

Meeting Date: 06/22/2015
Agenda Item: 2.1
Unclassified Manager: G. Hall
Extension: 2750
Director(s): All

CONFORMED COPY

BOARD AGENDA MEMO

SUBJECT: Update on the Expedited Recycled and Purified Water Program

RECOMMENDATION:

Receive update on the District's Expedited Recycled and Purified Water Program.

SUMMARY:

To expand the District's water supply portfolio to meet the long-term needs of Santa Clara County, especially in extended droughts, the District has undertaken initial steps in the Program. The State of California is experiencing exceptional drought conditions. The District's Board has taken a number of actions in response to the drought (e.g. call for 30% water conservation) but, as drought conditions continue, falling groundwater levels increase the risk of land subsidence, which, if it occurs, will impact the infrastructure of the county. One of those actions is to expedite the expansion of the recycled and purified water program as identified in the December 2014 South Bay Water Recycling Master Plan.

At the April 28, 2015, Board meeting, the Board authorized the CEO to negotiate and execute six consulting agreements to initiate work, and continue ongoing work, on the Expedited Recycled and Purified Water Program (Program; including the five projects defined in Table 1, page 5 of 10). This agenda memorandum provides status on the six agreements as well as other Program updates.

BACKGROUND

Board Policy:

The Board's Governance Policies and CEO Interpretations guide development of the recycled water program. The Board's water supply goal related to recycled water is contained in E-2.1-*current and future water supply for municipalities, industries, agriculture and the environment is reliable*. The Board's water supply objectives are contained in the following Ends policies: E-2.1.4: *Protect, maintain and develop recycled water*, and E-2.1.1: *Aggressively protect groundwater from the threat of contamination and maintain and develop groundwater to optimize reliability and to minimize land subsidence and salt water intrusion*. CEO Interpretation of these ends policies calls for the District to develop recycled water to meet at least 10 percent of County demands by 2025. In 2015, staff will develop an update to the CEO Interpretation of these Ends policies as they affect recycled and purified water development.

Prior Information Presented to the Board, and Board Actions:

On March 12, 2015, staff presented to the Board the proposed Program, in which up to 45,000 acre-feet per year (AFY) of purified water will be produced for indirect potable reuse (IPR) to supplement groundwater recharge from other existing sources (imported and local stored water).

The South Bay Water Recycling (SBWR) Master Plan, completed in December 2014, identified four projects to maximize the use of recycled water produced from the City of San Jose's Regional Wastewater Facility. These four projects are listed as items (a) through (d) below. Projects (b), (c) and (d) include expanded purified water treatment facilities at the Silicon Valley Advanced Water Purification Center (SCAWPC). A potential fifth project, the delivery of purified water from the City of Sunnyvale's Water Pollution Control Plant, while not evaluated extensively in the SBWR Master Plan, is also potentially viable. A future expansion of the facilities to provide direct potable reuse (DPR), in which purified water is not recharged into the ground but instead blended with raw water for future treatment and distribution, is also included.

- (a) Ford Recharge Ponds IPR,
- (b) Mid-Basin Injection Wells IPR,
- (c) Los Gatos Recharge Ponds IPR,
- (d) Westside Injection Wells IPR or Central Pipeline DPR, and
- (e) Sunnyvale IPR.

A description of the five projects was provided in the agenda memo presentation at the March 12, 2015 Work Study Session. The location of these projects is shown in Figure 1.

On April 28, 2015, the Board authorized the CEO to execute single source contracts with RMC Water and Environment for preliminary engineering work, Todd Groundwater Inc. for groundwater studies, Main Technology Modeling Group for operations studies, and Carollo Engineers Inc. for pursuing grant funding opportunities. It also authorized the CEO to execute contract amendments with Katz & Associates Inc. for public outreach and MWH Americas Inc. to update the South County Recycled Water Master Plan. Board authorization to the CEO on these four new contracts and two amended contracts extended to a cumulative not-to-exceed amount of \$10 million.

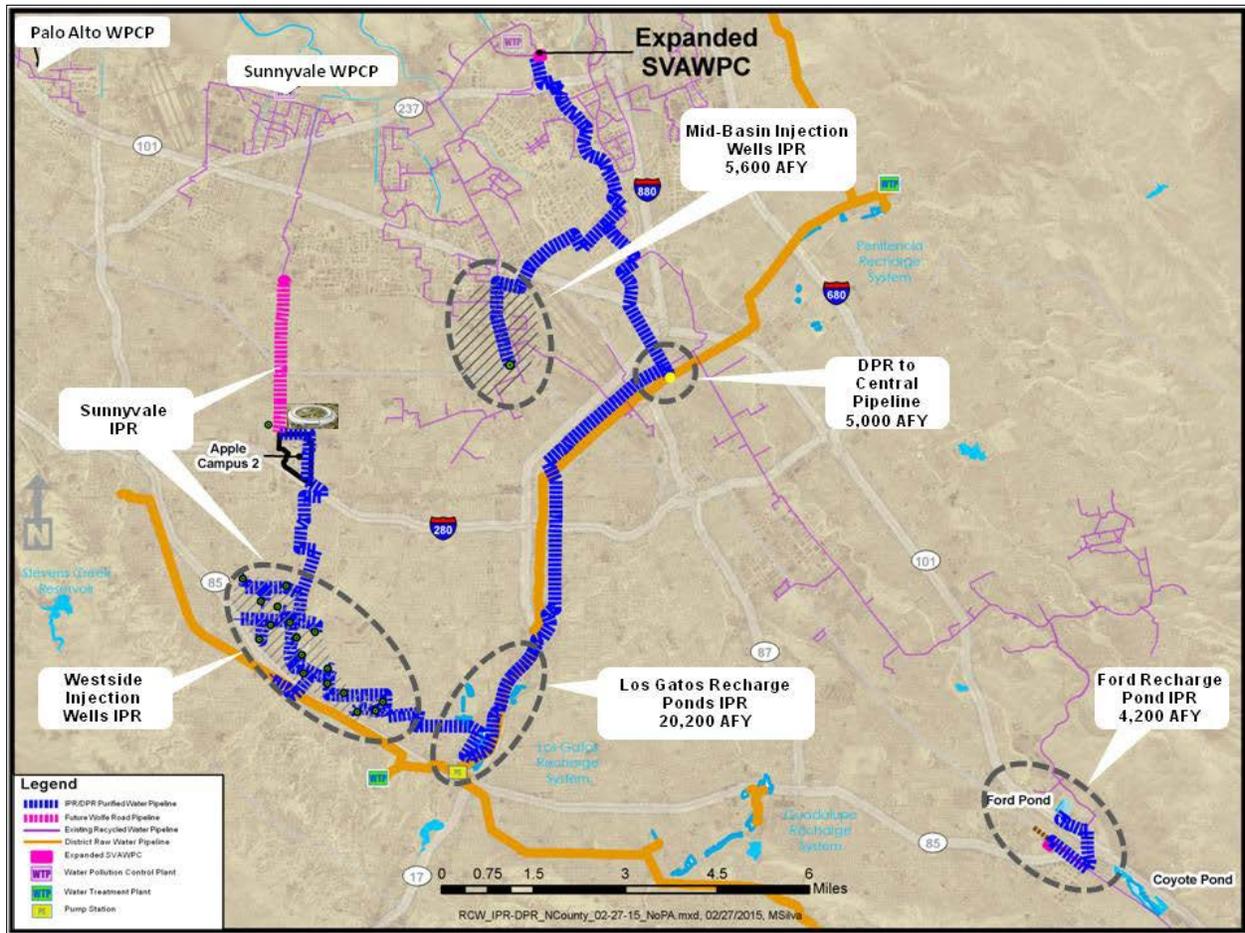


Figure 1: Proposed Purified Water Projects

Figure 2 outlines the estimated schedule for the Expedited Recycled and Purified Program including completion of contracts, CEQA, SVAWPC expansion, IPR project construction and public outreach components.

Table 1 summarizes the capacity, estimated capital costs, and estimated annual operations and maintenance (O&M) costs for the five proposed projects that comprise the Program.

Table 1 – Proposed Projects in Expedited Recycled and Purified Water Program			
Description	Capacity (AFY)	Est. Capital Costs (\$M)⁶	Est. Total O&M Costs (\$M/year)
Ford Recharge Ponds IPR ¹	4,200	\$70	\$4.0
Mid-Basin Injection Wells IPR ²	5,600	\$140	\$3.5
Los Gatos Recharge Ponds IPR ³	20,200	\$260	\$10.0
Westside Injection Wells IPR ⁴ (or Central Pipeline DPR)	5,000 (5,000)	\$120 (\$65)	\$4.0 (\$4.5)
Sunnyvale IPR ⁵	10,000	\$210	\$2.0
Total	45,000	\$800	\$23.5

^{1,2,3,4} South Bay Water Recycling Master Plan; ⁵IPR Treatment Study, Carollo Engineers; ⁶ As presented in the March 12, 2015, agenda memo, these costs are at a planning level of development and should be considered within a range of -20 percent to +100 percent.

UPDATES ON CONSULTANT CONTRACTS:

1. Agreement with RMC Water and Environment — Preliminary Engineering Services

Description:

The agreement will further develop Indirect Potable Reuse (IPR) project concepts presented in the recently completed South Bay Water Recycling Strategic and Master Planning Report. The work will provide refinement of proposed project components as needed to support alternatives analyses, facility plans, and alignment plans. Deliverables will include the following:

- Facility requirements
- Facility siting and conveyance facilities alternatives and evaluations
- Hydraulic assessments
- Constructability evaluations
- Estimated costs, including present worth life-cycle cost analyses
- Implementation options and assessments
- Recommended implementation plans

The deliverables will also include:

- Technical support for reverse osmosis concentrate management including evaluations to support the use of the City of San Jose’s existing Regional Wastewater Facility outfall.
- Technical support for discussions with the Division of Drinking Water (DDW) of the State Water Resources Control Board, and the Regional Water Quality Control Board (RWQCB) regarding project permits.

Results will identify recommended project components with sufficient detail to enable completion of planning study reports and to enable environmental assessments in accordance with California Environmental Quality Act (CEQA) requirements. Additionally, the work will include technical studies related to reverse osmosis concentrate (brine) disposal and assistance with regulatory discussions.

Key component project elements to be evaluated include:

- Mid-Basin Injection Well Facilities.
- Los Gatos Recharge Pond Facilities.
- Westside Injection Well Facilities.
- Conveyance pipelines and pumping stations to distribute water to the above proposed facilities from the South Bay Water Recycling System and the City of Sunnyvale Recycled Water System.
- Ford Recharge Ponds and Coyote Valley Facilities.

Status:

The agreement is currently being negotiated and expected to be executed by July 15, 2015.

2. Agreement with Todd Groundwater Inc. — Groundwater Studies

Description:

This agreement provides numerical modeling of groundwater conditions; constructs critical-path monitoring wells; and evaluates potential for water chemistry changes from IPR projects. Groundwater model refinement and simulations will help assess the effects of IPR projects, predict underground travel times as required by the state Division of Drinking Water, and assess surface water/groundwater interaction near proposed recharge ponds. Four deep monitoring wells will be installed to provide baseline groundwater data. Soil samples will be analyzed to evaluate potential water quality or permeability effects from the recharge of purified water. An IPR Groundwater Monitoring Plan will also be prepared for each site and the consultant will provide support for regulatory issues.

Status:

The agreement was executed on June 2, 2015, for a not-to-exceed amount of \$3,204,594 and a kick-off meeting was held on June 3.

3. Agreement with Maine Technology Modeling Group — Operations Modeling

Description:

Operations modeling analysis studies will determine how the IPR projects could be operated under a range of conditions, including wet, average, and dry years to optimize their beneficial use. The modeling will evaluate benefits and operational issues associated with deploying IPR projects, in various combinations and collectively. Benefits include improved ability to meet

demands and maintain groundwater levels. Questions to be resolved include competition of IPR project output with existing supplies, especially during wet years. Different operational scenarios and implementation timeframes will be evaluated to optimize the beneficial use of existing and new supplies and facilities. The results of the modeling will help the District decide how to maximize the beneficial use of existing and new supplies and facilities while minimizing the risk of stranded assets.

Status:

The agreement with Maine Technology Modeling Group was executed on May 19, 2015. The Contractor is currently working with District staff to incorporate new data, operational requirements, and assumptions into the District's existing water supply system operations model. The next steps include setting up the potable reuse projects in the model, based on information from RMC, and performing modeling runs of various combinations of potable reuse projects.

4. Agreement with Carollo Engineers — Grants Program

Description:

The purpose of the contract is to pursue state and federal funding for the projects included in the Program. Work to be performed under this contract will develop a strategy that defines the project elements in a manner that maximizes funding potential. The strategy will take into consideration many factors including project benefits, costs, schedule, public and political acceptance while comparing against available funding programs, grant amounts, and funding priorities. This work will determine project priorities and will select projects that will provide the public greatest financial value. The consultant will develop a funding strategy and prepare the necessary grant and loan applications for the selected projects.

Status:

The agreement is expected to be executed by July 15, 2015.

5. Amendment to Agreement with MWH — 2015 South County Master Plan Updates

Description:

The District and MWH have an agreement in place to develop the 2015 South County Recycled Water Master Plan update, which will be used by the District and South County Regional Wastewater Authority (SCRWA) to expand the use of tertiary treated recycled water within the South County. The Amendment to the original contract will include development and analysis of additional alternative alignments in both Gilroy and Morgan Hill to evaluate further expansion of recycled water to beyond current distribution alignments. Potential IPR options within the South County area will also be evaluated as part of this Master Plan amendment.

Status:

The amendment is expected to be executed by July 15, 2015.

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6. Amendment to Agreement with Katz & Associates — Communications Outreach Support

Description:

Staff is working to amend an existing contract with Katz & Associates (Katz) to provide communications outreach support and dedicated resources to support the District's expansion of recycled water and potable reuse projects in close coordination and collaboration with District Communications staff. This includes supporting the implementation of the revised 2015 Strategic Communications Plan that will guide overall countywide recycled and purified water communications. Katz will coordinate closely with lead Communications staff assigned to project-specific outreach plans to help support expedited recycled and purified water capital projects. Approximately 95 percent of their original scope of work has already been completed to the satisfaction of District staff on their existing contract.

The current agreement is being amended to add the following program tasks:

- Tour Program Coordination and Resources
- Community Outreach and Program Management
- Stakeholder Outreach and Engagement
- Collateral Material Development
- Optional Support Services

Status:

The amendment is expected to be executed by July 15, 2015.

PLANNED ADDITIONAL CONSULTANT CONTRACTS:

1. Request for Qualifications to Hire External Program Manager

Description:

On April 28, 2015, staff informed the Board of its intention to issue a Request for Qualifications (RFQ) to hire a Project Management team to help manage the four single-source consultant agreements and assist District management with initiating any pertinent strategies in advance of completion of the feasibility-level studies and development of a proposed Program. Based on satisfactory performance, the District may choose to amend the project management agreement to include Program Management Services for design and construction of the capital projects identified in the Program.

Status:

The RFQ was released on June 18, 2015. District staff plans to select a consultant through a competitive process by early August, 2015.

2. Request for Consultant Proposals for Design of the Silicon Valley Advanced Water Purification Center Expansion

Description:

On April 28, 2015, staff informed the Board of its intention to prepare a request for proposals (RFP) to select a consultant to begin design work to expand the SVAWPC. Expansion of the SVAWPC is the cornerstone of IPR projects (b), (c) and (d) identified on page 2 of this Agenda Memorandum.

Status:

Staff is currently evaluating the potential time-saving benefits of a Progressive Design-Build method of project delivery over the District's standard Design-Bid-Build method and Public-Private-Partnership method, and will make a determination and proposal first to District management in July 2015 and to the Board at the July 28, 2015 Board meeting. The release of a request for qualifications or request for proposals will follow.

OTHER PROGRAM UPDATES:

1. CEQA Strategy

Staff has initiated consideration of the requirements under CEQA as they may apply to the Program.

At the same time, staff has tracked and supported "Budget Item 831," a State of California budget trailer bill proposed by other agencies and WateReuse, a non-governmental organization (NGO), to achieve a CEQA exemption for recycled water projects that are approved as an emergency response to the drought. On May 14, Governor Brown released the "May Revise" of the 2015–2016 State Budget. As is customary, the State Budget includes numerous trailer bills that originate from the Governor's Office to be approved through the legislative budgetary process involving the Budget Subcommittee and the full Budget Conference Committee. If not approved in Budget Subcommittee or Committee, these bills may advance to the legislative leaders and the Governor for final consideration. If trailer bills survive this process, they are packaged by subject matter in one bill and voted, up or down, on the floor of each house and, if approved, sent to the Governor for signature.

Budget Item 831, based on the current language, would exempt from CEQA recycled water projects undertaken, carried out or approved by a public agency to mitigate drought conditions for which the Governor has proclaimed a state of emergency. If it is enacted, staff believes that the District may have an opportunity to obtain an exemption for the Program or significant elements of it. Staff believes an exemption may allow the Program timeline to be shortened significantly. Figure 2 includes the timeline for CEQA, if undertaken for the Program, and illustrates that at least one year may be eliminated from the overall schedule.

Even if Trailer Bill 831 is enacted, staff will evaluate all options for environmental clearance, including a normal CEQA process, and solicit Board guidance or decision, as applicable. If a CEQA exemption is recommended, staff's recommendation will include a description of the environmental assessment and mitigation actions that will be undertaken notwithstanding the CEQA exemption, and the approach to be used to determine mitigation for any environmental impacts.

2. Focused Program Management

Once the Board approves a proposed Program Management consultant agreement, the CEO will organize the majority of work required to execute the Program under the direction of the Program Manager, with the Program Manager reporting directly up to the Chief level. Various staff or Program Management consultant Leads will be appointed and placed under direction of the Program Manager. These Leads will likely include Technical, Partnerships and Outreach, Legal, and Financial. The Water Utility Enterprise divisions will continue with existing structure and assignments; however, substantial assignments needed to execute the Program will be under the direction of the Program Manager, and will report in matrix format (organizational structure where staff may report to more than one manager) to the Program Manager. Organization and management of the work in this way will provide accountability placed at a high level in the organization and dedicated focus of key Lead individuals.

3. Estimation of Impacts to Groundwater Production Charges

In the March 12, 2015 special Board meeting at which the proposed Program was presented, Board members asked staff for an indication of the impact of the Program on the groundwater production charges. Staff has now prepared a preliminary estimate based on development of a schedule of the full \$800 million Program.

As a reference point, between FY 2016-17 and FY 2020-21, the Zone W2 M&I groundwater production charge is currently projected to increase an average of 9.5% per year. With the Program in place and no additional funding (such as grants) applied, the groundwater production charge projection is preliminarily projected to increase an average of 14.6% per year over the same time period. Consequently, the Program is expected to incrementally increase the groundwater production charge an average of 5.1% per year.

FINANCIAL IMPACT:

The staff recommendation to receive an update on the District's Recycled and Purified Water Program has no financial impacts.

CEQA:

The recommended action does not constitute a project under CEQA because it does not have a potential for resulting in direct or reasonably foreseeable indirect change in the physical environment.

ATTACHMENTS:

Attachment 1: PowerPoint Presentation providing an "Update on the Expedited Recycled and Purified Water Program"

Update on the Expedited Recycled and Purified Water Program

June 22, 2015

Our mission is to provide Silicon Valley safe, clean water for a healthy life, environment, and economy.

Recap

- March 12, 2015 Board Study Session – Expedited Recycled and Purified Water Program (Program) defined
- April 28, 2015 – Board approved CEO authority to execute consultant contracts in amount not to exceed \$10 M
- Staff committed regular updates to the Board

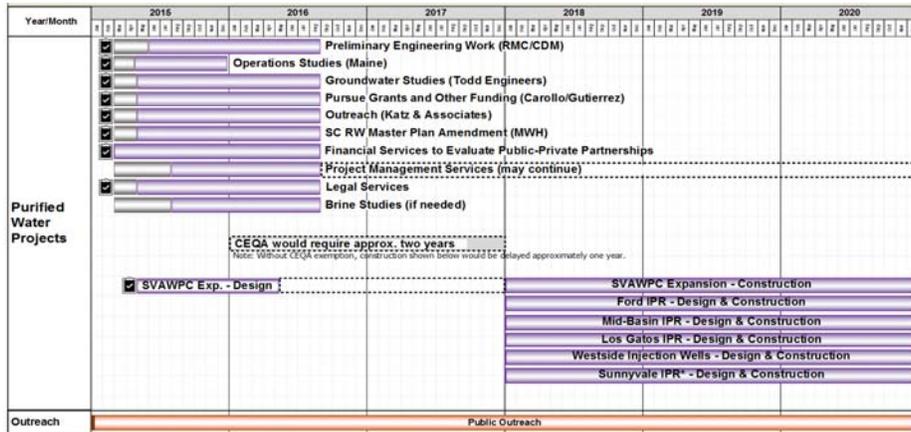
Update Content

1. Schedule

2. Topics

Consultant Contracts	Design/ Construction	CEQA/ Permits	Cost/ Rates	Organization	Partnerships	Outreach
Status of six contracts	Information on next steps	Information on possible CEQA exemption	Preliminary estimate of rates with Program	Update on Program Management	Today's second agenda item	No updates at this time

Schedule



*Note: The Sunnyvale IPR Project Schedule may be extended to 2026.

(Rev. 5/27/2015, 11 am)

-  = Securing Contract. This includes Request For Qualifications (RFQ), negotiations, and contract execution.
-  = Conducting Work. This includes work prepared by consultant(s).
-  = Work underway.

Consultant Contracts

	Contracts	Cost	Execution Status (projected)
1	Preliminary Engineering Services – RMC/CDM	\$5,176,000	(July 15, 2015)
2	Groundwater Studies – Todd Groundwater	\$3,204,594	Executed
3	Operation Studies – Maine Technology	\$162,750	Executed
4	Securing Grants – Carollo Engineers	\$435,213	(July 15, 2015)
5	Public Outreach – Katz & Associates	\$599,140	(July 15, 2015)
6	South County Recycled Water Master Plan – MWH	\$152,762	(July 15, 2015)

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Design/Construction

Request for Consultant Proposals for Design of the Silicon Valley Advanced Water Purification Center Expansion

- Evaluating Progressive Design/Build method vs. Design/Bid/Build
- Recommendation to Board by August 2015
- RFQ/RFP will follow Board approval to proceed

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CEQA/Permits

- The normal CEQA process is expected to take two years
- However, efforts underway in the State Capital may produce legislation allowing CEQA exemption related to the Governor's Executive Order
- Irrespective of the CEQA timeline, State agency permitting for the Program is a critical-path activity; an early start will be essential
- Staff will review all options for CEQA clearance and permitting, and return to the Board for direction

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Cost/Rates

Over the period FY17 through FY21 (North County)

- Without Program: M&I groundwater production charge is projected to increase an average of 9.5% per year
- With Program (and no additional funding applied) groundwater production charge is projected to increase an average of 14.6% per year
- Consequently, the Program is expected to increase the groundwater production charge projection by an average of 5.1% per year

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Organization

Request for Qualifications to Hire External Program Manager

- RFQ released June 18, 2015
- Consultant selection expected by August 2015

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Outreach

No updates at this time

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Questions