

Colorado River Basin Regional Water Quality Control Board's Supplemental Environmental Project (SEP) Proposal Form

Please review the SEP FAQ prior to completing this form. All submitted forms will be reviewed by Regional Board staff for consideration of inclusion on the Board's SEP List. Regional Board staff will follow-up directly with the applicant if any additional information is necessary. Please contact Adriana Godinez at Adriana.Godinez@waterboards.ca.gov if you have general questions about submitting a SEP proposal.

Name of Project: MSWD Private Septic System Connection/Groundwater Quality Protection Program

Project Applicant: Mission Springs Water District

Address: 66575 Second Street, Desert Hot Springs, CA 92240

Contact person and title: Arden Wallum, General Manager

Contact phone number and email: (760) 329-6448, awallum@mswd.org

Project Category (check all that apply):

- Public health
- Pollution prevention
- Pollution reduction
- Environmental restoration and protection
- Assessments and audits
- Environmental compliance promotion
- Other project with environmental and/or public health benefits
- Project location (include, as appropriate, city, county, address, waterbody)
- None of the above

Does the project further one or more of the Regional Board's priorities for SEPs that address problems specific to the following? If so, please check all that apply

- Salton Sea watershed
- The New River
- The protection of groundwater resources
- Environmental justice community, disadvantaged community, or community with financial hardship
- None of the above

Brief work plan containing tasks, deliverables, milestones, and schedule. The deliverables must include quarterly progress reports and a final completion report.

Mission Springs Water District (MSWD) and those residents within the MSWD service area have long recognized the need for protecting the groundwater. This guardianship extends back prior to the 1970's when Assessment District 1 was successfully formed and the Alan L. Horton Wastewater Treatment Plant was constructed. Since that time, area residents have approved a total of eight assessment districts in and around the City of Desert Hot Springs. Many of the assessment districts predominantly include economically disadvantaged areas. While MSWD has successfully connected a majority of the developed parcels within these assessment districts, several parcels have failed to connect to the sanitary sewer. MSWD records indicate there are 68 developed parcels within 200 feet of an existing sanitary sewer, but have not been connected. These 68 developed parcels continue to use private on-site septic tank/seepage pit/leach field systems (hereafter referred to as septic systems) to treat sewerage and discharge partially treated wastewater directly to the groundwater aquifer.

The proposed SEP will provide funding to construct private sanitary service laterals from MSWD sanitary sewers located in public rights-of-way to the on-site sewer plumbing and abandon septic systems located on private property, thus enhancing groundwater quality protection by removing known point sources of groundwater degradation in high-density economically disadvantaged areas. MSWD is proposing to connect an estimated 21 properties to the sanitary sewer collection system or as many properties as funds will allow. The project is discussed in more detail below under the Need for the Project/Water Quality Impacts, Public Health Benefit, Work Plan, Deliverables, and Schedule sections.

Need for the Project/Water Quality Impacts

MSWD has identified 68 developed parcels that are not connected to the sanitary sewer collection system. These parcels include: 59 single-family homes and 9 multifamily buildings (See Exhibit 1). These parcels are located in economically disadvantaged areas of Desert Hot Springs (See Exhibit 2). These parcels failed to connect to the sanitary sewer during construction activities between 10-30 years ago. While it is believed the septic systems are in good working order, according to EPA ecological research on environmental effects of septic tank systems¹, it is estimated that as many as one-half of all septic systems are not operating satisfactorily. The failure of a septic system has the potential of adverse impacts to groundwater. Historically, septic system failure has been linked to soil clogging, loss of infiltrative capacity, or simply exceeding the infiltrative capacity of the soil. When this type of system failure occurs, wastewater may seep to the surface and contaminants may be carried with the overland flow directly to a water body or a nearby well.

Septic systems also may fail to provide sufficient treatment due to the high permeability of the

¹ Environmental Protection Agency (EPA), 1997. "Environmental Effects of Septic Tank Systems", *Ecological Research Series*, August, 1997.

surrounding soil without showing any signs of seepage or overflow. Highly-permeable soil can be rapidly overloaded with organic and inorganic contaminants that move to the groundwater zone without being treated by the system. Multiple studies show that most of the known contaminants in septic tank effluent including suspended solids, biochemical oxygen demand (BOD), and fecal bacteria can be removed by soil filtration under proper conditions and sufficient filtration depths. However, other chemicals such as chlorides and nitrates are essentially unaffected by movement through most soils. The probability of contamination increases in wet conditions when the groundwater table rises. Higher water tables can rise into the aerobic zone below the soil absorption field and impede wastewater treatment.

Although groundwater contamination caused by septic systems may be due to different factors in different regions (i.e. density of the facilities in the area, geology, depth to water table, and climate), it has been continuously one of the highest ranked contributors of directly discharged wastewater to groundwater and one of the most frequently reported sources of contamination². Contamination from septic systems has been identified to cause diseases such as infectious hepatitis, typhoid fever, dysentery, and various gastrointestinal illnesses, and may be responsible for numerous subclinical cases of waterborne diseases that go unnoticed. As a main contributor to the nitrate concentration in groundwater, septic systems can be indirectly related to health concerns associated with high concentrations of nitrate in drinking water such as methemoglobinemia in human infants, increased risk of spontaneous abortion, bladder and ovarian cancer, and non-Hodgkin's Lymphoma³.

In light of the EPA studies, a septic to sewer conversion project was selected as a SEP to mitigate the potential of adverse groundwater impacts from failing septic systems which can feasibly be connected to the existing sewer collection system. A prioritization of the properties will be based on the distance from MWSD water production wells (See Exhibit 3).

Public Health Benefit

The primary public health benefits of the SEP are twofold: protecting water quality by mitigating the risk of groundwater contamination from existing septic systems; and providing reliable sewer service to economically disadvantaged residents of the MSWD service area. As previously explained, the advantages of converting septic systems to sanitary sewer connections is significant in protecting groundwater quality. Poorly maintained or failing septic systems impose a high risk of groundwater contamination and water quality degradation. The careful selection of the project area ensures that while the MSWD is serving the economically disadvantaged communities, it is addressing the most critical and high-risk systems and delivering the highest public benefit.

² Environmental Protection Agency (EPA), 1997. "Environmental Effects of Septic Tank Systems", *Ecological Research Series*, August, 1997.

³ John A. Izbicki, Alan L. Flint, David R. O'Leary, Tracy Nishikawa, Peter Martin, Russell D. Johnson, Dennis A. Clark, 2015. "Storage and mobilization of natural and septic nitrate in thick unsaturated zones, California", *Journal of Hydrology*, Volume 524, May 2015, Pages 147-165, ISSN 0022-1694, <https://doi.org/10.1016/j.jhydrol.2015.02.005>.

Work Plan

The work plan will consist of eight (8) primary tasks of the project. Those primary tasks are;

- Environmental Documentation – As all construction will occur within developed areas which have previously been disturbed by the installation of either the private septic system or public sewer lateral, we believe the project will be exempt from the California Environmental Quality Act. MSWD will prepare and file a Notice of Exemption with the Riverside County Clerk within 35 days of the SEP approval.
- Property Owner Authorization & Agreement - Each property owner will be asked to sign a Right of Entry Agreement (See Exhibit 4) with the MSWD's service area, giving MSWD's agents and contractor the right to enter their property to complete a survey and install the required improvements for connection to the sewer collection system. The agreement will state that after the improvements have been inspected by MSWD and have been completed to the satisfaction of the MSWD and the property owner, the improvements will become the property of the property owner and maintained from that time forward by said property owner.
- Plans, Specifications and Estimates - It is anticipated that the preparation of the plans, specifications and estimates (PS&E) will be prepared by an engineering consultant.
- Advertise Construction – MSWD will publicly bid the project using the PS&E as the construction documents used for soliciting contractor bids.
- Award Contract – Based on bids received, MSWD will award a contract to the lowest responsible and best responsive bidder.
- Execute Contract, Permits and Submittals - After the construction contract is awarded by MSWD, the contract will be executed, City permits for the work both in the public right-of-way and private property will be issued to the contractor, and submittals for the construction schedule, traffic control and materials will be reviewed and approved.
- Construction – Construction will consist of connecting private sanitary piping to public sanitary sewer laterals located at rights-of-way/property line and the abandonment of existing private septic system in place.
- Close Out Construction & Notice of Completion - The project will be closed out after testing, final inspections, resolution of change orders and claims and final payment to the contractor. After this, MSWD will approve a Notice of Completion for the project, which is recorded by the County.
- Quarterly Progress Reports and Final Completion Report – The MSWD shall submit quarterly status reports on or before the 15th of each January, April, July and October until the Project is complete. Upon completion, MSWD will provide a final report and certification of completion.

Deliverables

MSWD will provide Quarterly Progress Reports and Final Completion Report.

Schedule

The major SEP tasks and schedule for the start and completion of those tasks is shown below. The environmental documentation and approval process for the project is scheduled to start immediately after the SEP is approved by the Colorado River Basin Regional Water Quality Control Board. It is anticipated that the work will be categorically exempt, and the environmental documentation and clearance will use in-house resources. It will be necessary for each property owner to sign an agreement with MSWD to give the MSWD’s agents and contractor the right to enter their property to complete a survey and install the required improvements to connect to the sewer collection system. The agreement will state that after the improvements have been inspected by MSWD and have been completed to the satisfaction of MSWD and the property owner, the improvements will become the property of the property owner and maintained from that time forward by said property owner. It is anticipated that the preparation of the plans, specifications and estimates (PS&E) will be prepared by an engineering consultant. The PS&E will be the construction documents used for advertising for contractor bids. After the construction contract is awarded by MSWD , the contract will be executed, City permits for the work both in the public right-of-way and private property will be issued to the contractor, and submittals for the construction schedule, traffic control and materials will be reviewed and approved by the MSWD. After this the construction can start. The project will be closed out after testing, final inspections, resolution of change orders and claims and final payment to the contractor. After close out, MSWD will approve a Notice of Completion for the project, which is recorded by the County. Shown below is an estimated SEP implementation schedule.

| Task | Duration (days) | Start | Finish |
|---|------------------------|--------------|---------------|
| Environmental Documentation | 39 | 12/01/22 | 1/09/23 |
| Property Owner Authorization & Agreement | 90 | 12/01/22 | 03/01/23 |
| Plans, Specifications and Estimates | 123 | 12/01/22 | 04/03/23 |
| Advertise Construction | 28 | 04/03/23 | 05/01/23 |
| Award Contract | 31 | 05/01/23 | 06/01/23 |
| Execute Contract, Permits and Submittals | 30 | 06/01/23 | 07/01/23 |
| Construction | 184 | 07/01/23 | 01/01/24 |
| Close Out Construction & Notice of Completion | 31 | 01/01/24 | 02/01/24 |

Total project cost and amount of SEP money requested. If there are other funding sources, indicate if the funds have been committed and whether there are any restrictions on the funds.

Cost to Connect to Sewer

During the construction of the sanitary sewers which are within 200 feet of properties with active septic systems, MSWD also constructed sanitary wyes and laterals to the rights-of-way or property lines. Therefore, the cost to connect the active septic systems would include the plumbing connection on private property, the abandonment of the septic system, and City permit fees. The capacity/connection fee (\$2,520 for a single residential parcel) has been approved, as part of the assessment district, to be assessed to the parcel at the time of construction. Therefore, the capacity/connection fee has already been paid for these properties and will not be included in the cost of this project. For property owners who are in financial hardship and not financially able to connect to the sewer collection system, the District has not been able to develop a grant program due to fund restrictions. The funds collected from the usage fee, paid by existing users, cannot pay for the cost of new connections to the system. The funds collected from the connection fee are restricted to increasing the capacity of the system.

If approved, this SEP would provide the necessary funds to connect a portion (between 21-35) of the 68 parcels to the existing sanitary sewer collection systems, and abandon the legacy septic system impacting groundwater quality. For the purposes of this SEP, it is estimated that the connection cost would vary between \$5,000 to \$8,000. Total estimated project cost is shown below. Costs which exceed the SEP Amount (\$175,000) shall be paid for by MSWD. MSWD will also undertake efforts to conduct outreach related to this SEP in compliance with the SEP Policy section VIII.J's requirement that any publicity about the Project note that it is being carried out as a term of settlement of an enforcement action with the Colorado River Basin Water Board.

| Description | Quantity | Unit | Unit Price | Total Cost |
|--|----------|------|------------|------------------|
| Septic System Connection to Collection System | | | | |
| Extend Private Piping from Septic Tank to Lateral | 21 | EA | \$2,000 | \$42,000 |
| Abandon Existing Septic Tank | 21 | EA | \$4,000 | \$84,000 |
| Surface Restoration | 21 | EA | \$1,000 | \$21,000 |
| Sub-Total | | | | \$147,000 |
| Total Construction Cost | | | | \$147,000 |
| Engineering Services (10%) | 1 | LS | \$14,700 | \$14,700 |
| Construction Administration (5%) | 1 | LS | \$7,350 | \$7,350 |
| Contingency (10%) | 1 | LS | \$14,700 | \$14,700 |
| Total Project Cost | | | | \$183,750 |

Project readiness, including status of CEQA, permits, and landowner agreements

The areas where construction will occur (existing septic tanks, sanitary laterals, private sanitary piping) have been previously disturbed and will be small areas on private property or just inside public rights-of-way. As such it is believed that this SEP will not be subject to CEQA. Therefore, once the SEP is approved, MSWD staff will file the Notice of Exemption with Riverside County. MSWD staff will also begin contacting property owners closest to District well sites requesting the execution of a Right of Entry Agreement (See Exhibit 4).

Expected benefits or improvements to water quality or beneficial uses

This project which will connect existing septic systems to MSWD sanitary sewer collection system will improve water quality to the Mission Creek and Desert Hot Springs Subbasins by:

- Eliminating known pollution sources.
- Reclaiming water to reduce demand on limited groundwater resources.
- Protecting underground storage capacity.
- Leveraging multiple funding opportunities.

Is the project located within, or does it benefit, an Environmental Justice community, a Disadvantaged Community, or a community that has a financial hardship? If yes, describe.

The properties which will be part of this project are all within the Disadvantage Communities – Census Tracts (ACS:2016-2020) as shown by the DAC Mapping Tool (<https://gis.water.ca.gov/app/dacs/>). Desert Hot Springs is a disadvantaged community with a financial hardship because the City has a median household income of less than \$47,203, which represents less than 60% of the statewide median household income.

Will this project further the State Water Board's core value of the human right to water? If yes, describe.

Yes, this project will protect both the drinking water supplies and the hot water that is the basis of the spa economy for the City of Desert Hot Springs and the Coachella Valley. MSWD depends entirely on groundwater as its source of drinking water and the proposed project helps protect said groundwater; allowing MSWD to continue providing safe, clean, affordable, and accessible water to the disadvantaged communities it serves.

Mission Springs Water District Supplemental Environmental Project (SEP) Septic to Sewer Conversion Project Exhibits

- Exhibit 1 – List of Parcels with Septic Systems within 200' of Sanitary Sewer
- Exhibit 2 – Map of Parcels with Septic Systems within 200' of Sanitary Sewer
- Exhibit 3 – Map of MSWD Wells, Reservoirs, and Booster Stations
- Exhibit 4 – Right of Entry Agreement