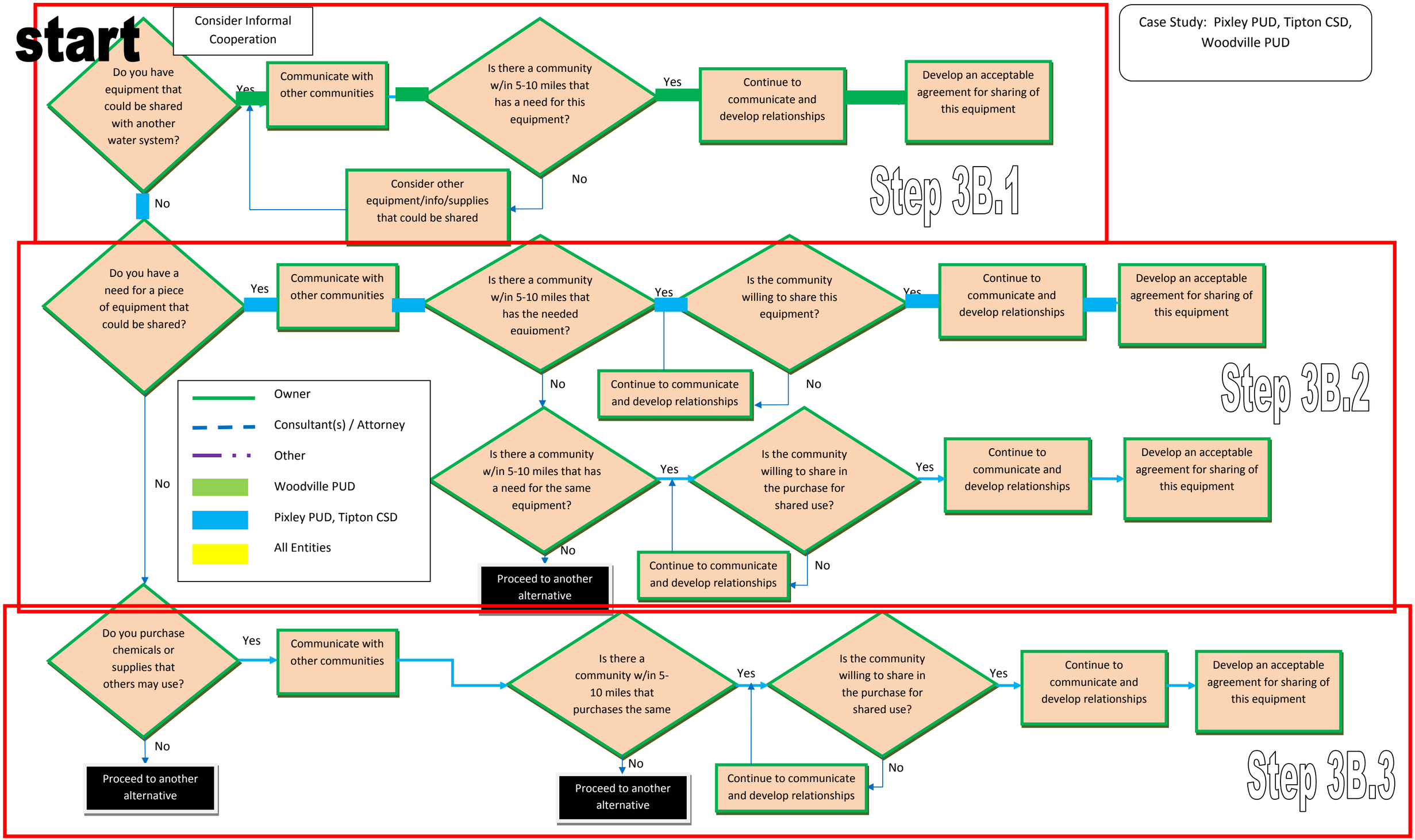
Step 3A

INTERNAL CHANGES (REPORT SECTION 6.1.1)



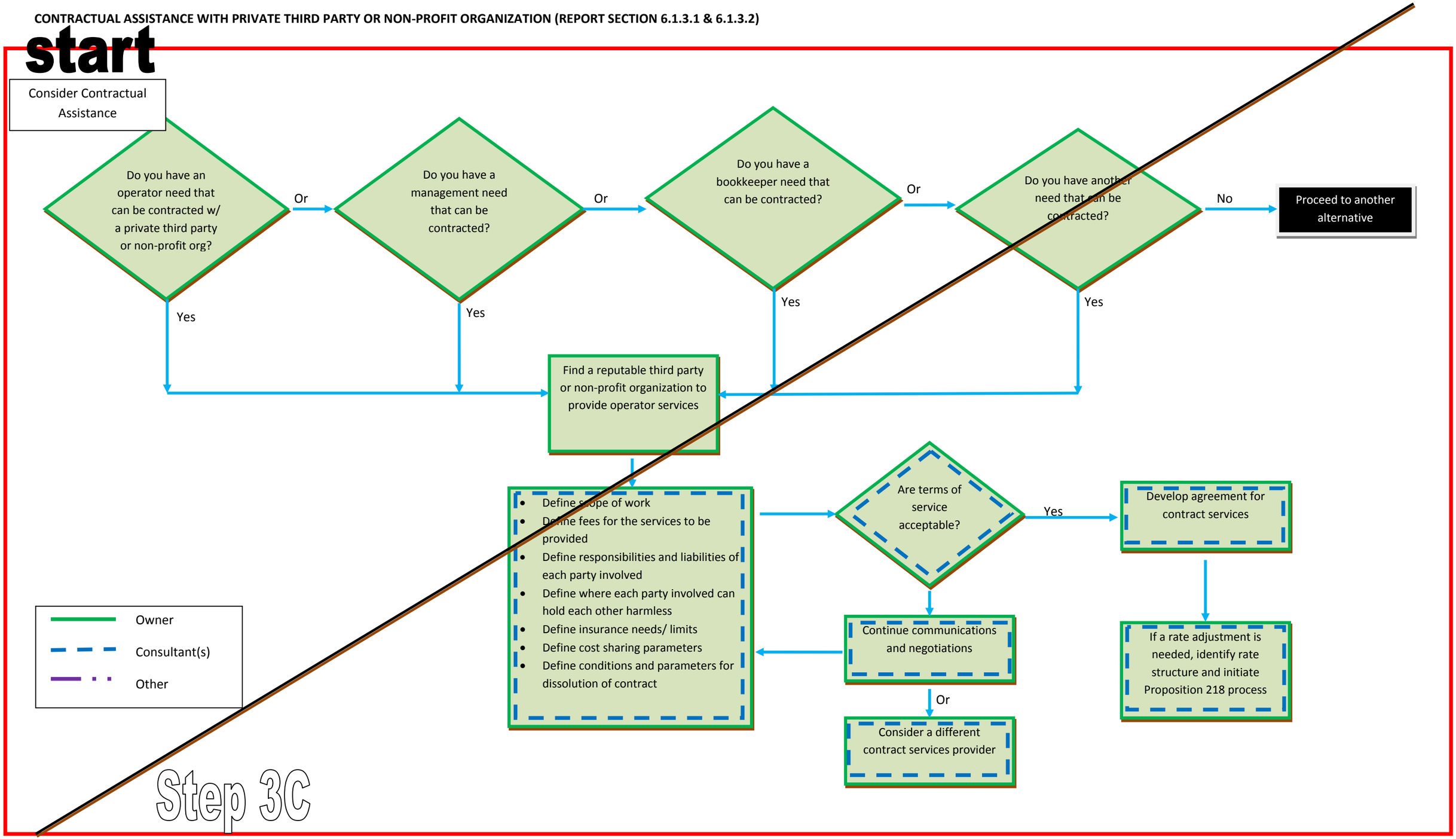
Step 3B

INFORMAL COOPERATION (REPORT SECTION 6.1.2)



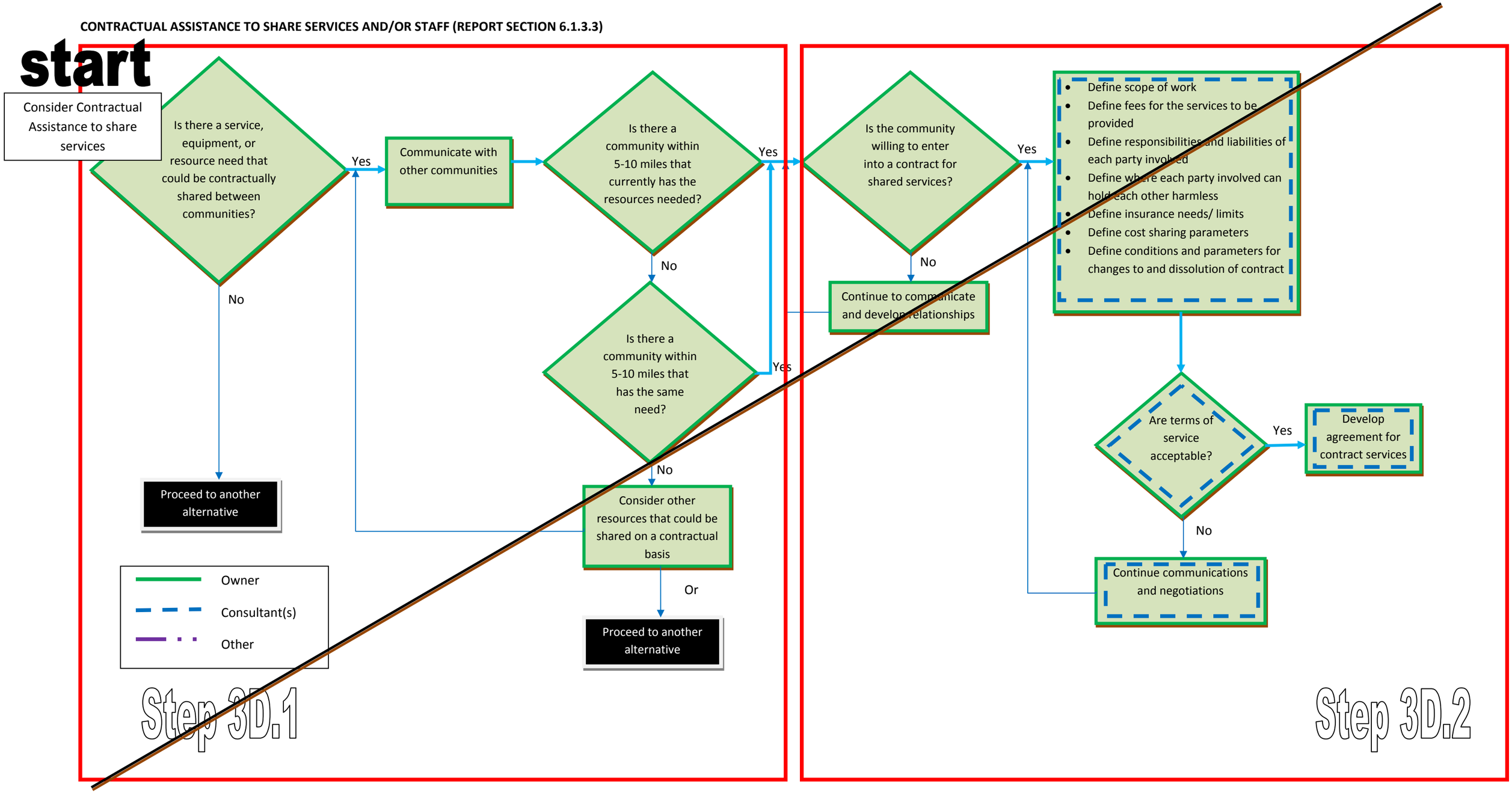
Step 3C

CONTRACTUAL ASSISTANCE WITH PRIVATE THIRD PARTY OR NON-PROFIT ORGANIZATION (REPORT SECTION 6.1.3.1 & 6.1.3.2)



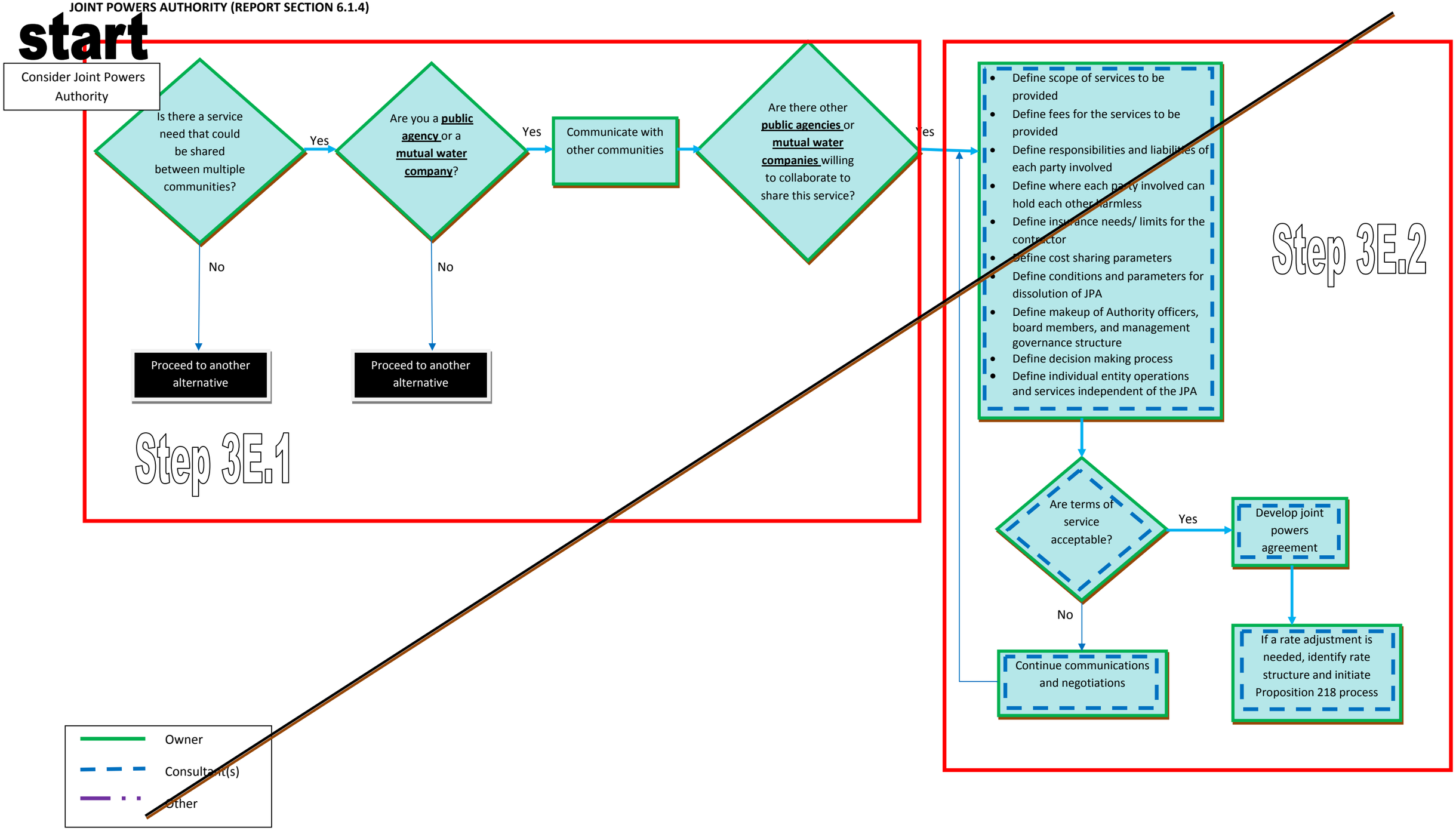
Step 3D

CONTRACTUAL ASSISTANCE TO SHARE SERVICES AND/OR STAFF (REPORT SECTION 6.1.3.3)



Step 3E

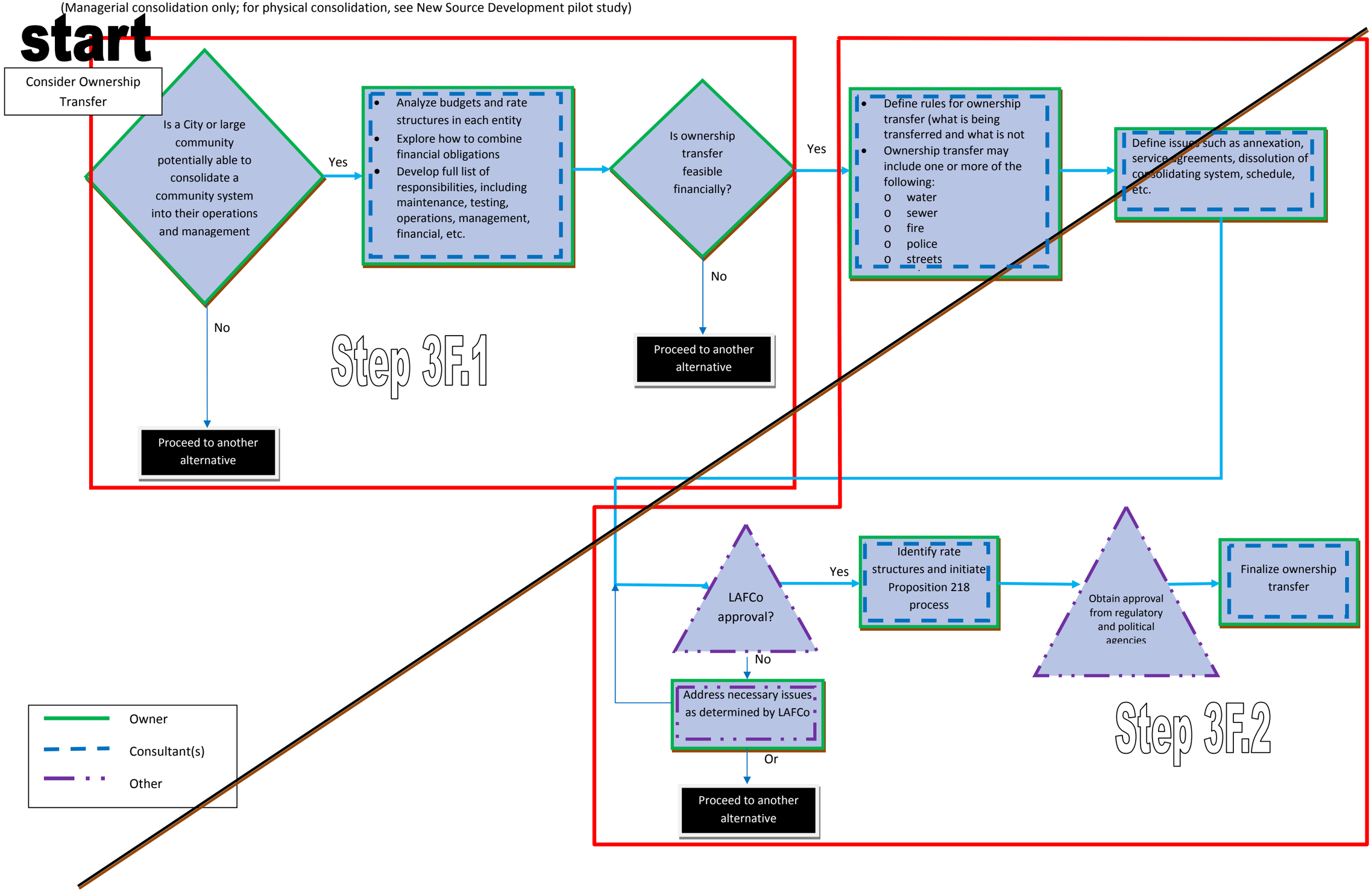
JOINT POWERS AUTHORITY (REPORT SECTION 6.1.4)



Step 3F

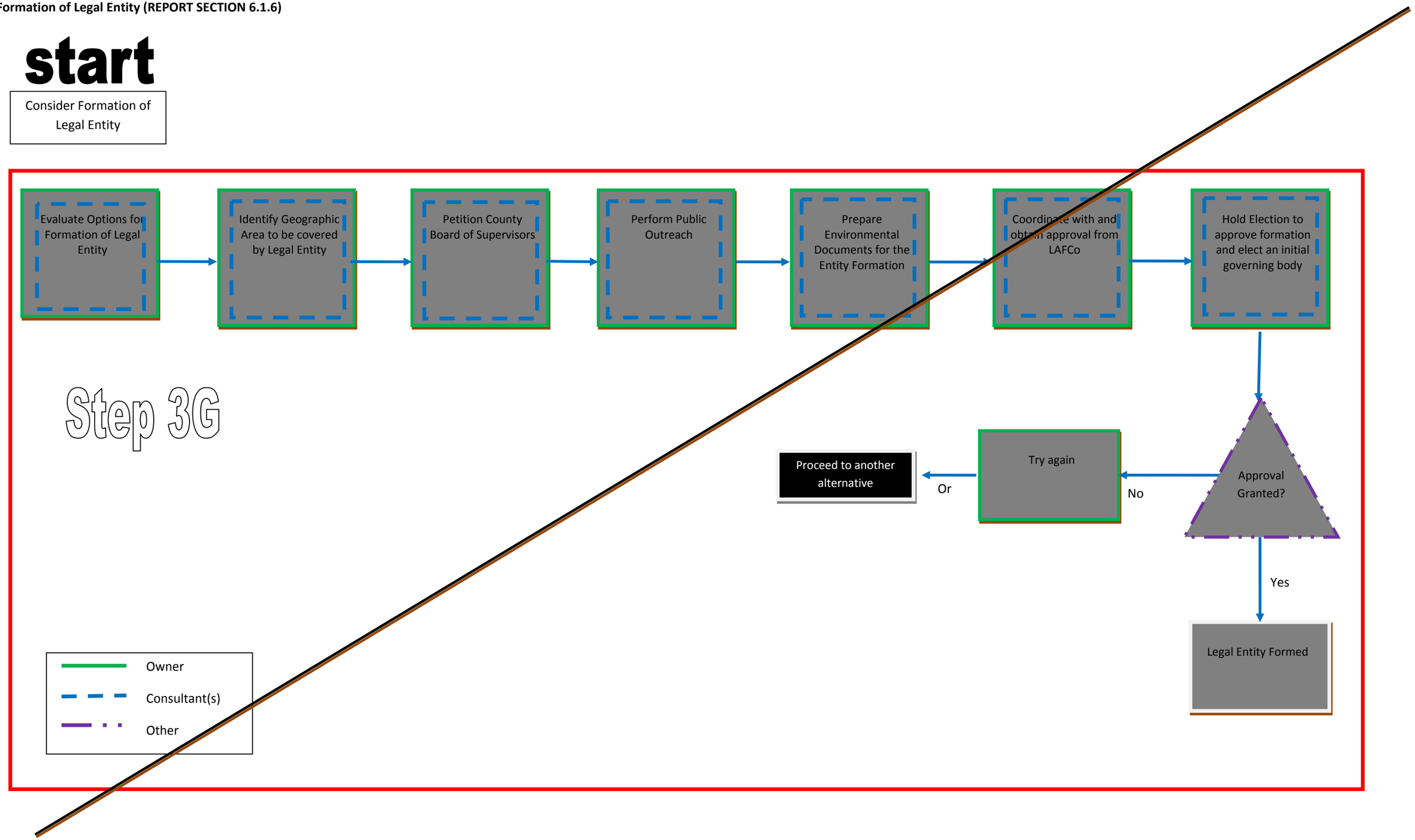
OWNERSHIP TRANSFER (REPORT SECTION 6.1.5)

(Managerial consolidation only; for physical consolidation, see New Source Development pilot study)



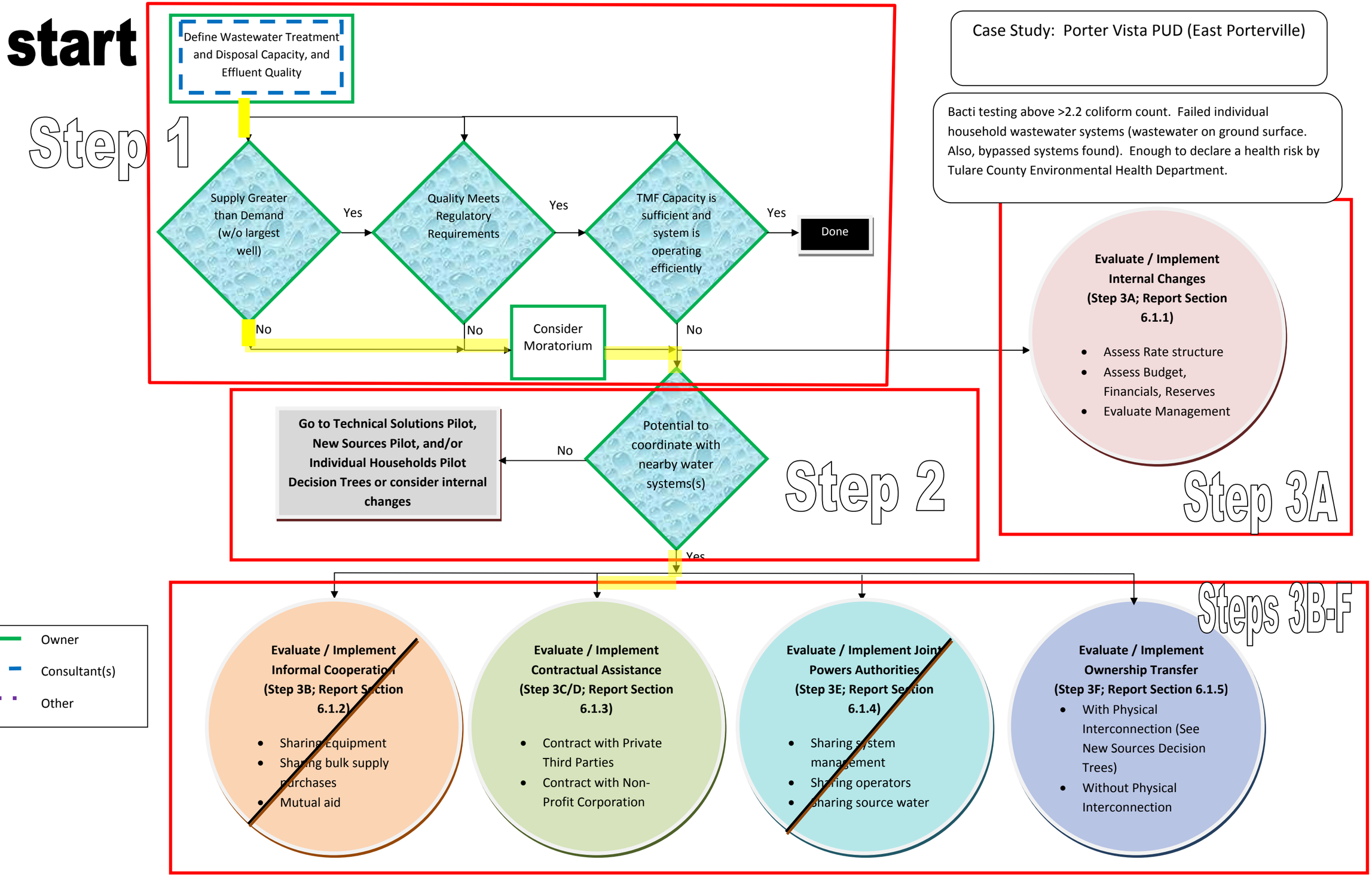
Step 3G

Formation of Legal Entity (REPORT SECTION 6.1.6)



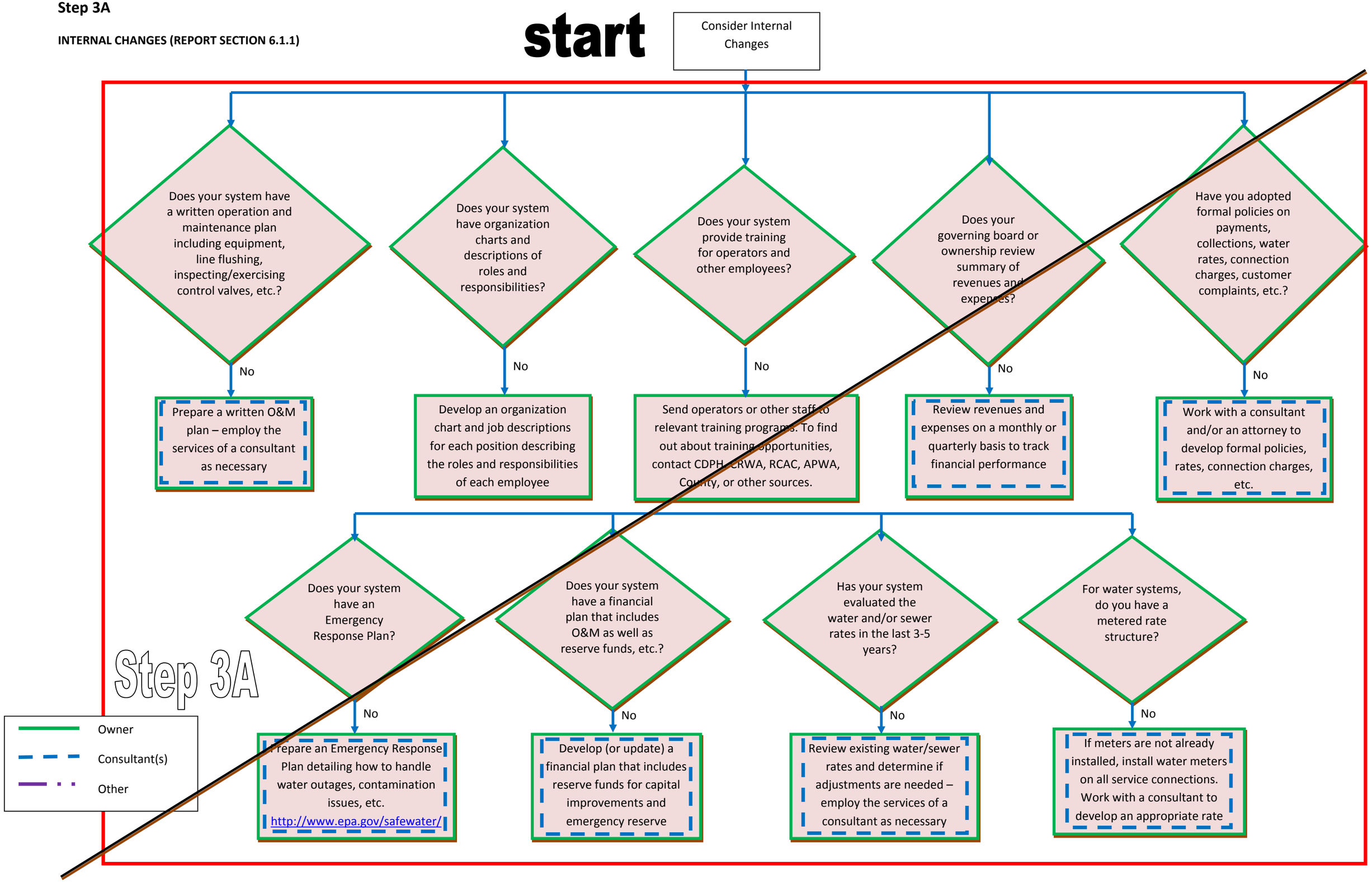
Appendix F

MANAGEMENT AND NON-INFRASTRUCTURE SOLUTIONS DECISION TREE



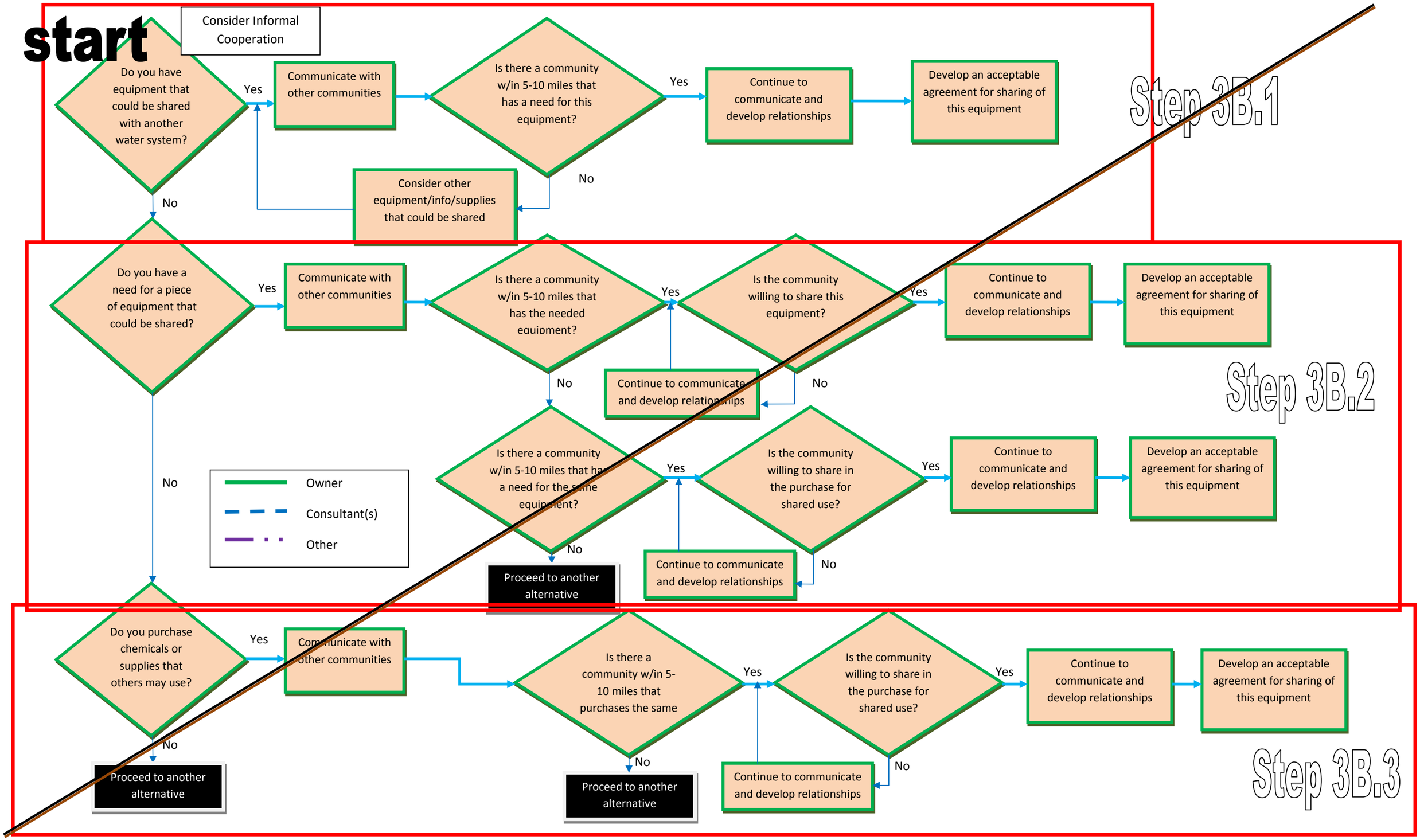
Step 3A

INTERNAL CHANGES (REPORT SECTION 6.1.1)



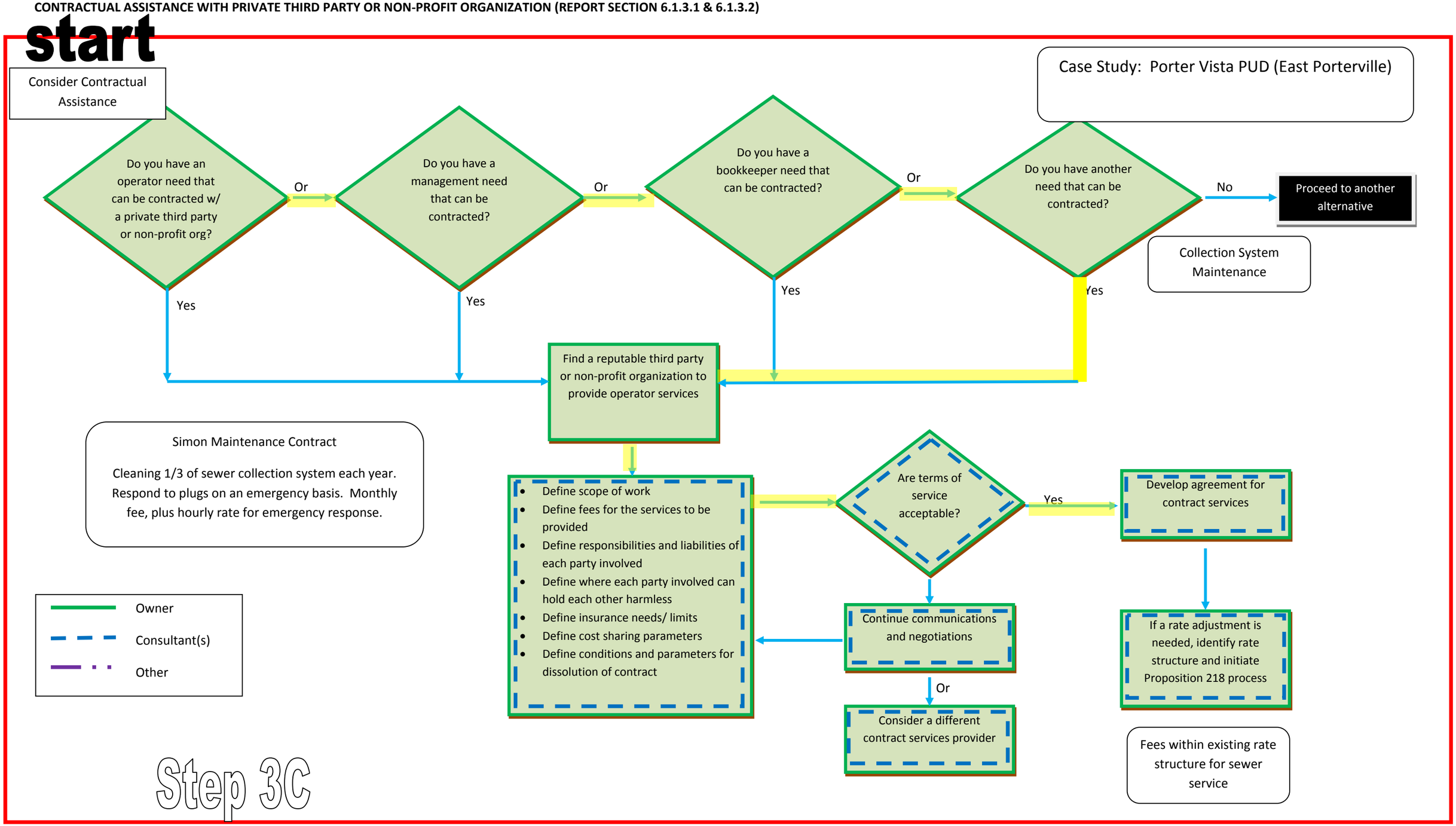
Step 3B

INFORMAL COOPERATION (REPORT SECTION 6.1.2)



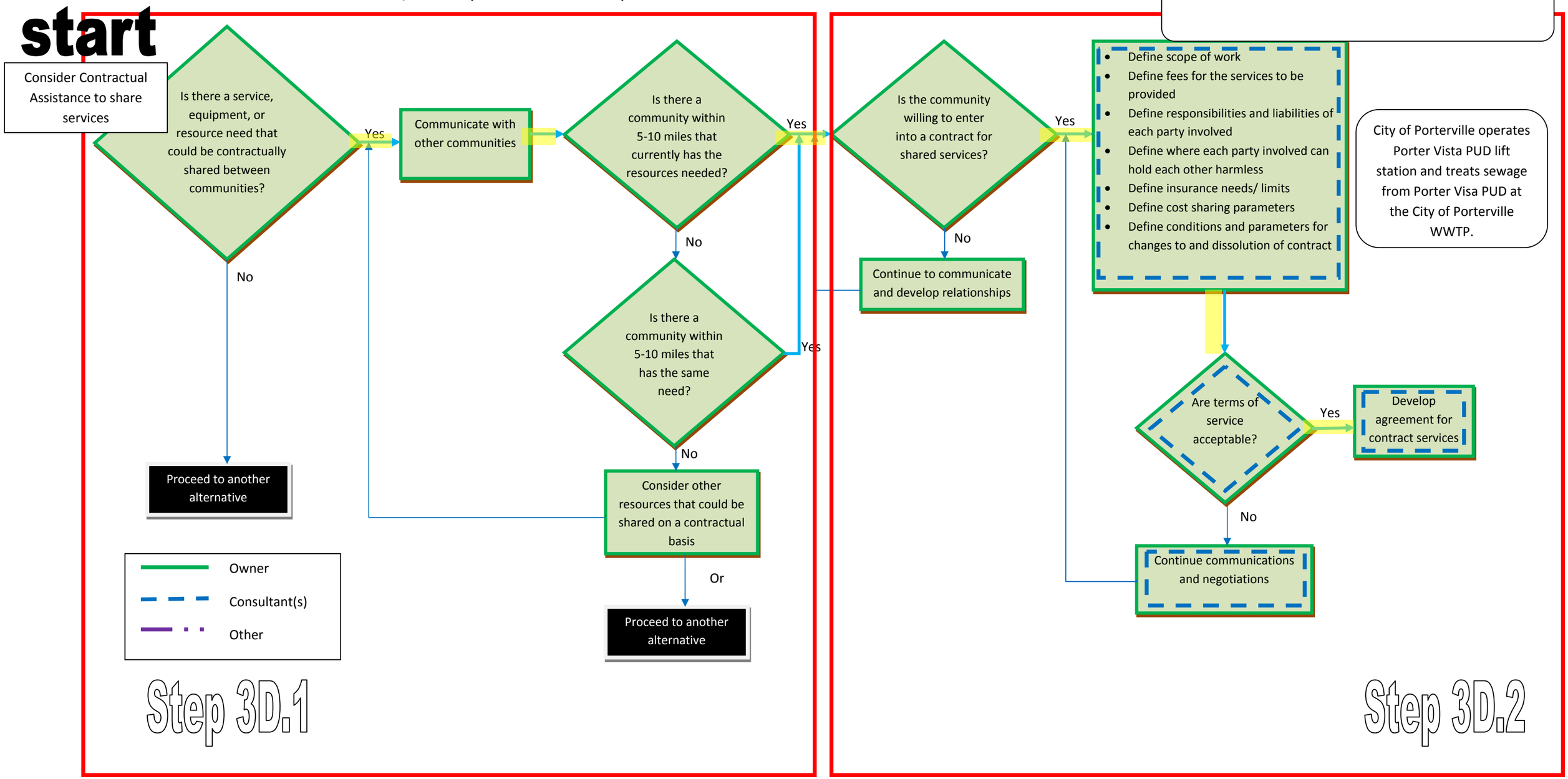
Step 3C

CONTRACTUAL ASSISTANCE WITH PRIVATE THIRD PARTY OR NON-PROFIT ORGANIZATION (REPORT SECTION 6.1.3.1 & 6.1.3.2)



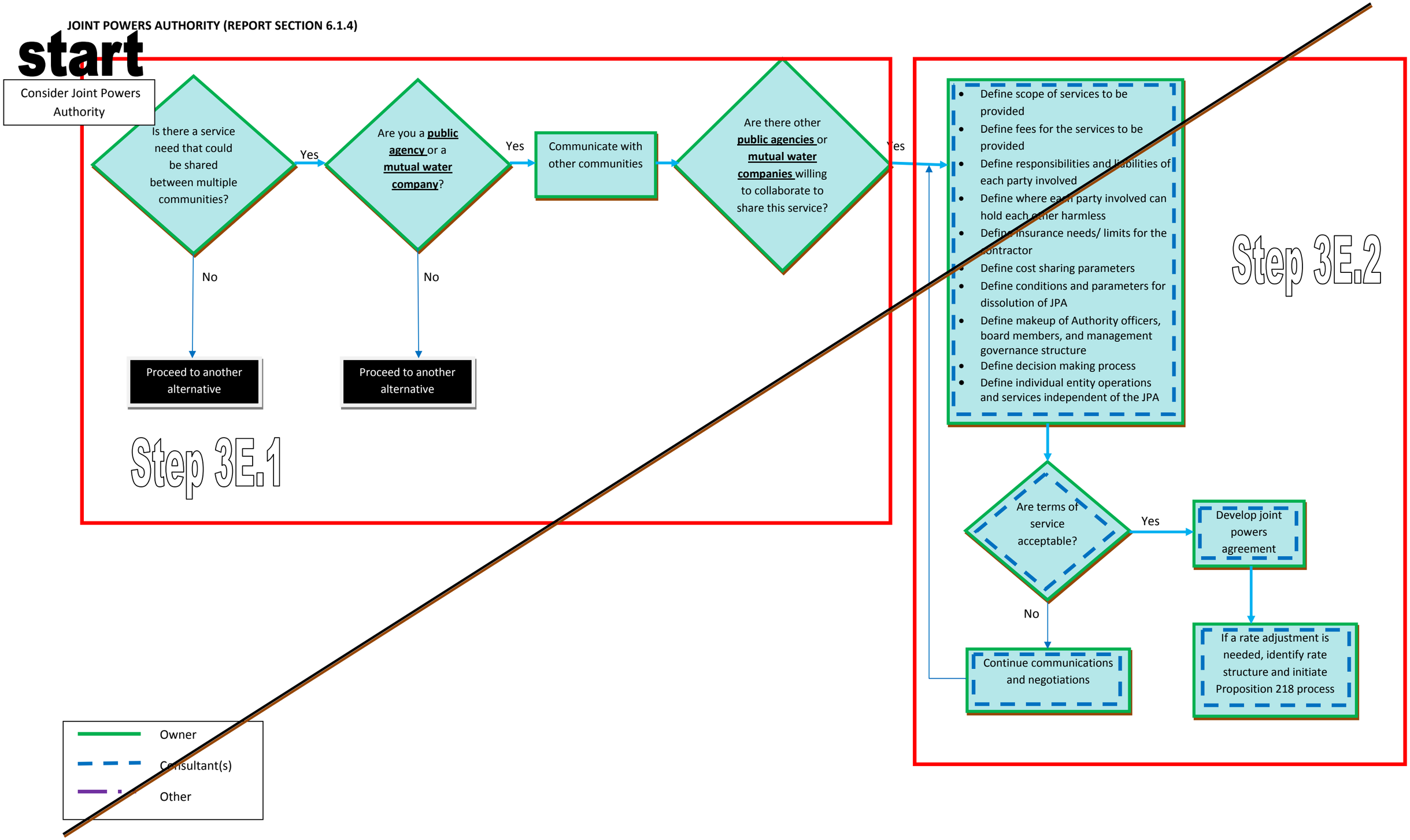
Step 3D

CONTRACTUAL ASSISTANCE TO SHARE SERVICES AND/OR STAFF (REPORT SECTION 6.1.3.3)



Step 3E

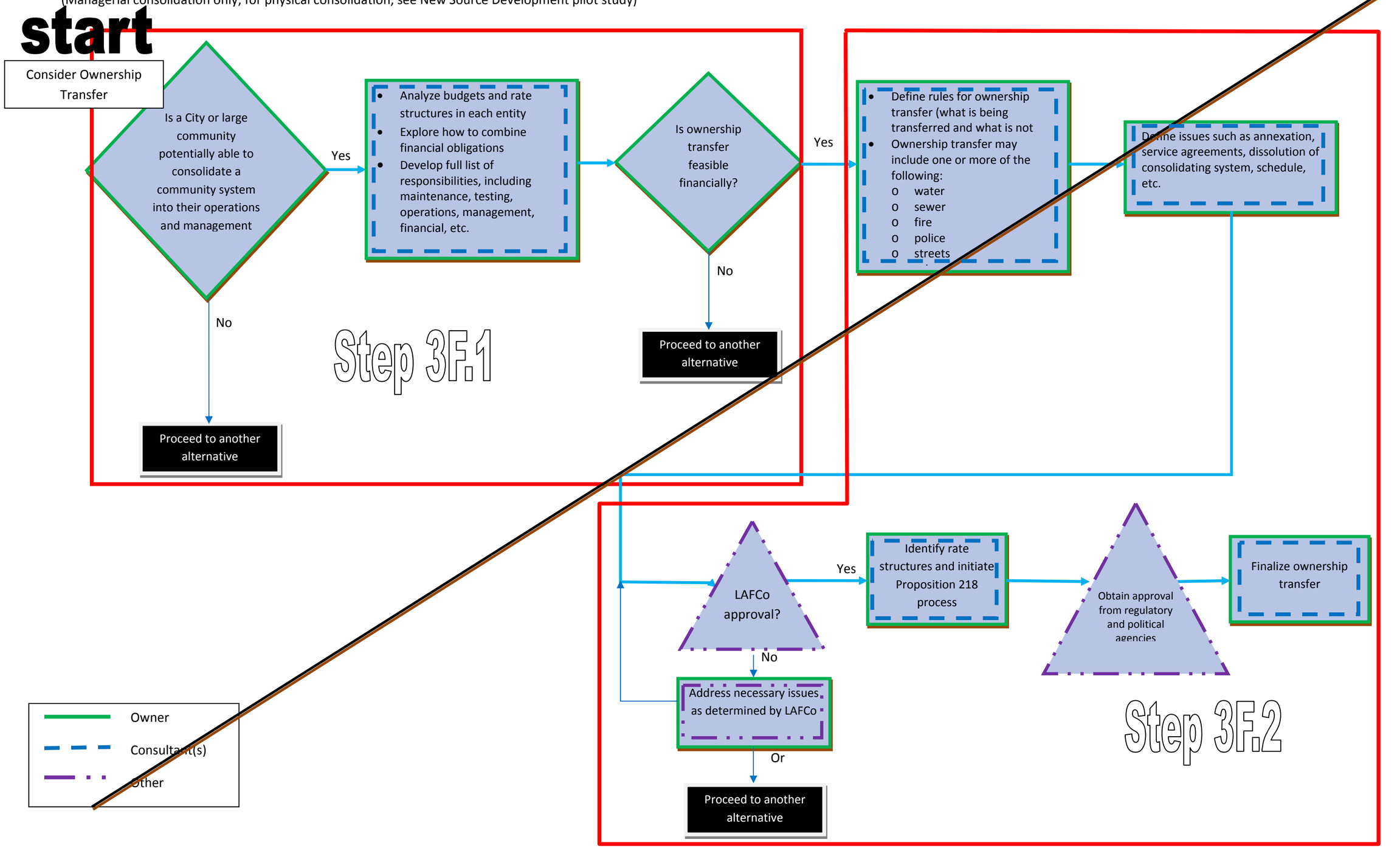
JOINT POWERS AUTHORITY (REPORT SECTION 6.1.4)



Step 3F

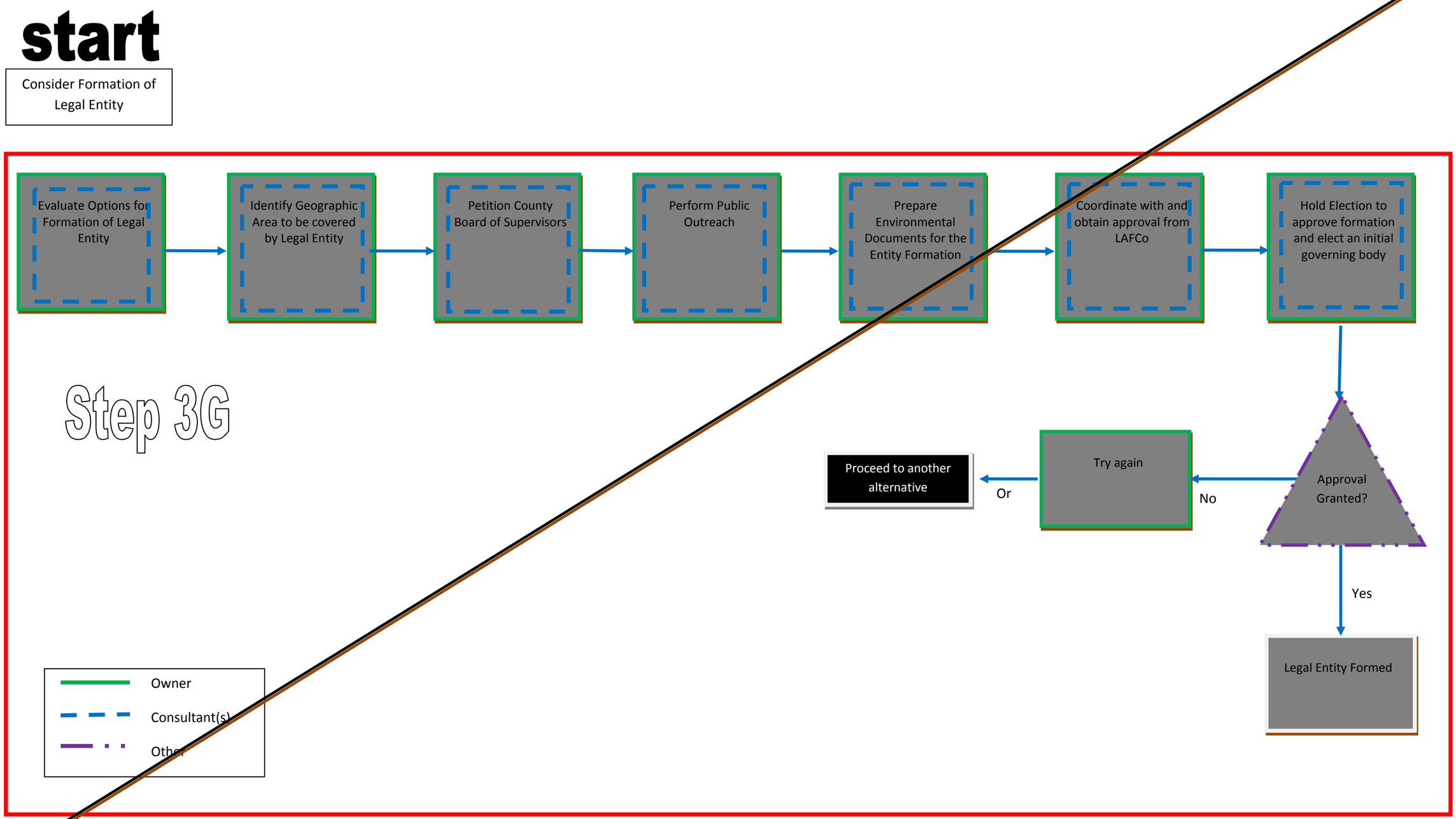
OWNERSHIP TRANSFER (REPORT SECTION 6.1.5)

(Managerial consolidation only; for physical consolidation, see New Source Development pilot study)



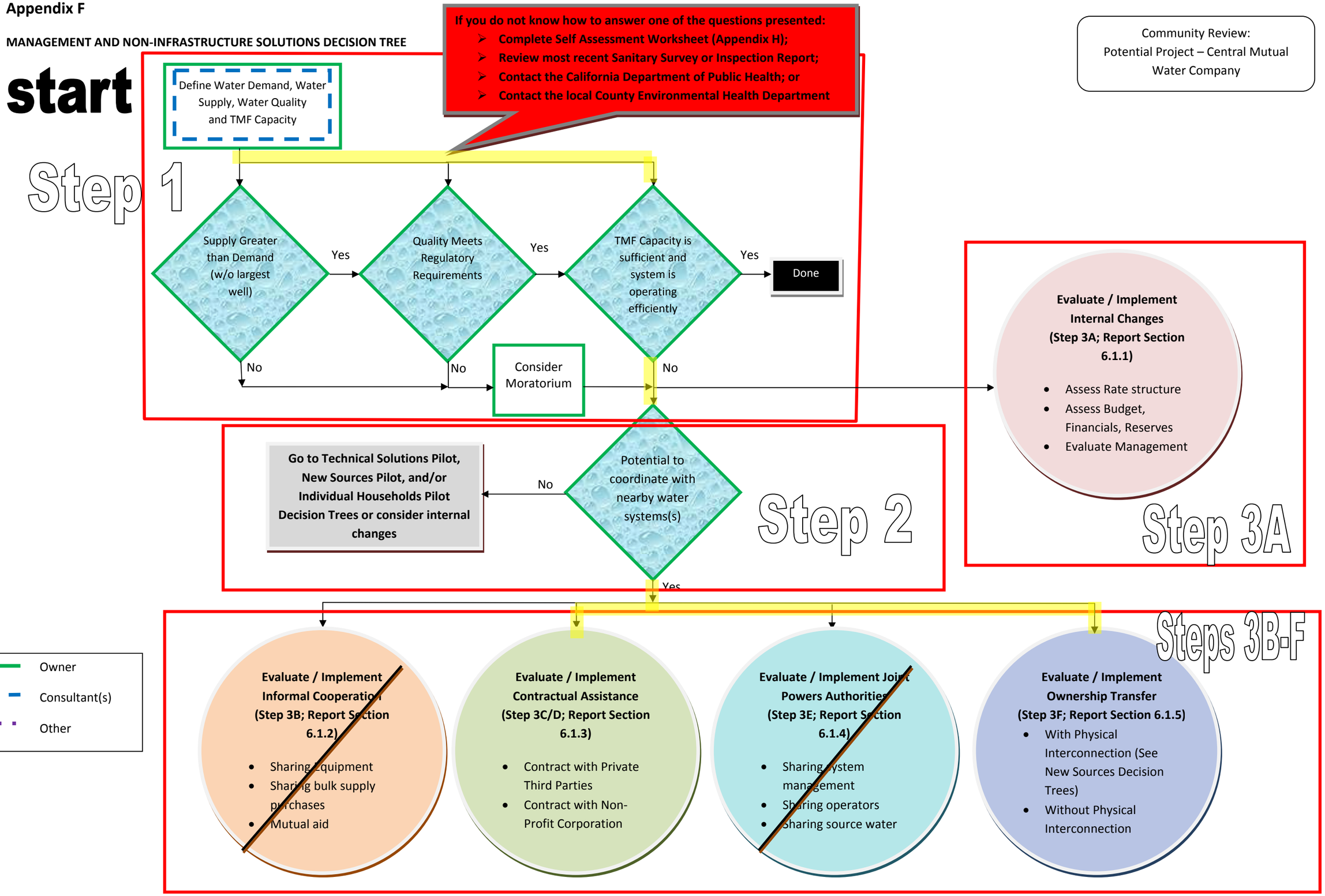
Step 3G

Formation of Legal Entity (REPORT SECTION 6.1.6)



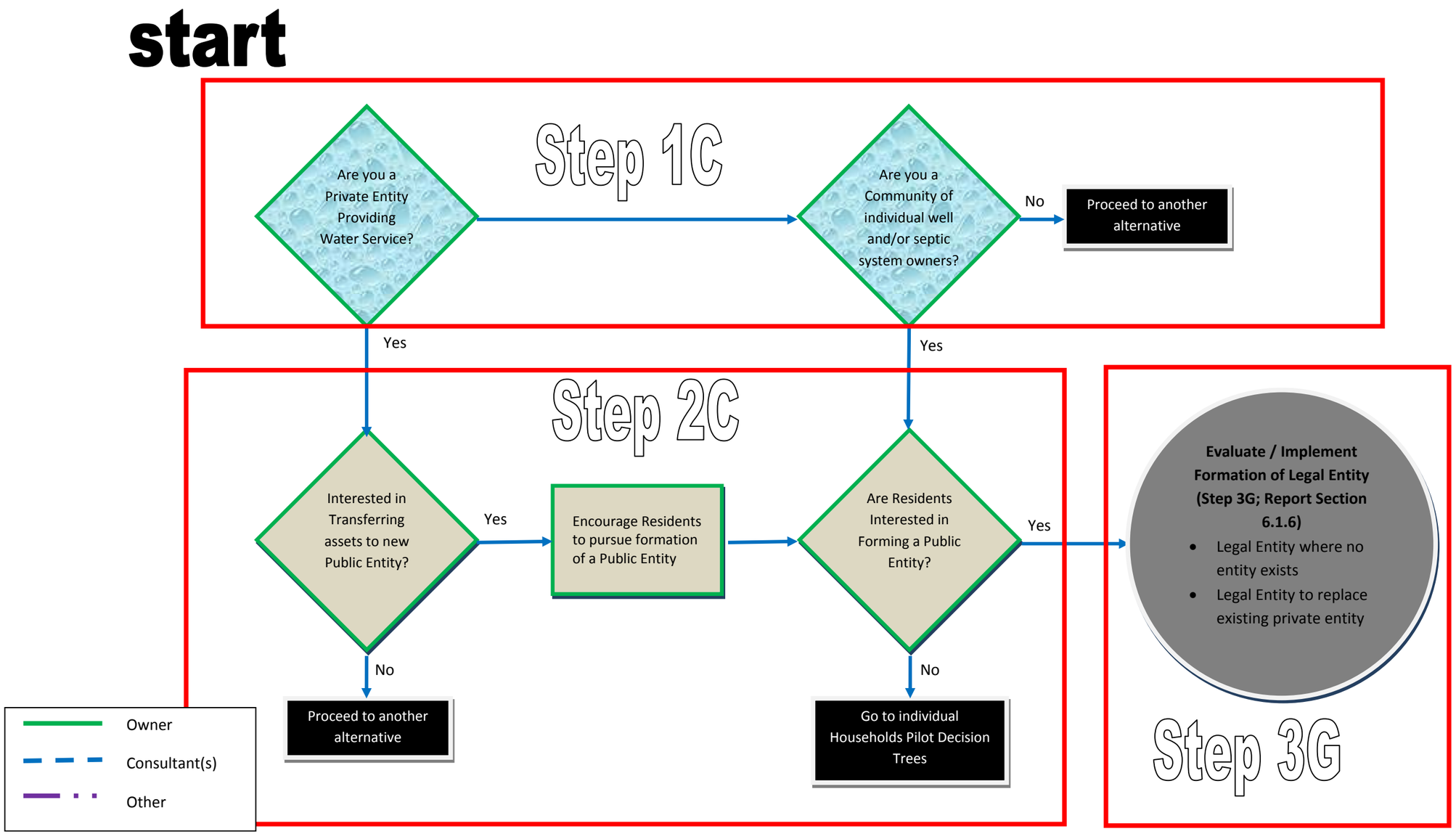
Appendix F

MANAGEMENT AND NON-INFRASTRUCTURE SOLUTIONS DECISION TREE



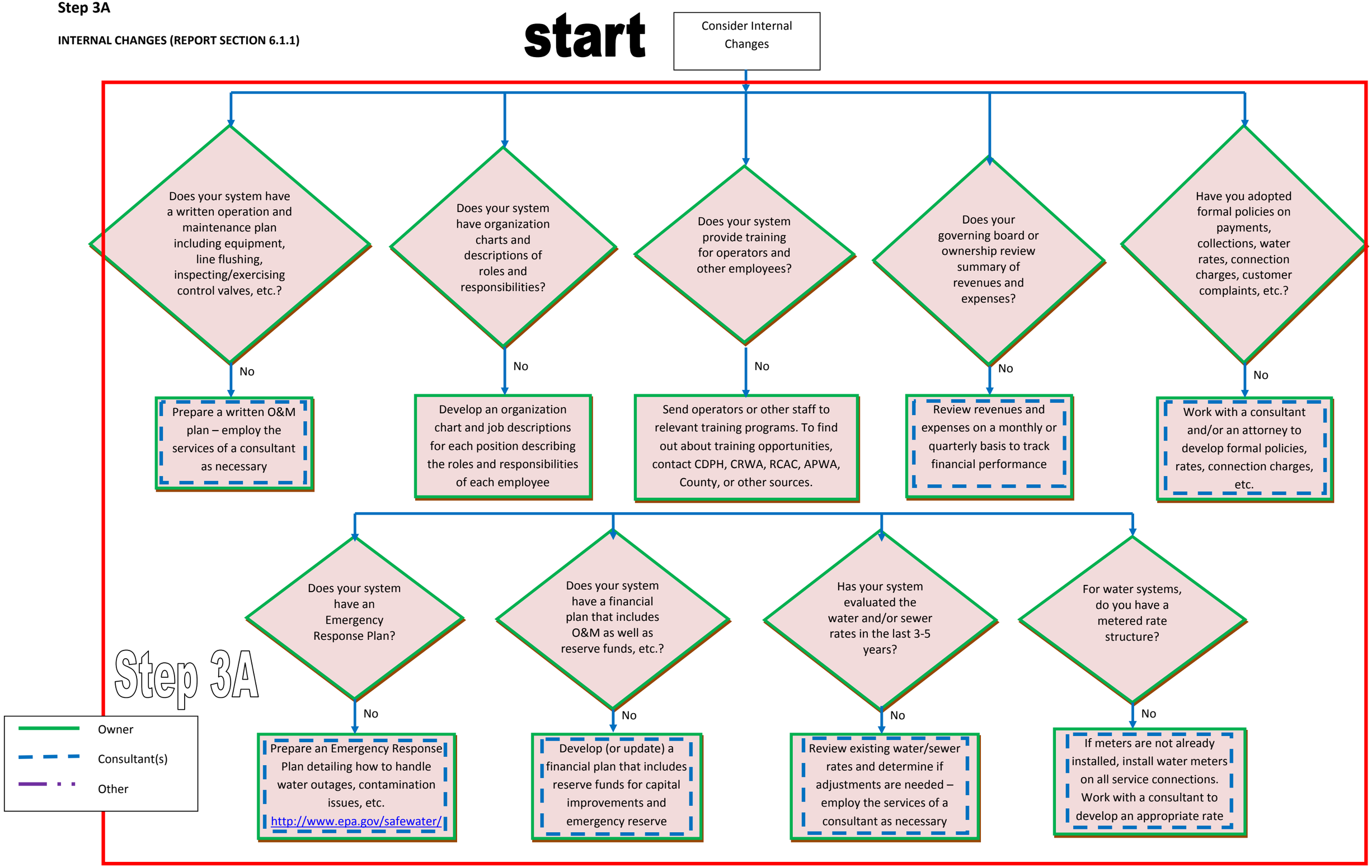
Appendix F

MANAGEMENT AND NON-INFRASTRUCTURE SOLUTIONS DECISION TREE



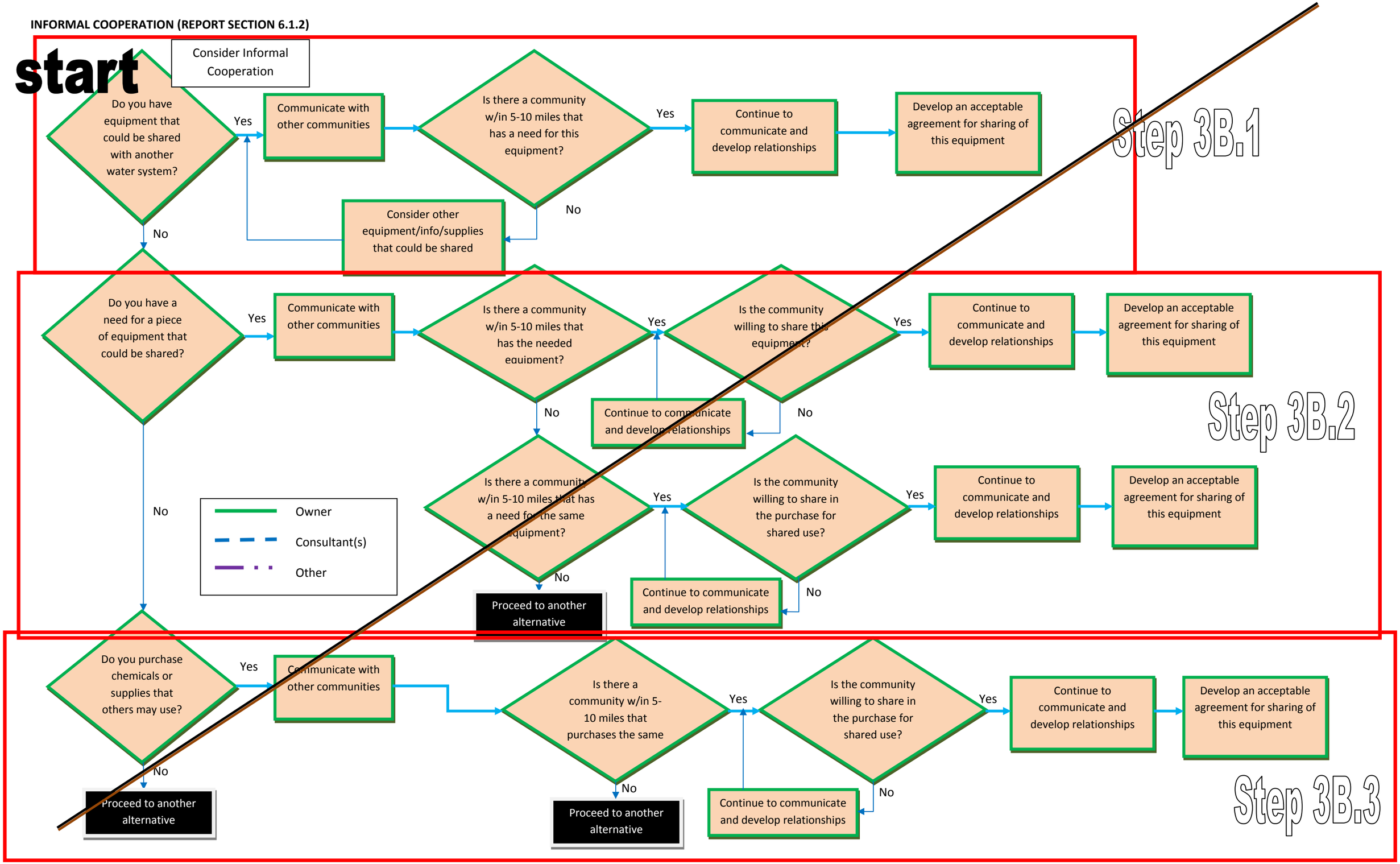
Step 3A

INTERNAL CHANGES (REPORT SECTION 6.1.1)



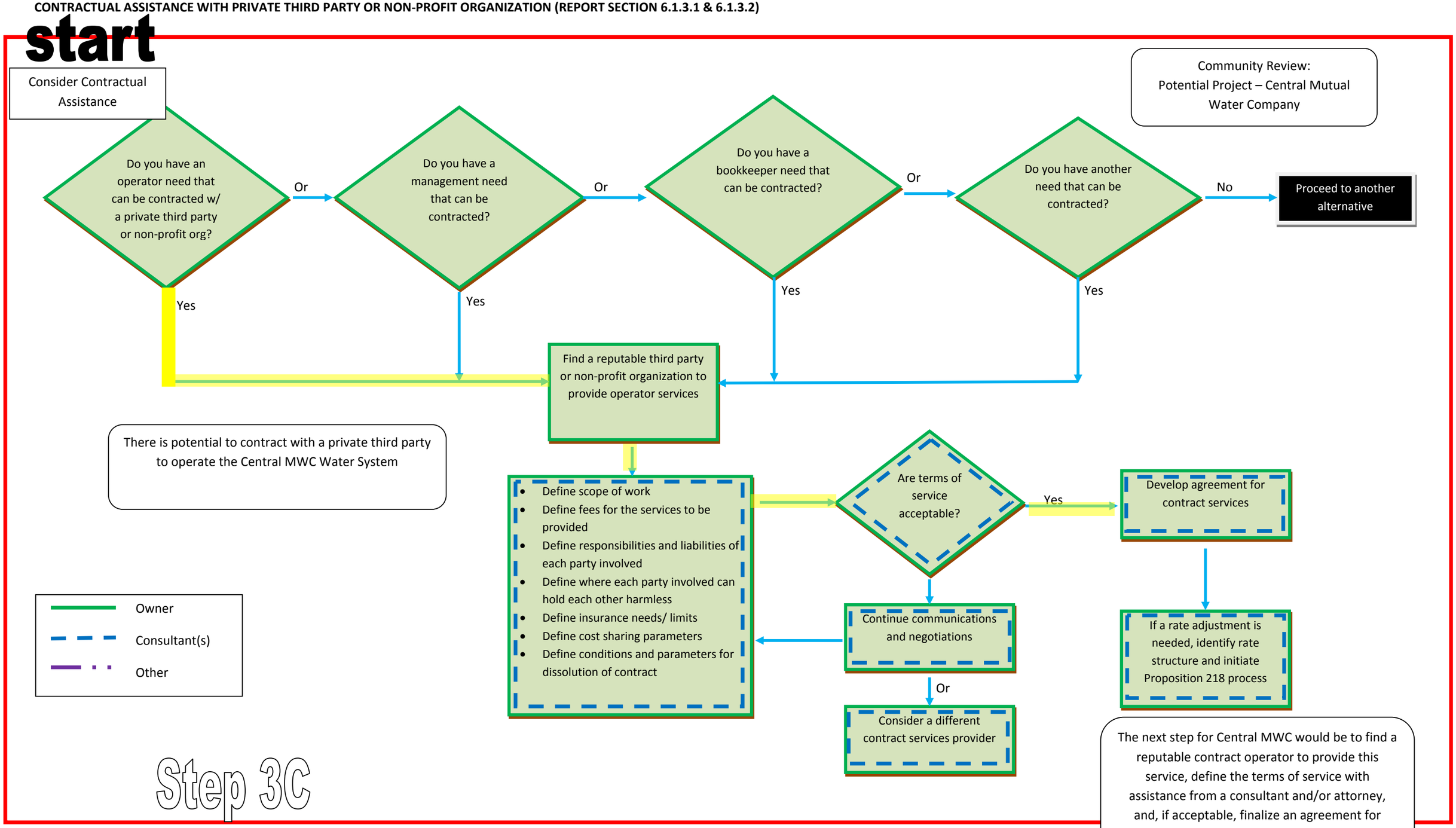
Step 3B

INFORMAL COOPERATION (REPORT SECTION 6.1.2)



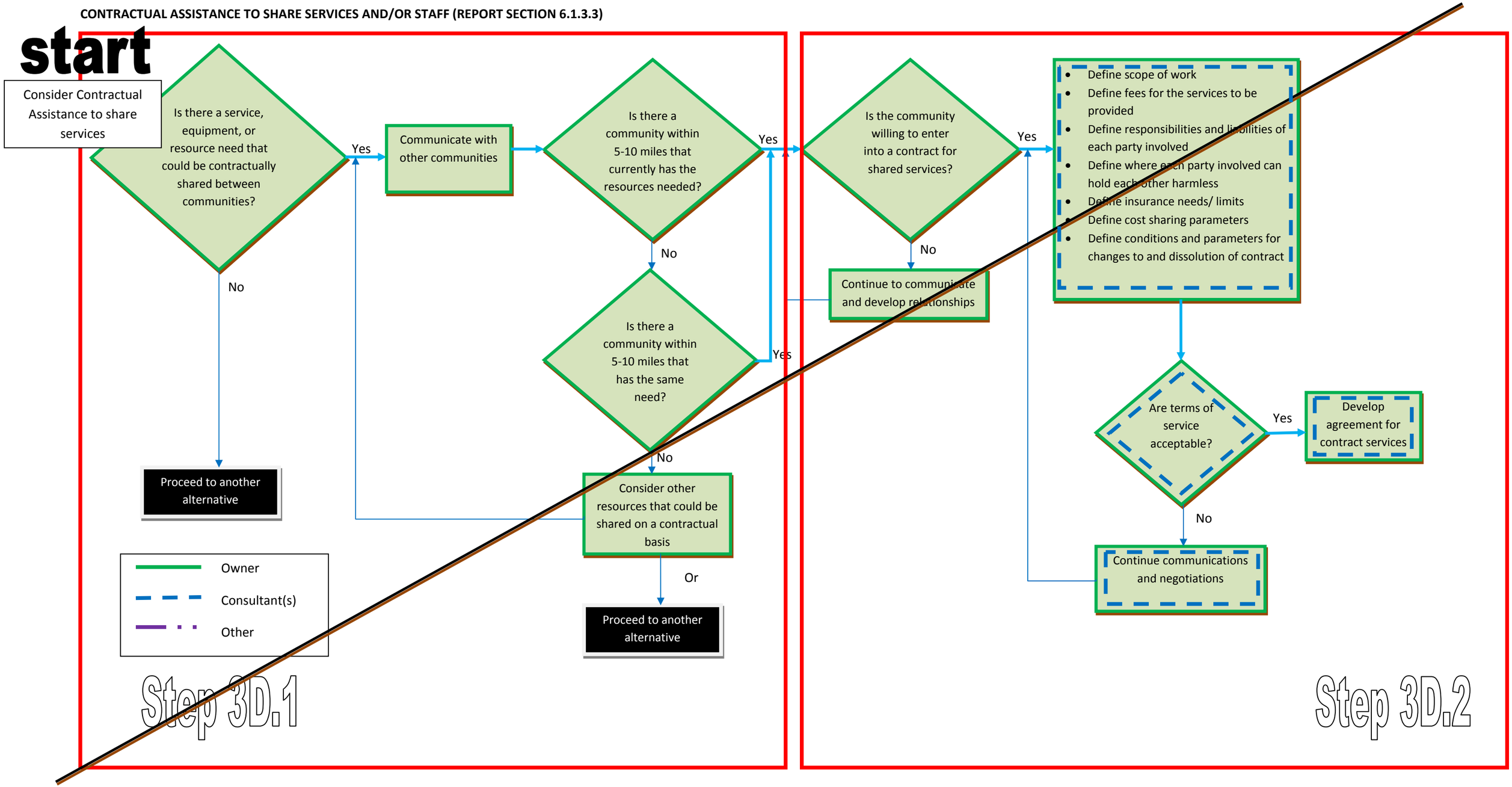
Step 3C

CONTRACTUAL ASSISTANCE WITH PRIVATE THIRD PARTY OR NON-PROFIT ORGANIZATION (REPORT SECTION 6.1.3.1 & 6.1.3.2)



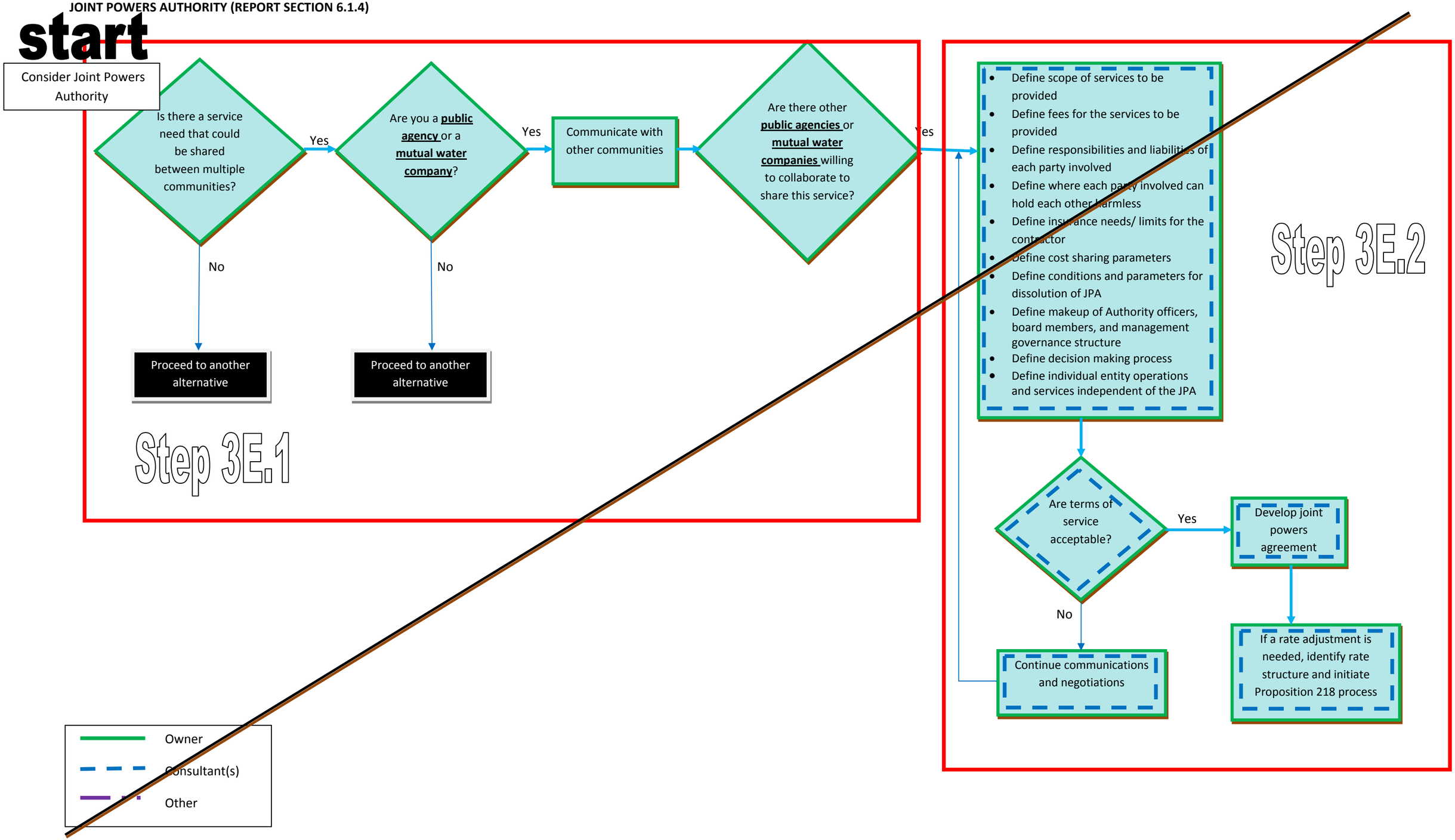
Step 3D

CONTRACTUAL ASSISTANCE TO SHARE SERVICES AND/OR STAFF (REPORT SECTION 6.1.3.3)



Step 3E

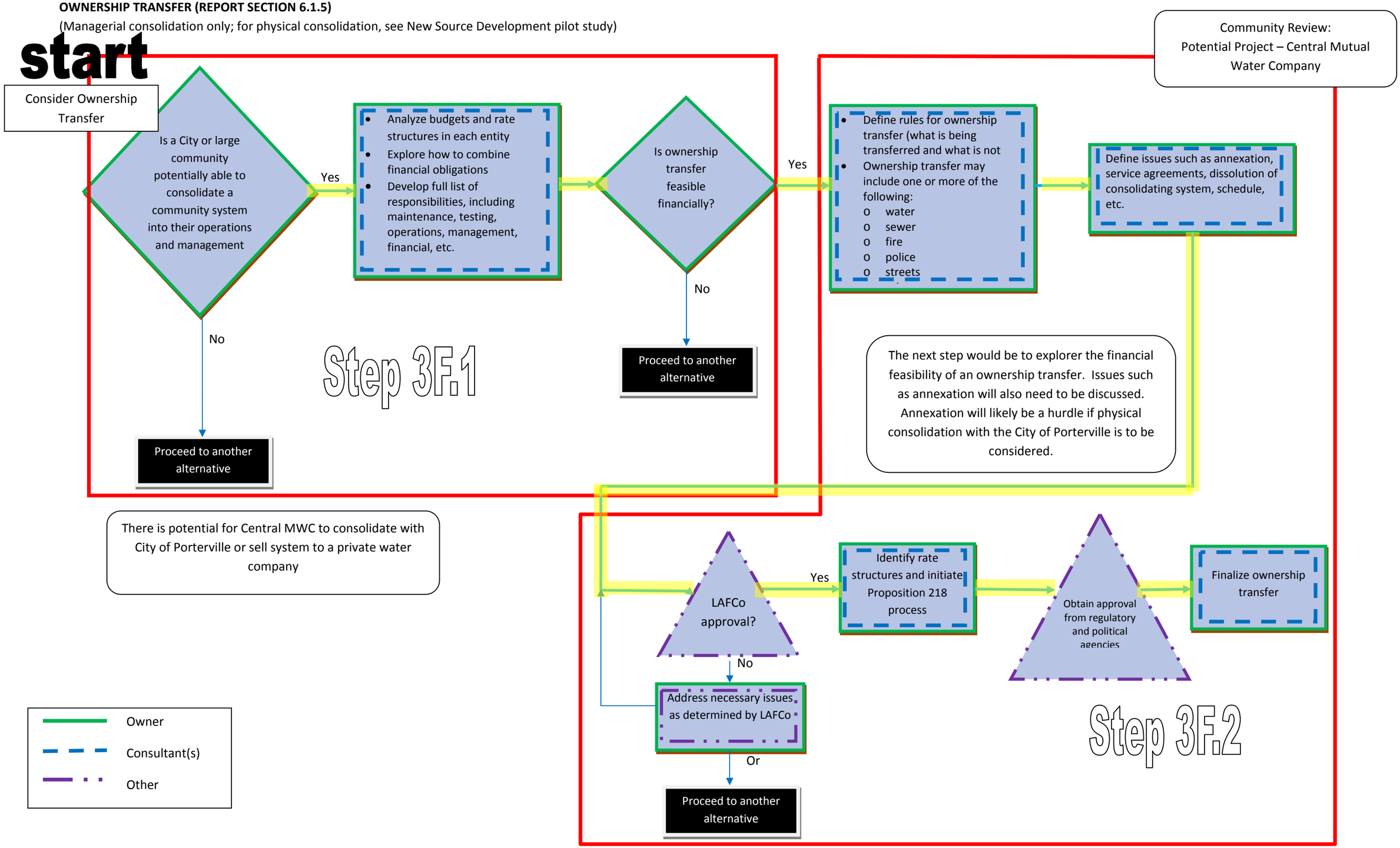
JOINT POWERS AUTHORITY (REPORT SECTION 6.1.4)



Step 3F

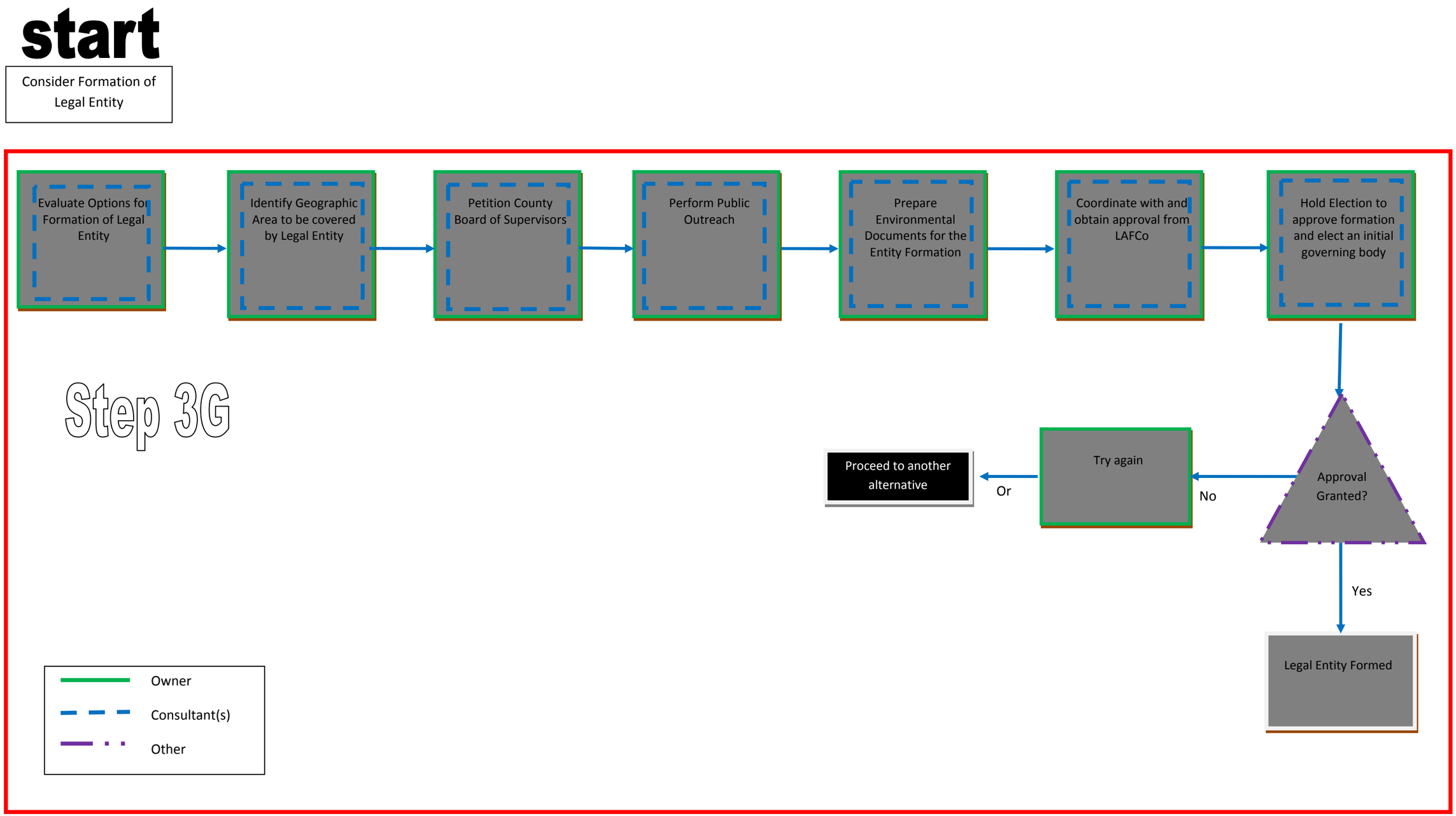
OWNERSHIP TRANSFER (REPORT SECTION 6.1.5)

(Managerial consolidation only; for physical consolidation, see New Source Development pilot study)



Step 3G

Formation of Legal Entity (REPORT SECTION 6.1.6)



APPENDIX G

COMMUNITY REVIEW MEETING NOTES

Tulare Lake Basin Disadvantaged Communities Water Study

Management and Non-Infrastructure Solutions Pilot

Funded by the California Department of Water Resources and Sponsored by County of Tulare

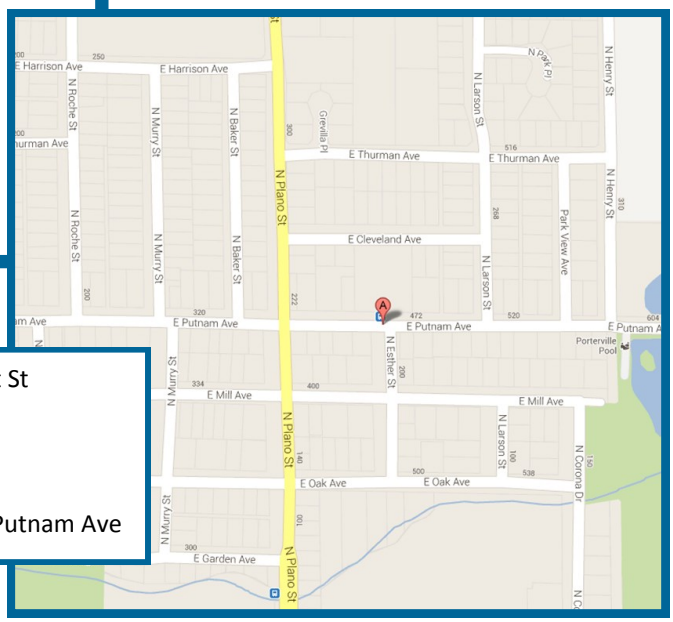
INVITATION

Representatives from the local communities in the Porterville area, water providers, board members, local residents and other interested parties are invited to a meeting to discuss local drinking water and wastewater needs and potential shared resources and management opportunities

Where: *Community Center at the Comision Honorifica Mexicana Americana Building*
466 E Putnum Avenue
Porterville, CA 93257

When: *Wednesday, June 26, 2013*

Time: *5:30pm—7:30pm*



- Head west on W Olive Ave toward N Hockett St
- Take the 1st right onto N Hockett St
- Take the 1st left to stay on N Hockett St
- Take the 3rd right onto W Putnam Ave
- Your destination will be on the left at 466 E Putnam Ave

The Purpose of this meeting:

- ***Get your input on local drinking water and wastewater needs***
- ***Get your feedback on the proposed shared solutions***
- ***Hear directly from you on what is needed to develop/implement solutions***

For more information or if you have any questions please call Community Water Center at (559) 733-0219 or Self Help Enterprises at (559) 802-1681

Estudio del Agua en las Comunidades de Bajos Recursos en la Cuenca del Lago Tulare

Piloto de Soluciones de Administración/No-Infraestructura

Financiado por el Departamento de Recursos Hídricos de California y Patrocinado por el Condado de Tulare

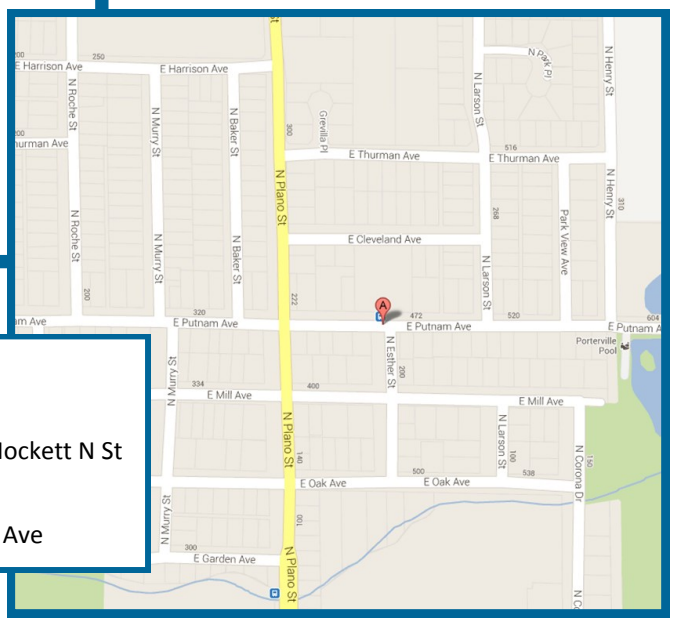
INVITACIÓN

Esta es una invitación a los representantes de las comunidades locales en el área de Porterville, a los proveedores del agua, a los miembros de las mesas del agua, a los residentes locales y otras partes interesadas para tener una junta y hablar sobre las necesidades locales del agua potable y aguas residuales y también sobre los posibles recursos compartidos y oportunidades de administración

Dónde: *Comision Honorifica Mexicana Americana Building "Centro Comunitario"*
466 E Putnum Avenue
Porterville, CA 93257

Cuando: *Miércoles, 26 de Junio, 2013*

Horario: *5:30pm—7:30pm*



- Hacia el oeste en W Olive Ave hacia Hockett Ave
- Gire a la derecha en N Hockett St
- Tome la primera izquierda para permanecer en Hockett N St
- Tome la tercera derecha en W Putnam Ave
- Su destino estará a la izquierda en 466 E Putnam Ave

Propósito de esta Junta:

- ***Obtener información sobre las necesidades locales del agua potable y aguas residuales***
- ***Obtener su opinión sobre las posibles soluciones compartidas***
- ***Escuchar directamente de usted sobre lo que es necesario para poder desarrollar y implementar soluciones***

Para obtener más información o si tiene alguna pregunta por favor comuníquese con el Centro Comunitario por el Agua al (559) 733-0219 o con Self Help Enterprises al (559) 802-1681

Levels of Sharing

Informal Cooperation – Informal cooperation can involve two or more entities working together in a mutual aid arrangement, without contractual obligations. By sharing equipment, bulk supply purchases, backup operation and maintenance personnel, sampling and testing services, billing services, or similar items or services, the cooperating communities can reduce some of their individual expenses without the need for a formal agreement.

Contractual Assistance – Contractual assistance can be provided in various forms. An entity or group of entities can contract with a third party entity to provide bookkeeping services, operation and maintenance services, management, engineering, or other services. This type of contract is under each individual system's control, and does not necessarily involve cooperation between two systems. Alternatively, the contractual assistance can be between service suppliers. In this case, an entity could enter into one or more contracts with other similar entities for the provision of services and/or the purchasing of supplies and equipment.

Agreement between Organizations – Agreements between organizations involve the creation of a new entity by several existing entities but allows each system to continue to exist as independent entities. This would most likely be in the form of a Joint Powers Agreement that can form a Joint Powers Authority (JPA). The JPA would provide one or more services for all participating entities; however the remaining services of each entity remain the responsibility of the individual system. For example, the JPA may provide shared system management structure, while each participating entity continues to operate its own system.

Ownership Transfer (Full Consolidation) – Ownership transfer involves full consolidation of two or more systems into one existing or newly created system. This solution also has various options, including: acquisition and physical interconnection between the systems; or acquisition and satellite management (no physical interconnection).

Types of Consolidation

Managerial Consolidation – The participating entities merge their customer accounts, integrate their billing system, and bank accounts. Eliminate redundancy of multiple professional contracts, i.e., engineers, accountants, bookkeepers, attorneys, etc. If the utilities involved are managed by board members, this option gives the participating entities the ability to identify a primary and an alternate to represent them on the regional entity board/council. (*Level of Sharing: Contractual Assistance or Agreement between Organizations*)

Operational Consolidation – Systems integrate their operations but remain autonomous. This option helps utilities to increase their operating capacity, provide a reliable service and establish redundancy through standardizing equipment, operating standards, etc. creating resiliency. In some cases, utilities interconnect with each other but do not commingle their water. The systems interconnect strictly for the purpose of back up in the event of an emergency. They do however, share equipment, chemicals, parts, etc. (*Level of Sharing: Contractual Assistance or Agreement between Organizations*)

Full Consolidation – This option integrates assets, liabilities, personnel and all aspects of the participating entities into either an existing or newly formed entity. The founding entities have as the ultimate goal their complete and absolute dissolution as a result of a full integration into an umbrella entity. This is the highest level of regionalization, consolidation and collaboration. In this case, everything becomes one unit. (*Level of Sharing: Ownership Transfer*)

Physical Consolidation – In this option the systems are connected pipe to pipe. This can be done to establish better fire protection, better coverage, extending lines to underserved areas and to abandon surplus infrastructure. It can mean developing a new water source together or can simply be done to sell water to each other. (*Level of Sharing: Contractual Assistance or Ownership Transfer*)

TLB DAC Study: Management and Non-Infrastructure Solutions Pilot Study

Porterville Community Review Meeting #1

Meeting Notes

June 26, 2013

Meeting notes are based on the opinions of the meeting participants. Statements and opinions made by participants have not been confirmed to be factual or correct, and they may or may not be consistent with the opinions of the water system board. These statements and opinions provide a basis for evaluation and a feel for the general sentiment of residents in the area regarding their water supply, but these statements and opinions should not be solely relied upon when analyzing the water systems needs and desires.

Questionnaire 1: Local Water Needs

What are the major drinking water and wastewater operations and management needs in your community or for the area?

Operator, Woodville PUD – Nitrates: 10-15 years ago nitrate levels were in the 20s, they are now in the 30s and approaching the nitrate limit. Dairies have been built around Woodville, which may be contributing to the problem. Also, groundwater depletion is a problem. Depth to groundwater use to be around 90'-100', but now it is closer to 210'.

Operator, East Plano and Grandview Gardens (Del Oro Water Company) – Mostly nitrates, sometimes in the 40s.

Operator, Central Mutual Water Company – 85 years old, and has been there since 1953. They have a single well for a 20 acre area. They have been fortunate because their water levels have actually gone up since the dam was constructed. They have 33 connections, and everyone kicks in their share as needed. No one is really in charge of running the system, but he does because he has been there the longest. He volunteers his time, and is 85 years old. There is also a language barrier (mostly Spanish speaking residents). Part of the problem is they keep letting people divide parcels, increasing the population/demand.

Resident/Water Board Member, Ducor CSD – Their water at times is too filthy and smelly even to shower in. There is sulfur in the groundwater, which has declined some, but is still not drinkable (in her opinion). Ducor is getting ready to drill a new well, and hopes to find better water. Currently residents have to buy bottled water to drink. They also have nitrate issues, and their distribution system is old. Water main breaks have caused them to be out of water for periods of time. They pay $70 per month for water they cannot drink. She noted as one of the primary problems, they are all on septic systems (no sewer system). Installing a sewer collection system may help.

Resident, Poplar CSD – Gentleman has a personal well that has been down since 2009. His property has been annexed into Poplar CSD, but they have not connected him. Other residents on individual wells have nitrate issues.

Resident, Poplar CSD – Consumer Confidence Report only in English. Most of the residents are Spanish speaking and cannot read English. They do not know what they are receiving notices about. Ralph Gutierrez noted that he use to send out CCRs in English and Spanish, but that CDPH makes it difficult to do so because they must have a template in Spanish if they are going to send it out (can't just send to SHE or others for translation). He therefore no longer sends in Spanish.

What are some of the solutions that you have implemented or are working on?

Operator, Woodville PUD – Currently no real treatment process for nitrates. Could modify well, but nitrates will continue to go down in the aquifer with the declining water levels, and would just have to modify again. Woodville currently operates two other small systems (a MHP and a manufacturer). This provides some additional income that benefits the community.

Resident/Water Board Member, Ducor CSD – Tried to get tied in to Terra Bella ID's water system, but failed. Also attempted to connect with Richgrove CSD. Neither District was interested in taking in Ducor.

Questionnaire 2: Gauging General Interest

Are the solutions presented, solutions you could see implemented in your community? Are there any solutions that you think we should consider (specify)?

City Engineer, City of Porterville – Recommends small systems utilize private water company (such as Del Oro Water Company). Will cost, but will alleviate the headache for the resident who has to operate and maintain, and there will be a professional running the system, who knows all of the sampling and other requirements, and the system can be run more efficiently.

As a result of this comment, operators from Del Oro Water Company and Central Mutual Water Company appeared to exchange cards.

City Engineer also said that Fairways Tract is a good example. No one within Fairways Tract knew about running a water system, or what opportunities were available, and it took an outside force to get them moving to consolidate with the City of Porterville.

Has your community implemented any type of shared resources solution? If so, what type(s)? What are things to consider or avoid when pursuing these solutions?

Operator, Woodville PUD – Tipton, Pixley and Woodville all share a sewer cleaner. This benefits all communities, and is also better for the equipment (rather than being used only once per year).

Resident/Water Board Member, Ducor CSD – Del Oro does billings/ financials, but not operations. This does not help their water quality.

What would you need for these or other types of shared solutions to work for you? What type of additional information, studies or analysis would be helpful for you to develop and implement these kinds of solutions?

Resident/Water Board Member, Ducor CSD – primary need is a sewer system, maybe connecting to Terra Bella or Richgrove.

Operator, Woodville PUD – Woodville, Tipton, Pixley and Poplar all share some on an informal basis… **Talk to your neighbor**.

Consider developing Mutual Aid Agreements to help other communities when emergencies arise. This would likely be larger communities that may have the equipment and resources to help. The problem is, the larger system will likely want to know “what’s in it for me?” There would need to be a mutual benefit.

There are a large number of communities who want operators for their systems but can’t find them.

TLB DAC Study: Management and Non-Infrastructure Solutions Pilot Study

Porterville Community Review Meeting #1

Ducor mentioned Center for Race Poverty and the Environments (CRPE), who initiated community meetings for Ducor to open a platform to talk and start making changes. This has been beneficial for Ducor, and a similar group may benefit others in starting community discussions.

The management non infrastructure pilot will include a roadmap to inform communities about shared solutions and provide guidance on how to implement those solutions. Are you interested in participating in the development of a plan that could be used to guide the implementation of shared resources solutions?

Most seemed interested in either individual contact or a second meeting.

Tulare Lake Basin Disadvantaged Communities Water Study

Management and Non-Infrastructure Solutions Pilot

Funded by the California Department of Water Resources and Sponsored by County of Tulare

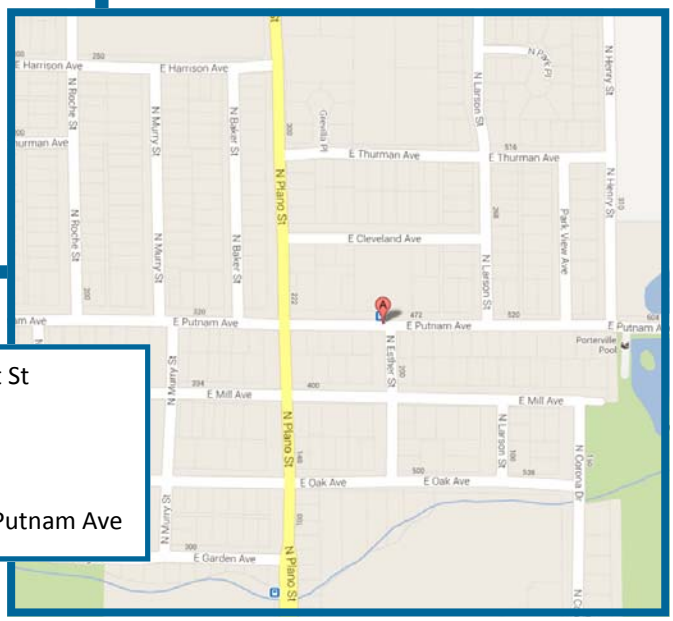
INVITATION

Representatives from the local communities in the Porterville area, providers of water and wastewater services, board members, local residents and other interested parties are invited to a second meeting to discuss local case studies and to ensure that the potential shared resources and management opportunities are realistic, achievable, and sustainable for your community.

Where: *Community Center Building*
466 E Putnum Avenue
Porterville, CA 93257

When: *Tuesday, September 3rd, 2013*

Time: *5:30pm—7:30pm*



- Head west on W Olive Ave toward N Hockett St
- Take the 1st right onto N Hockett St
- Take the 1st left to stay on N Hockett St
- Take the 3rd right onto W Putnam Ave
- Your destination will be on the left at 466 E Putnam Ave

The Purpose of this meeting:

- ***Build on your feedback and interest on the proposed shared solutions.***
- ***Ensure solutions are realistic, achievable, and sustainable.***

For more information or if you have any questions please call Community Water Center at (559) 733-0219 or Self Help Enterprises at (559) 802-1681

Estudio del Agua en las Comunidades de Bajos Recursos en la Cuenca del Lago Tulare

Piloto de Soluciones de Administración/No-Infraestructura

Financiado por el Departamento de Recursos Hídricos de California y Patrocinado por el Condado de Tulare

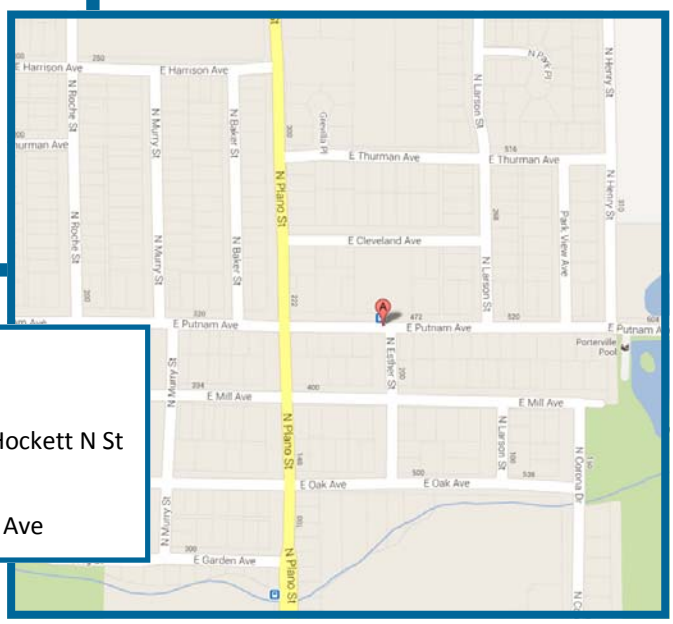
INVITACIÓN

Esta es una invitación a los representantes de las comunidades locales en el área de Porterville, a los proveedores del agua, a los miembros de las mesas del agua, a los residentes locales y otras partes interesadas para tener una segunda junta para hablar de casos de estudio locales y para asegurar que los posibles recursos compartidos y oportunidades de administración sean realistas, alcanzables y sostenibles para su comunidad.

Dónde: *Comision Honorifica Mexicana Americana*
466 E Putnum Avenue
Porterville, CA 93257

Cuando: *Martes, 3 de septiembre, 2013*

Horario: *5:30pm—7:30pm*



- Hacia el oeste en W Olive Ave hacia Hockett Ave
- Gire a la derecha en N Hockett St
- Tome la primera izquierda para permanecer en Hockett N St
- Tome la tercera derecha en W Putnam Ave
- Su destino estará a la izquierda en 466 E Putnam Ave

Propósito de esta Junta:

- ***Trabajar sobre su colaboración e interés en las soluciones compartidas propuestas.***
- ***Garantizar soluciones que sean realistas, alcanzables y sostenibles.***

Para obtener más información o si tiene alguna pregunta por favor comuníquese con el Centro Comunitario por el Agua al (559) 733-0219 o con Self Help Enterprises al (559) 802-1681

TLB DAC Study: Management and Non-Infrastructure Solutions Pilot Study

Porterville Community Review Meeting #2

Meeting Notes

September 3, 2013

Meeting notes are based on the opinions of the meeting participants. Statements and opinions made by participants have not been confirmed to be factual or correct, and they may or may not be consistent with the opinions of the water system board. These statements and opinions provide a basis for evaluation and a feel for the general sentiment of residents in the area regarding their water supply, but these statements and opinions should not be solely relied upon when analyzing the water systems needs and desires.

Break Out Session - Table 1

Types of Solutions:

1. *Agreement between Organizations*
2. *Ownership Transfer*

Considerations:

1. *Applicability of Solution*
2. *Implementation*
3. *Leadership and Capacity*

<u>Agreement between Organizations</u>

Facilitator, Community Water Center read the description from the "Levels of Sharing" fact sheet, and gave the example of the Cutler-Orosi WWTP JPA. Cutler and Orosi are equal members of the JPA, which provides wastewater treatment for six communities (Cutler, Orosi, Yettem, Seville, East Orosi, and Sultana).

Operator, Woodville PUD mentioned that he actually helped operate this system for a couple months. One of the main challenges he observed was that Cutler has 3 representatives on the board and Orosi has 3 representatives on the board, and there is no deciding vote. Additionally, the other four communities who are served have no representation.

When asked if he has a recommendation to fix this issue, he responded that he did not know the answer to this issue, but that Cutler and Orosi have typically have two different ideas and go against each other on the board. This leads to frustration for staff and

operators. He also noted that they need to hire a Grade 3 operator, but they currently only have a Grade 2 operator.

Despite the challenges noted, Woodville operator said it definitely saves money, when costs for repairs and replacement are split between six communities.

Facilitator, CWC responded to the concerns Woodville operator brought up with the Cutler Orosi JPA. It comes down to governance and developing the appropriate governance structure, including board representation.

Operator, Woodville PUD suggested that perhaps Cutler and Orosi could alternate every couple of years, with Cutler having 3 reps and Orosi 2 reps for two years and then Orosi getting 3 reps and Cutler 2 reps for the following two years, etc. This may however lead to other issues during times when one is in power versus the other.

Resident/Water Board Member, Ducor CSD - If someone was available to help the Ducor CSD operator, she thinks it would benefit the system. Using students as Woodville operator had mentioned in his presentation is a great idea [Woodville operator had mentioned that he hires students to help him in Woodville. This gives him a helping hand, and provides the students with valuable training.]

Ducor would like some kind of connection from Terra Bella and/or Richgrove, but they are not interested.

Resident, Porterville said that the local Board of Supervisor has suggested to the community that they wait to see the results of the Seville and Yettem Consolidation project before moving forward.

Resident/Water Board Member, Ducor CSD said Ducor Board President would need to be involved in any discussion regarding management solutions. Ducor has periodic coliform and nitrates in the water. They take care of the problem, but it is always there (ongoing issues). Del Oro runs the management/billings.

Operator, Woodville PUD commented that Richgrove's system is operated by the Earlimart operator.

Resident/Water Board Member, Ducor CSD thinks that if CWC or CRWA (or similar organization) could come into a Board meeting and show examples of successes, it may help.

Are communities aware of trainings that are available?

Operator, Woodville PUD is aware of various trainings and information mostly from personal relationships and experience. Some sources of information related to trainings are CRWA and RCAC.

Resident/Water Board Member, Ducor CSD receives mailers every month at the Board meetings, but has never attended a training program.

Operator, Woodville PUD – Operators get fliers (if part of CRWA) to notify of training opportunities. He noted that Board members are typically working people, and it is tough for them to get to training.

Resident/Water Board Member, Ducor CSD [Facilitator asked how often Ducor's operator goes to training]. He [operator] receives fliers every month, but always says he does not want or need to go.

Operator, Woodville PUD noted that there was an upcoming training session in Paso Robles. Training/education points are required to maintain operator classification.

Representative, Kings Basin IRWMP expressed the need to get DACs engaged and educate them. He suggested consolidating information related to case studies and levels of sharing, and connect people with RCAC or CRWA. He said it is difficult to get DAC representatives to come to IRWMP meetings because they are often part time and have other jobs, etc., and there is often no funding to pay for operators to go to meetings. This makes it difficult to get an understanding of their water/wastewater needs. Now that these issues have been mapped for the Kings Basin (Kings Basin DAC Study), they know what is out there and can try to help tackle the issues.

Resident/Water Board Member, Ducor CSD noted that in Ducor, if you want to go to trainings you can, but you have to pay for it yourself.

Representative, Kings Basin IRWMP said that the Kings Basin IRWMP could bring together training meetings, but how do they get a certified trainer/educator so operators can get training credits?

Operator, Woodville PUD said there is too much reliance on engineers for efforts that are not appropriate for engineers. Operators and board members often do not understand or know how, so the engineer does it. This obviously costs more money. Communities need trained people so they can use engineers for engineering work, but appropriate staff can do other tasks that do not require engineering.

<u>Ownership Transfer</u>

Facilitator, CWC read the description from the Levels of Sharing fact sheet.

Resident/Water Board Member, Ducor CSD – Connect Ducor and Terra Bella.

Operator, Woodville PUD - Distance becomes an issue with physical consolidation. Topography is also critical – are you pumping uphill? Does the additional pumping cost make sense (offset the benefit of consolidation, or still cheaper?)

Woodville operator also gave an example of a MHP within the City of Visalia that should connect to the City system, but the MHP owner does not want to. The County wants to

enforce this (require consolidation) now, due to a previous violation. The MHP is within the Cal Water sphere of influence.

Facilitator, CWC asked why the owner is against consolidation.

Operator, Woodville PUD - She (owner) does not want to lose the revenue from the water system. It would take State Health Department coming in to say they must connect.

Facilitator, CWC asked if there is any role for the residents of the MHP.

Operator, Woodville PUD – Residents do not want to connect. They are primarily older people; any dollar more is a dollar too much. A cost analysis or water quality education may help.

Cal Water was approached by the County to serve this MHP. Cal Water is willing, but the residents said “No”.

Resident/Water Board Member, Ducor CSD – Ducor use to be a private water system, but became as CSD due to difficultly in dealing with a private owner. They have issues now, but it is much better than what it once was. To become a CSD, residents got a petition and got everyone in the community to sign the petition in favor of forming a community services district. An attorney helped them through this process.

TLB DAC Study: Management and Non-Infrastructure Solutions Pilot Study

Porterville Community Review Meeting #2

Meeting Notes

September 3, 2013

Meeting notes are based on the opinions of the meeting participants. Statements and opinions made by participants have not been confirmed to be factual or correct, and they may or may not be consistent with the opinions of the water system board. These statements and opinions provide a basis for evaluation and a feel for the general sentiment of residents in the area regarding their water supply, but these statements and opinions should not be solely relied upon when analyzing the water systems needs and desires.

Break Out Session - Table 2

Types of Solutions:

1. *Informal Cooperation*
2. *Contractual Assistance*

Considerations:

1. *Applicability of Solution*
2. *Implementation*
3. *Leadership and Capacity*

Informal Cooperation

Facilitator, SHE read from the "Levels of Sharing" fact sheet and explained which two "Levels" the table would be discussing (Informal Cooperation and Contractual Assistance). We need to focus on whether these types of cooperation would work in the communities represented, and what they would need to help make it work well. Beginning with Informal Cooperation, examples were given.

Resident, Poplar CSD (also Tonyville) had questions regarding the definition of the term "contractual". Tonyville is very poor; connected to Lindsay for sewer service, but Tonyville does not have improvements like Lindsay does. Resident said that Lindsay got $5M to replace Tonyville's water lines but instead the City used the money to build a plaza downtown.

In Poplar, things have always been controlled (and most land owned) by the Walker family. Now the Walker sons have sold off most of the properties and they still run the Poplar Community Services District (PCSD). She said that the PCSD does not allow

people to attend board meetings. She cited a lack of communication between the board and residents. When residents do attend meetings (rarely), they feel that their concerns are not heard. Also, there are two dairies on each side of the town, which she believes contaminate the groundwater supply.

Representative, United Farmworkers Foundation asked Poplar resident if they (the unhappy residents) have anyone who could run for the board. **Poplar resident** stated that previous attempts have been unsuccessful.

Resident, Poplar CSD is concerned that the PCSD board will soon purchase a water filtration system with little or no competition and questionable success.

Facilitator, SHE suggested board and staff training to help with communication. **UFF representative** recommended training board members, and also getting people to run for seats on the board. **SHE** suggested visiting Woodville's board meetings to compare how differently things are done there.

Resident, Poplar CSD asked why Poplar property owners are being assessed a tax by the irrigation district. **SHE** explained the indirect benefit of recharging groundwater and bringing in surface water.

Resident, Poplar CSD said she wants to see financial statements.

Operator, Del Oro Water Company explained how Del Oro operates as a private system, and how they are a contractor to the Ducor CSD for billing purposes.

Resident, Poplar CSD returned to the topic of Poplar CSD, stating that $25,000 had been donated for park improvements at Poplar Park. Some small improvements were made with the money, but it did not seem that they would have cost $25,000. When residents asked the CSD where the money went, the Board responded that it was not the residents' business.

Resident, Poplar CSD also complained that the Poplar CSD switched trash companies and announced to the residents that they had to get a new container or face being fined. The Board makes announcements about what will be done, without seeking opinions or public comment. **Engineer, P&P** explained that there are some items that the Board can and should do in closed session.

<u>Contractual Assistance</u>

Operator, Del Oro Water Company described some more of the services that Del Oro offers, such as billing (see Ducor comment above); operations & maintenance; and a 24-hour emergency services hotline. It is one central call center for all 27 systems that Del Oro operates (as far north as Chico), which makes it cost-efficient. Del Oro is a private company, so the CA Public Utilities Commission (CPUC) approves/disapproves rate increases. The company has "open staff" and helps water systems do all the necessary compliance for CDPH and other agencies.

Resident, Poplar CSD (also Tonyville) said she has not attended any PCSD meetings in about a year but she is willing to go back and see how the meetings are run now. She has complaints that pesticides and manure leach into the canal that runs through the community. There is a warning put out by the local school that kids should bring bottled water to drink because of water quality issues at the school.

APPENDIX H

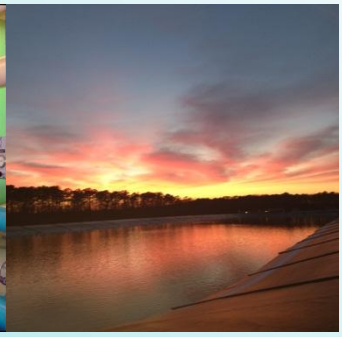
RURAL AND SMALL SYSTEMS GUIDEBOOK TO SUSTAINABLE UTILITY MANAGEMENT

USDA

EPA United States Environmental Protection Agency

Rural and Small Systems Guidebook to Sustainable Utility Management

2013



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INTRODUCTION

Background & Purpose

Many rural and small systems throughout the country struggle with various issues, which may include aging or inadequate infrastructure, difficulties recruiting or retaining qualified staff, growing or establishing financial reserves, and setting rates that are reflective of their operational costs.

This *Rural and Small Systems Guidebook to Sustainable Utility Management (Guidebook)* is an important part of a Memorandum of Agreement (MOA) signed by the United States Environmental Protection Agency (EPA) and the United States Department of Agriculture (USDA) in 2011 to jointly support a series of activities to help rural and small water and wastewater systems address various issues and more effectively provide sustainable services to the communities they support. As part of this MOA, EPA and USDA hosted a series of four, day-long pilot workshops, which included participants from over 60 rural and small water providers, in cooperation with local sponsors dedicated to small water and wastewater system management. The first workshop was held in Acme, Michigan, in cooperation with the Michigan Rural Water Association, the second in Santa Cruz, California, in cooperation with the Rural Community Assistance Corporation, the third in Helena, Georgia, with the Georgia Rural Water Association, and the fourth in Nashville, Tennessee, with the United South & Eastern Tribes.

The workshops were designed as a pilot project with the intent of each workshop building off of previous ones. Their goal was to provide information to help address rural and small water and wastewater system management concerns and improve rural and small system operations. At each workshop, participants were given an introduction to the management areas described in more detail in this guide, and then were asked to do a short self-assessment of their operations based on the management areas. Participants also identified management improvement opportunities at their systems based on the assessment, and shared experiences from their systems to better understand how to approach implementing the identified improvements and provide a basis for working with staff and community members to operate more effectively. Participants also provided feedback to EPA and USDA on the usefulness of the information used and exercises undertaken during the workshops. Finally, participants were introduced to a compendium of resources that could help them implement the improvements identified during the assessment.

Based on the approaches used in these workshops and feedback from the workshop participants, the *Guidebook* is designed to introduce rural and small water and wastewater systems to the key areas of effectively managed systems. It provides background information on ten key management areas, as well as instruction and assistance on how to conduct a system assessment process based on the key management areas. It also includes information on how to prioritize areas for improvement, while developing measures of progress that can help small systems with performance improvement. In addition to the *Guidebook*, a companion resource was developed for those who wish to host their own workshop. The *Workshop in a Box: Sustainable Management of*

Rural and Small Systems Workshops kit provides guidance for workshop preparations, execution, and copies of all materials necessary to run a successful workshop on utility management improvement.

The *Guidebook's* aim is to support rural and small water and wastewater systems in their common mission to become more successful and resilient service providers. Because of its dynamic nature, this resource can be used effectively in many different ways:

- By system managers, water systems operations specialists and staff as a guide for taking actions leading to short- and long-term improvement to system management and performance;
- By service providers as they work with individual systems or groups of systems through workshops or other assistance efforts;
- As a resource for system improvement workshops, like those sponsored by USDA and EPA;
- As a resource for guiding conversations about sustainability with utility board members; or
- As a resource for communicating and educating utility board members on the importance of effective management.

The information presented in the *Guidebook* draws on the results of four workshops conducted by EPA and USDA described above, as well as feedback from managers of rural and small systems that attended those workshops. Additionally, several small systems and water systems operations specialists provided input to this guide as it was developed.

The *Guidebook* begins by introducing each of the ten key management areas of effectively managed systems, followed by a self assessment to help users identify their strengths and challenges to prioritize where to focus improvement efforts. The *Guidebook* ends by discussing improving outcomes in the ten management areas by examining what constitutes high achievement in each area, and identifying resources for small systems. The overall approach and steps described in this *Guidebook* are similar to the approach in another initiative, called Effective Utility Management, which has been supported by EPA and several major water sector associations since 2008 and used successfully by a number of medium and larger utilities. The *Guidebook* takes the approach embodied in Effective Utility Management and adapts it for the needs of rural and small water and wastewater systems.

What's In It for Me:

Why Should My System Use this Guidebook?

The information in the Guidebook can help rural and small systems in several important ways by:

- *Giving you a simple and objective way to evaluate your system's strengths and areas for improvement*
- *Helping you develop an easy to follow plan for improving your operations based on your assessment*
- *Helping you better communicate internally and with others like board members and customers about your system and your challenges*
- *Help build the necessary support for improving your system over time*

THE SUSTAINABLY MANAGED UTILITY: TEN KEY MANAGEMENT AREAS

The ten key management areas of sustainably managed utilities described here can help rural and small water and wastewater system managers address many ongoing challenges and move toward sustainable management of both operations and infrastructure. In aiming to increase their long-term sustainability and effectiveness, the eventual goal for systems is high achievement, consistent with the needs and expectations of their communities, in each of the management areas.

The management areas were developed by drawing on information and experience from a wide range of rural and small water system operations specialists and managers from across the United States. The management areas were further validated through the workshops held with rural and small systems, sponsored by EPA and USDA. Each management area is described as a desirable outcome for a system to achieve, and can be considered a building block for improving system performance. Through working to improve performance in each of the ten areas, managers can help their systems to become more successful, resilient, and sustainable for the long term.

- Product Quality
- Customer Satisfaction
- Employee & Leadership Development
- Operational Optimization
- Financial Viability
- Infrastructure Stability
- Operational Resiliency
- Community Sustainability & Economic Development
- Water Resource Adequacy
- Stakeholder Understanding & Support

The management areas are not presented in a specific order, but together they make up the framework for a complete and well-rounded management approach. By making improvements in any of the areas, at a pace consistent with its most pressing challenges, a system will be able to deliver increasingly efficient, higher quality services. The graphic below depicts the interconnectedness of the management areas, while also showing that no one area is weighted more heavily than another – all areas are equal in the context of the *Guidebook.*

Descriptions of the management areas are found in the following pages, including the characteristics of successful outcomes for each area.

PRODUCT QUALITY: The system is in compliance with permit requirements and other regulatory or reliability requirements. It meets its community's expectations for the potable water or treated effluent and process residuals that it produces. The system reliably meets customer, public health, and ecological needs.

CUSTOMER SATISFACTION: The system is informed about what its customers expect in terms of service, water quality, and rates. It provides reliable, responsive, and affordable services, and requests and receives timely customer feedback to maintain responsiveness to customer needs and emergencies. Customers are satisfied with the services that the system provides.

EMPLOYEE & LEADERSHIP DEVELOPMENT: The system recruits and retains a workforce that is competent, motivated, and safe-working. Opportunities exist for employee skill development and career enhancement, and training programs are in place, or are available, to retain and improve their technical and other knowledge. Job descriptions and performance expectations are clearly established (in writing), and a code of conduct is in place and accepted by all employees.

OPERATIONAL OPTIMIZATION: The system ensures ongoing, timely, cost-effective, reliable, and sustainable performance in all aspects of its operations. The key operational aspects of the system (e.g., pressure,

flow, quality) are documented and monitored. It minimizes resource use, loss, and impacts from day-to-day operations. It has assessed its current energy use and water loss and performed related audits.

FINANCIAL VIABILITY: The system establishes and maintains an effective balance between long-term debt, asset values, operations and maintenance expenditures, and operating revenues. The rates that it charges are adequate to pay its bills, put some funds away for both future capital expenditures and unanticipated issues, and maintain, repair, and replace its equipment and infrastructure as needed. The system discusses rate requirements with its customers, decision making authorities, and other key stakeholders.

INFRASTRUCTURE STABILITY: The system understands the condition and costs associated with its critical infrastructure assets. It has inventoried its system components, conditions, and costs, and has a plan in place to repair and replace these components. It maintains and enhances the condition of all assets over the long-term at the lowest possible life-cycle cost and acceptable level of risk.

OPERATIONAL RESILIENCY: The system ensures that its leadership and staff members work together to anticipate and avoid problems. It proactively identifies legal, financial, non-compliance, environmental, safety, security, and natural threats to the system. It has conducted a vulnerability assessment for safety, natural disasters, and other environmental threats, and has prepared an emergency response plan for these hazards.

COMMUNITY SUSTAINABILITY & ECONOMIC DEVELOPMENT: The system is active in its community and is aware of the impacts that its decisions have on current and long-term future community health and welfare. It seeks to support overall watershed, source water protection, and community economic goals, where feasible. It is aware of, and participates in, local community and economic development plans.

WATER RESOURCE ADEQUACY: The systems ensure that water availability is consistent with current and future customer needs. It understands its role in water availability, and manages its operations to provide for long-term aquifer and surface water sustainability and replenishment. It has performed a long-term water supply and demand analysis, and is able to meet the water and sanitation needs of its customers now and for the reasonable future.

STAKEHOLDER UNDERSTANDING & SUPPORT: The system actively seeks understanding and support from decision making bodies, community members, and regulatory bodies related to service levels, operating budgets, capital improvement programs, and risk management decisions. It takes appropriate steps with these stakeholders to build support for its performance goals, resources, and the value of the services that it provides, performing active outreach and education to understand concerns and promote the value of clean, safe water and the services the utility provides, consistent with available resources.

SYSTEM IMPROVEMENT PRIORITIES: SELF ASSESSMENT

A useful first step in identifying where a system should start making improvements in the ten management areas is completing a candid and comprehensive self assessment. The self assessment included in this guide is designed to help rural and small systems identify their strengths and challenges to prioritize where efforts and resources should be focused. It can be completed by a number of different individuals within a utility (e.g., managers, staff), or as a team exercise amongst management, staff, and external stakeholders such as board members or customers (if appropriate). If used as a team exercise, it is recommended that each participant complete the assessment on his/her own, followed by a group discussion about the similarities and differences in results. Regardless of how the utility uses the assessment, the goal for all systems should be high achievement, consistent with the needs and expectations of their communities, in each of the management areas.

The self assessment has three main steps:

1) Rate achievement for each management area;
2) Rank the importance of each management area; and
3) Plot results to identify critical areas for improvement.

Once completed, the self-assessment exercise can help the systems to develop a plan for improving its outcomes in the management areas.

The Self Assessment Worksheet

STEP 1 – RATING ACHIEVEMENT AREAS

Assess your system by rating your current level of achievement for each management area. Consider how effectively your current management efforts support each of the areas, and note that each management area has several dimensions (represented by the bullet points listed for each). Your rating should reflect the dimension with the lowest level of achievement. For example, if you felt that your achievement in one dimension of a management area was low, but your achievement in another dimension of that area was high, your overall rating for the area would be low. An example of the rating exercise can be found on the following page.

Scale from low achievement to high achievement:

- Select **Low** if your system has no workable practices in place for addressing this area – very low capacity and performance.
- Select **Medium** if your system has some workable practices in place with moderate achievement, but could improve – some capacity in place.
- Select **High** if your system has effective, standardized, and accepted practices in place. It either usually or consistently achieves goals – capacity is high and in need of very little or no further development.

YOUR TURN: Proceed to Table A in Appendix I and fill out the column labeled "Step 1" for each management area before moving to Step 2.

STEP 2 - RANKING PRIORITY AREAS

Rank the importance of each management area to your system. Base this ranking on your goals and the specific needs of your community. Your ranking may be influenced by current or expected challenges (e.g., if your community is experiencing elevated population growth rates, Water Resource Adequacy may be ranked as a high priority area to address). Again, note that each management area has multiple dimensions (represented by the bullet points listed) – your ranking should represent the highest priority of all of the points listed, and should be ranked independently of the achievement level (i.e., an area can remain, and therefore be ranked, as a high priority even if the utility is already undertaking needed improvement efforts). An example of the rating exercise can be found on the following page.

Scale from low priority to high priority, keeping in mind the following:

- Current or expected challenges
- Customer or stakeholder impact (reliability, quality, timeliness)
- Consequences of not improving (non-compliance, increased cost, lost credibility, impacts to health and safety)
- Urgency (near or long term needs)
- Community priorities

YOUR TURN: Proceed to Table A in Appendix I and fill out the column labeled "Step 2" for each management area before moving to Step 3.

TABLE A: EXAMPLE

Key Management Area	Management Area Description	Step 1: Rate Achievement (Low – High)	Step 2: Rank Priority (Low – High)
1. Water Resource Adequacy **(e.g., water quantity)**	• My system is able to meet the water or sanitation needs of its customers now and for the reasonable future. • My system or community has performed a long-term water supply and demand analysis. (Applies to drinking water systems only.) • My system understands its relationship to local water availability. (Drinking water utilities should focus on utilization rates relative to any local water stress conditions, wastewater utilities should focus on return flows.)	Low	High
2. Product Quality **(e.g., clean & safe water)**	• My system is in compliance with permit requirements and other regulatory or reliability requirements. • My system meets local community expectations for the potable water and/or treated effluent and process residuals that it produces.	Medium	High
3. Customer Satisfaction	• Customers are satisfied with the services the system provides. • My system has procedures in place to receive and respond to customer feedback in a timely fashion.	High	Medium
4. Community Sustainability & Economic Development	• My system is aware of and participating in local and regional community and economic development planning activities. • My system's goals also help to support overall watershed and source water protection, and community economic goals.	High	Low
5. Employee & Leadership Development	• Training programs are in place to retain and improve institutional knowledge. • Opportunities exist for employee skills development and career enhancement. • Job descriptions, performance expectations, and codes of conduct are established.	Low	Medium
6. Financial Viability	• The rates that my system charges are adequate to pay our bills, put some funds away for the future, and maintain, repair, and replace our equipment and infrastructure as needed. (O&M, debt servicing, and other costs are covered). • My system discusses rate requirements with our customers, board members, and other key stakeholders.	Medium	High
7. Operational Optimization **(e.g., energy/water efficiency)**	• My system has assessed its current energy usage and performed an energy audit. • My system has maximized resource use and resource loss (e.g., water loss, treatment chemical use). • My system understands, has documented, and monitors key operational aspects of the system (e.g., pressure, flow, quality).	Medium	Medium
8. Infrastructure Stability **(e.g., asset management practice)**	• My system has inventoried its current system components, condition, and cost. • My system has a plan in place for repair and replacement of system components.	Low	Medium
9. Operational Resiliency	• My system has conducted an all hazards vulnerability assessment (safety, natural disasters, environmental risks, etc.). • My utility has prepared an all hazards emergency response plan.	Medium	Low
10. Stakeholder Understanding & Support	• My system actively engages with local decision makers, community, watershed (where relevant), and regulatory representatives to build support for its goals, resources, and the value of the services it provides. • My system performs active customer and stakeholder outreach and education to understand concerns and promote the value of clean and safe water.	Low	Low

STEP 3 - PLOT RESULTS

To compare your results for each management area, you will plot each pair (rating, ranking) in Table B of Appendix I. For each management area, identify your high/medium/low rating in the green Step 1 box, and find the corresponding row in the table. Then, for the same management area, identify your high/medium/low ranking in the blue Step 2 box, and find the corresponding column in the table. The box where the row and column intersect is where you should place that management area (note abbreviations below for use in the plotting exercise). The example below shows how the plotting exercise in Step 3 should be completed. The ranking and rating for each management area should be paired and placed into the corresponding box in the grid, based on the low/medium/high determinations given in Steps 1 and 2.

WA	Water Resource Adequacy	FV	Financial Viability
PQ	Product Quality	OO	Operational Optimization
CS	Customer Satisfaction	IS	Infrastructure Stability
CE	Community Sustainability & Economic Development	OR	Operational Resiliency
ED	Employee & Leadership Development	SS	Stakeholder Understanding & Support

TABLE B: EXAMPLE

Key Management Area	Management Area Description	Step 1: Rate Achievement (Low – High)	Step 2: Rank Priority (Low – High)
1. Water Resource Adequacy (e.g., water quantity)	• My system is able to meet the water or sanitation needs of its customers now and for the reasonable future. • My utility or community has performed a long-term water supply and demand analysis. (Applies to drinking water systems only) • My system understands its relationship to local water availability. (Drinking water utilities should focus on utilization rates relative to any local water stress conditions, wastewater utilities should focus on return flows)	Low	High
2. Product Quality (e.g., clean & safe water)	• My system is in compliance with permit requirements and other regulatory or reliability requirements. • My utility meets local community expectations for the potable water and/or treated effluent and process residual that it produces.	Medium	High
3. Customer Satisfaction	• Customers are satisfied with the services my system provides. • My system has procedures in place to receive and respond to customer feedback in a timely fashion.	High	Medium

Rating (Achievement)				
	High		CS	
	Medium			PQ
	Low			WA
		Low	Medium	High
		Ranking (Priority)		

YOUR TURN: Complete the plotting exercise in Step 3 in Table B of Appendix I before moving to Step 4.

STEP 4 - ANALYZE RESULTS:

Examining the results of the plotting exercise in Step 3 can help identify management areas on which to focus improvement efforts. Generally speaking, management areas that fall into the **red box** are both **very important and need improvement,** meaning that they should be seen as a top priority for improvement. Management areas that land in the **yellow boxes** should be next on the list for improvement efforts, and those that fall into the **white boxes** are important to consider for long-term improvement efforts, but likely do not need to be prioritized for immediate action. The eventual goal for all utilities should be high achievement in each of the management areas.

QUESTIONS TO CONSIDER:

Where is my system strong?

Where is there the most room for improvement?

What should my areas of focus be?

Why are these areas priorities?

A good way to identify and prioritize the actions is to create a utility management improvement plan, which should be incorporated, as appropriate, into the utility's annual budget and coordinated with its capital improvement plans. The improvement plan should be tied directly to the analysis of the self-assessment results described above.

The results of the self assessment and an improvement plan can act as building blocks for long-range planning. Preparing a long-range plan involves taking a long-term view of each of the system's goals and establishing a clear vision and mission. Improvement goals and plans from the utility management improvement plan for each priority management area should be included in a utility's long-range plan in a logical sequence, in addition to plans for maintaining high achievement in the areas of current strong performance. Even if the utility does not have a long-range plan, it is important to develop the improvement plan based on the self-assessment. Utilities are encouraged to repeat the assessment as changes to its system operations or infrastructure are made.

Types of Plans:

System Management Improvement Plan: A plan that addresses specific areas of utility management that need improvement. This type of plan should be designed around the assessment of the management areas presented in this *Guidebook.*

Capital Improvement Plan: A mid-term plan (typically over a period of four to ten years) that identifies capital projects and equipment purchases. It provides a planning schedule and identifies options for financing each item.

Long-Range Plan: A plan that addresses future outcomes to help meet goals over a long period of time (typically over a period of twenty years or more) by evaluating an organization and the environment in which it operates.

IMPROVING OUTCOMES

To create a successful systems management improvement plan, it is important to have at least a basic understanding of the following items:

- What it means to accomplish "high achievement" in each area;
- The changes a system will need to make to reach this level;
- The challenges that may arise for each management area; and
- How to track performance and progress.

This section of the *Guidebook* is designed to help systems develop a strategy for addressing each of these components of becoming a more sustainable and resilient system.

How to Succeed in Each Management Area: High Achievement and Common Challenges

Once a system has decided to improve its performance in one or more of the key management areas, the next step is to develop and implement a plan. To create a plan, it is important to have an idea of what challenges may arise, and what practices can be adopted to address each area. Found on the following pages are overviews of challenges and effective practices for five management areas that were discussed in-depth at the small system workshops that served as background for the *Guidebook*. Also included are examples of ways in which systems can measure their performance in each management area.

QUESTIONS TO CONSIDER FOR EACH MANAGEMENT AREA:

What will constitute 'high achievement' in this area?

What factors have led to performance gaps in this area?

What changes will my utility need to make to improve performance?

Who will need to be involved for changes to take place?

How will my utility track performance progress?

What will be the biggest challenges to performance improvement?

Are there external resources that can support the improvement of performance in this management area?

EMPLOYEE & LEADERSHIP DEVELOPMENT

> **Try This:**
>
> Develop relationships with neighboring systems to share training resources.

Challenges specific to **Employee & Leadership Development** include:

- Employee motivation and opportunities for development can be hampered by a lack of resources.
- Not having access to training opportunities can prevent personal and professional development.
- Not having written job responsibilities can lead to uncertainty about management expectations and a lack of recognition for the work that is done.
- Time constraints on employees.

Examples of actions taken by high performing utilities in **Employee & Leadership Development** include:

- Have programs in place to retain and improve institutional knowledge, such as a "living document" with best practices for different areas of utility operations that is updated regularly (e.g., have a "best practices" document that includes sections for each area of operation, and every six months ask an operator from each area to review the content and make updates as necessary).
- Ensure that staff members are cross-trained (i.e., more than one staff member can do a specific job).
- Allow employees to work non-traditional schedules (e.g., a modified overtime schedule) to allow for on-the-job-training (e.g., job shadowing of other employees as a part of cross-training).
- Identify and schedule key training events that staff members are required to attend. Whenever possible, make training events short and focused, and build them into the regular work day.
- Establish and clearly communicate staff performance requirements (e.g., create a table of capabilities for successful performance in the different positions and review with staff annually).
- Create an outreach plan to attract qualified staff (e.g., with local schools or veteran's associations).
- Create incentive programs to retain staff, encourage training, or encourage staff to take on additional duties (e.g., monthly or quarterly recognition/awards for staff that have gone above and beyond their regular duties or competition between staff members for accruing the most training hours in a set period of time).
- Develop training module templates for how to conduct trainings on different topics. Include presenter notes and materials for participants.
- Check in with staff regularly to identify new training needs.
- Create partnerships with the system's insurance agency or state water organization to benefit from free or reduced rate training programs that they may offer.
- Help train, or otherwise assist, staff from neighboring utilities.

Measures that you might consider for tracking accomplishments in Employee & Leadership Development:

- **Employee turnover rate:** $\frac{\textit{Number of employee departures per year}}{\textit{Number of total positions per year}}$
- **Employee job satisfaction rate:** $\frac{\textit{Number of employees satisfied with their jobs per year}}{\textit{Total number of employees per year}}$
- **Annual training hours per employee**

FINANCIAL VIABILITY

> **Try This:**
>
> Undertake a rate study to determine if current rates are adequate to meet both current and future needs.

Challenges specific to **Financial Viability** include:

- It is uncomfortable and politically challenging to discontinue service to neighbors, acquaintances, elderly customers, or fixed income customers who have not paid their bills.
- It is difficult to communicate to elected officials and consumers about how much it costs to produce drinking water and process wastewater, making it a challenge to get rate increases approved.
- Customers feel that flat rate billing practices are unfair (low volume users paying the same as high volume users).
- Many times, board members were elected by running on the platform of no rate increases.

Examples of actions taken by high performing utilities in **Financial Viability** include:

- Discuss rate requirements and related system repair requirements with its customers, board members, and other key stakeholders so that there is a better understanding within the community of why rate decisions and changes are made. (Consider using a respected member of the community to facilitate this discussion).
- Have a study on rate requirements conducted by an independent consultant (e.g., National Rural Water Association, Rural Community Assistance Partnership) to back up discussions about rate requirements.
- Establish predictable rates, consistent with community expectations and acceptability.
- Have financial accounting policies and procedures in place.
- Have ordinances in place for automatic rate increases tied to cost of living increases.
- Set aside funds for reserves (i.e., have a "rainy day" fund).
- Increase equity in billing practices by using meters whenever possible.
- Conduct quarterly budget reviews.
- Identify priorities for system improvements to aid in allocation of available funds.
- Improve practices for reducing the number of outstanding bills (e.g., limit the carry-forward balance to a fixed amount or increase service connection fees or service deposits to discourage customers who move frequently or avoid paying their bills).
- Create incentives for early bill payment (e.g., a 5% discount for bills paid early, or a good customer discount such as a discount on the seventh month's bill after six months of paying on time).
- Communicate financial viability information to stakeholders to keep them informed about rates.

Measures that you might consider for tracking accomplishments in Financial Viability:

- **Revenue to expenditures ratio:** $\frac{Total\ annual\ revenue}{Total\ annual\ expenditures}$
- **Debt ratio:** $\frac{Total\ liabilities}{Total\ assets}$
- **Number of late or unpaid bills per billing period**
- **Number of annual shutoffs**

INFRASTRUCTURE STABILITY

Challenges related to **Infrastructure Stability** include:

- Planning for repair and maintenance of infrastructure is hampered by a limited knowledge of the condition of existing infrastructure components.
- Many systems are trapped in a reactive repair and maintenance mode leaving little or no time for undertaking the proactive work needed to establish an asset management program.

Try This:

Create an inventory of your assets over time by setting up a template for logging assets. Log assets at the time that regular maintenance is performed.

Examples of actions taken by high performing utilities in **Infrastructure Stability** include:

- Create a complete and organized inventory of its current system components, condition, location, age, life expectancy, and cost.
- Conduct inflow and infiltration (I&I) and water loss analyses to determine the revenue and cost implications of deteriorating pipe conditions.
- As major collection system replacements are needed, consider sewer (sanitary and stormwater) separation to improve treatment performance and preserve treatment capacity.
- Track the status of all system components to be better aware of where weaknesses exist and when maintenance may be required (e.g., plotting valves, hydrants, and main breaks on a map).
- Coordinate asset repair, rehabilitation, and replacement with other community projects and repairs (e.g., road maintenance) to minimize disruptions and other negative consequences. Communicate these repairs in advance with customers in case of service disruptions.
- Track the frequency and cause of repeat collection, distribution, and maintenance problems.
- Establish a capital improvement plan that identifies capital projects and equipment purchases, as well as the resources needed to fund them.
- Have an understanding of system operating parameters (e.g., pressure).
- Organize all system documentation in a manner that it can be easily accessed by multiple staff members in the case of a break-down or other event.
- Focus on small annual projects and system upgrades rather than major undertakings.

Measures that you might consider for tracking accomplishments in Infrastructure Stability:

- **Inventory completeness rate:** $\frac{\textit{Total number of critical assets inventoried}}{\textit{Total number of critical assets owned and operated}}$
- **Condition assessment rate:**

$$\frac{\textit{Number of assets with condition assessed and put into condition categories}}{\textit{Total number of assets}}$$

OPERATIONAL RESILIENCY

> **Try This:**
>
> Use an annual board meeting as an opportunity to distribute and review key emergency documents.

Challenges related to **Operational Resiliency** include:

- A lack of system documentation.
- Insufficient time to conduct training and exercises on the emergency response plan.
- Employee and board member turnover makes it difficult to maintain familiarity with emergency response procedures and materials.

Examples of actions taken by high performing utilities in **Operational Resiliency** include:

- Conduct an all hazards vulnerability assessment.
- Prepare an all hazards emergency response plan, including all associated documents (e.g., shut off checklists, notices, and contact information), and conduct training and exercises on the plan. In this plan, make sure to indicate who is responsible for each activity.
- Distribute all emergency documents to board members and other essential personnel, including local emergency responders.
- Participate in your state's Wastewater Agency Response Network (WARN) program to share resources with neighboring utilities during an emergency through mutual aid and assistance.
- Develop relationships with contractors to ensure the types of equipment and services needed during emergencies are available in a timely fashion.
- Have safety policies in place to protect employees against work-related injuries.
- Identify and establish risk communication roles and responsibilities.
- Coordinate emergency response plans with local response partners, including emergency management agencies, police, fire, and critical independent sectors (e.g., hospitals and power companies).
- Identify a state certified laboratory that can help with emergency water testing during an incident.
- Plan for recovery by identifying funding resources that may be available to restore and strengthen the resiliency of your system.
- Identify opportunities to mitigate and adapt to climate change.

Measures that you might consider for tracking accomplishments in Operational Resiliency:

- **Annual number of work-related injuries**
- **Annual number of emergency response trainings or exercises held**
- **Period of time (hours or days) that minimum daily demand can be met with the primary water source unavailable**

STAKEHOLDER UNDERSTANDING & SUPPORT

Challenges related to **Stakeholder Understanding & Support** include:

- Customers and stakeholders display a lack of interest in gaining a better understanding of utility needs.
- Customer resistance to paying water bills or supporting rate increases.

Try This:

Host an open house or annual barbeque at your facility for stakeholders and community members. Offer tours of the facility to citizens and local media as a part of this event.

Examples of actions taken by high performing utilities in **Stakeholder Understanding and Support** include:

- Perform active customer and stakeholder outreach and education (e.g., hold meetings with stakeholders at the facility to convey a basic understanding and knowledge of utility operations).
- Utilize engagement and outreach activities as opportunities to also better understand community and customer needs and interests related to utility operations.
- Promote the value of clean and safe water (e.g., utilize pre-prepared National Rural Water Association education materials associated with its Quality on Tap program).
- Actively engage with local decision makers, watershed, and regulatory representatives through newsletters, regular meetings, and surveys.
- Have a capital improvement plan or other document to share with stakeholders that summarizes utility priorities. Make this information easily available.
- Establish active level of service goals to set performance measures for the utility and share with customers.
- Use space in bills to provide important information to customers.
- Share positive information on your utility with local media sources as a way of establishing a positive working relationship.

Measures that you might consider for tracking accomplishments in Stakeholder Understanding & Support:

- **Annual number of stakeholder outreach activities conducted**
- **Amount of annual positive media coverage (number of media stories per year)**
- **Rate of responsiveness to stakeholder suggestions/complaints:**

$$\frac{\textit{Number of stakeholder suggestions or complaints responded to}}{\textit{Total number of stakholder suggestions or complaints}}$$

Developing and Implementing a System Management Improvement Plan

CREATING A PLAN

Having gained a more complete understanding of strengths and challenges based on the self-assessment and an idea of what actions can strengthen performance in the management areas, a system will be better equipped to develop an effective utility management improvement plan. It is often useful for a "champion" to be assigned to be in charge of overseeing the development of an improvement plan (or parts of the plan), but various staff members and managers should be involved in its creation, if possible. In drafting a plan, the utility should create specific tasks and tactics for addressing its targeted improvement areas, and identify management adjustments necessary to make the desired changes.

Upon completion of the self assessment exercise, the system will choose priority improvement areas based on the results, choosing areas in the red and yellow boxes of the plotting exercise first. The utility management improvement plan should be **simple, specific, realistic, and complete.** For each improvement action, the following components should be included in the plan:

- An easy-to-understand, but still thorough, **description** of what actions will be taken;
- Identification of **who will be responsible** for taking the action;
- Known **resources** already on-hand or needed to successfully complete the actions (financial, informational, or other);
- Identification of key **challenges** that will need to be addressed;
- A **timeline** with key milestones for the actions in the plan, and a date by when the plan will be completed (or acknowledgement if it is ongoing); and
- A **review loop** to periodically assess progress in implementing the plan and adapting the plan to changing conditions (e.g., implementing a new billing system, measuring the efficiency of the system as implemented, and refining the system based on the information from the performance measures).

The utility can create its own improvement plan format based on its unique needs and circumstances, or use the System Management Improvement Plan Worksheet that is provided in Appendix II.

The System Management Improvement Plan Worksheet

Instructions:

1. *List your top three priority management areas – these should be drawn from the self assessment activity.*
2. *List the improvement actions that you will undertake to address the priority management areas – you should have at least one action for each priority management area (actions may address multiple management areas).*
3. *Fill out the details in the table below for each improvement action separately (i.e., one table per action).*

EXAMPLE SYSTEM MANAGEMENT IMPROVEMENT PLAN WORKSHEET

Priority Management Areas:

1. Water Resource Adequacy
2. Product Quality
3. Financial Viability

Improvement Action:	Improve practices for reducing the number of outstanding bills
Description: ✓ Action ✓ Management Area(s) addressed ✓ Objective(s)	✓ Limit the carry-forward balance to a fixed amount and increase service deposits to discourage customers who move frequently or avoid paying their bills. ✓ Financial Viability ✓ Reduce the amount of money lost to unpaid bills
Timeline: ✓ Start date ✓ Milestones ✓ Target completion date	✓ June 2013: Start –Draft new carry-forward balance allowance and new service deposit requirements for new customers ✓ July 2013: Propose and approve new balance and deposit requirements at board meeting August 2013: Notify customers of new requirements ✓ September 2013: Completion – Implement new balance and deposit requirements
Responsible Party (or Parties):	✓ Bill Smith ✓ Jane Anderson
Relevant Resources (on-hand or needed):	✓ Example ordinance text created by other utilities to support the desired policy change
Challenges to Address:	✓ Public pressure on board members to reject rate increases
Review Process: ✓ Performance indicators or measures ✓ Status reports and updates frequency/cycle	✓ Milestone dates met ✓ Weekly progress checks with utility director relative to identified milestones
Other Notes:	✓ Conduct calls with each board member to explain the need for the policy change and answer their questions

YOUR TURN: Complete the Improvement Plan Worksheet in Appendix II.

MEASURING PROGRESS

As a part of the review loop built into an action plan, the system must determine how to track progress toward achievement of performance goals. For rural and small systems, it is most feasible to measure internal performance, rather than trying to gather external data needed for more complex evaluations. Some measurements to consider are included in the "How to Succeed in Each Area" section of the *Guidebook*, beginning on page 11, but it is important to remember that performance measures should be tailored to the specific needs and goals of each system.

Some points to keep in mind when selecting performance measures are included below:

- Select the **right number, level, and type of measures** for the utility's capabilities and capacity. (As a general rule, having a short list of measures is probably best)
- Measuring performance will require some level of **resource commitment**. (Resources can include money, time, and personnel)
- Develop **clear and consistent definitions** for each measure. (How will it be tracked and reported?)
- Set **reasonable targets** based on criteria such as performance and improvement in previous years, or customer expectations. (How quickly does the community expect projects to be completed?)
- Develop a process for **evaluating and responding to the results** of measuring progress. (Now that the utility knows how it is doing, how will it use this information to continue to improve its performance?)
- Select measures that support the system's **short-term and long-term goals**. (How do these measurements fit into the "big picture" of the utility?)
- Periodically report on progress to the board and other key stakeholders in the community.
- **Recognize and celebrate** progress along the way! (Every little bit counts)

ASSESSING ACCOMPLISHMENTS AND MAKING IMPROVEMENTS

Having created a system for measuring progress toward meeting improvement goals, a system will need to complete the third step in the review loop: assessing accomplishments (or pitfalls) and making adjustments as needed. Setting aside time on a quarterly, biannual, or annual basis to discuss the progress that has been made towards key management goals is one of the simplest, but most important, actions that a system can take. By addressing the key questions and modifying the improvement plan on a regular basis, a system will keep the goals, and itself, up-to-date on current issues and on the path to being a more resilient, sustainable system.

QUESTIONS TO CONSIDER:

What is working? Why?

What is not working? Why?

Have internal or external conditions for my utility changed?

How can my plan be adjusted accordingly?

APPENDICES

Appendix I: Self Assessment Worksheet

Appendix II: System Improvement Plan Worksheet

Appendix III: Resources for Rural and Small Systems

APPENDIX I: SELF ASSESSMENT WORKSHEET

STEP 1 – RATING ACHIEVEMENT AREAS

Assess your system by rating your current level of achievement for each management area. Consider how effectively your current management efforts support each of the areas, and note that each management area has several dimensions (represented by the bullet points listed for each). Your rating should reflect the dimension with the lowest level of achievement.

Scale from low achievement to high achievement:

- Select **Low** if your system has no workable practices in place for addressing this area – very low capacity and performance.
- Select **Medium** if your system has some workable practices in place with moderate achievement, but could improve – some capacity in place.
- Select **High** if your system has effective, standardized, and accepted practices in place. It either usually or consistently achieves goals – capacity is high and in need of very little or no further development.

STEP 2 - RANKING PRIORITY AREAS

Rank the importance of each management area to your system. Base this ranking on your goals and the specific needs of your community. Your ranking may be influenced by current or expected challenges (e.g., if your community is experiencing elevated population growth rates, Water Resource Adequacy may be ranked as a high priority area to address). Again, note that each management area has multiple dimensions (represented by the bullet points listed) – your ranking should represent the highest priority of all of the points listed, and should be ranked independently of the achievement level (i.e., an area can remain, and therefore be ranked, as a high priority even if the utility is already undertaking needed improvement efforts).

Scale from low priority to high priority, keeping in mind the following:

- Current or expected challenges
- Customer or stakeholder impact (reliability, quality, timeliness)
- Consequences of not improving (non-compliance, increased cost, lost credibility, impacts to health and safety)
- Urgency (near or long term needs)
- Community priorities

TABLE A

Key Management Area	Management Area Description	Step 1: Rate Achievement (Low – High)	Step 2: Rank Priority (Low – High)
1. Water Resource Adequacy **(e.g., water quantity)**	• My system is able to meet the water or sanitation needs of its customers now and for the reasonable future. • My utility or community has performed a long-term water supply and demand analysis. (Applies to drinking water systems only.) • My system understands its relationship to local water availability. (Drinking water utilities should focus on utilization rates relative to any local water stress conditions, wastewater utilities should focus on return flows.)		
2. Product Quality **(e.g., clean & safe water)**	• My system is in compliance with permit requirements and other regulatory or reliability requirements. • My utility meets local community expectations for the potable water and/or treated effluent and process residuals that it produces.		
3. Customer Satisfaction	• Customers are satisfied with the services the system provides. • My system has procedures in place to receive and respond to customer feedback in a timely fashion.		
4. Community Sustainability & Economic Development	• My utility is aware of and participating in local and regional community and economic development planning activities. • My utility's goals also help to support overall watershed and source water protection, and community economic goals.		
5. Employee & Leadership Development	• Training programs are in place to retain and improve institutional knowledge. • Opportunities exist for employee skills development and career enhancement. • Job descriptions, performance expectations, and codes of conduct are established.		
6. Financial Viability	• The rates that my utility charges are adequate to pay our bills, put some funds away for the future, and maintain, repair, and replace our equipment and infrastructure as needed. (O&M, debt servicing, and other costs are covered.) • My utility discusses rate requirements with our customers, board members, and other key stakeholders.		
7. Operational Optimization **(e.g., energy/water efficiency)**	• My utility has assessed its current energy usage and performed an energy audit. • My utility has maximized resource use and resource loss (e.g., water loss, treatment chemical use). • My utility understands, has documented, and monitors key operational aspects of the system (e.g., pressure, flow, quality).		
8. Infrastructure Stability **(e.g., asset management)**	• My utility has inventoried its current system components, condition, and cost. • My system has a plan in place for repair and replacement of system components.		
9. Operational Resiliency	• My utility has conducted an all hazards vulnerability assessment (safety, natural disasters, environmental risks, etc.). • My utility has prepared an all hazards emergency response plan.		
10. Stakeholder Understanding & Support	• My system actively engages with local decision makers, community, watershed (where relevant), and regulatory representatives to build support for its goals, resources, and the value of the services it provides. • My utility performs active customer and stakeholder outreach and education to understand concerns and promote the value of clean and safe water.		

STEP 3 - PLOT RESULTS

To compare your results for each management area, you will plot each pair (rating, ranking) in the grid below. For each management area, identify your high/medium/low rating in the green Step 1 box, and find the corresponding row in the table. Then, for the same management area, identify your high/medium/low ranking in the blue Step 2 box, and find the corresponding column in the table. The box where the row and column intersect is where you should place that management area (note the abbreviations below for use in the self assessment plot).

WA	Water Resource Adequacy	FV	Financial Viability
PQ	Product Quality	OO	Operational Optimization
CS	Customer Satisfaction	IS	Infrastructure Stability
CE	Community Sustainability & Economic Development	OR	Operational Resiliency
ED	Employee & Leadership Development	SS	Stakeholder Understanding & Support

TABLE B

Rating (Achievement)	**High**			
	Medium			
	Low			
		Low	**Medium**	**High**
		Ranking (Priority)		

STEP 4 - ANALYZE RESULTS

Examining the results of the plotting exercise in Step 3 can help identify management areas on which to focus improvement efforts. Management areas that fall into the **red box** are both very important and under-developed, meaning that they should be seen as a top priority for improvement. Management areas that land in the **yellow boxes** should be next on the list for improvement efforts, and those that fall into the **white boxes** are important to consider for long-term improvement efforts, but likely do not need to be prioritized for immediate action. The eventual goal for all systems should be high achievement in each of the management areas.

QUESTIONS TO CONSIDER:

Where is my utility strong?

Where is there the most room for improvement?

What should my areas of focus be?

Why are these areas priorities?

APPENDIX II: SYSTEM MANAGEMENT IMPROVEMENT PLAN WORKSHEET

Instructions:

- ✓ *List your top three priority management areas – these should be drawn from the self assessment activity.*
- ✓ *List the improvement actions that you will undertake to address the priority management areas – you should have at least one action for each priority management area (actions may address multiple management areas).*
- ✓ *Fill out the details in the table below for each improvement action separately (i.e., one table per action).*

Priority Management Areas:

1.
2.
3.

Improvement Action:
Description: ✓ Action ✓ Management Area(s) addressed ✓ Objective(s)
Timeline: ✓ Start date ✓ Milestones ✓ Target completion date
Responsible Party (or Parties):
Relevant Resources (on-hand or needed):
Challenges to Address:
Review Process: ✓ Performance indicators or measures ✓ Status reports and updates frequency/cycle
Other Notes:

APPENDIX III: RESOURCES FOR RURAL AND SMALL SYSTEMS

As a companion resource to this *Guidebook*, this list of resources offers additional information and guidance specific to small systems on the ten key management areas. Resources are identified in the table by the key management areas that they address (abbreviations in the table are identified in the key below). The majority of the resources listed are available free of charge.

WA	**Water Resource Adequacy**	**FV**	**Financial Viability**
PQ	**Product Quality**	**OO**	**Operational Optimization**
CS	**Customer Satisfaction**	**IS**	**Infrastructure Stability**
CE	**Community Sustainability & Economic Development**	**OR**	**Operational Resiliency**
ED	**Employee & Leadership Development**	**SS**	**Stakeholder Understanding & Support**

	WA	PQ	CS	CE	ED	FV	OO	IS	OR	SS
A Drop of Knowledge The Non-operator's Guide to Drinking Water Systems http://www.rcap.org/sites/default/files/rcap-files/publications/RCAP-Non-operator%27s%20Guide%20to%20DRINKING%20WATER%20Systems.pdf *Explains in simple, everyday language the technical aspects of drinking water utilities from source to tap. Helpful as an orientation and background guide for new small utility board members and small community decision makers.*										✓
ArcGIS for Water Utilities http://resources.arcgis.com/content/water-utilities *An industry specific configuration of ArcGIS designed to meet common needs of water, wastewater and stormwater utilities and is delivered as module of ArcGIS for Local Government. ArcGIS for Water Utilities is a free download that you can deploy on top of either the entire ArcGIS System or the individual components of the ArcGIS System that your organization licenses.*								✓		
ArcGIS for Water Utilities – Infrastructure Operations Dashboard Template http://www.arcgis.com/home/item.html?id=00109211bfba4a89a82b512a78f3b9f5 *Provides a high-level view into the health and operations of public infrastructure. Also provides relevant base maps and operational layers from several sources, and provides a series of information pop-ups and reports so concise map-centric content can be visualized and used to support the day to day operations of a water utility or public works agency.*							✓			

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ARRA Registering and Reporting Guide for Water/Wastewater Systems with Loans/Grants from the U.S. Department of Agriculture-Rural Utilities Service http://www.rcap.org/sites/default/files/rcap-files/publications/RCAP%20ARRA%20Registering%20and%20Reporting%20Guide.pdf *Walks communities that received loans of American Recovery and Reinvestment Act (ARRA) funds through USDA Rural Utilities Service (RUS) (for water and wastewater projects) through the special reporting processes that must be followed for ARRA funds.*						✓				
Arsenic and Radionuclides: Small Water System Treatment Experience http://watercenter.montana.edu/training/arads/default.htm *Consists of four 10-minute video presentations and auxiliary resource files to help small-water-system personnel understand the requirements and challenges of treating their source water for arsenic or radionuclides from the perspective of their peers who operate treatment facilities.*		✓								
Assessing The Impact Of Current And Future TMDL Designations On Small Wastewater Systems http://www.nrwa.org/benefits/whitepapers/2010_Update/kramer%20TMDL%20impact%20assessment%20final.doc.pdf *The impact of a TMDL on a given water body can result in much more stringent permit limits for a wastewater treatment plant discharging to that water body. A significant financial impact can befall a community if the community's current wastewater treatment plant is unable to meet the new limits and a new plant or substantial upgrades are required. This paper is an attempt to quantify the impacts of the TMDL program on small communities.*		✓								
Asset Management: A Handbook for Small Water Systems http://epa.gov/safewater/smallsystems/pdfs/guide_smallsystems_asset_mgmnt.pdf *Presents basic concepts of asset management and provides the tools to develop an asset management plan. It is designed for owners and operators of small community water systems (CWSs). CWSs include all systems (both publicly and privately owned) with at least 25 year-round residential customers or 15 year-round service connections.*						✓	✓	✓		
Asset Management Guide for Wastewater Utilities Including Total Electronic Asset Management System (TEAMS) Software http://www.mcet.org/am/am%20toolkit.html *Modules on the principles of asset management, as well as Train the Trainer materials to multiply this information.*							✓	✓		
AWWA Water Audit Software http://www.awwa.org/resources-tools/water-knowledge/water-loss-control.aspx *Free software to compile a preliminary audit.*										

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The Basics of Financial Management for Small-community Utilities http://www.rcap.org/finmgmtguide *A basic guide that is ideal for a board member of a drinking water or wastewater utility who needs to understand the financial aspects of a utility's operations.*					✓	✓				
The Big Guide for Small Systems: A Resource for Board Members http://www.rcap.org/boardguide *A comprehensive desk reference that is ideal as an orientation and background for new members on a utility's board of directors. Designed for members of the board of a drinking water and/or wastewater system in a small community. In various parts of the guide, sample documents are provided that utilities can take and adapt for use in their own situations.*			✓		✓					✓
Board Member Training http://msucares.com/water/waterboard/waterindex.html *Trains board members in the areas of laws and regulations, duties and responsibilities, ethics, operation and maintenance, management and finance, rate setting, and public relations and customer service.*										✓
Capital Improvement Plan (CIP) Tool for Water and Wastewater Utilities http://www.efc.unc.edu/tools.htm#CIPTool *CIP tool with example data and tools to create easy-to-understand predictions on: financial reserves, rate increases, and capital investment.*								✓		
Care and Conserve Sewer Line Repairs http://www.atlantawatershed.org/bureaus/waste/Sewer_Care%20&%20Conserve%20Web.pdf *Sample program for low income assistance.*						✓				
Check Up Program for Small Systems http://epa.gov/safewater/cupss/ *Provides a simple, comprehensive approach based on EPA's highly successful Simple Tools for Effective Performance (STEP) Guide series. Use CUPSS to help you develop: a record of your assets, a schedule of required tasks, an understanding of your financial situation, and a tailored asset management plan.*						✓	✓	✓		
Circuit Rider Program http://www.nrwa.org/state%20associations/map.aspx *Provides technical assistance for the operations of rural water systems. Rural Utilities Service through contracting, has assisted rural water systems with day-to-day operational, financial, and management problems. The assistance may be requested by officials of rural water systems or RUS. The program compliments the loan supervision responsibilities for RUS. The National Rural Water Association has entered into a contract with RUS to provide this service. National Rural Water Association - State Affiliates do the work in their states.*					✓	✓		✓	✓	
Control and Mitigation of Drinking Water Losses in Distribution Systems http://water.epa.gov/type/drink/pws/smallsystems/upload/Water_Loss_Control_508_FINALDEc.pdf	✓	✓		✓			✓	✓	✓	

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Information on establishing water loss control programs.										
Drinking Water Security for Small Systems Serving 3,300 or Fewer Persons **http://water.epa.gov/infrastructure/watersecurity/upload/2005_12_12_smallsystems_very_small_systems_guide.pdf** *Presents basic information and steps you can take to improve security and emergency preparedness at your water system.*									✓	
EFC Financial Dashboard **http://efc.boisestate.edu/efc/Tools/Dashboard/tabid/154/Default.aspx** *Allows users to use CUPSS data for strategic purposes (login).*						✓	✓	✓		
eLearning – Leadership & Management Courses **http://apps.awwa.org/ebusmain/Elearning/Courses.aspx?Category=ELMGMTLEADERSHIP** *AWWA's online courses on leadership and management.*					✓					
eLearning – "Water Basics for Decision Makers" **http://www.awwa.org/Conferences/learning.cfm?ItemNumber=56775&navItemNumber=56779** *Series for new decision makers in water or wastewater utilities, or for those who regularly interact with professionals but don't clearly understand how water is distributed and treated.*										✓
Energy Audit Webcast **http://www.rcap.org/energyauditswebinar** *The Association of State Drinking Water Administrators (ASDWA) and RCAP partnered to host an energy audit webinar for state drinking water program staff. The webinar covers a "how-to" plan for conducting energy audits for small water utilities and outlined a national training effort to bring an energy audit approach to all RCAP offices including undertaking a pilot initiative involving selected small water systems.*							✓			
ENERGY STAR for Wastewater Plants and Drinking Water Systems and Portfolio Manager Tool **http://www.energystar.gov/index.cfm?c=evaluate_performance.bus_portfoliomanager** *An interactive energy management tool that allows you to track and assess energy and water consumption across your entire portfolio of buildings in a secure online environment.*							✓			
Energy Use Assessment Tool for Water and Wastewater Systems (includes User Guide, Tool and Example) **http://water.epa.gov/infrastructure/sustain/energy_use.cfm** *An Excel-based tool to help small and medium sized water and wastewater utilities assess their current energy usage and help identify possible ways to use energy more efficiently.*				✓			✓	✓		
Financial Management Courses						✓				

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http://www.newwa.org/NetCode/courseDescList.aspx *Search under course category "Management."*										
Financial Planning: A Guide for Water and Wastewater Systems http://www.nmenv.state.nm.us/dwb/Documents/Public%20Info/RCAC%20Financial%20guide_final_6.pdf *Guidebook that walks a utility through the annual budgeting process, the rate setting process, and creating a 6-year financial plan.*						✓				
Formulate Great Rates: The Guide to Conducting a Rate Study for a Water System http://www.rcap.org/rateguide *A guide to developing a fair and equitable rate structure in a small drinking water or wastewater system.*		✓	✓			✓				
Getting in Step: A Guide for Conducting Watershed Outreach Campaigns http://water.epa.gov/type/watersheds/outreach/upload/gettinginstepedition3.pdf http://water.epa.gov/type/watersheds/outreach/index.cfm *Provides some of the tools needed to develop and implement an effective watershed outreach plan. For a watershed practitioner trained in the sciences, this manual will help you address public perceptions, promote management activities, and inform or motivate stakeholders.*										✓
Getting Your Project to Flow Smoothly: A Guide to Developing Water and Wastewater Infrastructure http://www.rcap.org/sites/default/files/rcap-files/publications/RCAP%20Getting%20Your%20Project%20to%20Flow%20Smoothly.PDF *A comprehensive guide on all the steps a project owner (governing body of a utility) should go through in planning, designing and constructing infrastructure.*	✓			✓		✓	✓	✓		✓
The Homeland Security Exercise and Evaluation Program (HSEEP) Toolkit https://hseep.dhs.gov/pages/1001_Toolk.aspx *The HSEEP Toolkit is an interactive, on-line system for exercise scheduling, design, development, conduct, evaluation and improvement planning. The HSEEP Toolkit is not a system, but rather a collection of systems and tools.*									✓	
Local Safe Disposal Programs: Ex. Safe Medicine Disposal for Maine http://www.safemeddisposal.com/ *The Safe Medicine Disposal for ME program provides Maine's residents with a safe disposal option for unused and unwanted medicine. Free medicine mail-back envelopes are available at participating sites.*										✓
National Cost Estimate for Cross Connection Control in Small Water Systems http://www.nrwa.org/benefits/whitepapers/risks/risks03/risk03/risk03.pdf *A national regulation for cross connection control will impact the 49,497 Community Water Systems (CWS) and 19,668 Non transient and Noncommunity Water Systems (NTNCWS) in the U.S. that serve 10,000 or fewer persons (USEPA 2003). This report presents a methodology to estimate the national cost for a cross connection control program for these water systems.*		✓						✓	✓	

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National Rural Water Association Job Network **http://www.nrwa.org/benefits/jobtarget.aspx** *Helps to connect the most skilled professionals in the fields of drinking water, wastewater, source water protection, utility management & engineering to potential employers.*										
National Rural Water Association Technical Training and Assistance Program **http://www.nrwa.org/state%20associations/map.aspx** *Click on your state for contact information to obtain services under the Technical Assistance and Training Program. National Rural Water Association provides training and on-site technical assistance to waste water systems in the contiguous 48 states, Alaska, Puerto Rico, and Hawaii. The training is provided to help reduce exposure to waste related health and safety hazards and enhance the sustainability of wastewater systems in rural and small communities.*		✓					✓			
National Rural Water Association Website **www.nrwa.org** *Website of the National Rural Water Association, the largest water and waste water utility membership association.*										
Only Tap Water Delivers Campaign **http://www.awwa.org/Government/Content.cfm?ItemNumber=3846&navItemNumber=3847** *A public outreach campaign that is available to AWWA utility members free of charge. The materials are available in a CD toolkit, and can be adapted to meet local needs.*										✓
Pipe Repair Checklist **http://www.awwa.org/Resources/SmallSystem.cfm?ItemNumber=3640&navItemNumber=32930** *AWWA small systems pipe repair checklist.*							✓			
Preventive Maintenance Card File for Small Public Water Systems Using Ground Water **http://www.epa.gov/ogwdw/smallsystems/pdfs/booket_smallsystems_preventmaint.pdf** *Schedules for maintenance tasks and checklists and logs for easily recording your findings.*							✓			
Protecting Your Community's Assets: A Guide for Small Wastewater Systems **http://www.nesc.wvu.edu/subpages/WW_manage_plan.cfm** *Helps utility managers, operators, and local officials improve security and plan for emergency situations affecting wastewater treatment systems.*		✓						✓	✓	
Public Communications Toolkit **http://www.awwa.org/Government/Content.cfm?ItemNumber=3851&navItemNumber=3852** *Website with and online toolkit of various resources for water professionals related to public communication.*										✓

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Public Education and Outreach on Stormwater Impacts http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=min_measure&min_measure_id=1 *EPA's website for local officials and communities to conduct education and outreach about stormwater, what it is, who contributes to it, and best practices related to stormwater.*										✓
Quality On Tap! Publication http://www.nrwa.org/benefits/QOT.aspx *A nationwide, grassroots public relations and awareness campaign designed especially for the drinking water industry. Quality On Tap is the first practical "hands-on" guide to better public relations for small water utilities. It contains the tools small water systems need to do the most important job of all - spreading the truth to the public of the quality of work they do and the quality water they produce.*										✓
Record Keeping Rules: A Quick Reference Guide http://www.epa.gov/ogwdw/smallsystems/pdfs/guide_smallsystems_records_08-25-06.pdf *A rule-by-rule summary of requirements for keeping monitoring, public notice, and other records, as well as helpful tips on record maintenance and security.*		✓					✓			
Recruiting and Training Veterans Brochure: For Careers in the Water Sector http://www.workforwater.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=2147483686 *The Department of Veterans Affairs and Department of Labor administer programs to assist Veterans in their transition to civilian careers and oversee funding to pay for education and job training. The Environmental Protection Agency, American Water Works Association and Water Environment Federation are working with these agencies to promote water sector careers nationally.*					✓					
Restructuring and Consolidation of Small Drinking Water Systems http://www.epa.gov/safewater/smallsystems/pdfs/compendeum_smallsystems_restruct.pdf *Contains information on restructuring and consolidation authorities for public drinking water systems. It provides an individual summary for each state by listing available statutes, regulations, or policies that encourage or require consolidation or restructuring of drinking water systems.*		✓	✓	✓		✓	✓	✓	✓	
Revolving Loan Fund Program http://www.nrwa.org/benefits/revolvingloan.aspx *The NRWA Revolving Loan Fund was established under a grant from USDA/RUS to provide financing to eligible utilities for pre-development costs associated with proposed water and wastewater projects. RLF funds can also be used with existing water/wastewater systems and the short term costs incurred for replacement equipment, small scale extension of services or other small capital projects that are not a part of your regular operations and maintenance.*						✓				

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Rural Community Assistance Partnership Website www.rcap.org *Aims to provide technical assistance and training services to rural communities develop and sustain critical infrastructure and promote economic opportunity.*										
Rural Water Supply and Sewer Systems: Background Information http://www.nationalaglawcenter.org/assets/crs/98-64.pdf *CRS report for congress.*										
Saving Water and Energy in Small Water System http://watercenter.montana.edu/training/savingwater/default.htm *A training program that consists of four 45-minute presentations and associated resource files. The presentations are meant for use in classroom or workshop settings. The four modules address the following topics: water conservation, energy management, alternative energy, and water accounting (audit and leak detection).*	✓			✓			✓			
Security and Emergency Management System (SEMS) http://semstechnologies.com/RAMCAP.asp *Software to assist small water systems in completing a vulnerability self-assessment.*								✓	✓	
Security and Emergency Response Planning Toolbox for Small Water and Wastewater Systems http://www.rcap.org/toolbox *Consists of five core modules, appendices, and introductory text that relate security and emergency preparedness to best practices of system operation and management.*								✓	✓	
Setting Small Drinking Water Rates for a Sustainable Future http://www.epa.gov/owm/waterinfrastructure/pdfs/final_ratesetting_guide.pdf *A step-by-step rate setting guide for small utilities for assessing annual costs, revenue needs, and reserve requirements and setting appropriate rates.*						✓				✓
Simultaneous Compliance Tool http://www.simultaneouscompliancetool.org/SCToolSmall/jsp/modules/welcome/welcome.jsp *Assists in making appropriate choices to comply with various water quality goals emanating from water quality regulations.*		✓								
Small Drinking Water Systems Handbook A Guide to "Packaged" Filtration and Disinfection Technologies with Remote Monitoring and Control Tools http://www.epa.gov/nrmrl/pubs/600r03041/600r03041.pdf *Provides information to the small system operator, manager, and/or owner about different approaches to providing safe and affordable drinking water to your community.*		✓						✓		
Small System Electric Power Use - Opportunities For Savings www.nrwa.org/benefits/whitepapers/risks/2008papers/regnier%20SMALL%20SYSTEM%20ELECTRIC%20POWER%20USE%206.doc *Describes the typical rate structures utilized by U.S. Electric utilities and how these rate structures can most effectively be utilized by water utilities, especially small*							✓			

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ones, to minimize their electric costs and thereby save money and energy.										
Small System Guide to Safe Drinking Water Act Regulations http://epa.gov/safewater/smallsystems/pdfs/guide_smallsystems_sdwa.pdf *A resource for understanding current and anticipated drinking water regulations with which utilities need to comply.*		✓								
Small Utilities Rates and Finances Spreadsheet (and Instructions) http://www.awwa.org/Resources/SmallSystem.cfm?ItemNumber=3640&navItemNumber=32930 *A self-guided, interactive financial spreadsheet application designed to assist small systems.*						✓				
Small Utility Board Training http://watercenter.montana.edu/training/board_training/default.htm *A training course designed to help water board members and elected officials understand the basic principles of public water system regulation, operation, planning, budgeting and communication.*					✓					✓
Small Water Systems: A Vital Component of WARN http://www.epa.gov/mutualaid or www.nationalwarn.org *Describes how small systems can participate in WARN to share resources with neighboring utilities during an emergency.*									✓	
Strategic Planning: A Handbook for Small Water Systems, Simple Tools for Environmental Protection (STEP) Guide http://www.epa.gov/ogwdw/smallsystems/pdfs/guide_smallsystems_stratplan.pdf *Presents basic concepts on strategic planning for small water systems and explains how this process can help improve your technical, managerial, and financial capabilities. It provides background information on the process of strategic planning and a series of worksheets to use in developing a written strategic plan.*				✓		✓	✓	✓	✓	
Stakeholder Analysis http://www.sswm.info/category/planning-process-tools/exploring#StakeholderAnalysis *A portion of the Sustainable Sanitation and Water Management online Toolbox.*										✓
Survival Guide: Public Communications for Water Professionals www.wef.org/WorkArea/DownloadAsset.aspx?id=7120 *A guidebook to help utilities learn how to communicate effectively with their community and customers. It provides an overview focused on the learning the basics of public communication and different public communication scenarios.*										✓
Sustainable Infrastructure for Small System Public Services: A Planning and Resource Guide http://www.rcap.org/sites/default/files/rcap-files/publications/RCAP%20Sustainable%20Infrastructure%20Guide.PDF				✓		✓	✓	✓	✓	

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Provides worksheets, examples, case studies and resources on water conservation, energy efficiency and renewable energy resources for small utilities.										
System Development Charge Calculator **http://efc.boisestate.edu/Tools/SDCCalculator/tabid/87/Default.aspx** *System development charges (SDCs), otherwise known as impact fees, are difficult for most small systems to determine. This calculator predicts the unit cost of adding new development to an existing water system. The calculator gives users the option of two methodologies when determining the cost impact of new connections.*						✓		✓		
Tabletop Exercise Tool for Water Systems **http://yosemite.epa.gov/ow/SReg.nsf/description/TTX_Tool** *A PC-based tool that contains materials to assist those interested in planning and facilitating tabletop exercises that focus on Water Sector-related issues. The updated TTX Tool contains fifteen scenarios that address an all-hazards approach to emergency preparedness and response, including natural hazards and manmade incidents, as well as introduces users to the potential impacts of climate change.*									✓	
Taking Stock of Your Water System: A Simple Asset Inventory for Very Small Drinking Water Systems **http://www.epa.gov/ogwdw/smallsystems/pdfs/final_asset_inventory_for_small_systems.pdf** *Helps very small water systems, such as manufactured home communities and homeowners' associations, assess their condition by preparing a simple asset inventory.*						✓		✓		
Talking to Your Decision Makers: A Best Practices Guide **http://www.epa.gov/ogwdw/smallsystems/pdfs/guide_smallsys_decision_makers_08-25-06.pdf** *Tips for working successfully with decision makers in your community to meet your water system's needs.*										✓
Talking to Your Customers About Chronic Contaminants in Drinking Water: A Best Practices Guide **http://water.epa.gov/drink/contaminants/upload/2007_11_02_contaminants_fs_contaiminants_chronic_talkingtocustomers.pdf** *Guidelines for effectively communicating with customers about the dangers of chronic contaminants and how water systems protect against contamination.*			✓	✓						✓
Technitrain Program **http://www.rcap.org/technitrain** *Helps to protect public health and foster economic development in targeted rural communities throughout the United States and its territories by providing onsite, community-specific technical assistance and training that: identifies and evaluates solutions to water and waste disposal problems, assists communities in preparing funding applications for their water and waste projects, and improves operation*				✓	✓	✓				

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and maintenance of existing water and waste-disposal facilities. It is part of RCAP's overall mission of working with small, rural communities to increase local capacity.										
USDA Rural Utilities Service Borrower's Guide: A How-to for Water and Wastewater Loans from USDA Rural Development http://www.rcap.org/pubs/usdaborrguide *Summarizes the managerial and financial requirements for communities that are receiving U.S. Department of Agriculture Rural Utilities Services (RUS) loan funds for their water or wastewater utility.*						✓				
Utility Budgeting Worksheets http://efc.boisestate.edu/Tools/UtilityBudgetingwithUtilityBudgetingWorksheet/tabid/86/Default.aspx *Worksheets that assist operators, managers and board members in determining whether key criteria of financial viability are being met by a utility system and help determine if that system will have the financial capabilities necessary for the sustained provision of services for its customers.*						✓				
Valve Record Template http://www.awwa.org/Resources/SmallSystem.cfm?ItemNumber=3640&navItemNumber=32930 *Valve master record template spreadsheet.*							✓			
Vulnerability Self-Assessment Tool (VSAT) http://water.epa.gov/infrastructure/watersecurity/techtools/vsat.cfm *A risk assessment software tool that assists drinking water and wastewater utilities in assessing security threats and natural hazards and updating utility Emergency Response Plans; appropriate for any water system size or type.*								✓	✓	
Water and Environment Programs - Engineering Success Stories http://www.usda.gov/rus/water/ees/englib/success.htm *The information in these stories is provided by Rural Development, Water and Environmental Programs as a service to all those persons looking for alternative, innovative, or just plain successful approaches to rural water and waste problems.*							✓			
Water System Operator Roles and Responsibilities: A Best Practices Guide http://water.epa.gov/type/drink/pws/smallsystems/upload/2008_07_01_smallsystems_guide_smallsystems_operator_08-25-06.pdf *Helps to understand: (1) Roles and responsibilities in delivering safe drinking water to system's customers; (2) Additional responsibilities, which can vary depending on size, characteristics, managerial structure, and regulatory requirements.*		✓			✓				✓	
WaterPro Conference Website http://www.waterproconference.org/ *WaterPro is the annual conference of the National Rural Water Association. It takes place in even numbered calendar years. WaterPro is designed to bring together water and wastewater utility systems - large and small, municipal and rural - for*										

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sessions in operations, management, boardsmanship and governance.										
WaterSense **http://www.epa.gov/WaterSense/** *EPA's program to promote water efficiency and conservation. Provides information for consumers to identify products and practices that save water. Utilities and local governments can partner with EPA to receive access to a network of partners working on water conservation and promoting the value of water and using it wisely.*			✓							✓
Water System Owner Roles and Responsibilities: A Best Practices Guide **http://www.epa.gov/ogwdw/smallsystems/pdfs/guide_smallsystems_owner_08-25-06.pdf** *A summary of system owners' key duties in protecting public health, overseeing system operation, and working with local officials.*					✓					✓
Water Quality in Small Community Distribution Systems **http://www.epa.gov/nrmrl/pubs/600r08039/600r08039.pdf** *Assists the operators and managers of small- and medium-sized public water systems. Provides a comprehensive picture of the impact of the water distribution system network on distributed water quality.*		✓						✓	✓	
Water University **http://www.wateruniversity.org/** *The intent of Water University and the National Rural Water Association is to provide the highest level of instruction, education, training and discussion to the largest audience possible. To meet that goal, most of the webinar/lecture portions of these courses are presented at low or no cost. In addition to providing information to the entire water industry, Water University provides a method for licensed water professionals to earn their necessary Continuing Education Units through our advanced on-line educated modules. Access to these modules requires enrollment fees, but these fees are still very affordable compared to in-person training.*										
Water & Wastewater Pricing **http://water.epa.gov/infrastructure/sustain/Water-and-Wastewater-Pricing-Introduction.cfm** *EPA Website on water and wastewater pricing, explaining the concept of pricing and water conservation, as well as supplying tools, guides, and reports on pricing.*						✓				
White Paper on Climate Change Impacts on Small and Rural Public Water Systems **http://www.nrwa.org/benefits/whitepapers/2010_Update/Climate%20white%20paper%20June%2022_2010%20-%20Final.pdf** *Presents a critical evaluation of the possible impacts of climate change on small and rural water systems and management/operational techniques or actions that may be affected as a result of these potential impacts.*	✓			✓					✓	

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Work for Water Website **http://www.workforwater.org/** *Materials to encourage careers in the water sector, where opportunities to protect and preserve water resources are virtually unlimited and the chance to make a difference is unmatched.*					✓					

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Rural and Small Systems Guidebook to Sustainable Utility Management

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