



OPC SB 1 Grant Program

Track 1: SLR Adaptation Planning - Full Proposal

Please respond to the summary information and full proposal prompts on the following pages. Please submit all materials as one attached PDF file to OPC-SB1@resources.ca.gov using the subject: [Main Applicant Name]-Track 1 Project-Proposal.

Section 1: Cover Page

Contact Information			
Lead Entity Name	Stinson Beach County Water District		
Contact Person	Marc Matheson		
Position/Title	Grants Manager		
Phone	(415) 868-1333	Email	mmatheson@stinsonwater.org
Mailing Address	PO Box 245, Stinson Beach CA, 94970		
Federal Tax ID#	94-2266508		

Subcontractor Information (if applicable)

Please list all subcontractors below. Use the example provided and copy/paste for each additional subcontractor that is included on the project team.

Subcontractor 1 Name: Stetson Engineers Inc.

Contact Person: Allan Richards

Position/Title: Principal / Project Manager

Phone & Email: (415) 457-0701 allanr@stetsonengineers.com

Mailing Address: 2171 E. Francisco Blvd., Suite K, San Rafael, CA 94901

Federal Tax ID #: 94-2452155

Brief Description of their role in the project: Stetson Engineers Inc. (“Stetson”) will perform the technical studies and analyses in close coordination with the Stinson Beach County Water District (“Stinson Water”) and will assist with data gathering needed to assess project

feasibility. The results of the technical studies and analyses and their findings will be presented and described in technical memoranda and reports. Stetson will also assist with project administration, including grant administration.

Letter of Commitment included in application? (Yes/No): No. Letter of Commitment can be produced if required.

Project Information					
Project Name	Stinson Water Adaptation Plan for a Community Wastewater System				
Amount Requested	\$1,200,000	Total Project Cost	\$1,200,000	Non-State Leveraging Funds	\$0
Project Duration (in years)	3 years				



Please indicate which of the following project types of SLR Adaptation Planning will be addressed by the proposed project (check all that apply):

- Community Visioning (Phase 1)
- Vulnerability Assessments (Phase 1)
- Data/Information Gathering (Phase 2)
- SLR Adaptation Plans (Phase 3)
- San Francisco Bay Shoreline Adaptation Plans (Phase 3)
- Sector Specific Adaptation Plans (Phase 3) - Please refer to Section *III. G. Proposal Requirements* of the Solicitation for instructions regarding projects seeking to complete a Sector Specific Adaptation Plan. **Do not complete a full proposal for a Sector Specific Adaptation Plan until you have received approval from OPC Staff.**

Section 2: Application Completeness Checklist

When submitting your full proposal package, please indicate if you have included or completed each item listed.

Item	Requisite	Complete
Section 1: Cover Page	Required	X
Section 2: Application Completeness Checklist	Required	X
Section 3: Project Description	Required	X
Section 4: Project Work Plan	Required	X
Section 5: SLR Adaptation Criteria Justification	Required	X
Section 6: Project Schedule and Major Deliverables	Required	X
Section 7: Budget	Required	X
Section 8: Supplemental Documents		
a. Project Team Resumes or Curricula Vitae	Required	X
b. Nonprofit Organization Pre-Award Questionnaire	Required*	N/A
c. Project Letters	Required	X

Section 3: Project Description

Summary

Stinson Beach County Water District (“Stinson Water” or “District”) provides drinking water and onsite wastewater services for the small coastal community of Stinson Beach, California, which has no existing sewer system or regional wastewater infrastructure. All residential and commercial properties in Stinson Beach have onsite wastewater treatment systems (“OWTS”) buried underground. A previous study shows that over 70% of Stinson Beach’s OWTS are either moderately or highly vulnerable to inundation due to predictions of sea level rise. Stinson Water plans to perform a reconnaissance or “pre-feasibility” study to assess design options, costs, and other issues pertaining to their future sewage collection system and wastewater treatment plant and will develop an Adaptation Plan that will guide Stinson Water through the challenges of transitioning from septic systems to a community wastewater system.

Project Description

This Planning Project (Phase 3) will involve developing a Sea Level Rise Adaptation Plan (“Plan”) assessing the feasibility of building a community wastewater system, including a wastewater treatment plant. One option that the Project will explore is the cost and feasibility of building a connection with the neighboring community of Bolinas, which already has its own small sewer collection system and wastewater treatment system. Stinson Water’s service area, the unincorporated community of Stinson Beach, is isolated and vulnerable to sea level rise, as is Bolinas. Stinson Beach is situated roughly twenty miles north of San Francisco on the Marin County coast; Bolinas is northwest of Stinson Beach, and the two communities are separated by the Bolinas Lagoon and the inlet of Bolinas Bay. In concept, the tie-in would connect Stinson’s proposed sewer system with the Bolinas Community Public Utility District (“BCPUD”)’s small existing sewer system. Other options will be assessed if the joint wastewater system is found to be infeasible or cost-prohibitive during the course of the study.

The proposed feasibility study will include examination of the California Coastal Commission’s Local Coastal Program Update Guide’s development and permitting definitions. The proposal incorporates the California Climate Adaptation Strategy insofar as partnership, coordination and collaborative building climate resilience are at the heart of this Project to leverage resources between adjoining community utilities. The Project would adhere to the intent of the Coastal Act also, given that the Project’s intent is to protect the health and safety of the environment and coastal residents. It would protect the public’s access to the coast by ensuring that there are no beach closures due to overflowing sewage. The Project will study how the construction process can minimize environmental impacts and impediments to public access and maximize the existing beauty, character, and quality of the coastal area. The California Coastal Commission Local Coastal Program Update Guide has also been considered in this proposal. The biological productivity and the quality of coastal waters, streams, wetlands and estuaries will be maintained throughout this Project. Precedence will be given to a Low Impact Development (“LID”) approach as well as to protection and, where feasible, restoration of hydrologic features such as stream corridors, groundwater recharge areas, floodplains and wetlands. Installation of impervious surfaces and impact to Environmentally Sensitive Habitat Areas (“ESHA”) will be minimized.

The proposed Project also aligns with the OPC's Strategic Plan 2020-2025 in prioritizing increased resilience, raising of awareness, and integration of changing coastal conditions into planning and operations, specifically through setting a proactive approach to sea-level rise planning for vulnerable and critical wastewater treatment infrastructure. The Project identifies and builds resiliency to sea-level rise, coastal storms, erosion and flooding through replacing over 700 OWTS with a single, modern and efficient wastewater collection and treatment system. This regionally coordinated and collaborative Project aligns agency action of two adjoining coastal water and wastewater utilities, Stinson Beach and Bolinas, toward a specific objective that demonstrates improved understanding of climate impacts and the role of marine protected areas on California's coast and ocean.

Prior work by the County of Marin has already been completed at the Pre-Planning and Data Collection phases for sea level rise adaptation planning, studying both Stinson Beach specifically and the County's coastline as a whole. The prior work included the completion of a Vulnerability Assessment in 2023, which was an update to a 2016 Vulnerability Assessment. Stinson Beach is currently collaborating with the County of Marin on a study (Stinson Adaptation and Resilience Collaboration or "Stinson ARC") of the effects of climate change, particularly sea level rise, on coastal communities in California. Community engagement and outreach to residents and stakeholders has been ongoing during this process. The intent of this collaboration, which builds upon the County's C-SMART sea level planning process from 2016, is to identify what sea level rise adaptation options are available to the Stinson Beach community and what the associated benefits and drawbacks are. The Stinson ARC project is exploring adaptation options to reduce flood risk for the community, its natural areas, and for beach visitors, and is educating, informing and connecting with local residents about the effects of climate change and sea level on the shoreline. Stinson Water continues to collaborate in these outreach, education, and community engagement efforts.

This Project is one of several adaptation plans that will be needed in the coming years to mitigate effects of sea level rise in Stinson Beach. The Project is being undertaken as a separate project in order to focus effectively on the wastewater study, which will be extensive and costly. It is the intent of our Project Team to closely collaborate with the Stinson ARC team using shared data and adaptation pathways identified as part of the feasibility study for our proposed centralized regional wastewater system.

The Project envisioned for Stinson Beach involves the installation of a new regional wastewater collection and transmission system (likely a combination of gravity and low pressure pipelines) for both the Stinson Beach and Bolinas communities and a new, centralized 300,000 gallon per day ("gpd") wastewater treatment facility with full secondary treatment, potentially tertiary treatment, and solids handling. Feasibility will be assessed for appropriate treatment technologies, engineering design, costs, and environmental considerations. As part of the feasibility study, alternatives will be evaluated for siting new or upgrading existing wastewater treatment plants, pipelines, pump stations, and related wastewater facilities. Ongoing regulatory consideration in California for direct and/or indirect potable reuse will also be considered as a means to offset the effect of long-term, climate change-driven drought conditions by providing an additional source of drinking water to both communities. If direct potable reuse becomes acceptable from a regulatory perspective, the feasibility of an intertie with the potable

water system will also be included. Consideration will also be given to recycled use of the treated wastewater for irrigation and other non-potable uses. The public will be informed about developments in the Project and feedback and input will be solicited at various stages (at milestone accomplishments).

Relative Need for SLR Planning and Likelihood of Success

A centralized regional wastewater system would improve climate resilience for both communities, as onsite systems are particularly vulnerable to high ground water levels and localized flooding events that result from storm surge, increasingly higher tides, heavy rainfall events and rising sea levels. During such events, onsite septic systems are essentially inundated, effectively neutralizing treatment and causing raw, concentrated wastewater to freely mix with either surface and/or subsurface water. This creates both an acute and chronic public health risk and can potentially cause significant adverse effects to the local environment and coastal area. During California’s January and February 2023 storm events, storm surge, high waves and tides physically destroyed six particularly vulnerable onsite septic systems in Stinson Beach. Recent storm events this past winter also threatened Stinson Beach’s OWTS.

A shared wastewater collection system and treatment plant between Stinson Beach and Bolinas would also help prevent potential inundation of the existing Bolinas wastewater system and provide opportunities for cost sharing. Moreover, as sea level rise and other issues caused by climate change continue to present more challenges, isolated coastal communities with few resources will need to work together to respond to these challenges. This proposed Project would be an example and a model of collaboration and teamwork between two separate communities. Because this feasibility study would involve active participation and collaboration between the two water districts, it is anticipated that through a regional approach, both communities would take advantage of economies of scale, share operational resources, mitigate climate risks, provide employment opportunities for local residents, improve service to local residents and visitors, and better protect public health and safety and the environment. Active participants in this study would be the US National Park Service (through the Golden Gate National Recreation Area), California State Parks, California Department of Water Resources, California Regional Water Quality Control Board, Marin County, BCPUD and Stinson Water.

Stinson Water is planning to build on the studies already performed as a part of the County’s adaptation planning and move forward with developing their Plan for the wastewater system. These studies include:

Vulnerability Assessments (Phase 1)

- 2023 – Stinson Beach Adaptation Response Collaboration Draft Sea Level Rise Vulnerability Assessment

Data/Information Gathering (Phase 2)

- 2023 – Stinson Beach Visitation Analysis
- 2022 – Stinson Beach Integrated Flood Study of Easkoot Creek
- 2021 – Stinson Beach Nature-Based Adaptation Study
- 2018 – Marin Ocean Coast Sea Level Rise Adaptation Report

Community Description

Stinson Water provides drinking water and onsite wastewater services for Stinson Beach, which has no existing sewer system or regional wastewater infrastructure. The community lies in the vast

unincorporated area (392 square miles) of western Marin County, northern California, on the rugged, isolated coast occupied mostly by national parkland, private ranches and farms, and scattered small communities. The area is a major attraction for visitors, with tens of thousands of visitors annually to Stinson Beach and 2.4 million annually to the adjacent Point Reyes National Seashore. Offshore, two national marine sanctuaries (4,581 square miles in total) preserve and support diverse sea life, whale migrations, and some ecotourism. Like many small beach towns along the Pacific Coast, Stinson Beach has experienced tremendous change in only a few decades. Where once local life moved at a slow, rustic pace, now expensive beachfront properties and gated communities attract wealthy investors. Yet alongside such properties live many elderly people surviving on fixed incomes, poorly compensated ranch workers housed in substandard shelters, and young families of diverse backgrounds, including immigrants, struggling to secure a healthy place in which to raise the next generation.

Many environmental justice and social equity indices, such as the California Healthy Places Index, Parks Community FactFinder Map, and Climate Change & Health Vulnerability Indicators for California show West Marin as a safe, healthy and secure place to live. At the same time, the effects of climate change become more evident with each passing year. The current Federal Emergency Management Agency (“FEMA”) national risk index rates the area as high (96.5%) for coastal flooding, earthquakes, and wildfires. The vulnerable wastewater services of both Stinson Beach and adjacent Bolinas have already been subject to rising sea levels, damaging storm events and coastal flooding, and would be impacted significantly by earthquakes, fires, and resultant landslides. The District has not made significant outreach to underserved, marginalized communities nor does it have direct contact with California Native American tribes. The local efforts towards these constituencies within West Marin generally, and Stinson Beach and Bolinas specifically, are made by trusted locally driven community organizations such as West Marin Community Services, Bolinas Community Land Trust, Community Land Trust Association of West Marin and West Community Services.

The proposed Project will incorporate outreach, education and community engagement, with priorities identified through community input and involvement. Stinson Water is already in discussions with three neighboring community utility districts – Muir Beach, Bolinas and Inverness – towards regional collaboration and emergency response readiness. This regional approach comes about due to the realities of the unincorporated, isolated and rural nature of the area and its low population density. The regional collaborative aims to coordinate where feasible with administrative, operational, crisis management and local job training responsibilities. The proposed community wastewater system would serve all residents and visitors equitably, without regard to race, culture, income or national origin, and would ensure a safe, clean and sustainable local water system and environment for decades into the future.

Tribal Partnership (if applicable)

Stinson Water does not currently have any partnerships with California Native American tribes. The project would not have any impact on Tribes, Tribal lands, or Tribal sacred sites, as there are no Tribal lands in the area of the proposed Project.

Section 4: Project Work Plan

The proposed feasibility study will assess the existing wastewater systems in Stinson Beach and Bolinas for a thorough understanding of the historical and current operations of the systems and the unique differences in the wastewater systems. Information on the existing wastewater systems will be compiled and evaluated, including demand, design, operational capacities, and limitations. The feasibility study will generally assess the potential to convert, upgrade, and/or expand the existing individual systems to a centralized regional wastewater system for both communities. Detailed descriptions of the Work Plan Tasks, Milestones, and Deliverables are provided below.

Task 1: Compile Documents, Data, and Other Pertinent Information

Due to pollution from failing septic systems, in 1961 the Marin County Health Department suggested that Stinson Beach and Bolinas build a centrally located joint wastewater system to accommodate an anticipated rise in development and associated population growth. Many studies were conducted and their findings and suggestions were ultimately generally rejected due largely to excessive costs, unreliability, the potential for excessive population growth, and other issues that were deemed relevant at the time. In 1978, the San Francisco Bay Regional Water Quality Control Board passed a formal resolution allowing Stinson Beach to continue using septic systems, but with more stringent requirements. Conditions, technology, and science have evolved significantly since the 1960s and 1970s, warranting a new look at continued operation of the OWTS and the feasibility of constructing a regional wastewater collection and treatment system.

Task 1 will consist of gathering and organizing historical and recent studies, data, and any other documents that may provide information pertinent to this Project, including the studies performed in the 1960s and 1970s. The studies performed by the County to date pertaining to their SLR Adaptation Plan will be thoroughly reviewed and studied so that no work will be repeated, and the results of the SLR Adaption Plan studies will be fully integrated in the current Project. Task 1 work will also include collecting detailed information regarding the number, locations, and general conditions of the existing OWTS systems. A database and inventory of the existing OWTS systems will be prepared and a similar compilation of data and information will be made for the existing wastewater facilities utilized in Bolinas.

Task 1 Milestones: Initial Project Kick-off Meeting with the Public and Interested Parties to inform that the Project is being conducted and engage the Public from the start of the Project.

Task 1 Deliverables: Database/inventory of files and data compiled for the existing facilities.

Task 2: Prepare Maps of Existing Wastewater Systems

Stinson Water's engineering consultant will prepare maps using a Geographical Information System ("GIS") showing the locations of each of the OWTS in Stinson Beach. GIS Mapbooks will be created to

show the details of the existing OWTS in Stinson Beach and a similar set of maps will be prepared to show the details of the existing wastewater system in Bolinas.

Task 2 Milestones: Public Meeting after completion of Task 1 and Task 2 analyses (including mapping) to present Draft work products (Draft Technical Memorandum) regarding the existing facilities data and GIS mapping and to receive and incorporate public comments and input into final summaries of existing wastewater facilities and GIS mapping (Final Technical Memorandum).

Task 2 Deliverables: Draft and Final Technical Memoranda with summary tables and GIS Mapbooks showing the existing facilities potentially subject to replacement with a regional wastewater collection and treatment system.

Task 3: Summarize Previous Vulnerability Studies and Map the Vulnerability of Existing Wastewater Systems in the Context of the Previous Vulnerability Studies

Task 3 will incorporate the GIS mapping and analyses prepared and conducted under Task 2. Task 3 will combine the results of the Task 2 work with previous vulnerability studies to analyze and identify the specific OWTS that are subject to sea level rise, storm events, and flooding. The maps of the existing facilities will overlay the previous mapping of areas subject to the different inundation scenarios as demonstrated in the County’s 2023 Vulnerability Assessment to show how many OWTS would be impacted in each scenario. The District has already developed a GIS mapping project, which includes information on the District’s water facilities (pipelines, tanks, water wells), assessor parcel data, and other mapping data. The existing GIS mapping tool will be used to support the GIS mapping of existing OWTS and enable graphical illustrations and quantifications of the potential impacts associated with sea level rise. The analyses and mapping prepared under Task 3 will also inform conceptual mitigation plans to address the areas vulnerable to potential impacts and will be used to develop detailed Conceptual Alternative analyses.

Task 3 Milestones: Public Meeting after completion of Task 3 analyses (including mapping) to receive public comment and input on Draft work products (Draft Technical Memorandum) and to incorporate comments into final GIS mapping of existing wastewater facilities and their vulnerabilities (Final Technical Memorandum).

Task 3 Deliverables: Draft and Final Technical Memoranda with GIS maps and summary tables identifying and quantifying the areas with existing wastewater facilities and their relative vulnerabilities. mitigation cost estimates, assess feasibility, prepare implementation schedule for alternatives

Task 4: Identify Mitigation Cost Estimates, Assess Feasibility, and Prepare Implementation Schedules for Conceptual Alternatives

Under Task 4, preliminary cost estimates, engineering constraints, economic feasibility, environmental considerations, and implementation schedules will be prepared for a set of Conceptual Alternatives to address mitigation and identify preliminary construction plans for mitigation. A relative ranking of the Conceptual Alternatives will be prepared to provide a preliminary assessment of the alternatives and to identify a preferred alternative.

Task 4 Milestones: Public Meeting after completion of Task 4 analyses to receive Public comments and input on Draft work products (Draft Technical Memorandum) and incorporate the comments into Final Technical Memorandum.

Task 4 Deliverables: Draft and Final Technical Memoranda identifying, summarizing, and ranking Conceptual Alternatives for mitigating the impacts identified.

Task 5: Prepare Report (SLR Adaptation Plan) Summarizing all Task 1 through 4 Work and Conceptual Plans for Alternatives to Mitigate the Vulnerability of the Existing Systems

The results of Tasks 1 through 4 will be summarized in a Technical Report (SLR Adaptation Plan). The deliverables generated from Tasks 1 through 4 will be combined and restated in the form of a Draft Technical Report that will be distributed for public comment and input. Comments and input received from the public and interested parties will be incorporated into a comprehensive Final SLR Adaptation Plan for the preferred alternative .

Task 5 Milestones: Public Meeting after completion of Task 5 analyses to receive Public comment and input on the Draft SLR Adaptation Plan and incorporate comments into a Final SLR Adaptation Plan.

Task 5 Deliverables: Draft and Final SLR Adaptation Plan Reports.

Task 6: Identify Next Steps

Under Task 6, the next steps towards implementing the preferred alternative (identified in Task 5) will be outlined to prepare a “roadmap” for achieving the goals of the SLR Adaptation Plan and carrying the Project forward.

Task 6 Deliverables: Technical Memorandum.

Task 7: Outreach and Public Involvement

Outreach to the public will be ongoing during this Project. The Project Team will seek public input during various stages of the development of the SLR Adaptation Plan. Public outreach will be made with a series of Public Meetings scheduled to occur at each milestone accomplishment. The milestone accomplishments will correspond to the completion of each Task listed above and presentation of Draft work products to the Public. Public engagement will be continuous and conducted in incremental steps as the Project details are developed. All planned Public outreach meetings and work products distributed for the Public meetings will include solicitation from the California Coastal Commission and/or the Bay Conservation Development Commission.

Task 8: General Project Administration

The General Manager of Stinson Water will be actively involved in all aspects of the Project to ensure the Project remains on schedule and the workload is appropriately distributed among Stinson Water staff and consultants. The General Manager and Stinson Water’s Grant Project Manager will work together

to ensure Public Meetings are conducted as specific milestone accomplishments are completed. Stinson Water and Stetson have been working together for many years on grant projects that were awarded in the past and have coordinated efficiently and effectively on planning studies, design, and construction of water facilities, and adhering to the requirements specified in grant agreements.

Task 9: Grant Administration

Stinson Water’s engineering contractor will assist the District with the submittal of Quarterly Progress Reports and other activities related to grant administration. This work will include compiling receipts for reimbursable costs incurred and tracking hours spent by Stinson Water and Stetson during the Project, including costs associated with labor, equipment, and materials.

Task 9 Deliverables: Quarterly Progress Reports with supporting documentation and all other information and documentation required by the Grant Program.

Section 5: SLR Adaptation Criteria Justification

Missing Criteria Justification

The McAteer-Petris Act for the Bay Shoreline is not applicable because the Project would not be sited on or in San Francisco Bay. The Suisun Marsh Preservation Act is not applicable because the Project would not be sited at or near the by the confluence of the Sacramento and San Joaquin Rivers. The California Public Trust Doctrine is not applicable to this proposal because no natural or cultural resources would be incorporated into the Project.

Section 6: Project Schedule and Major Deliverables

Project Schedule

2025*

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Task 1	PM	1: Historical information gathering											
Task 2						2. Maps of existing PM waste water systems							
Task 3	3.1 Generate vulnerability study of BCPUD sewer infrastructure???												
Task 4													
Task 5													
Task 6													
Task 7													
Task 8													
Task 9													

2026

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Task 1												
Task 2												
Task 3				PM	3: summarize previous vulnerability study and generate new vulnerability map in context of previous studies							
Task 4						4: mitigation cost estimates, assess feasibility,						
Task 5												
Task 6												
Task 7	7: Outreach and public involvement											
Task 8	8: Project Administration											
Task 9	9: Grant Administration											

2027

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Task 1												
Task 2												
Task 3												
Task 4			PM									
Task 5				5: Prepare SLR report				PM				
Task 6									6. Identify next steps			
Task 7												
Task 8												
Task 9												

PM = Public Meeting

*Start date of January 2025 assumes an award date of December 2024 (due to lack of information regarding award date) but can be adjusted depending on actual award date

Major Deliverable Milestones

Task	Deliverable Name	Estimated Due Date
Task 1	Database/inventory of files and data	June 2025
Task 2	GIS Mapbooks	December 2025
Task 3	Technical Memorandum	June 2026
Task 4	Technical Memorandum	June 2027
Task 5	SLR Adaptation Plan	September 2027
Task 6	Technical Memorandum	December 2027
Task 7	Public Meetings	Ongoing
Task 8	General Project Administration	Ongoing
Task 9	Quarterly Reports	Quarterly

Section 7: Budget

Budget Template

	Task 1	Task 2	Task 3	Task 4	Task 5	Task 6	Task 7	Task 8	Task 9	Total
Personnel	\$77,582	\$64,651	\$51,721	\$94,822	\$43,101	\$32,326	\$58,826	\$49,332	\$35,743	\$508,103
Travel	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Subcontractor(s)	\$51,721	\$64,651	\$77,582	\$142,233	\$43,101	\$32,326	\$129,024	\$71,424	\$78,336	\$690,397
Equipment/Materials	\$0	\$0	\$0	\$0	\$0	\$0	\$1,500	\$0	\$0	\$1,500
Overhead	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Task Total	\$129,303	\$129,303	\$129,303	\$237,055	\$86,202	\$64,651	\$189,350	\$120,756	\$114,079	\$1,200,000
Agreement Total:	\$129,303	\$129,303	\$129,303	\$237,055	\$86,202	\$64,651	\$189,350	\$120,756	\$114,079	\$1,200,000

Budget Justification

The budget for this Project is based almost exclusively on the labor hours that will be performed by Stinson Water and Stetson. Because this is a feasibility study and not an implementation project, the only funds that will need to be allocated for any other purpose will be \$300 for supplies for each planning meeting with the community, as shown under Task 7. A significant portion of the budget is set aside for public engagement, for on-going public meetings, preparation for the meetings, follow-up to comments and questions received at the meetings. Meetings and meeting presentations will require a significant amount of time and resources from the Stinson Water staff and Stetson.

The budget amounts for each task are based on estimated amounts of time that Stinson Water and Stetson will likely be spending on these tasks. Some tasks will require more work by Stetson, while some tasks will require more work by Stinson Water. The justification for the amounts provided in the budget table are based in part on Stinson Water’s prior experience with the costs associated with grant project administration, project management, and reporting requirements.

Section 8: Supplementary Documents

- a. Project Team Resumes
- b. Project Letters
 - i. Office of Senator Mike McGuire
 - ii. California Rural Water Association

Project Team Resumes

Stinson Water Resumes

KENT NELSON, PE

GENERAL MANAGER

3785 Shoreline Highway, PO Box 245, Stinson Beach, CA · 415-868-1333 · knelson@stinsonwater.org

Accomplished and compassionate leader, with a track record of success, offering **30+ years** of water/wastewater utility experience across the public and private sectors. Known as an expert in delivering innovative results through stakeholder collaboration, employee empowerment and accountability. Action-oriented, articulate and adaptable with a proven progressive career reflecting strong leadership experience that builds relationships and inspires teams. Highly praised for work ethic, interpersonal skills and motivational style.

CORE COMPETENCIES

- Executive Leadership and Administration
- Public Agency Financial Planning and Control
- Governing Board and Interagency Collaboration
- Business Analytics and Performance Management
- Policy/Procedure Development and Implementation
- Long-Term Strategic Planning and Vision
- Organizational Development and Management
- Team Building, Mentoring and Staff Development
- Labor Management and Contract Negotiation
- Water/Wastewater Utility O&M and Regulations
- Capital Planning and Project Management
- External Communication and Public Affairs

PROFESSIONAL EXPERIENCE

Stinson Water

GENERAL MANAGER/DISTRICT ENGINEER

October 2022 – present

Stinson Beach, CA

- Lead all aspects of administration, finance, information technology, engineering, operation, maintenance, water quality, and health and safety for a public utility responsible for providing potable water, regulating local onsite wastewater treatment systems, and holding the franchise for local solid waste collection and disposal services in Stinson Beach serving a total population of approximately **500** permanent residents and **100K+** visitors annually.
- Directed **7** diverse staff including administrative, supervisory and trade personnel; responsible annual P&L of **\$3.2M** including taxes, debt service and depreciation.
- Developed, implemented and actively managed new five-year capital improvement program (CIP) worth **\$5.4M**, utilizing a 15-year planning horizon to identify a total of **\$50M** of strategic capital improvements.

New York American Water

INTERIM VICE PRESIDENT, OPERATIONS (*short-term contract*)

October 2021 – February 2022

Long Island, NY

- Until sale, led all aspects of operation, maintenance, water quality, and health and safety for a regulated investor-owned utility responsible for providing potable water and wastewater services across 18 separate public systems throughout New York State serving a total population of **150K**.
- Directed **140+** diverse staff including managerial, administrative, supervisory, technical, journey, and apprentice-level trade personnel; responsible annual P&L of **\$110M** including taxes, OPEX, profit and CAPEX recovery.
- Collaborated to develop and program a regulated 5-year CAPEX budget of **\$150M**.

Caretaker for Elderly Family

COVID-19

January 2020 – October 2021

Sonoma County, CA

Florida Keys Aqueduct Authority

DEPUTY EXECUTIVE DIRECTOR

August 2017 – December 2019

Key West, FL

- Led all aspects of operations, maintenance, water quality, engineering, and health and safety for a public utility providing potable water and wastewater services to **79K** permanent residents and **1M+** visitors annually.
- Directed **200+** diverse staff including managerial, engineering, administrative, supervisory, technical, journey, and apprentice-level trade personnel, successfully negotiating and implementing collective bargaining agreement.
- Regularly collaborated with the Authority's Governor-appointed Board of Directors, successfully earning approval for and personally managing a **\$50M+** annual operating budget.
- Developed, implemented and actively managed new five-year capital improvement program (CIP) worth **\$125M+**, utilizing a 15-year planning horizon to identify **\$250M+** of strategic capital improvements.

- Developed and implemented a new asset management program utilizing reliability centered maintenance (RCM) theory and real-time maintenance data for over **5,000** assets to enhance reliability and assist in capital planning.
- Responsible for coordinating groundwater extraction rates with the South Florida Water Management Agency, negotiating water rights for FKAA, and all regulatory submissions.
- Created and implemented staff development and training plans, including reorganizational changes to reflect succession planning for all **282** Authority staff.
- Collaborated with Florida State Assembly and Senate to negotiate LAFCO boundaries and potential take-over.
- Partnered with Monroe County, Miami-Dade County, multiple municipalities and peer utilities, Florida Department of Environmental Protection, Florida Department of Public Health, US Fish and Wildlife Service, and the US Navy from whom a **\$550K** annual CIP contract was secured.

Veolia North America

PRINCIPAL AND VICE PRESIDENT

February 2013 – August 2017

New York, NY | Washington, DC | Detroit, MI

- Managed up to **\$1.2M** utility consulting projects in Michigan, Ohio, Indiana, and New Jersey; created sales and business development strategies to drive growth, securing projects projected to be worth **\$10M** annually.
- Provided tools, training, and systems for **400+** Detroit Water and Sewerage Department employees and implemented asset management strategies targeting **18%+** improvement in efficiency across field operations.
- Led risk and resiliency study for the Sewerage and Water Board of New Orleans, preparing and presenting work to **40+** attendees at the British Columbia Water and Waste Association Climate Change and Adaptation Conference.
- Led a Utility Benchmarking and Organizational Efficiency Study for the Washington Suburban Sanitary Commission, preparing and presenting work to **100+** attendees at the joint American Waterworks Association/Water Environment Federation Utility Management Conference.
- Managed utility management consulting contract with the District of Columbia Water and Sewer Authority, increasing overall field maintenance productivity by **43%** while saving **\$2.6M** annually.

EARLY CAREER EXPERIENCE

O&M MANAGER, *San Francisco Public Utilities Commission; San Francisco, CA*

WQ SUPERINTENDENT, *Contra Costa Water District; Concord, CA*

PROJECT MANAGER, *Carollo Engineers; Walnut Creek, CA*

PROJECT ENGINEER, *Stanley Consultants; Chicago, IL*

APPRENTICE OPERATOR, *University of Iowa Water Treatment Plant*

May 2008 – February 2013

March 2005 – May 2008

September 2000 – March 2005

June 1996 – September 2000

November 1994 – June 1996

EDUCATION

MASTER OF SCIENCE - *Environmental Engineering*, Northwestern University

BACHELOR OF SCIENCE - *Civil Engineering*, University of Iowa

LICENSES & CERTIFICATIONS

Professional Engineer, Civil - *State of California*, License #C62418

National Incident Command System – *ICS 100, 200, 300, 400, 700 and 800*

MEMBERSHIPS

- *American Water Works Association (AWWA)*
- *Water Environment Federation (WEF)*
- *Association of Metropolitan Water Agencies (AMWA)*
- *National Association of Clean Water Agencies (NACWA)*
- *Association of California Water Agencies (ACWA)*

Marc Matheson
PO Box 512, Inverness CA 94937
415-342-8490
iolairemhara@gmail.com

EXPERIENCE

STINSON BEACH COUNTY WATER DISTRICT, Stinson Beach, California

Office Administrator / Grants Manager

February 2020 - present

- Office administration and administrative support
- Grant research and applications
- Manage visitor and customer communication
- Contract manager for all vendor and project contracts
- Serve as the district's notary public

VIRTA HEALTH, San Francisco, California (temporary)

Office Manager

August – October 2019

- Responsible for building security and visitor services
- Managed mail, deliveries, shipments and office supplies
- Supported human resources with new employee onboarding
- Directed facilities maintenance and repairs through landlord and vendor relations
- Coordinated company meal, snack and beverage services, including staff social events
- Managed marketing and staff swag with inventory, ordering and shipping
- Compiled and drafted office manager manual and resources
- Utilized Google Suite, Slack, Envoy, Brivo, ADT, Spoke, Asana, Namely, Zoom, Amazon and FedEx

POINT REYES NATIONAL SEASHORE ASSOCIATION, Point Reyes Station, California

Development Coordinator

November 2014 – July 2018

- Assisted Executive Director and Development Director in administration, operations and facilities
- Managed multiple calendars and schedules for projects, teams and facilities (Outlook and Google)
- Responsible for expense reimbursements, check requests and timesheets
- Planned and coordinated Board and other meetings, conference calls and meals
- Drafted Board minutes, annual report, correspondence, social media and additional materials
- Launched a strategic volunteer program in collaboration with National Park Service staff
- Managed annual fundraising auction, cocktail reception, major donor and other events
- Increased auction income by 30% in one year through diversification of donor network

KWMR – WEST MARIN COMMUNITY RADIO, Point Reyes Station, California

Administrative Coordinator

Mar 2010 – Oct 2014

- Assisted Executive Director with logistical, event and administrative support
- Built out and managed new membership database (DonorSnap) and donor acknowledgements
- Provided consistent and responsive, proactive phone and email customer service
- As a volunteer, created and hosted 6 new radio programs between 2009 and 2019

CORNERSTONE TITLE CO., Larkspur, California

Administrative Assistant to Vice President of Sales & Marketing

Jul 2006 – Jan 2007

- Supported Vice President and 21-person statewide Sales and Marketing team
- Managed busy calendars and travel arrangements
- Administered expense reimbursements and reporting, check requests and timesheets
- Provided calm, responsive customer care in a fast-paced, high-stress environment
- Planned and coordinated meetings, calls, meals, logistics and staff appreciation events

ENVIRONMENTAL SCIENCE ASSOCIATES, San Francisco

Executive Assistant to President/CEO and Vice President/CFO

Jan 2001 – Jan 2004

- Assisted CEO with internal communications, meeting minutes, scheduling and traveling needs
- Assisted CFO with budgets, cash flows and ad hoc Excel reports
- Restructured employee contract stock ownership plan (ESOP) reporting system
- Planned and coordinated meetings, calls and meals
- Responsible for expense reimbursements, reporting and check requests

EDUCATION

FOOTHILL COLLEGE, Los Altos Hills CA
Psychology

1973 – 1974

PRESCOTT COLLEGE, Prescott AZ
East Asian Studies (Chinese and Tibetan)

1971 – 1972

SKILLS

- Proficient in Microsoft Windows and OS X (Outlook, Word and Excel), Google Suite (Calendar, Drive, Mail, Docs and Sheets), Slack, Envoy, Brivo, ADT, Spoke, Asana, Namely and Zoom
- Outstanding organizational abilities with systems, procedures, writing and events
- Robust email, internet, calendaring, travel, accounting and reporting expertise
- Adept at thinking proactively, anticipating opportunities, challenges and networking prospects
- Assiduous focus, adroit at creating order and calm, and enthusiastic for creating solutions
- Dynamic, resourceful, thoughtful, and solution-oriented, low-ego and intuitive professional
- Open, low-ego collaborative professional eager to create integrity within and beyond his team
- Exceptional interpersonal, listening, verbal and written communication skills
- Culturally competent and curious; over 100 hours of self-financed diversity and inclusion training
- Languages: English, French (native speaker, not fluent), Mandarin, Japanese and Tibetan (not fluent)

ADDITIONAL WORK EXPERIENCE

ZEN HOSPICE PROJECT, San Francisco

Financial and Office Administrator

2005-2006

Initiated reorganization and streamlining of bookkeeping and accounts payables records and procedures; initiated and facilitated weekly staff meetings; and served as office manager, receptionist and volunteer coordinator.

HOSPICE OF MARIN FOUNDATION, Larkspur, California

Volunteer Program Manager

2004-2005

Recruited, trained and cultivated fundraising event volunteers; coordinated and appreciated long-term volunteers; and coordinated a very busy month-long shopping mall holiday gift-wrapping service with over 100 volunteers.

BLUE MOON PERSONNEL, San Francisco

Office Manager

1998-1999

Negotiated and oversaw telecommunications contract and installation; produced all invoicing and payroll; and provided administrative support to a very busy eight-person office.

SYSKA + HENNESSY, San Francisco

Office Manager

1997-1998

Provided administrative, scheduling and communication support of busy, on-the-go Executive Vice President and his staff, located in three cities on two coasts; reformed office procedures and systems; and hired and trained my successor.

GRUBB & ELLIS CO., San Francisco

Office Manager

1995-1996

Initiated improved interpersonal communication between corporate accounting chief and his culturally diverse thirty-person office, leading to happier working conditions; and managed operations, administrative details and financial reporting.

SAN FRANCISCO SYMPHONY, San Francisco

Office Manager

1992-1994

Recruited, trained and managed 60 office volunteers in support of more effective fundraising event production of the *Black and White Ball* and other annual events. Trained in event production and provided administrative support to busy project management team.

CIT CORPORATION/MANUFACTURERS HANOVER TRUST CO., New York City

Credit Analyst and Commercial Loan Administrator

1979-1989

Analyzed financial statements and cash flows, made credit decisions for textile trade-focused asset-based lending unit; recognized for outstanding client service and management reports; promoted to loan administration where my weekly executive-level reports and contract compliance work were also recognized.



JOB CLASSIFICATION DESCRIPTION

Classification Title:	Wastewater Supervisor
Pay Tier:	4
Pay Status:	Non-Exempt
Statement of Duties:	The incumbent assists in planning, implementation, inspection, and operation of the District onsite wastewater management program; and assists with the operation of the District water system as directed by the GM.
Supervision Received:	Works under the direct supervision of the GM.
Supervision Exercised:	May supervise of a small number of maintenance employees during emergency or non-emergency conditions, specifically in the performance of assigned wastewater program inspection tasks.
Examples of Principal Duties:	<ol style="list-style-type: none"> 1. Performs routine testing of onsite wastewater systems within the District boundaries, determines if a system is operating correctly; or determines if a system is failing. 2. Schedules Inspections: Reviews files and inspections reports, defines daily inspections, compares daily water usage against Discharge Permit allowance, generates inspection calendar. 3. Performs groundwater and surface water monitoring and special system monitoring; obtains water samples and performs routine tests; develops protocols for assuring the quality to chemical and biological testing. 4. Recommends action for new and replacement onsite wastewater systems, reviews approved plans, ensures system complies with plans, assists with various inspections. Provides data and input to the District Engineer for Annual Report to the Regional Water Quality Control Board. Meets with property owners and representatives of other agencies on matters related to the onsite wastewater program. 5. Meets with Wastewater Committee during monthly meetings to provide updates on status of Failed Systems, systems in progress, and general District wastewater business. 6. Consults with Owners/Agents: Meets with property owners, designated agents, contractors, system designers, and other agencies on matters related to the onsite wastewater program. 7. Maintains Wastewater Database: Updates and operates the wastewater

	<p>database, enters data, generates reports as necessary.</p> <ol style="list-style-type: none"> 8. Coordinate with office staff for them to track the status of Inspection Notices, Maintenance Orders, Discharge Permits, and Pending Revocations. 9. As needed and as directed by the GM, assist in the water operations of the District. 10. Performs related duties as required. 11. Performs on-call and alternate weekend duty as scheduled.
<p>Physical Demands:</p> <p><i>The physical demands described here are representative of those that must be met by the incumbent to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.</i></p>	<ol style="list-style-type: none"> 1. Frequently use hands and arms to handle, feel, and operate objects, tools, controls, and vehicles. 2. Frequently stand, walk, sit, climb, balance, stoop, kneel, crouch, and/or crawl. 3. Frequent requirement to see, smell and hear. 4. Specific vision abilities required by this job include close vision, distance vision, color vision, peripheral vision, depth perception, and the ability to adjust focus. 5. Frequently required to lift and/or move up to 25 pounds and occasionally required to lift and/or move up to 100 pounds.
<p>Work Environment:</p> <p><i>The work environment characteristics described here are representative of those the incumbent encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.</i></p>	<ol style="list-style-type: none"> 1. While performing the duties of this job, the incumbent regularly works in inclement weather conditions and/or near moving mechanical parts and may occasionally be exposed to wet and/or humid conditions and/or vibration. 2. The incumbent may occasionally work in high, precarious places, and may occasionally be exposed to fumes or airborne particles. 3. The incumbent may be required to handle toxic or caustic chemicals. 4. The incumbent may be required to perform duties involving electrical current. 5. The noise level in the work environment may be loud in field settings, and moderately quiet in office settings.
<p>Knowledge, Skills, and Abilities:</p>	<ol style="list-style-type: none"> 1. Knowledge of the operation and maintenance of water and wastewater systems. 2. Knowledge of the federal and state regulations regarding water quality control and treatment and protection of surface and groundwater, and distribution of potable water. 3. Ability to communicate effectively verbally and in writing. 4. Knowledge of computers and knowledge of District office software platforms, 5. Ability to make sound decisions independently in accordance with generally accepted construction practices and established policy and to use initiative and judgement in carrying out tasks and responsibilities with only general instruction

	<p>and guidance.</p> <ol style="list-style-type: none"> 6. Ability to guide, direct and motivate employees. 7. Ability to organize and supervise the activities of various crews performing construction and maintenance work. 8. Ability to operate and maintain various equipment used in water maintenance and repair such as backhoe, dump trucks, etc. 9. Ability to lift heavy objects and perform sustained manual work. 10. Ability to use tact and sound judgement as well as communicate effectively when dealing with the public and co-workers. 11. Ability to work harmoniously with other employees and consulting professionals.
Required Experience:	A minimum of five years of experience in the field of wastewater, or any equivalent combination of experience and training.
Minimum Required Education:	High school diploma, or equivalent GED.
Desired Education:	Associate's degree in any science-related field, especially coursework in wastewater technology or sanitary engineering.
Minimum Required Licensure/Certification:	<ol style="list-style-type: none"> 1. Class C driver's license from the State of California. 2. Water Distribution Operator Grade D3 or higher from the California State Water Resources Control Board, Drinking Water Operator Certification Program. 3. Water Treatment Plant Operator Grade T3 or higher from the California State Water Resources Control Board, Drinking Water Operator Certification Program.
Desired Licensure/Certification:	<ol style="list-style-type: none"> 1. Class B CDL from the State of California.



JOB CLASSIFICATION DESCRIPTION

Classification Title:	Utility Operator II
Pay Tier:	3
Pay Status:	Non-Exempt
Statement of Duties:	Operates and maintains the District water system including the treatment plant, collection, storage, and distribution facilities; assists with onsite wastewater program inspections; prepares reports for regulatory agencies; and performs chemical tests for water quality.
Supervision Received:	Normally works under the direct supervision of the Water Supervisor, and occasionally under the direct supervision of the Wastewater Supervisor, who reviews work for conformance to established standards and procedures.
Supervision Exercised:	None, but may serve as team lead with other Utility Operators and Workers.
Examples of Principal Duties:	<ol style="list-style-type: none"> 1. Operates District water system; performs routine water quality tests at the water treatment plant and adjusts chemical systems as necessary; performs systematic checks on filtration equipment, electrical system, pumps, tanks and other system components; maintains operating records as required by law; keeps water treatment plant in a clean, neat, and orderly fashion. 2. Installs and maintains pumps, valves, mains, services, meters, and related water distribution facilities and appurtenances. 3. Operates and maintains equipment used in water system construction, including backhoe/front end loader, jackhammer, dump truck, tamper, etc. 4. Reads water meters; turns services off and on; meets with customers to identify service locations and resolve service problems. 5. Assists with the operation of the onsite wastewater management program by performing routine inspections of wastewater systems, routine groundwater testing, etc. 6. Maintains inventory of chemicals at water treatment plant and assures the safe handling of caustic and toxic materials. 7. Performs routine water quality field testing; gathers information for reports needed for regulatory agencies and assures conformance of operations to regulatory standards. 8. Performs related duties as required.

	<ol style="list-style-type: none"> 9. Performs on-call and alternate weekend duty as scheduled and is a member of the District's Disaster Emergency Response Team.
<p>Physical Demands:</p> <p><i>The physical demands described here are representative of those that must be met by the incumbent to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.</i></p>	<ol style="list-style-type: none"> 1. Frequently use hands and arms to handle, feel, and operate objects, tools, controls, and vehicles. 2. Frequently stand, walk, sit, climb, balance, stoop, kneel, crouch, and/or crawl. 3. Frequent requirement to see, smell and hear. 4. Specific vision abilities required by this job include close vision, distance vision, color vision, peripheral vision, depth perception, and the ability to adjust focus. 5. Frequently required to lift and/or move up to 25 pounds and occasionally required to lift and/or move up to 100 pounds.
<p>Work Environment:</p> <p><i>The work environment characteristics described here are representative of those the incumbent encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.</i></p>	<ol style="list-style-type: none"> 1. While performing the duties of this job, the incumbent regularly works in inclement weather conditions and/or near moving mechanical parts and may occasionally be exposed to wet and/or humid conditions and/or vibration. 2. The incumbent may occasionally work in high, precarious places, and may occasionally be exposed to fumes or airborne particles. 3. The incumbent may be required to handle toxic or caustic chemicals. 4. The incumbent may be required to perform duties involving electrical current. 5. The noise level in the work environment may be loud in field settings, and moderately quiet in office settings.
<p>Knowledge, Skills, and Abilities:</p>	<ol style="list-style-type: none"> 1. Knowledge of proper practices in the maintenance and operation of a water utility. 2. Knowledge of the federal and state regulations regarding water quality control and treatment and protection of surface and groundwater, and distribution of potable water. 3. Knowledge of pumps, telemetry, and other related water system equipment. 4. Ability to operate and maintain various equipment used in water maintenance and repair such as backhoe, dump trucks, etc. 5. Ability to communicate effectively verbally and in writing. 6. Ability to make sound decisions independently in accordance with generally accepted construction practices and established policy and to use initiative and judgement in carrying out tasks and responsibilities with only general instruction and guidance. 7. Ability to use tact and sound judgement as well as communicate effectively when dealing with the public and co-workers.

	<ul style="list-style-type: none"> 8. Ability to lift heavy objects and perform sustained manual work. 9. Ability to work harmoniously with other employees and consulting professionals.
Residency Requirement:	The incumbent is required to maintain permanent residency within 45 minutes of the District service area.
Required Experience:	A minimum of two years of experience in the field of water supply or any equivalent combination of experience and training.
Minimum Required Education:	High school diploma, or equivalent GED.
Desired Education:	Associate degree or higher in any science-related field, especially coursework in water treatment and/or sanitary engineering.
Minimum Required Licensure/Certification:	<ul style="list-style-type: none"> 1. Class C Driver's License from the State of California. 2. AWWA Backflow Prevention Assembly Tester Certification, or the ability to obtain certification within 12 months of hire. 3. Water Distribution Operator Grade D3 or higher from the California State Water Resources Control Board, Drinking Water Operator Certification Program. 4. Water Treatment Plant Operator Grade T3 or higher from the California State Water Resources Control Board, Drinking Water Operator Certification Program.
Desired Licensure/Certification:	<ul style="list-style-type: none"> 1. Class B CDL from the State of California. 2. AWWA Cross Connection Specialist Certification.

Stetson Engineers Resumes

Curriculum Vitae

ALLAN L. RICHARDS, P.E.

Principal

Mr. Richards joined Stetson Engineers in 1993 and has participated in a wide variety of engineering projects relating to agricultural and municipal water systems, water rights investigations, and water measurement. Mr. Richards has testified in numerous water rights proceedings in California, Nevada, and Arizona, and he has been qualified as an expert in water rights, surface water hydrology, and aerial photograph interpretation. He has extensive experience with water meters and water measurement and routinely assists California water right holders with their water diversion and use reporting required by the State Water Resources Control Board. Mr. Richards is also a water system design engineer. He has prepared plans, specifications, and bid documents for public water utility infrastructure, including a drinking water treatment plant, water tank replacement and retrofit projects, drinking water wells, pipelines, and other potable water facilities. His water system design experience includes the planning and permitting processes, and he provides construction management.

EDUCATION: B.S. Civil Engineering, University of California, Davis, 1992

CREDENTIALS: Professional Civil Engineer No. 59631, California
Professional Civil Engineer No. 22179, Nevada
Water Rights Surveyor Certificate No. 1285, Nevada
Professional Civil Engineer No. 33554, Oklahoma

**PROFESSIONAL
EXPERIENCE:** 31 years

Select Municipal Engineering Projects (Plans, Specifications, and Construction Management)

- Prepared the design plans and specifications for replacing the Stinson Beach County Water District's ("SBCWD") conventional surface water treatment plant with a pressure membrane filtration system (Stinson Beach, California). Project included the design of all tanks, pipe systems, and the structures for the new \$2.5 million drinking water treatment plant and laboratory. Also prepared the plans, specifications, and provided Construction Management for: two groundwater wells; anchoring, steel repairs, and re-coating three 320,000 gallon welded steel water tanks; several water pipeline replacement projects; culvert replacements; and pipeline creek crossings (2004 – Present).
- Prepared water resources planning studies for the SBCWD including Urban Water Management Plans and Water Supply and Demand Management Options evaluation. Assisted the District with establishing its creek flow monitoring project including the installation of water level sensors, dataloggers, and solar-powered equipment. Prepared an application and secured a grant for the SBCWD in the amount of \$1.25 million for

construction of projects in its Water Supply and Drought Preparedness Plan (2004 – Present).

- Project Engineer and Manager for developing a model of the North Coast County Water District's ("NCCWD") water system and utilized the model to develop a prioritized CIP for the District and a 20-Year Water System Master Plan (Pacifica, California). Prepared NCCWD's 2015 Urban Water Management Plan Update and provided Construction Management and Engineering Services to the District during construction of the District's 3.8 million gallon welded steel Christen Hill Water Tank. Also provides assistance with water rights reporting to the State Water Resources Control Board (2013 – 2018).
- On behalf of the Bay Area Water Supply and Conservation Agency ("BAWSCA") in California, evaluated several projects contained within the San Francisco Public Utilities Commission's ("SFPUC") \$2.5 billion 10-Year Capital Improvement Program ("CIP"). The 10-Year CIP was developed to improve the reliability of the SFPUC's aging water system. BAWSCA is corporation whose membership consists of 29 Bay Area water utilities that purchase water from the City and County of San Francisco through the SFPUC (2001 – 2002).
- Participated in BAWSCA's negotiations of the 2009 Water Supply Agreement with the SFPUC. Co-authored sections of the 2009 Water Supply Agreement that pertain to Water Measurement and the SFPUC's Water Meter Calibration requirements (2007 – 2009).
- Played significant role in negotiations between the SFPUC and BAWSCA regarding the inaccuracy of large venturi meters that measure total water deliveries to the City of San Francisco. Assisted with the development of the scope of work for the meter calibration project, served as a technical consultant to BAWSCA while the meters were being rehabilitated and calibrated, and currently oversee preventive maintenance work. Also currently oversee the SFPUC's effort to evaluate and calibrate the remaining large meters which measure system input and in-line flows of the SFPUC's municipal water system (1995 – Present).
- Provided engineering and mapping services in a matter involving litigation between two homeowners associations ("HOA") in the Reno, Nevada area. Participated in mediation sessions and currently assisting the HOA and its attorneys in settlement negotiations (2016 – Present).
- Represented Stetson Engineers and the Morongo Band of Mission Indians in California during negotiations with Southern California Edison for the renewal of high voltage powerline rights-of-way crossing the Reservation (1999).

Select Groundwater Well Projects

Stinson Beach County Water District ("SBCWD") Drinking Water Well Construction, California

- Stetson Engineers has been the Water Engineer for the SBCWD since 2001. As part of Stetson's work for the SBCWD, Mr. Richards prepared designs, construction plans, and specifications for two new drinking water wells. He evaluated local geology, existing data on local groundwater conditions, well driller's logs for existing wells in the SBCWD's

service area, and he developed the design parameters for the proposed new wells. Mr. Richards prepared the Coastal Development Permits for the new groundwater wells, participated in public hearings and addressed technical questions raised by the County and State permitting agencies regarding potential impacts of the proposed wells. He assisted the SBCWD with soliciting Bids from well drillers, evaluating Bids received, and awarding Contracts. For the SBCWD's most recent well, Mr. Richards directed and oversaw the Contractor's well drilling, and the Contractor's well development processes after the well was completed. Mr. Richards designed and supervised a step-drawdown pump test and a constant-rate pump test for the well as required by the State Water Resources Control Board, Division of Drinking Water ("DDW"), for determining the capacity of new wells before they can be added as a new source of supply to a Public Water System. Mr. Richards prepared the Well Capacity Report for the SBCWD's new well, based on and supported by the results of the constant-rate pumping test. He also prepared the SBCWD's Application for an Amended Water Supply Permit to add the new well as an additional source of potable water supply. The DDW approved and concurred with Mr. Richards' Well Capacity Report, approved the Amended Water Supply Permit Application, and granted the SBCWD's request to use the new well as part of its drinking water supply (2016 – present).

Water Wells Identified in the San Gregorio Creek Decree and Well Water Right Transfers, California

- In 2006, Stetson was appointed to the position of Watermaster for the San Gregorio Creek Decree by the San Mateo County Superior Court. Mr. Richards and a colleague at Stetson perform or direct all duties of the Watermaster. The Decree recognized and identified certain wells as having subterranean stream flow as the source of water pumped from the wells. The Decree established rights to the use of water pumped from the wells and authorized well pumping in accordance with the same provisions of the Decree that pertain to priority, allowable diversion rates, and annual diversion volumes for direct diversions from the stream. In addition to monitoring San Gregorio Creek diversions for compliance with the Decree, Stetson also evaluates proposed San Gregorio Creek Decree water right transfers. As the Watermaster for the San Gregorio Creek Stream System, Mr. Richards has evaluated water right transfers that involved existing and proposed wells as points of diversion from the stream. He prepared Watermaster Reports to the Court for its consideration regarding the water right transfers and in all cases the Court generally concurred with the recommendations in Mr. Richards' Watermaster Reports and his conclusions regarding whether the proposed transfers would unreasonably affect fish, wildlife, or other water right owners.

Insurance Claim for Damaged Wells filed by a Luxury Resort in Monterey County, California

- Stetson Engineers was retained by an Insurance Company to evaluate a multi-million dollar claim filed by a luxury Resort ("the Insured") located on the California coast in Monterey County. The Insured claimed that it was forced to turn away Resort guests for several months following a major storm event, based on allegations that some of the Resort's groundwater wells were damaged during a power surge associated with the storm. The Insured claimed that the remaining capacity of its wells not damaged by the storm limited

the Resort's ability to provide drinking water to its guests at full occupancy. Mr. Richards evaluated the claim with respect to the reported production capacity of the Resort's groundwater wells prior to and following the storm event. Mr. Richards also evaluated information regarding the local geology and the groundwater aquifer, well construction data, well logs, well pumping data, and records of the Water Treatment Plant production and water use by the Resort's staff and its guests. Mr. Richards requested and evaluated information on file with the Monterey County Department of Environmental Health pertaining to the Resort's Public Water Supply system, Water Supply Permit, and the capacities of the Resort's drinking water wells as stated in the Water Supply Permit. Mr. Richards also evaluated the regional hydrology and the Resort's claimed water demand needs. He prepared Requests for Information ("RFI") regarding the Resort's drinking water wells and evaluated documents produced in responses to the RFIs. Mr. Richards prepared an Expert Report summarizing his findings regarding the capacity of the Resort's drinking water wells and the Resort's claim that its groundwater supply after the storm limited guests from staying at the Resort. The Expert Report was used for mediation between the Insurance Company and the Insured Resort (2018 – 2019).

Groundwater Well Protests for Eastern Nevada/Western Utah Client

- Stetson Engineers was retained by an Irrigation Company and a large-scale Cattle Company ("the Protestants"), operating their businesses in eastern Nevada and western Utah, to evaluate the impacts of upstream groundwater pumping on springs and surface water rights held by the Protestants. The Protestants' rights were established by Decree and were senior in priority to the upstream groundwater pumpers. Mr. Richards evaluated the Decree and other water rights on file with the Nevada State Engineer and the Utah State Engineer, and he evaluated the local hydrology, groundwater conditions, well construction data, well logs, well pumping records, and historical records of spring flows and stream flows which were diminishing over time in correlation to the construction and use of the upstream pumping wells. Mr. Richards prepared an Expert Report jointly with a Utah geologist and he also co-authored a Rebuttal Report in response to Expert Reports filed by consultants for the opposition. Mr. Richards provided expert witness testimony in regard to his Expert Report and the Rebuttal Report during administrative hearings that were conducted by the Nevada State Engineer's Office (2014 – 2015).

Groundwater Study and Groundwater Well Protests for Utah Clients

- Stetson Engineers was retained by a group of private water users and water municipalities ("the Protestants") to evaluate groundwater right change applications filed with the Utah State Engineer's Office by a ski resort owner located upstream of the Protestants. Stetson was requested to evaluate the impacts of existing and proposed groundwater pumping on the Protestants' rights to divert water from spring-fed creeks. Mr. Richards' evaluation included an assessment of geology and aquifer conditions, local hydrology, well construction data, well logs, groundwater pumping data on file with the Utah State Engineer, and groundwater supply reports prepared by consultants for the ski resort owners. Mr. Richards and a colleague from Stetson (hydrologist) prepared an Expert Report that was filed with the Utah State Engineer, summarizing the impacts that the upstream

pumping wells were having and would have on the downstream water rights held by the Protestants (2014 – 2015).

Groundwater Study and City of Ely Municipal Water Wells, Nevada

- Stetson Engineers was retained by the City of Ely to assist with evaluating the terms of an Agreement the City had previously entered into with a local mining company. Mr. Richards is evaluating ground water rights currently held by the City of Ely and ground water rights currently held by the mining company. Operations of the mining company involve drawing down water levels in the local aquifers and Mr. Richards is evaluating well construction data, pumping data, and pumping reports that the mining company is required to file with the Nevada State Engineer's Office. Mr. Richards' evaluation will include a review of groundwater modeling that has been conducted by consultants for the mining company to assess trends in groundwater level declines and potential effects of well pumping on local streams and springs that the City of Ely relies upon for its municipal water needs (2019 – 2020).

Select Adjudications, Decrees, and Water Rights Projects

Gila River Decree (Globe Equity No. 59), Arizona

- Mr. Richards has been involved with various matters pertaining to the Gila River Decree for his entire career. Currently, he represents the U.S. Department of Justice (“DOJ”), and the U.S. Bureau of Indian Affairs, on behalf of Native American Indian Tribes holding Gila Decree water rights, and he is a member of the Court-appointed Technical Committee, established to address technical issues associated with the Gila Water Commissioner's administration of the Gila River Decree. Mr. Richards was involved in evaluating land and water use associated with approximately 400 Gila Decree water right transfers, determining irrigation status for the existing and proposed places of use under the transfers using aerial photograph interpretations, and report preparation in support of objections filed by the U.S. Department of Justice and the San Carlos Apache Tribe. Mr. Richards testified in Federal Court on behalf of the Tribe and the DOJ in support of their objections (1993 – Present).

San Gregorio Creek Watermaster (San Gregorio Creek Decree), California

- Stetson Engineers was appointed to the position of Watermaster for the San Gregorio Creek Stream System by the San Mateo County Superior Court in 2006. Mr. Richards and a colleague are responsible for performing or directing all Watermaster duties. The primary responsibility of the Watermaster is to ensure the proper distribution of the available water supply in accordance with the priorities and water allocations established by the Decree. Other Watermaster duties include evaluating Petitions for changes in the Decree water rights and providing recommendations for the Court's consideration, conducting streamflow measurements, collecting water meter readings, providing consultation on the requirements for water meter installations, assisting water users in the preparation of water diversion and use reporting required by the State Water Resources Control Board, and resolving disputes between water users when they arise (2006 – Present).

Snake River Basin, Utah

- Mr. Richards provides on-going water rights consulting for a large irrigation and cattle ranching operation located in the Snake River Basin in eastern Nevada and Western Utah. He co-authored an expert report and rebuttal report, and testified before the Nevada State Engineer to support evidence showing that groundwater pumping is adversely impacting senior water rights (2013 – Present).

Newlands Irrigation Project Water Right Transfer Cases and other Matters Pertaining to Nevada Water Rights (Orr Ditch Decree and Alpine Decree)

- Mr. Richards has consulted for the Pyramid Lake Paiute Tribe for his entire career on various matters pertaining to the Truckee and Carson Rivers in Nevada. He was involved with the AB 380 Water Rights Purchase Program adopted by Nevada legislators to settle water rights disputes between landowners within the Newlands Project and the Tribe. He is involved with the U.S. Bureau of Reclamation’s (“Reclamation”) annual determination of irrigation, water delivery, and incentive credit calculations for the Newlands Project. He is currently involved with implementation of the Truckee River Operating Agreement (“TROA”) and the Federal Water Master’s administration of TROA provisions pertaining to releases of water from Truckee River Reservoirs and maintaining instream flows for threatened and endangered fish in the lower Truckee River and the Pyramid Lake (1993 – Present).
- Representing the interests of the Pyramid Lake Paiute Tribe, Mr. Richards testified in more than 80 Newlands Irrigation Project water right transfer hearings conducted by the Nevada State Engineer. His involvement with the water right transfer hearings included field investigations and aerial photograph interpretation to document agricultural land and water use for hundreds of parcels of land within the Newlands Irrigation Project. In connection with each transfer hearing, he reviewed and summarized the water right contracts and agreements for the existing places of use under the water right transfer applications (1996 – 2004).
- Mr. Richards testified before the Nevada State Engineer in regard to water right transfers filed by Nevada Land and Resource Company in the Dodge Flat Basin and testified in regard to water right transfer applications filed by Nevada Waterfowl Association and Nevada Department of Wildlife in the Carson Lake Basin. Testimony included summary of findings based upon aerial photograph interpretation (2006).
- Mr. Richards was involved with the identification of the names and addresses of all current owners of Orr Ditch Decree water rights (Truckee River system) for the purpose of preparing a service list for the Court’s use in notifying Orr Ditch Decree water right owners of a proposed modification or amendment of the Decree.

Ogden River Water Rights, Utah

- Mr. Richards provided water rights and hydrology consultation in a Utah water rights case

before the Utah Division of Water Rights, in support of various Protestants objecting to a water rights Exchange Application. The Project involved evaluating the proposed exchange, existing and proposed points of diversions associated with the exchange (groundwater wells and springs), and preparation of a Report to address potential impacts the Exchange would have on the Protestants' water rights (2014 – 2015).

Smoke Creek Desert Basin Adjudication, Nevada

- Mr. Richards conducted field work, performed analyses associated with surface water and groundwater availability, and prepared the Pyramid Lake Paiute Tribe's Federal Reserved water right claim and associated claim documentation, filed in the Smoke Creek Desert Basin Adjudication. The Project involved directing the work of the soils scientist, economists, and water rights surveyors who prepared the mapping for the claim (2012).

Klamath River Basin Adjudication, Oregon

- On behalf of the Native American Rights Fund and the Klamath Tribes, Mr. Richards was involved with developing the Tribes' contests to water right claims filed in the Klamath River Basin Adjudication, including a study of the historical development of the Klamath Project in terms of irrigated land and construction of project facilities. He evaluated claims to Project water, claimed diversion rates, water duties, places of use, periods of use, and amounts claimed.

Santa Clara River Basin Adjudication, Utah

- Mr. Richards was involved with the development of technical positions for objections to the State of Utah's determination of water rights within the Santa Clara River drainage area. He worked on behalf of the Shivwits Band of Paiute Indians, performed field investigations and aerial photograph interpretation to document agricultural land and water use for areas claimed for irrigation within the Santa Clara River basin. He also assisted with the survey of a potential dam site within the Shivwits Indian Reservation.

Water Rights Diversion and Use Reporting

- Mr. Richards routinely assists public agencies, private individuals, and Indian Tribes in California, Nevada, Arizona, and Utah, with rights evaluations for the purpose of preparing and filing water rights transfers and accompanying maps, and any other documentation required to help protect and preserve water rights. He provides assistance and consultation to clients on their reporting of water diversion and use amounts to the appropriate State agencies in accordance with the requirements of those agencies.

Select Agricultural Engineering Projects

- Involved with developing project alternatives to deliver Central Arizona Project ("CAP") water to the San Carlos Apache Indian Reservation in Arizona through CAP water

exchange partners. The project involved designing the diversion, storage, conveyance, distribution, and on-farm irrigation facilities for Reservation-wide water delivery project concepts.

- Provided technical assistance to the San Carlos Apache Tribal Farm Board including compiling, evaluating, and reporting the Tribe's diversions from the Gila River in Arizona to irrigated farm land, and assisting with the preparation of the Tribe's "then being irrigated" reports for filing with the Gila Water Commissioner.
- Evaluated analyses and reports prepared by others pertaining to soils and irrigation suitability, water supply assessments, and irrigation project feasibility on the Duck Valley Indian Reservation (Idaho/Nevada). Assessed and updated cost estimates for rehabilitating existing irrigation project facilities and developing new irrigation project facilities for the purpose of requesting federal funding.
- Evaluated the Hydrologic River Operation Study System surface water supply model, developed by the U.S. Bureau of Reclamation. Analyzed model input files and calibration output results in connection with applications of the model to the drainage basins of the Milk River, Jocko River, and Little Bitterroot River in Montana.
- Assisted with the review of flow records, aerial photographs, and inspections of the Utah Power and Light aqueduct system located in the Santa Clara River Basin. The investigation involved identifying the extent and density of phreatophytes and estimating consumptive use losses associated with the leaking transmission system.
- Assisted with the analysis and conceptual design of an irrigation drainage system for over 30,000 acres of potentially irrigable land within the Flathead Indian Reservation in Montana.
- Analyzed aerial photographs, water delivery records, and water rights information for an irrigation canal water delivery study within the Northern Ute Indian Reservation in Utah. Prepared an irrigation water delivery report which identified deficiencies in irrigation scheduling and water deliveries, and provided recommendations for improving the water delivery monitoring program.

Select Water Measurement Projects

- Assisted a client on Frenchman's Creek (Half Moon Bay) with developing a Streambed Alteration Agreement ("SAA") and the specific provisions of the SAA pertaining to measurement and monitoring of streamflows, bypass flows for fish, and the Notifications and Reporting of diversions to the California Department of Fish and Wildlife ("CDFW"). Stetson installed creek flow measuring equipment, developed stage-discharge relations, worked with an Environmental Consultant to develop the SAA that was approved by the CDFW, and continues to assist with measuring creek flows, and reporting diversions in compliance with the terms of the SAA.
- Assisted with flow measurements and water sampling of the Gila River in Arizona for the San Carlos Apache Tribe. Also assisted with the preparation of court exhibits showing the correlation between streamflow and water quality, and contributed to the preparation of the

water quality report.

- Designed a concrete flume with continuous flow and water quality recording instrumentation. Prepared construction drawings and specifications for the flume which is used to measure water deliveries to irrigated land within the San Carlos Indian Reservation in Arizona. Also designed and assisted with the installation of two pipe flow and water quality measuring stations with continuous recording instrumentation to measure Gila River diversions to fields irrigated by the Tribe.
- Performed field inspections of existing stream gaging equipment, made recommendations for equipment improvements, and assisted with the design and installation of additional stream gaging devices for Battle Creek in California.
- Assisted the Stinson Beach County Water District in California with a creek flow monitoring program. The Project involves establishing stage-discharge relations below the District's points of diversions on four creeks, and data logger installations with remote telemetry systems.
- Installed water level sensors, data loggers, and staff gages in ground-water recharge ponds located on the Camp Pendleton Marine Corps Base in California. The instrumentation was installed as part of a project to quantify the ground-water recharge system.
- Participated in a flow meter calibration project with the Bay Area Water Users Association and the San Francisco Public Utilities Commission. The project involved pitot tube flow testing in large diameter pipelines, and other equipment evaluations to determine the accuracy of the flow meters that measure and record total water deliveries to the City of San Francisco, California.
- Performed current meter flow measurements and discharge measurement computations for an agricultural drainage ditch in Tracy, California.

Testimony Experience

- Mr. Richards has provided testimony, depositions, affidavits, or declarations in the following matters:

<u>Date</u>	<u>Court Case and Subject of Hearing</u>
March 2023	Superior Court of California, County of Napa, In the Matter of Glenn C. Rice et al vs. Okell Holdings, LLC. Prepared an expert report and provided a deposition.
December 2021	Superior Court of California, County of Napa, In the Matter of Glenn C. Rice et al vs. Okell Holdings, LLC. Declaration in Support of Motion by Plaintiffs to Expunge Lis Pendens.
October 2021	United States District Court for the District of Arizona, United States of America vs. Gila Valley Irrigation District, In the Matter of United States' Amended Objection to Change in Place of Use Application No. 2014-02. Prepared expert report in January 2020 and provided deposition on the expert report in October 2021.
September 2018	United States District Court for the District of Arizona, United States of America vs. Gila Valley Irrigation District, In the Matter of United States' Amended Objection to Change in Place of Use Application No. 2014-01. Provided declaration in support of the United States' Amended Objection.
December 2017	United States District Court for the District of Arizona, United States of America vs. Gila Valley Irrigation District, In the Matter of United States' Objection to Change in Place of Use Application Nos. 2014-01 and 2014-02. Provided declarations in support of the United States' Objections.
December 2015	Superior Court of California, County of San Mateo, In Regard to San Gregorio Creek Stream System and Watermaster's Motion Requesting Hearing and Order to Enforce Payment of Unpaid Watermaster Fees Under the Decree. Provided declaration and testified as Watermaster for the San Gregorio Creek Decree.
February 2015	Public Administrative Hearing before the Office of the Nevada State Engineer, In the Matter of Protested Application Nos. 78795 et al, Filed to Change the Places of Use and Points of Diversion of the Underground Waters of the Snake Valley Hydrographic Basin (195), White Pine County, Nevada. Prepared expert report in August 2014 and rebuttal report in January 2015. Testified as an expert witness in water rights and surface water hydrology.

<u>Date</u>	<u>Court Case and Subject of Hearing</u>
September 2013	Arbitration Hearing in Las Vegas, Nevada, Regarding a Dispute between a Homeowner and a Home Owners Association. Provided deposition and testified as expert witness in the arbitration hearing.
February 2010	United States District Court for the District of Arizona, United States of America vs. Gila Valley Irrigation District, In the Matter of Freeport-McMoRan Applications. Provided deposition and testified as expert witness for the U.S. Department of Justice and the San Carlos Apache Tribe.
October 2009	Superior Court of California, County of San Mateo, In Regard to San Gregorio Creek Stream System, Petition to Modify Decree and Approve Transfer of Water. Prepared a Report to the Court and testified as Watermaster for the San Gregorio Creek Decree.
June 2008	Superior Court of California, County of San Mateo, In Regard to San Gregorio Creek Stream System, Petition to Modify Decree and Approve Transfer of Water. Prepared a Report to the Court and testified as Watermaster for the San Gregorio Creek Decree.
July 2007	Superior Court of California, County of San Mateo, In Regard to San Gregorio Creek Stream System, Petition to Modify Decree and Approve Transfer of Water. Prepared a Report to the Court and testified as Watermaster for the San Gregorio Creek Decree.
November 2006	Public Administrative Hearing before the Office of the State Engineer, In the Matter of Applications 71775, 73444 and 73574 Filed to Change the Place of Use of the Waters of the Truckee and Carson Rivers, Carson Desert Hydrographic Basin (101), Churchill County, Nevada. Testified as an expert witness on behalf of the Pyramid Lake Paiute Tribe.
February 2006	Public Administrative Hearing before the Office of the State Engineer, In the Matter of Applications 57555, 61893 and 63277 filed to Change the Manner and Place of Use of the Waters of the Truckee River, Storey and Washoe Counties, Nevada. Testified as a factual witness on behalf of the Pyramid Lake Paiute Tribe.
1996 – 2004	Testified on behalf of the Pyramid Lake Paiute Tribe as a factual witness in approximately 80 Public Administrative Hearings before the Office of the Nevada State Engineer, In the Matter of Various Applications to Transfer Newlands Irrigation Project water rights.



<p>Name & Title: Noah Wasserman, GISP, GIS Manager</p>	<p>Project Assignment: GIS Mapping & Data Analysis</p>
<p>Years of Experience with Firm: 17</p>	<p>Years of Experience with Other Firms: 0</p>
<p>Education: Degree(s) / Year / Specialization: M.A. / 2009 / Geography – Environmental Resource Management/ San Francisco State University B.A. / 2001 / Urban Studies and Planning / University of California, San Diego</p>	<p>Registrations / Certifications: Geographic Information System Professional (GISP) Certification #90657 (2020)</p>
<p>Experience Record Mr. Wasserman has been employed by Stetson Engineers since June of 2007. He brings problem solving and an innovative approach to resource management, having worked on many Stetson projects as they have evolved over time from paper maps into the digital and online mapping era. At Stetson Mr. Wasserman is the primary GIS Manager and spatial analyst technician supporting water resources management projects. He currently provides technical support and design to all Stetson project managers on irrigation, water rights and resource management projects in addition to map/figure layout production. Typical tasks include (but are not limited to) preparation and analysis of field maps and data, map/figure production and layout, data collection, GoogleEarth animated flyovers, analysis of vector and raster data (including aerial imagery), GIS data management, ESRI/ArcGIS.com online/mobile mapping applications, etc. Mr. Wasserman is proficient at ArcGIS 10.x (including Spatial Analyst extension), ArcGIS Pro 3.x, ESRI Collector, ESRI Field Maps, ArcGIS.com, Arcade (intermediate), QGIS, Adobe Photoshop, Adobe Illustrator, WordPress, and Microsoft Office Suite.</p> <p>Mapping and Cartography At least half of Mr. Wasserman’s current responsibilities are to provide cartographic support to all project managers at Stetson Engineers. This requires working with ArcGIS and ArcGIS Pro to create report and technical memo figures, field maps, posters, and presentation slides. On average this means developing and editing 20-50 individual maps every week.</p> <p>Spatial Analysis The remaining portion of Mr. Wasserman’s responsibilities at Stetson Engineers involve detailed spatial analysis. Utilizing ArcGIS, ArcGIS PRO, and QGIS Mr. Wasserman provides watershed delineation, bulk geoprocessing, time-series raster processing, model grid development, hydrologic modeling GIS support, Model Builder tool building, aerial imagery georeferencing, interpretation and analysis, map series design and layout, and detailed data visualization in 2 and 3D.</p> <p>Project Examples <u>Stinson Beach County Water District, Stinson Beach, CA</u> Mr. Wasserman has worked with Stinson Beach County Water District to update their digital pipe system and convert static mapping to dynamic web-based infrastructure management. This on-going process requires GIS analysis to fill in data gaps and identify misaligned, mislabeled, or missing elements of their raw and treated water pipe delivery system. The goal is to provide a web-based model where they can quickly access important data while in the office, in the field, and remotely during emergency events.</p> <p><u>North Coast Water District Capital Inventory Project, Half Moon Bay, CA</u> To bring this water district out of paper maps and into the digital age of infrastructure management Mr. Wasserman georeferenced, digitized and rectified historic as-built paper plans into a GIS database, categorized facilities and repair logs, and developed an online interactive mapping tool to manage capital improvements and repairs. The online database was made available for verification and editing of system features from mobile and desktop devices on the ArcGIS.com platform.</p> <p><u>Upper San Luis Rey River, San Diego County, CA</u> As part of multiple groundwater basin hydrologic modeling projects Mr. Wasserman developed land use, irrigation, stake holder, and hydrologic datasets to assist model development. Geologic layering, hydrologic recharge, and</p>	

water use datasets were processed and analyzed, and time-series (600+ months) of historic recharge, precipitation, runoff, and evapotranspiration were compiled together using bulk-geoprocessing for input into model software. Watershed delineation, analysis of geologic layers and bedrock depths, and development layers necessary to prepare hydrologic modeling were completed for multiple iterations of groundwater storage analysis.

Marine Corps Base Camp Pendleton, CA

Over the last decade Stetson and Mr. Wasserman has provided GIS support for multiple groundwater modeling projects, monitoring well assessment, habitat monitoring, field data collection, and an online digital inventory of live and static monitoring sites. He has helped build capacity to monitor local resources and integrate real-time reporting for advanced warning systems.

Maintenance Reporting and Wastewater System Monitoring Project, Confidential Client, UT

Utilizing ESRI/ArcGIS.com and Arcade program language Mr. Wasserman created a customized maintenance and asset management system for the client's stand-alone wastewater network. Field maintenance data collection and reporting, with an interactive mobile questionnaire, was deployed to streamline reporting requirements to multiple agencies. Arcgis.com, ESRI Field Maps application, and Arcade programming were utilized to create this customized inspection reporting system.

Annual Water Release Tracking, Lake Cachuma, CA

Mr. Wasserman has created and maintains an online reporting and tracking application for the annual Santa Ynez River/Lake Cachuma water release. Field staff collect and upload water location, data, and photos which are made available live to agency and water managers. 2022 release can be viewed here (<https://arcg.is/1z4KaT>), 2021 here (<https://arcg.is/1fbf5q>).

Department of Justice, Duncan and Safford Valleys, Gila County AZ

As part of on-going water rights litigation Mr. Wasserman researched, georeferenced, and maintained a historic aerial imagery database (1950s to 2000s) to determine present and historic irrigation and the movement of existing and place of use water rights transfers. These places of use transfers were imported into GIS from legal descriptions and analyzed against contested water rights transfers.

San Carlos Apache Nation, AZ

As part of Stetson's consultation to San Carlos Apache Tribe over the last decade, Mr. Wasserman headed up the GIS analysis for conceptual irrigation designs, water networking, and dam designs. To showcase our design concepts Mr. Wasserman produced GoogleEarth fly-over videos to assist in decision making and presentation of these ideas to multiple stakeholders. Mr. Wasserman processed LIDAR data from raw LAS format to DEM and contours to be used by Stetson CAD staff and engineers, maintained utility and hydrologic databases for the entire 1.8 million acre reservation, and produced field/presentation maps.

Irvine Ranch, Orange County CA

Mr. Wasserman researched historic ownership and established current legal water district boundary based on 100+ years of deeds and transfers. Current boundary was drawn in ArcGIS with each segment tied to a historic deed or parcel. Historic parcel, topo, and imagery analysis and interpretation was required to provide final alignment.

Dam failure inundation modeling and mapping, various locations, CA

As one of the first firms to submit dam failure inundation maps for review and approval, Mr. Wasserman and Stetson Engineers helped State agencies craft and perfect policy for public safety mapping. Mr Wasserman created dam failure inundation maps for a dozen dams in southern and northern California, which included flood water arrival times and inundation depth scenarios. Vulnerable and/or important public infrastructure locations were researched and included in all maps.

Previous Experience

National Fish and Wildlife Foundation 2005-2007

Mr. Wasserman managed 150+ individual grants, totaling over \$14,000,000 in federal and non-federal funds, and served as west coast grants manager for seven species specific grants programs.

Graduate work

As part of the San Francisco State University Geography department, Mr. Wasserman's graduate course work included cartographic and GIS techniques, remote sensing, statistics, and research methods. His Master's Thesis - *Vegetation Change Trends in Yosemite National Park Over the Last Century (1890-2008)* – researched vegetation changes in alpine and subalpine communities of the Sierra Nevada Mountains through the utilization and analysis of GIS and repeat-photography techniques.



Name & Title: Gustavo Trinidad, P.E., Senior Engineer	Project Assignment: Senior Engineer
Years of Experience with Firm: 24	Years of Experience with Other Firms: 9
Education: Degree(s) / Year / Specialization: B.S. / 1990 / Agricultural Engineering, Universidad Nacional Agraria La Molina, Lima, Peru	Registrations / Certifications: California Professional Civil Engineer, No. C68371

Mr. Trinidad is a senior engineer with 25 years of professional experience in civil and agricultural engineering. He is the lead AutoCAD engineer, senior surveyor, and design engineer specialist for water resources projects, including hydraulic control structures, grading, erosion control, land development, agricultural engineering, and civil/structural design; responsible for preparation of design plans, engineering quantities and calculations, and cost estimates.

Selected Projects:

Pyramid Lake Paiute Tribe and Town of Wadsworth

- Developed 10 alternatives for Numana Dam Fish Passage, including dam removal, sediments removal, fish screens, inflatable dam, fish ladders, lining Nixon Ditch (existing irrigation canal), and others to improve the fish passage. Prepared engineers cost estimates for each alternative,
- Created a surface combining survey data, bathymetric data and aerial survey data for downstream area of Truckee River.
- Developed topographic maps profiles and cross-sections.
- Developed set of plans for the existing fish ladder and dam structure for Numana Dam
- Prepared Wadsworth Water System Master Plan, including pipe layouts, water supply, demand calculations, hydraulic Water CAD modeling and cost estimates.

Step-Pool Roughened Channel Design Upper Green Valley Creek Fish Passage Improvement Project, California

- Developed conceptual design, 50%, 90% and final submittals set of plans, cost estimates and specifications for a culvert replacement and creek fish habitat restoration/enhancement using step-pools and rock weirs.

Marin County Flood Control and Water Conservation District, Zone 9, California

- Prepared feasibility-level design plans and cost estimates of measures to reduce flood damage, including channel improvements and detention basins. Installation of a rubber dam along the spillway of existing Phoenix Lake to increase detention storage during heavy storms is being analyzed and designed.

Pala Band of Mission Reservation, California

- Prepared construction level design plans and specifications for Allers bridge replacement project including hydrology study.
- Surveyed creek geomorphology, evaluated topography and assisted on the study of Pala Casino flood control.

Fish Ladder Removal and Creek Restoration Corte Madera Creek

- Developed conceptual design, and cost estimate for a concrete fish ladder, wedding creek, and creek transition to concrete channel.

Highlight of Skills and Expertise:

- **Civil and Agricultural Engineering:** Excellent background in water resources engineering and agricultural projects. Skillful at preparing set of plans and plan setting management, designing civil structures, providing hydraulic and structural calculations, as well as technical specifications, engineering quantifications and engineering cost estimations.
- **AutoCAD, Civil 3D:** Strong knowledge of AutoCAD Civil 3D 2013. Proven leader and high performance CAD team builder. Successful manager of CAD projects with extensive experience running AutoCAD Civil 3D software, as well as CAD mapping tools.
- **Surveying:** Management background directing and conducting survey field works. Efficient operating total station, surveyor’s level, and other survey equipment with excellent background processing data and developing

topographic maps.

- **Grading Design:** Skilled in grading design and earthwork engineering calculations with experience in AutoCAD Civil 3D grading tools. Knowledge of grading regulations.



Name & Title: Hla Htoo, Associate III	Project Assignment: Water Resources Engineer
Years of Experience with Firm: 1	Years of Experience with Other Firms: 6
Education: Degree(s) / Year / Specialization: B.S. / 2019 / Civil Engineering, University of Massachusetts, Lowell, MA	Registrations / Certifications: EIT # 26060-EN-EI

Experience Record:

Mr. Htoo recently joined Stetson Engineers as an Associate Engineer with a Bachelor of Science degree in Civil Engineering. In addition to general civil engineering, he has strong working knowledge of AutoCAD, engineering analyses and reports, cost estimates, plan design, and project management.

February 2023 – Present, Stetson Engineers Inc.

MUNICIPAL

Stinson Beach County Water District

- Conducted thorough research and analysis of construction materials, labor costs, and contractor pricing to develop precise cost estimates for Stinson Beach County Water District Capital Improvement Projects such as pipeline and hydrant replacement, new tank construction, and new wastewater treatment facility.
- Designed and developed the details retaining wall and grading plan for the access road for Community Center Well project.
- Assisted in the development of a Geographic Information System (GIS) application for Stinson Beach County Water Delivery System.
- Implemented a digital daily logging system, along with an automated data extraction process, to streamline the summary calculation of raw water diversions for Stinson Beach County Water District.

Bolinas Community Public Community District

- Designed and developed AutoCAD drawings and project descriptions for two emergency well projects, a tank site pipeline replacement project, ensuring accurate and detailed documentation for construction and engineering teams.
- Prepared accurate cost estimates for materials, equipment, and labor, considering factors such as pipe size, materials of construction, and installation requirements.
- Assisted in creating the project manual documentation outlining the scope, objectives, and technical specifications of the project

Coastside County Water District

- Developed comprehensive designs for a recent pipeline project, focusing on the replacement of water pipes, designing outfall and intake structures from the reservoir, vault box, and culvert replacements.
- Utilized AutoCAD and Civil3D softwares to create detailed and precise plan set, incorporating various elements such as horizontal directional drilling details, pipe alignments, profile, and cross-sections.

Grayhorse Rural Water District and Rural Water District #21

- Developed design plans for a water tank and pipeline project, ensuring alignment with project goals and standards.
- Created detailed pipeline profiles and cross-sections for the proposed pipeline.
- Conducted material research to ensure high-quality selections and prepared cost estimates.

PREVIOUS EXPERIENCE

Geotechnical Engineer, Lahlaf Geotechnical Consulting, Inc., Billerica, MA

- Conducted field activities such as geotechnical drilling, laboratory testing, and construction observations related with earthwork, foundation, and construction materials.
- Prepared daily field reports, and reviewed submittals and RFIs including construction means and methods.
- Performed geotechnical engineering analyses and prepared geotechnical reports, and contract specifications.

Civil Engineer, MassDOT, Boston, MA

- Successfully managed and inspected two bridge reconstruction projects to verify that work was being performed and completed per the contract documents and specifications.
- Prepared daily reports, field measurements and sketches in detail for the estimates and payments.
- Collected samples and performed field tests on materials used for the project.
- Calculated items and unit quantity for pay estimates, contract changes and final payments..

Civil Design Engineer (Part-time), Now Engineering Co. Ltd, Yangon, Myanmar

- Prepared plans using AutoCAD, cost estimates, and specifications for street improvements and land improvements
- Designed demolition plans, site grading, drainage, post-construction storm water BMPs, traffic control, traffic signing and striping.
- Project Management Intern, UMASS Lowell, Lowell, MA 8/2018- 5/2019
- Created AutoCAD layout options for assigned civil engineering related projects.
- Assisted project management in scheduling, budget oversight, issue resolution on projects,
- managing and procuring access for project sites.
- Coordinated project needs with other campus service providers, contractors and designers.

Civil Engineering Intern, Naing Group Construction, Yangon, Myanmar

- Estimated cost and quantity of materials, equipment and labor required for project feasibility.
- Inspected project construction sites to monitor progress and consult with on-site engineers.



Name & Title: Cece Cambri , Assistant III	Project Assignment: Administrative Support
Years of Experience with Firm: 5	Years of Experience With Other Firms: 0
<p>Experience Record</p> <p>Cece (Cecelia) Cambri has been employed with Stetson Engineers since April 2019. She splits her duties between clerical/administrative office tasks and assisting project managers with various technical duties and client relations.</p> <p>Administrative Office Support</p> <p>Ms. Cambri provides administrative support to staff, including processing mail, answering phones, and printing, copying, scanning, and binding documents as requested by employees. She formats, proofreads, and edits documents, assists with proposals and reports, archives old project and library files, orders office supplies, and handles business license renewals, among other general administrative duties. She files accounts payable and accounts receivable items and developed a system for digitally filing and storing accounts receivable files. She assists with any general administrative duties that may arise or be requested by office staff and performs select accounting duties, such as handling client questions or sending collections emails.</p> <p>Support to Clients</p> <p>At the request of project managers, Ms. Cambri assists on various client jobs. She performs administrative tasks and assists with various technical duties, such as technical editing of reports, data retrieval and entry, drafting memos or sections of reports, and conducting background research. She assists with matters pertaining to clients’ water rights, such as helping them file for various water rights permits or protest others’ water rights applications.</p> <p>Select Project Examples</p> <p><u>Stinson Beach County Water District (Stinson Beach, California)</u></p> <p>Ms. Cambri routinely assists Stinson Beach County Water District (“Stinson Water”) with their grant application efforts, including researching potential grant opportunities, working closely with Stinson Water’s Grant Manager to apply for grants, and providing grant administrative support for their current Small Community Drought Relief Grant (she assisted with that successful grant application). She has also assisted Stinson Water with various other matters, such as helping to file a Coastal Development Permit, reviewing orders from the State Water Board to assess potential relevance or necessary action, and other items. Ms. Cambri is familiar with many aspects of Stinson Water, such as the history of the area and its water issues, the different parts of its water system, and its ongoing Capital Improvements Project.</p> <p><u>Pyramid Lake Paiute Tribe (Reno, Nevada)</u></p> <p>Ms. Cambri assists the project manager with many items pertaining to several ongoing, long-term projects for the Pyramid Lake Paiute Tribe. She downloads and analyzes water rights information from the Nevada Department of Water Resources, assists with submitting necessary paperwork to the Nevada State Engineer pertaining to the Tribe’s water rights (such as Proof of Beneficial Use or temporary applications for instream water use), and helps draft and submit protests to water rights applications filed by others that may adversely affect the Tribe’s water supply.</p> <p><u>Department of Justice/Bureau of Indian Affairs Gila River Adjudication (Arizona)</u></p> <p>Ms. Cambri assists with an ongoing effort by the federal government to adjudicate the waters of the Gila River in Arizona and protect the local Native American tribe’s water rights. Currently, she reviews for accuracy applications for requests for severances and transfers of Gila River water rights. She also maintains and updates a spreadsheet of applications and due dates pertaining to the severance and transfer applications.</p> <p><u>Bay Area Water Users Association (California)</u></p> <p>Stetson Engineers works with the San Francisco Public Utilities Commission (“SFPUC”) in order to obtain the necessary data to assist their client, the Bay Area Water Users Association (“BAWSCA”). Ms. Cambri accesses and downloads SCADA data from the SFPUC’s online database and enters it into Stetson’s tracking spreadsheets. She also enters customer usage data sent by the SFPUC.</p> <p>Previous Experience</p> <p>Prior to Stetson Engineers, Ms. Cambri worked as a bookseller, a waitress, and a receptionist.</p>	

Project Letters

California State Senate

SENATOR MIKE MCGUIRE

PRESIDENT PRO TEMPORE

NORTHERN CALIFORNIA'S SECOND SENATE DISTRICT



March 20, 2024

Jenn Eckerle, Executive Director
California Ocean Protection Council
California Natural Resources Agency
715 P Street, 20th Floor
Sacramento, CA 95814

Dear Director Eckerle:

I am writing to express my support for the Stinson Beach County Water District's (Stinson Water) request for funding to conduct a feasibility study that would address their need to construct a shared wastewater collection and treatment system in collaboration with the neighboring Bolinas Community Public Utility District (BCPUD).

Stinson Water and BCPUD are isolated from other jurisdictions, leaving no opportunity to connections for water transfers with other public water supply systems. Additionally, there is no public sewage system in Stinson Beach; instead, the 750 individually owned and maintained on site wastewater systems (OWTS) are at the foundation of public health and safety. These OWTS are overseen by Stinson Water through regular inspections and enforcement for compliance with local, State, and Federal regulations. Due to the popularity of the Golden Gate National Recreation Area's Stinson Beach and the adjacent Mount Tamalpais State Park, the town receives tens of thousands of visitors on weekends, putting demands on the small system that it was not designed to accommodate.

The town of Bolinas faces similar challenges, and both utilities are located on the 1,100-acre Bolinas Lagoon tidal estuary, part of the offshore Greater Farallones National Marine Sanctuary. Cordell Bank National Marine Sanctuary lies immediately north on the same environmentally rich marine shelf.

Thank you for your consideration of this request. This funding will assist these rural jurisdiction's efforts to comply with the Safe Drinking Water Act, Clean Water Act, and to improve the overall sustainability of their water supplies. If our office can be of any assistance, please do not hesitate to call us at 916-651-4002.

Warmest regards,

A handwritten signature in blue ink, appearing to read "Mike McGuire".

MIKE MCGUIRE

Senator



California

Rural Water Association

March 21, 2024

California Ocean Protection Council
California Natural Resources Agency
715 P Street, 20th Floor
Sacramento, CA 95814

RE: Stinson Beach County Water District Feasibility Study Funding Request

California Ocean Protection Council Members:

The Stinson Beach County Water District (“Stinson Water”) is seeking funding to conduct a feasibility study that would address their need to construct a shared wastewater collection and treatment system in collaboration with the neighboring Bolinas Community Public Utility District (BCPUD).

The California Rural Water Association (CRWA) would like to express our support of the application for Stinson Beach Water and Bolinas Public Utility District’s proposed grant application for a consolidated study to construct a shared wastewater collection system.

CRWA is a statewide rural water/wastewater non-profit association with 1100 members and is dedicated to assisting rural communities achieve and maintain compliance, technical and management training for utility staff, and works with state and federal agencies to provide Technical Assistance and Training, as well as information on regulatory changes, and project funding opportunities.

The grant proposal is in-line with the State Water Resources Control Board’s Policy on consolidation of smaller utilities and working toward communities that will be able to establish economy of scale and current and future financial viability in operations, maintenance, and regulatory compliance. This grant would enable the districts to determine next steps and directed approaches to compliance, protecting public health, and provide a pathway to moving forward with the projects needed to achieve the objectives outlined in the proposal.

There is no public sewage system in Stinson Beach; instead, the 750 individually owned and-maintained on-site wastewater systems (“OWTS”) are at the foundation of public health and

safety. These OWTS are overseen by Stinson Water through regular inspections and enforcement for compliance with local, State, and Federal regulations. Because of the popularity of the National Park Service Golden Gate National Recreation Area's Stinson Beach Park and the adjacent Mount Tamalpais State Park, the town receives tens of thousands of visitors on seasonal weekends, putting demands on the small system that it was not designed to accommodate.

The situation in Bolinas, the nearest adjacent community in what is unincorporated County of Marin, is similar. Both locations are periodically subject to heavy seasonal rain and flooding and low-lying areas are at risk of rising sea levels. The area is rated high on the Federal Emergency Management Agency ("FEMA") national risk index for coastal flooding, earthquake, and wildfire. Stinson Water proposes a joint effort towards a single modern and safe wastewater collection and treatment system shared by the two communities as a joint powers authority. If approved, the enclosed grant application would fund the feasibility study towards such an effort as well as initial steps in establishing the necessary foundation for planning and construction.

Both utilities are located on the 1,100-acre Bolinas Lagoon tidal estuary, itself part of the offshore Greater Farallones National Marine Sanctuary (3,295 square miles). Cordell Bank National Marine Sanctuary (1,286 square miles) lies immediately north on the same environmentally rich marine shelf. It is imperative that these areas remain safe from contaminating activities.

Sincerely,

A handwritten signature in black ink, appearing to read "Dan DeMoss".

Dan DeMoss
Executive Director

STATE CAPITOL
P.O. BOX 942849
SACRAMENTO, CA 94249-0012
(916) 319-2012
FAX (916) 319-2112



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March 15, 2024

California Ocean Protection Council
California Natural Resources Agency
715 P Street, 20th Floor
Sacramento, CA 95814

To Whom It May Concern:

I write in strong support of Stinson Beach County Water District's ("Stinson Water") funding request for a feasibility study that would address their need to construct a shared wastewater collection and treatment system in collaboration with the neighboring Bolinas Community Public Utility District (BCPUD).

Stinson Water operates a small public water supply system in Stinson Beach, Marin County. Stinson Water operates on a very small annual budget and serves water to approximately 750 service connections. Stinson Water and BCPUD are located on the isolated coast, miles from other water municipalities, with no connections or opportunities for water transfers with other public water supply systems.

There is no public sewage system in Stinson Beach; instead, the 750 individually-owned and-maintained on-site wastewater systems ("OWTS") are at the foundation of public health and safety. These OWTS are overseen by Stinson Water through regular inspections and enforcement for compliance with local, State, and Federal regulations. Because of the popularity of the National Park Service Golden Gate National Recreation Area's Stinson Beach park and the adjacent Mount Tamalpais State Park, the town receives tens of thousands of visitors on seasonal weekends, putting demands on the small system that it was not designed to accommodate.

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Thank you for your assistance to this rural and small community. Should you have any questions, please don't hesitate to contact my office at (415) 479-4920.

Sincerely,

DAMON CONNOLLY
DC:ma