

Source Water Protection Program

2007 Final SWP Project Priority List

| SWP | BP | Pop. | WaterSystem | Project | WS Problem | Project Description | Costs | FY |
|--------|----|-------|--------------------------------------|---------|--|---|--------------|------|
| SWWP-A | 11 | 50 | SOUTH SAN JOAQUIN IRRIGATION | 5010040 | 002 Primary concern is microbial contamination from 1)cattle activities on watershed, 2) sanitary facilities (pit toilets) in the recreational areas, and 3) body contact recreation at the reservoir. This project would address all three sources. | Project will include berming and fencing the canal at critical areas to preclude cattle access, rerouting selected drains to prevent direct discharge of ag drainage to canal, construction of new sanitary facilities at the park to eliminate pit | \$2,000,000 | 2000 |
| | 11 | 600 | San Francisco Regional Water System | 3810001 | 122 (SFPUC No. 21) (Contaminants of concern are essentially microbial, potential from VOCs; sources of these contaminants are farms ranches, dwellings etc within the Upper Alameda Creek Watershed | VOC sources would be addressed by acquisition of critical watershed land within high water quality vulnerability ; Upper Alameda Creek | \$2,000,000 | 2000 |
| | 11 | 926 | Squaw Valley Public Service District | 3110020 | 004 The attached Draft Squaw Valley source Water Assessments describes the types of contaminants and the associated PCAs. The document also provides a relative ranking of the well exposure to potential sources of contamination. | Squaw Valley PSD Source water Protection Program. The project will identify, locate and map test wells, monitoring wells and abandoned wells that may create a conduit for contaminants to enter the groundwater. More than 50s of these | \$75,000 | 2001 |
| | 8 | 11814 | Nevada ID - Loma | 2910006 | 022 Microbial from human and animal contact and septic systems; DBP precursors from organic load; contaminants in runoff from upslope urban area and roads | Relocate source water from 37,000 ft of canal and 90 AF regulating reservoir to 22,000 ft buried pipeline; deliver water via closed conduit from the source (Deer Creek) to the WTP. | \$20,200,000 | 2005 |
| | 8 | 12939 | Nevada ID - E. George, Banner | 2910004 | 007 Microbial from human and animal contact and septic systems; DBP precursors from organic load; contaminants in runoff from upslope urban area and roads | Relocate source water from 28,000 ft of canal to 10,000 ft buried pipeline; deliver water via closed conduit from the source (Deer Creek) to the WTP. | \$6,500,000 | 2005 |
| | 7 | 21053 | Santa Fe I.D. | 3710023 | 001 SWPP Joint reservoir project; urban runoff contaminants impact raw water quality | SWPP Joint reservoir project; urban runoff collection/diversion system | \$2,000,000 | 2000 |
| | 4 | 597 | NORTH EDWARDS WD | 1510052 | 005 Septic tanks are installed in Zone A, B5 and B10 of Wells #1 and #2. | At present, there are vacant lots next to Wells 1 and 2. The Board of Directors would like to acquire the empty lots to prevent any more septic system installation close to the well heads. | \$50,000 | 2002 |
| | 4 | 3653 | TUD - Columbia Water System | 5510013 | 007 THE MATELOT DITCH AND RESERVOIR THAT SUPPLY THE WTP ARE SUBJECT TO CONTAMINATION. | CONSTRUCT RESERVOIR IMPROVEMENTS AND PIPE THE MATELOT DITCH TO PROVIDE SOURCE WATER PROTECTION. | \$1,210,000 | 2006 |
| | 4 | 3653 | TUD - Columbia Water System | 5510013 | 008 THE LOWER COLUMBIA DITCH LOOSES WATER THROUGH LEAKS AND IS CONTAMINATED BY LOCALIZED AG RUNOFF. | PIPE APPROXIMATELY 800 FEET OF DITCH AND GUNITE LINE APROXIMATELY 2000 FEET OF DITCH. | \$150,000 | 2006 |

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|--|----|---------|--------------------------------------|---------|---|--|-------------|------|
| SWWP-A | 3 | 2500 | Willow Creek C.S.D. | 1210015 | 002 Storm Water Bypass- Willow Creek CSD water supply; Storm water runoff from state highways 299, 96 and county roads are collected by a storm water system and discharged into Willow Creek at a point up stream from the WCCSD infiltration gallery (WCCSD water | Design and construct storm water interceptor and bypass of water system infiltration galleries. | \$80,000 | 2002 |
| | 3 | 3000 | North Marin WD - Pt. Reyes | 2110006 | 021 Micribial and chemical contamination associated with impacts of flooding of Lagunitas Creek on Wells 2 and 3. | As determined by feasibility study-modifications to wellheads, well casings, enclosures and surface grading and drainage. Study due 8/31/2000 per 10/28/99 Water Supply Permit. | \$100,000 | 2000 |
| | 3 | 56000 | North Marin Water District | 2110003 | 001 Dairy directly adjacent to reservoir. Reclassify from SRF to SWPP (6/11/01). | Develop Crypto Control Strategy installation of BMPs, sediment control structures, land/dairy purchase. Reclassify from SRF to SWPP | \$122,000 | 1998 |
| | 0 | 625 | TUD-Scenic View/Scenic Brook | 5510033 | 006 THE PHOENIX DITCH THAT SUPPLIES THE WTP IS CONTAMINATED FROM RUNOFF CAUSING THE PLANT TO HAVE DIFFICULTY MEETING CAP. | CONSTRUCT A PIPELINE TO REPLACE THE OPEN DITCH FROM THE SHAWS FLAT PIPELINE TO PHOENIX ROAD. | \$200,000 | 2006 |
| | 0 | 1300000 | East Bay MUD | 0110005 | 020 SWPP Cryptosporidium and other pathogens have been identified with grazing activity near reservoirs and tributaries; project will address direct access of cattle / horses to ponds, streams / reservoirs in | SWPP EB watershed fencing to mitigate Cryptosporidium contamination. The project would (1) outfence approximately 30 ponds to prevent direct access of domestic animals of the ponds and supply alternative trough watering facilities at each pond site, an | \$2,000,000 | 2001 |
| Total of projects in SWPP Category SWWP-A = 14 projects | | | | | | | | |
| Total Cost for Projects in Category SWWP-A : | | | | | \$36,687,000 | | | |
| SWWP-B | 3 | 5412 | Montara Water and Sanitary District | 4110010 | 021 Nitrate contamination in the Airport 3 and North Airport 2 wells is apparently migrating from agricultural property to the east. Nitrate concentrations often exceed the MCL. A shallow aquifer and proximity to the source make mitigation impossible. | Our project would focus on evaluating adjacent agricultural practices and education on BMPs, land acquisitions and /or establishing conservation easements. | \$150,000 | 2000 |
| Total of projects in SWPP Category SWWP-B = 1 project | | | | | | | | |
| Total Cost for Projects in Category SWWP-B : | | | | | \$150,000 | | | |
| SWWP-C | 5 | 9000 | Los Osos Community Services District | 4010016 | 003 Groundwater WQ Monitoring Program-See attachment A | See attachment A | \$500,000 | 2000 |
| | 5 | 9000 | Los Osos Community Services District | 4010016 | 001 Septic system abatement Project | See attachment A | \$2,000,000 | 2000 |

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| SWWP-C | 4 | 25 | Yosemite Alpine CSD | 2210923 | 001 A protected watershed for the entire Fish Camp area is being proposed. No other watersheds exist in the Fish Camp area. Development of the proposed watershed area would place (4) water systems in jeopardy of becoming contaminated and/or | Create a common watershed to ensure an adequate long term supply of uncontaminated water for the entire Fish Camp area. The proposed watershed is of very high water quality. Due to its protected location, the water quality can be | \$2,000,000 | 2004 |
| | 3 | 3967 | CalAm - Arden | 3410045 | 004 Nitrate contamination in the Fulton Fair Oak well is suspected to be associated with sewer or septic sources. Nitrate concentrations exceeding one-half the MCL at this well (in an established subdivision) | We propose to initiate a planning study to inventory PCAs, and vulnerability analysis. Based on the results of our study, we anticipate our project will include one or more of the following: Upgrade/abatement of septic systems, water | \$125,000 | 2000 |
| | 3 | 19272 | CalAm - Rosemont | 3410034 | 006 Nitrate contamination in the Montazuma well is suspected to be associated with sewer or septic sources. Nitrate concentrations exceeding one-half the MCL at this well (in an established subdivision) | We propose to initiate a planning study to inventory PCAs, and vulnerability analysis. Based on the results of our study, we anticipate our project will include one or more of the following: Upgrade/abatement of septic systems, water | \$125,000 | 2000 |
| | 3 | 32584 | CalAm - Suburban | 3410010 | 007 Nitrate contamination in the Whitewater well is suspected to be associated with sewer or septic sources. Nitrate concentrations exceeding one-half the MCL at this well (in an established subdivision) | We propose to initiate a planning study to inventory PCAs, and vulnerability analysis. Based on the results of our study, we anticipate our project will include one or more of the following: Upgrade/abatement of septic systems, water | \$125,000 | 2000 |
| | 3 | 32584 | CalAm - Suburban | 3410010 | 005 Nitrate contamination in the Malaga well is suspected to be associated with sewer or septic sources. Nitrate concentrations exceeding one-half the MCL at this well (in an established subdivision) suggest a | We propose to initiate a planning study to inventory PCAs, and vulnerability analysis. Based on the results of our study, we anticipate our project will include one or more of the following: Upgrade/abatement of septic systems, water | \$125,000 | 2000 |
| | 3 | 32584 | CalAm - Suburban | 3410010 | 006 Nitrate contamination in the Point Reyes well is suspected to be associated with sewer or septic sources. Nitrate concentrations exceeding one-half the MCL at this well (in an established subdivision) | We propose to initiate a planning study to inventory PCAs, and vulnerability analysis. Based on the results of our study, we anticipate our project will include one or more of the following: Upgrade/abatement of septic systems, water | \$125,000 | 2000 |
| | 3 | 44708 | CalAm - Lincoln Oaks | 3410013 | 010 Nitrate contamination in the Hemlock well is suspected to be associated with sewer or septic sources. Nitrate concentrations exceeding one-half the MCL at this well (in an established subdivision) suggest a | We propose to initiate a planning study to inventory PCAs, and vulnerability analysis. Based on the results of our study, we anticipate our project will include one or more of the following: Upgrade/abatement of septic systems, water | \$125,000 | 2000 |
| | 3 | 173359 | SAN BERNARDINO CITY | 3610039 | 017 The City of San Bernardino relies 100% on 47 groundwater wells for its domestic water supply. The Bunker Hill Groundwater Basin has identified plumes of VOCs, nitrates, DPCP, radiological, elevated levels of TDS, and perchlorate in | See attached description of project | \$400,000 | 2000 |

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| Total of projects in SWPP Category SWWP-C = 10 projects | | | | | | | | |
| Total Cost for Projects in Category SWWP-C : | | | | | \$5,650,000 | | | |
| SWWP-D | 11 | 60000 | South Tahoe PUD - | 0910002 001 | MTBE contamination from leaking underground fuel tanks has contaminated or is threatening to contaminate 12 District wells. The 12 wells have been shut off. | The district intends to implement a groundwater management plan, in full compliance with DWSAP assessments, that emphasizes the "early detection and immediate response" to MTBE/gasoline releases. To date, the District has | \$1,385,000 | 2000 |
| | 6 | 750 | Cuesta La Honda Guild, Inc. | 4110012 002 | Vineyard development and resultant siltation and contamination from | The project proposes to acquire the land or a conservation easement on the land immediately adjacent to Tunnel Spring and Woodhams Creek which are the sources of approximately 83% of the surface water... Doing so would prevent development of a vineyard... | \$2,000,000 | 2004 |
| Total of projects in SWPP Category SWWP-D = 2 projects | | | | | | | | |
| Total Cost for Projects in Category SWWP-D : | | | | | \$3,385,000 | | | |
| SWWP-E | 0 | 48418 | RIALTO-CITY | 3610038 004 | Perchlorate contamination in GW Basin | Drill barrier wells to stop spread of contamination | \$2,000,000 | 2003 |
| Total of projects in SWPP Category SWWP-E = 1 project | | | | | | | | |
| Total Cost for Projects in Category SWWP-E : | | | | | \$2,000,000 | | | |
| SWWP-F | 6 | 1300000 | East Bay MUD | 0110005 029 | Pardee Reservoir WQ Protection Conservation Easement; Microbial (septic systems), nitrate (from large livestock concentrations or agricultural fertilizers), chemicals (from herbicide/pesticide use) | Establish conservation easement on 700 acres of the watershed; Project addresses disinfection by-products, chemicals and microbial on watershed, | \$1,100,000 | 2002 |
| | 3 | 5458 | ACWA Sutter Creek | 0310003 006 | System uses a 24 mile open canal, mostly earthen, to transport source water. The Canal is exposed to storm water run-off and livestock. See attached study. | Watershed management projects include fencing to prevent access from livestock, storm water drainage diversions, and related improvements. | \$1,131,000 | 2000 |
| | 3 | 56000 | North Marin Water District | 2110003 023 | Storm events increase level of microbial and agricultural runoff (cattle) and sediments (erosion) impacts to Stafford | Buffer strip development with possible purchase of conservation easement son ranch property. | \$100,000 | 2000 |
| | 3 | 56000 | North Marin Water District | 2110003 025 | SWPP-Horse manure and associated contaminants (microbials, organic precursors to DBP) from stable operation adjacent to tributary to Stafford Lake. | SWPP-Develop a cooperative horse manure recycle program in conjunction with Marin County Stormwater Control Program. | \$50,000 | 2000 |
| Total of projects in SWPP Category SWWP-F = 4 projects | | | | | | | | |
| Total Cost for Projects in Category SWWP-F : | | | | | \$2,381,000 | | | |

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| SWWP-H | 7 | 177630 | Sweetwater Authority | 3710025 | 001 Contaminants include microbial and chemical constituents associated primarily with urban and rural residential | Funding would be used to purchase property in sensitive areas in order to provide control over potential microbial and chemical contamination and extend the Authority's ability to protect its source waters. Project will also include additional | \$900,000 | 2000 |
| | 4 | 600 | San Francisco Regional Water System | 3810001 | 111 (SFPUC No. 1) Microbial contamination from run-off and erosion of banks may be attributed to disrepair of the Alameda Creek tunnel outfall which discharges diverted water into the Calaveras Reservoir. | The contaminants of concern will be addressed by improvements to the tunnel. The slopes on either side of the tunnel will be stabilized and debris will be cleared, which will reduced the contribution of microbial contamination and | \$250,000 | 2000 |
| | 3 | 1189 | CalAm - Isleton | 3410012 | 002 The Isleton 2 well periodically shows evidence of raw water total coliform presence, an indicator of microbial | We propose to initiate a planning study to inventory PCAs, vulnerability analysis, provide public outreach and education programs along with program elements associated with CDWSAPP | \$95,000 | 2000 |
| | 3 | 3967 | CalAm - Arden | 3410045 | 005 The Fulton/Fair Oak well periodically shows evidence of raw water total coliform presence and indicator of | To initiate a planning study to inventory PCAs, vulnerability analysis, provide public outreach and education programs along with program elements associated with CDWSAPP | \$95,000 | 2000 |
| | 3 | 3967 | CalAm - Arden | 3410045 | 003 The Larch Ln well periodically shows evidence of raw water totoal coliform presence and indicator of microbial | We propose to initiate a planning study to inventory PCAs, vulnerability analysis, provide public outreach and education programs along with program elements associated with CDWSAPP | \$95,000 | 2000 |
| | 3 | 19272 | CalAm - Rosemont | 3410034 | 005 The Southport well periodically shows evidence of raw water total coliform presence and indicator of microbial | We propose to initiate a planning study to inventory PCAs, vulnerability analysis, provide public outreach and education programs along with program elements associated with CDWSAPP | \$95,000 | 2000 |
| | 3 | 19272 | CalAm - Rosemont | 3410034 | 004 The Westporter well periodically shows evidence of raw water total coliform presence and indicator of microbial | We propose to initiate a planning study to inventory PCAs, vulnerability analysis, provide public outreach and education programs along with program elements associated with CDWSAPP | \$95,000 | 2000 |
| | 3 | 33102 | CalAm - Antelope | 3410031 | 004 The Davidson well periodically shows evidence of raw water total coliform presence and indicator of microbial | We propose to initiate a planning study to inventory PCAs, vulnerability analysis, provide Public outreach and education programs along with program elements associated with CDWSAPP | \$95,000 | 2000 |
| | 3 | 43996 | CalAm - Parkway | 3410017 | 013 The Briggs well periodically shows evidence of raw water total coliform presence, an indicator of microbial | To initiate a planning study to inventory PCAs, vulnerability analysis, provide public outreach and education programs along with program elements associated with CDWSAPP | \$95,000 | 2000 |
| | 3 | 43996 | CalAm - Parkway | 3410017 | 012 The Conrad well periodically shows evidence of raw water total coliform presence, an indicator of microbial | To initiate a planning study to inventory PCAs, vulnerability analysis, provide public outreach and education programs along with program elements associated with CDWSAPP | \$95,000 | 2000 |

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|--------|----|-------|----------------------------|-------------|--|---|-----------|------|
| SWWP-H | 3 | 43996 | CalAm - Parkway | 3410017 014 | The Stocker well periodically shows evidence of raw water total coliform presence, an indicator of microbial | To initiate a planning study to inventory PCAs, vulnerability analysis, provide public outreach and education programs along with program elements associated with CDWSAPP | \$95,000 | 2000 |
| | 3 | 43996 | CalAm - Parkway | 3410017 011 | The Rockhurst well periodically shows evidence of raw water total coliform presence an indicator of microbial | We propose to initiate a planning study to inventory PCAs, vulnerability analysis, provide public outreach and education programs along with program elements associated with CDWSAPP | \$95,000 | 2000 |
| | 3 | 44708 | CalAm - Lincoln Oaks | 3410013 011 | The Crosswoods well periodically shows evidence of raw water total coliform presence, an indicator of microbial | We propose to initiate a planning study to inventory PCAs, vulnerability analysis, provide public outreach and education programs along with program elements associated with CDWSAPP | \$95,000 | 2000 |
| | 0 | 56000 | North Marin Water District | 2110003 022 | SWPP-Microbial from failing septic systems in zone A of Stafford Lake. | SWPP-Seek voluntary repair of failing septic systems through a low interest loan program to qualified residents on Stafford watershed. | \$50,000 | 2000 |
| | 0 | 56000 | North Marin Water District | 2110003 024 | Microbial pollution potential from older sewage collection system/force main serving golf course on watershed of Stafford water treatment plant. | Update system to current standards with pumping redundancy and spill protection. | \$125,000 | 2000 |

Total of projects in SWPP Category SWWP-H = 15 projects

Total Cost for Projects in Category SWWP-H : \$2,370,000

| | | | | | | | | |
|--------|---|------|--------------------------------------|-------------|---|------------------|-----------|------|
| SWWP-I | 5 | 9000 | Los Osos Community Services District | 4010016 002 | Evaluation of Agricultural practices-See attachment A | See attachment A | \$100,000 | 2001 |
|--------|---|------|--------------------------------------|-------------|---|------------------|-----------|------|

Total of projects in SWPP Category SWWP-I = 1 project

Total Cost for Projects in Category SWWP-I : \$100,000

Number of projects in SWP PPL= 48 projects

Grand Total: \$52,723,000