



Proposal

March 14, 2018

Lake County Special Districts Administration

South Main Street Water System Project



NEXGEN Utility Management
4010 Lennane Drive
Sacramento, CA 95834



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March 14, 2018

Lake County Special Districts
Attn: Mr. Scott Harter, P.E. Deputy Administrator
230 N. Main Street
Lakeport, CA 95453

Dear Mr. Harter:

Subject Proposal for the South Main Street Water System Project – South Lakeport

NEXGEN Utility Management, Inc. is pleased to submit this proposal to Lake County Special Districts Administration (District) for professional engineering services for the South Main Street Water System Project (Project) in Lakeport.

NEXGEN specializes in Northern California water management (permitting, planning, and design) as well as the development of asset management systems for public infrastructure. We have considerable experience with the loan and grant programs offered by the United States Department of Agriculture (USDA) and the State Water Resources Control Board (SWRCB) through the Clean Water State Revolving Fund (CWSRF).

The District has already completed a feasibility study which contains some good background information and some cost data that can be easily updated and validated. Both grant programs have similar information needs and we will prepare the Engineering Report in a format that can be used for either or both the CWSRF and USDA programs.

As requested in the RFP, our cost estimate is provided under separate cover.

If you have any questions about our company, proposed staff, or experience please do not hesitate to contact myself or Dan Rich (direct line 916-779-7301, drich@nexgenum.com).

NEXGEN Utility Management

A handwritten signature in blue ink, appearing to read 'V. Yee'.

Vincent Yee, P.E.
President

T 916-564-8000 | yee@nexgenum.com |

Main Office Address: 4010 Lennane Drive, Sacramento, CA, 95834

TASK 1: Water Demand Projections at Full Build-Out

Past studies projected the South Lakeport Area to grow from 170 to 218 resident unit equivalents (RUEs) and a projected water demand at maximum daily conditions of 106 gallons per minute. We will review those land use assumptions with District Staff and reflect any changes to unit water demand factors that may have occurred since the 2012 study. The water demand factors in 2012 were adapted from a 2006 City of Lakeport Study and may not reflect current "post-drought" demands.

We will discuss approach for water demand projections at the Project kickoff meeting and review the projections with the District at our 50% completion review meeting

TASK 2: Assess Water Distribution Options

Our experience is each community tends to be slightly different with respect to water main sizing and required fire flows. It is common to see water mains sized on maximum day plus fire flow demands. We will review fire flow requirements (flow and pressures) with the District and the local fire department. We note that a fire flow of 1500 gpm would likely require a 10 or 12 inch water main. An 8-inch pipe was anticipated in the 2012 Study. We will prepare a spreadsheet model of the system and update water main layouts.

Depending on the water supply option and fire flow requirements, additional storage and booster pumping will be evaluated and costed. For instance, the existing 8-inch main from the Kelseyville system does not have the capacity to handle fire flows, so this alternative may also require storage and booster pumping – or construction of an emergency intertie to the City of Lakeport's 14-inch main.

TASK 3: Assess Water Supply Options

We will update the 2012 Feasibility Report which looked at construction of an onsite well, treatment, storage, and booster pumping, as well as connecting to the Kelseyville / Finely Water System. The connection to the Kelseyville system may also onsite require storage and booster pumping. The 2012 report also makes mention of some existing 8-inch Asbestos Concrete (AC) mains within the Kelseyville System that would be used. Depending on the age and condition of

1 PROJECT UNDERSTANDING



this pipe, the District may want to consider replacing/enlarging those pipe sections as part of this project. We will prepare an updated cost estimate of each water supply option.

TASK 4: Assess Other Needs Consistent with SWRCB and USDA Funding Guidelines

The technical report will be prepared to be consistent with the guidelines for SWRCB and USDA funding. An outline for the SWRCB SRF technical report is provided below. Some of these sections may not be applicable to this Project. It is our experience that agency review processes are expedited if the exact same headings are used even if the text below says "Not Applicable."

Engineering Report Outline Consistent with CWSRF and USDA Requirements

A. WATER SYSTEM INFORMATION

1. Describe the water system and its facilities. Include details relating to source, storage, treatment, and distribution system.
2. Attach a schematic/map of the system which includes the existing facilities as described above.
3. Specify the agency that has jurisdiction over the water system: State Water Board or Local Primacy Agency (LPA)

B. PROBLEM DESCRIPTION

1. Describe the problem being addressed by the project and attach supporting documents. (Include the last two years of water quality data, most recent compliance orders, violations, citations, etc.)

C. ALTERNATIVE SOLUTIONS

1. Describe each alternative considered to correct the problem described in Section B. Include the feasibility of consolidating with one or more water systems.

D. SELECTED CONSTRUCTION PROJECT

1. Describe the proposed construction project and identify all major components.

1 PROJECT UNDERSTANDING

2. Describe how this project will solve the problem and provide an analysis of its effectiveness. List all anticipated operational challenges that the project may impose and include any proposed solutions.
3. Determine if the project is consistent with local/county planning. List the local/county planning documents used to make the determination.
4. Does the project contain green components?
5. Is the selected construction project a consolidation project?
6. List any land that will be purchased or acquired for this construction project, discuss the necessity for such land, and justify the appropriateness of the size of the land being purchased.
7. Describe the final plans and specifications as well as other technical aspects of the project, including the overall conceptual design (e.g. layout, flow diagrams, choice of unit processes, redundancy, reliability features).
8. Attach a schematic/map of the system which includes the proposed facilities as described above.
9. Provide water demand and capacity statistics used to design the project. Include a description of the methodology used to determine the peak flow water demands, the anticipated growth and its resultant water demand, and fire flow. If fire flow consideration is included in the facility design, provide the basis for including fire flow. If the project includes design capacity above the maximum day demand plus fire flow, provide U.S. Census or other population data from an independent source (including references) for the service area for at least the last two decades. (See Appendix I of the DWSRF Policy Handbook.)
10. Describe how industrial and commercial water users impact the peak flow demand.
11. List all major project components and identify their estimated useful life.
12. Attach a detailed cost breakdown of the entire project, which lists all major construction components, non-construction costs, and ineligible items.
 - a. The total project cost is \$_____
 - b. The eligible project cost is \$_____
 - c. The annual increase in operations/maintenance cost is \$_____

E. PROPOSED SCHEDULE

1. Attach a project schedule. Construction projects are required to be completed no later than three years from the funding agreement execution date.

F. ATTACHMENTS TO ENGINEERING REPORT

1 PROJECT UNDERSTANDING

1. Please attach the following documents to be included with this Applicant Engineering Report. Make sure your water system's name and water system/project number are on every additional attachment.
 - a. Schematic/map of system's existing facilities
 - b. Documents justifying the ranked problem
 - c. Schematic/map of system's proposed facilities
 - d. Detailed cost estimate
 - e. Proposed project schedule
 - f. Supplemental Information Form (Consolidation Projects Only)
 - g. Copy of any permits required as part of this project

Meetings, Deliverables, and Schedule

As part of the Projects' Predesign, the following meetings and deliverables will be provided:

Kick Off Meeting- *2 weeks after contract execution*

Deliverables •

Contact information of selected consultant

50% completion Meeting- *10 weeks after contract execution*

Deliverables •

Map of conceptual water system

Identification and details of system infrastructure

80% Completion Meeting- *18 weeks after contract execution*

Deliverables

Revised area map of conceptual water system

Preliminary feasibility report with recommendations for distribution options, supply options, storage and treatment options.

Presentation of Report Findings- *24 weeks after contract execution*

Deliverables

Report of Findings & Recommendations in Feasibility Study

NEXGEN will provide ten hard copies of the final report along with an electronic format of the final report.

2 PROJECT MANAGER QUALIFICATIONS



Dan Rich, P.E. – Project Manager

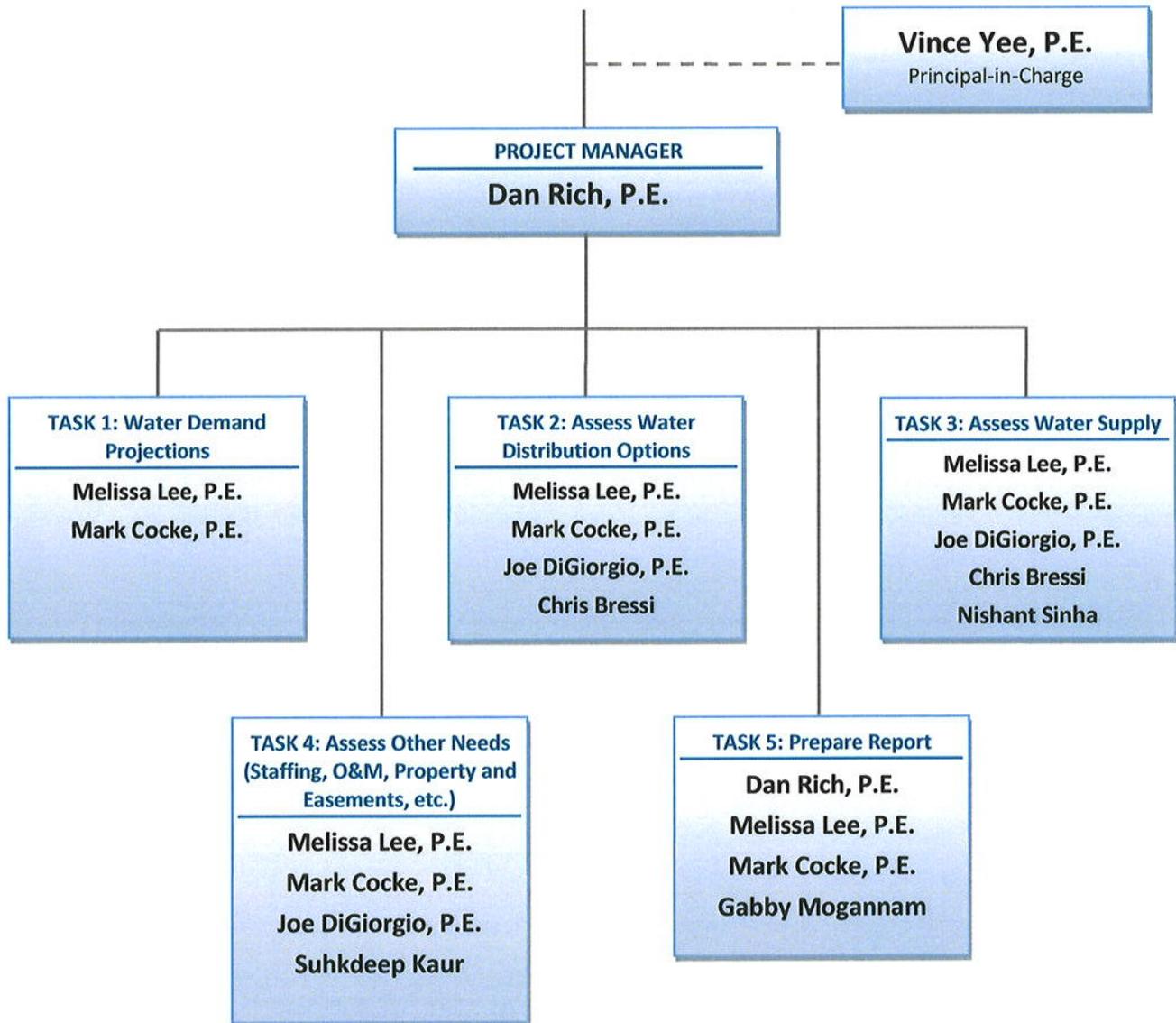
Dan would serve as the Project Manager and be the District's primary point of contact. Dan has 27 years of experience in the design of water and wastewater systems and is a Principal of the firm. Dan was the Project Manager for a \$43 million capital program for the City of Merced and a \$65 million capital program for the City of Lincoln and is currently managing a \$15 million plant design for the City of Colusa, as well as a \$12 million wastewater program for the City of Auburn. Dan has designed water treatment and conveyance systems serving the cities of Auburn, Reno, Lake Wildwood, Lincoln, Woodland, Merced, Tracy, West Sacramento, and Colusa.

Dan is a skilled public speaker and regularly gives project updates to members of the public, the media and city councils. Dan also serves as a Director of the San Juan Water District which provides treated water to nearly 300,000 people in Sacramento and Placer Counties.

Dan served as Project Manager for the following SRF and USDA funded projects.

- City of Colusa \$8 million in DAC grants and 7 million in low interest (1%) 30 year loans.
- Cascade Shores (\$2 million SRF grant),
- City of Woodland (\$2 million SRF grant, \$23 million loan)
- City of Auburn (\$3 million SRF grant, \$10 million loan).

Information on each of these projects is provided in Section 4.2 below.



3 STAFF QUALIFICATIONS



Dan Rich, P.E. –Project Manager

Dan has 27 years of experience in the design of sewerage systems, Dan will be the District's overall point of contact, lead the SRF funding efforts, and be responsible for the quality of all work products. Dan is a registered California Civil Engineer.

Vincent Yee, P.E. - Principal in Charge

Vince would serve as the project Principal-in-Charge. Vince brings 26 years of water engineering and asset management expertise.

Melissa Lee P.E. - Senior Engineer

Melissa has over 15 years (10 years with NEXGEN) of experience in wastewater planning, permitting, hydraulic modeling system, capacity analysis, rehabilitation program implementation, and I&I analysis. Melissa has completed a number of SRF funding applications to secure funding for multi-million dollar projects for various municipalities in Northern California. This includes recycled water applications and SRF funding for the City of Woodland, Colusa, Cascade Shores, and Auburn.

Mark Cocke, P.E. - Senior Engineer

Mark has 30 years of experience (6 years with NEXGEN) in planning and design of water and wastewater systems and relevant experience in the public sector on organizing funding for projects. Mark will lead the hydraulic analysis and develop cost estimates.

Joe DiGiorgio, P.E. - Senior Engineer

Joe has 32 years of experience (2 years with NEXGEN) in design and construction of water systems. He is currently serving as resident engineer for a \$10 million water treatment plant expansion for the Georgetown Divide PUD.

Chris Bressi, Cost Estimates and Constructability Reviews

Chris has 30 years of field experience (10 years with NEXGEN), including land grading, installation of sewer and storm drain facilities, and the construction of streets, sidewalks and retaining walls and landscaping in the public right of way. Chris works extensively for the City of Auburn and recently was the CM/ resident inspector for its 2 year WWTP upgrade, various pump station upgrade, roadway projects, and sewer repairs. Chris also manages solids handling projects each summer for the City of Woodland.

4 FIRM QUALIFICATIONS



4.1 Complete Name, Type of Firm, and Contact Information

Name: NEXGEN Utility Management, Inc.

Type of Firm: A California Corporation

Address: 4010 Lennane Drive
Sacramento, CA 95834

Telephone Number: (916) 779-7301

Fax Number: (916) 564-8030

Contact Name: Dan Rich

**Contact Direct
Phone Number:** (916) 779-7301

**Contact E-Mail
Address:** drich@nexgenum.com

Principal of the Firm: Vince Yee, P.E.; Dan Rich, P.E.

4.2 Relevant Experience

We have summarized three of our recent SRF / USDA projects below:

4 FIRM QUALIFICATIONS



Project:	City of Woodland Treatment and Percolation Pond Design	
Description		<p>NEXGEN has been the City of Woodland’s on-call wastewater consultant for the last 12 years and has completed dozens of permitting, planning, and design projects at their wastewater plant. In 2015, we designed and managed the construction of significant improvements to the City’s 120-acre pond system (pictured). As part of this project, NEXGEN obtained all NEPA documentation for environmental compliance.</p> <p>NEXGEN also completed and submitted all documentation to secure SRF funding for the project. This included all documents for the General, Technical, Financial, and Environmental portions of the SRF application. As a result of this effort, the City of Woodland was awarded \$23 million in a low interest SRF loan and \$2 million in Proposition 1 grants.</p>
Staff Responsibilities	<p>Dan Rich, P.E.: Project Manager, Lead Design Engineer Mark Cocke, P.E.: Design Engineer, SRF Funding Documentation Melissa Lee, P.E.: SRF Funding Lead, Permitting Lead Chris Bressi: Construction Management</p>	
Dates	(2005 – present).	
Reference	<p>Tim Busch, Principal Engineer (530) 661-5975 Tim.Busch@cityofwoodland.org City of Woodland 300 First Street Woodland, CA 95695</p>	

4 FIRM QUALIFICATIONS



Project:	City of Auburn City Engineering Services	
Description		<p>NEXGEN prepared the City of Auburn’s Wastewater Master Plan, rate and fee studies, and design various improvements to the City’s sewer collection system and tertiary wastewater treatment plant. In 2010, our team completed construction management for Auburn’s \$7 million tertiary treatment, UV disinfection, and nitrogen removal improvements. Our team designs and oversees about \$700,000 per year of sewer-related improvement projects. We design upgrades to one of the City’s 11 sewer pump stations each year. To date, four stations have been upgraded with new standby generators, new submersible pumps, and SCADA systems. Our team also implemented rate studies to fund the necessary capital improvements and additional O&M associated with the tertiary upgrades.</p> <p>In 2016, NEXGEN designed a \$10 million upgrade to the City’s WWTP to enhance nutrient removal and increase plant capacity for additional 1,000 homes.</p> <p>As part of this project, NEXGEN obtained all NEPA documentation for environmental compliance. NEXGEN also completed and submitted all documentation to secure SRF funding for the project. This included all documents for the General, Technical, Financial, and Environmental portions of the SRF application. As a result of this effort, the City of Auburn was awarded \$10 million in a low interest SRF loan and \$3 million in Green Reserve Grants.</p>
Staff Responsibilities	<p>Dan Rich, P.E.: Project Manager, Lead Design Engineer Melissa Lee, P.E.: SRF Funding Lead, Permitting Lead Mark Cocke, Joe Digiorgio, P.E.: Design Engineers Chris Bressi: Construction Management</p>	
Dates	2003 – present.	
Reference	<p>Bernie Schroeder, Planning and Public Works Director (530) 823-4211; bschroeder@auburn.ca.gov City of Auburn 1225 Lincoln Way, Room 3 Auburn, CA 95603</p>	

4 FIRM QUALIFICATIONS



<i>Project:</i>	City of Colusa Wastewater Permitting and Planning and Design
<i>Description</i>	<div data-bbox="397 430 1442 877" data-label="Image"> </div> <p data-bbox="389 919 1448 1087">Our team prepared the City of Colusa Report of Waste Discharge for the renewal of the City's NPDES permit, and completed various studies in support of their wastewater system improvements. We prepared the city of Colusa 2007 Wastewater Master Plan which identified \$20 million in required upgrades. We prepared the USDA loan report and the City received a \$1 million USDA grant and \$1 million USDA low interest loan,</p> <p data-bbox="389 1102 1448 1201">We designed tertiary improvements to allow the treated water to be recycled on agricultural areas to the east of the plant. We are also completing a solids handling and aeration system upgrade at the WWTP.</p> <p data-bbox="389 1215 1448 1314">In 2014 we prepared the Report of Waste Discharge for the NPDES permit. We also assisted the City in de-designating its receiving water from municipal water uses, allowing relaxed effluent limits and avoiding expensive upgrades.</p> <p data-bbox="389 1329 1448 1428">In 2015 we completed all SRF applications and reports and secured \$8 million in disadvantaged community grants plus low interest loans to fund \$7 million in sewer and plant improvements.</p>
<i>Staff Responsibilities</i>	<p data-bbox="389 1446 1003 1575">Dan Rich, P.E.: Project Manager, Melissa Lee, P.E.: SRF Funding Lead, Permitting Lead Mark Cocke, Joe DiGiorgio, P.E.: Design Engineers, CM Chris Bressi: Construction Management</p>
<i>Dates</i>	(2007 – present) .
<i>Reference</i>	<p data-bbox="389 1633 959 1728">Jesse Cain, City Manager, (530) 458-4740 citymanager@cityofcolusa.com City of Colusa 425 Webster St. Colusa, Ca 95932</p>