ATTACHMENT 6. MONITORING, ASSESSMENT, AND PERFORMANCE MEASURES

Att6_SWF _Measures_1of1

RD1614 WISCONSIN AVENUE PUMP STATION REPLACEMENT

Reclamation District 1614 (RD1614) will monitor construction bids, expenditures, and progress. There will be start-up testing after pump station completion, periodic visual monitoring by RD 1614 staff, and biennial pump testing. Pump testing will include collection of data related to hydraulics, flow rate, power usage, and pump efficiency. Electrical power use will be recorded on totalizing meters. The Project outfall will be inspected after each storm event to monitor and correct any erosion that may have occurred.

Performance measures and their indicators for this project are presented in Table 15 below.

Table 15 - Project Performance Measures, RD1614 Wisconsin Avenue Pump Station Replacement

Project Objectives and Goals	Desired Outcomes	Performance indicators	Measurement Tools and Methods	Targets
Provide stormflow flood protection for nearly 1,700 homes in the Wisconsin Avenue area of RD1614	Remove existing pump station; install new 30,000 gpm pump station	This objective and outcome will be met by the construction of the project	This objective and outcome will be met by the construction of the project	Constructed RD1614 project by October 2017
No redirected flood impacts; Minimize adverse impacts to agriculture, communities, and the environment	Construct SEWD flood detention facility with capacity adequate to match or exceed RD1614 outfall to Calaveras River	Construction and coordinated operation of SEWD flood detention facility; Combined infiltration and water treatment capacity of at least 67 cfs	This objective and outcome will be met by the construction of the SEWD project and confirming diversion and infiltration capacity	Constructed SEWD project by October 2015
Identify funding and financing for project	Successful Prop 1E Stormwater Grant application; Successful Prop 218 Assessment District creation	Signed Grant contract; Ballots with less than 50% of assessed value voting "no"	Signed Grant contract; Ballots with less than 50% of assessed value voting "no"	Grant award by August 2013; Balloting complete by June 2013
Reduce or eliminate flood insurance requirement	Certification of 100-year flood protection	Project construction and FEMA certification	FEMA certification	Constructed RD1614 project by October 2017
Equitably distribute benefits and costs	Provide flood protection paid for by beneficiaries	Successful Prop 218 Assessment District creation	Ballots with less than 50% of assessed value voting "no"	Balloting complete by June 2013

SEWD Flood Detention and Groundwater Recharge Facility

Stockton East Water District (SEWD) will monitor construction bids, expenditures, and operations progress. Water influent to the flood detention/groundwater recharge facility will be metered. Water quality will be measured at the recharge facility and drinking water treatment plant. The percolation rate of surface water to groundwater will be monitored at various locations including a multi-level monitoring well adjacent to the flood detention/groundwater recharge facility. SEWD is scheduled to adopt a Negative Declaration under CEQA in February 2013. A Project Monitoring and Reporting Program (PMRP) is expected to be implemented upon commencement of Project operations. Groundwater quality will be measured adjacent to the flood detention/groundwater recharge facility at a frequency consistent with the PMRP.

Groundwater monitoring: A minimum of three wells will be selected around the flood detention/groundwater recharge facility in an array that will indicate changes in the hydraulic levels or gradient of the groundwater basin. Water quality sampling will occur on a quarterly or semi-annually basis, but may be more frequent at start-up to establish a baseline.

Surface water quality (influent) monitoring: SEWD currently monitors average daily flow, pH, temperature, color, odor, turbidity, hardness, and alkalinity on a daily basis. This list of monitored constituents is expected to get longer over time.

Performance measures and their indicators for this project are presented in Table 16 below.

Table 16 - Project Performance Measures, SEWD Flood Detention and Groundwater Recharge Facility

Project Objectives and Goals	Desired Outcomes	Performance indicators	Measurement Tools and Methods	Targets
No redirected flood impacts	Construct SEWD flood detention facility with capacity adequate to match or exceed RD1614 outfall to Calaveras River	Construction and coordinated operation of SEWD flood detention facility; Combined infiltration and water treatment capacity of at least 67 cfs	This objective and outcome will be met by the construction of the SEWD project and confirming diversion and infiltration capacity	Constructed SEWD project by October 2015
Ensure the long-term water resource sustainability	Use flood water to replenish overdrafted groundwater basin	Construct flood detention/ groundwater recharge facility; Provide net groundwater recharge	Project constructed; Meter influent flows; Meter groundwater extraction; Monitor groundwater elevations	Constructed SEWD project by October 2015; Average net contribution to the basin of 10,800 acre-feet per year; Slow or reverse decline in groundwater elevation without excessive mounding

Project Objectives and Goals	Desired Outcomes	Performance indicators	Measurement Tools and Methods	Targets
Equitably distribute benefits and costs	Provides urban water supply reliability paid for by beneficiaries	Ability to extract stored groundwater in dry years; Funding agreement with urban water suppliers	Constructed SEWD project; Contribution of surface water exceeding dry-year needs; Funding agreement in place	Constructed SEWD project by October 2015; Average surface water in the Basin to exceed 6,500 acre-feet per year; Funding agreement by December 2013
Maximize efficiency and beneficial use of supplies	Reduce amount of flood flow that would otherwise be conveyed in the Calaveras River channel, and put this water to beneficial use by recharging groundwater for subsequent dry-year use	Capture and recharge of stormflow and other water	Project constructed; Meter influent flows; Meter groundwater extraction; Monitor groundwater elevations	Constructed SEWD project by October 2015; Conjunctive management of average net contribution to the Basin of 10,800 acre-feet per year
Protect and enhance water rights and supplies	Use of SEWD Calaveras River water rights; Increase reliability of dry-year supply	This objective and outcome will be met by the construction of the project	This objective and outcome will be met by the construction of the project	Constructed SEWD project by October 2015
Remediation of groundwater overdraft	Recharge overdrafted Eastern San Joaquin groundwater basin	Sustained higher Basin groundwater levels due to conjunctive flood detention/ groundwater recharge operations	Project constructed; Meter influent flows; Meter groundwater extraction; Monitor groundwater elevations	Conjunctive management of average net recharge of 10,800 acre-feet per year
Prevent further water quality degradation from saline water migration	Decrease or reverse eastward groundwater elevation gradient	Increased water level elevations or slowed water level declines	Monitor groundwater elevations	Increased water level elevations or slowed water level declines
Improve supply reliability	Banks flood flows in aquifer for use in dry years	This objective and outcome will be met by the construction of the project	This objective and outcome will be met by the construction of the project	Constructed SEWD project by October 2015