

PROJECT 02: NBWRP Phase 2

BUDGET NARRATIVE

This project is being implement by three member agencies of the NBWRA, Sonoma Water, City of Petaluma, and City of American Canyon. Narratives from the agencies are detailed below. Additional information can be provided upon request.

Sonoma Water is the Administrative and Fiscal Agent for the NBWRA and will provide project management, grant reporting, and other tasks as necessary. City of Petaluma and City of American Canyon will implement their respective sub-projects and report through Sonoma Water.

Sonoma Water: budget includes the following under Task 1 (Project Administration):

| Budget Item Description | Qty | Unit | Unit Cost | Total Cost |
|------------------------------------|------------|-------|-----------|---------------------|
| Salaries and Wages | | | | |
| Principal Engineer | 25 | hours | \$ 107.00 | \$ 2,675.00 |
| Administrative Services Officer II | 8 | hours | \$ 72.00 | \$ 576.00 |
| Administrative Services Officer I | 50 | hours | \$ 62.00 | \$ 3,100.00 |
| Department Analyst | 15 | hours | \$ 50.00 | \$ 750.00 |
| Accountant | 50 | hours | \$ 44.00 | \$ 2,200.00 |
| Office Assistant II | 12 | hours | \$ 33.00 | \$ 396.00 |
| SUBTOTAL | 160 | | | \$ 9,697.00 |
| FRINGE BENEFITS | | | | |
| Principal Engineer | 25 | hours | \$ 45.00 | \$ 1,125.00 |
| Administrative Services Officer II | 8 | hours | \$ 33.00 | \$ 264.00 |
| Administrative Services Officer I | 50 | hours | \$ 24.00 | \$ 1,200.00 |
| Department Analyst | 15 | hours | \$ 19.00 | \$ 285.00 |
| Accountant | 50 | hours | \$ 17.00 | \$ 850.00 |
| Office Assistant II | 12 | hours | \$ 16.00 | \$ 192.00 |
| SUBTOTAL | 160 | | | \$ 3,916.00 |
| TOTAL PERSONAL | 160 | | | \$ 13,613.00 |
| CONTRACUAL | | | | |
| County Counsel | 4 | hours | \$ 256.00 | \$ 1,024.00 |
| TOTAL Contractual | 4 | | | \$ 1,024.00 |
| TOTAL DIRECT COSTS | | | | \$ 14,637.00 |
| INDIRECT COSTS | | | | |
| Indirect Costs - 10% | | | | \$ 1,362.00 |
| TOTAL PROJECT COSTS | | | | \$ 15,999.00 |

City of Petaluma: The Tertiary Expansion Project includes upgrades at the existing Ellis Creek Water Recycling Facility (ECWRF) to increase tertiary filtration and disinfection capacity by 2.12 mgd. The existing ECWRF can treat 4.68 mgd to Title 22 tertiary disinfection standards. The project includes the expansion of filtration capacity using cloth filter technology. The project will add banks of UV lamps in an existing, unused channel, and upgrade existing UV lamps to the latest generation technology to match new lamps in the third channel. The project will include other related improvements to the tertiary system. Proposed facilities would provide 2.12 mgd of new tertiary filtration capacity and a project yield of 712 AFY. These improvements would allow the City of Petaluma to produce additional tertiary treated recycled water to meet increasing recycled water demands.

| TASK | DESCRIPTION | COST ESTIMATE |
|------|-------------|---------------|
|------|-------------|---------------|

| | | |
|---|---|-------------|
| 1 | Tertiary Pump Station Expansion | \$470,000 |
| 2 | Tertiary Filter Expansion (Concrete Basin Disk Filters) | \$4,080,000 |
| 3 | UV Upgrade and Expansion | \$2,890,000 |
| 4 | UV Canopy and Existing UV Facility Modifications | \$250,000 |
| 5 | RW Meter Vault and Other Tertiary Modifications | \$160,000 |
| 6 | Existing Filter Modifications and Filter Support HVAC | \$300,000 |
| | SUBTOTAL | \$8,150,000 |
| | Construction Contingencies (12.27%) | \$1,000,000 |
| | TOTAL | \$9,150,000 |

The Amended Tertiary Process Upgrades project elements include:

1. Tertiary Pump Station Expansion: Addition of two tertiary feed pumps to the existing filter feed pump station, modification to flow meter and header piping, and addition of flushing connections.
2. Tertiary Filter Expansion (Concrete Basin Disk Filters): Addition of two cloth media disk filter systems, with connection to the existing filter influent feed channel.
3. UV Upgrade and Expansion: Addition of Suez (Ozonix) UV disinfection equipment (40 HO Gen 2) for the third channel of the existing UV system, and replacement of the existing UV modules with upgraded modules (40HO Gen2) to match the new third channel units.
4. UV Canopy and Existing UV Facility Modifications: Add canopy shade structure; add second acid dip tank for UV modules, replace buried UV Channel drain valves, add channel coating. Addition of power monitoring for the UV power feeder; addition of a UV module rack or support system to be used when modules are to be removed for channel cleaning.
5. RW Meter Vault and Other Tertiary Modifications: Upsize existing tertiary effluent flow meter. Influent channel/box: Replace the 6-inch outlet diffuser pipe with 8-inch outlet diffuser pipe and add grout to slope interior of box to a recessed sump.
6. Existing Filter Modifications and Filter Support HVAC: Slope floor within flocculation basins, replace existing pumps with higher capacity sump pumps, modify meter and bypass piping. Filter Support Building: Air compressor room HVAC upgrades to reduce heat during warm weather.

Detailed line items of construction cost for each objective are presented in the budget. Line items are based on cost estimates formulated by the City and Consultant based on 50% design, prior construction estimates, vendor quotes and ENR construction data. Line item costs include 35% contingency to allow for changes during design; 8.13% sales tax on equipment; general conditions allowance of 15%; and contractor overhead and profit of 12%. Cost estimates include supplies, materials, equipment and labor costs. The estimate also includes an escalation of construction cost, assuming construction begins in June of 2020. Budget includes a construction contingency of 12.27% provided for change orders and revisions during construction.

City of American Canyon: The Recycled Water Distribution System Expansion Project proposes adding several new distribution pipelines in their service area, including the RW2, RW3, RW7, and RW8 described below:

RW2 Spikerush Circle

CIP RW2 consists of the construction of approximately 800 LF of 6-inch recycled water pipelines in Spikerush Circle from Wetlands Edge Road east towards the park. The proposed 6-inch pipeline will connect to an existing 8-inch recycled water pipeline in Wetlands Edge Road. This project will convert irrigation of American Canyon Community Park from potable water to recycled water.

RW3 Benton Way

CIP RW3 consists of the construction of approximately 1,670 LF of 6-inch recycled water pipelines in Benton Way from Wetlands Edge Road to Newbury Way. The proposed 6-inch pipeline will connect to an existing 8-inch recycled water pipeline in Wetlands Edge Road. This project will convert irrigation demands at the Middle School, Community Services and park from potable water to recycled water.

RW7 Dodd Court and Klamath Court

CIP RW7 consists of the construction of approximately 600 LF of 6-inch recycled water pipelines. In Dodd Court, construct approximately 190 LF of 6-inch recycled water pipelines between the Cul-de-Sac and Paoli Loop Road. In Klamath Court, construct approximately 410 LF of 6-inch recycled water pipelines between the Cul-de-Sac and Paoli Loop Road. The proposed 6-inch pipelines will connect to the existing 12-inch recycled water pipeline in Paoli Loop Road. The project will serve existing industrial customers and allow for conversion of irrigation and some process water demands from potable water to recycled water.

Project Budget

Detailed line items of construction cost for each objective are presented in the budget. Line items are based on cost estimates formulated by the City and Consultant based on 50% design, prior construction estimates, vendor quotes and ENR construction data. Cost estimates include supplies, materials, equipment and labor costs. The estimate also includes an escalation of construction cost, assuming construction begins in June of 2020. Budget includes a construction contingency of 25% provided for change orders and revisions during construction. Costs for planning and design are estimated to 23% of construction cost based on City’s experience of projects of similar size and scale. Costs for construction management and inspection are estimated to 8.5% of construction cost based on City’s experience of projects of similar size and scale. The City anticipates utilizing 3rd-party consultants for both design and inspection.

| Description | Quantity | Unit | Unit Cost | Total Cost |
|---|----------|------|-------------|-----------------|
| Mobilization and Demobilization (6%) | 1 | LS | | \$ 23,565.00 |
| Temporary Traffic Control (5%) | 1 | LS | | \$ 19,885.00 |
| SWPPP (5%) | 1 | LS | | \$ 19,885.00 |
| Potholing (10%) | 1 | LS | | \$ 39,770.00 |
| Shoring and Trench Safety (10%) | 1 | LS | | \$ 39,770.00 |
| Dewatering (15%) | 1 | LS | | \$ 59,655.00 |
| Handling, Treatment, and Disposal of Contaminated Soil and GW | 1 | LS | | \$ 39,770.00 |
| 6" Class 200 PVC Water Pipe | 3070 | LF | \$ 110.00 | \$ 337,700.00 |
| Recycle Water Service | 12 | EA | \$ 5,000.00 | \$ 60,000.00 |
| | | | | |
| Total Items 3-11 | | | | \$ 397,700.00 |
| | | | | |
| TOTAL ESTIMATE OF PROBABLE CONSTRUCTION COST | | | | |
| Sub-Total (Rounded) | | | | \$ 640,000.00 |
| | | | | |
| Construction Subtotal (Rounded) | | | | |
| Contingency (25%) (Rounded) | | | | \$ 160,000.00 |
| | | | | |
| Total Estimate of Probably Construction Cost (Rounded) | | | | |
| | | | | \$ 800,000.00 |
| | | | | |
| | PSE | | 23% | \$ 184,856.00 |
| | CM/Insp | | 8.5% | \$ 67,944.00 |
| | TOTAL | | | \$ 1,052,800.00 |