

RECLAMATION

Managing Water in the West

Water Infrastructure Improvements for the Nation Act of 2016 (Pub. L. 114-322), Title XVI Water Resources Development Section 4009(c):

Feasibility Study Review Findings

January 2018

Prepared for

United States Congress

Prepared by

**U.S. Department of the Interior
Bureau of Reclamation**



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Bureau of Reclamation**

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Mission Statements

The U.S. Department of the Interior protects America's natural resources and heritage, honors our cultures and tribal communities, and supplies the energy to power our future.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

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Eligible Projects

This periodic report is provided in accordance with Water Infrastructure Improvements for the Nation (WIIN) Act of 2016 (Pub. L. 114-322), Title I Water Resources Development Section 4009(c). The purpose of this report is to provide a summary of each of the review findings for Title XVI feasibility studies reviewed, completed, and not previously transmitted to Congress prior to October 1, 2017 that meet the established requirements as defined in the Bureau of Reclamation (Reclamation) Manual Directives and Standards WTR-11-01 and under section 1604 of Pub. L. 102-575, as amended. Reclamation has contacted entities with active projects to confirm that their project should be included in this transmission. Based on communication with the project sponsors the following list of completed feasibility studies is provided:

- City of Anaheim (California), Anaheim Recycled Water Project
- City of Benicia (California), Benicia Water Reuse Project
- City of Camarillo (California), North Pleasant Valley Desalter Facility
- City of Mountain View (California), Recycled Water Project
- Irvine Ranch Water District (California), Syphon Reservoir Improvement Project
- Santa Margarita Water District (California), San Juan Groundwater Basin Recharge, Reclamation, & Reuse Project

This list of projects eligible to compete for funding will be added to the list transmitted previously and will be amended as subsequent reports are provided to Congress as additional feasibility studies are completed and reviewed.

Summary of Results

This report includes a brief one page summary of the results of each feasibility study review under WTR 11-01, including the following determinations:

- The feasibility study report meets the requirements of a feasibility study as defined under section 1604 of Pub. L. 102-575, as amended.
- The feasibility study, and the process under which the study was developed, each comply with Federal laws and regulations applicable to feasibility studies of Title XVI projects.
- The project is technically and financially feasible and provides a Federal benefit in accordance with the reclamation laws.

The WIIN Act identifies that within 180 days of receipt of a feasibility study a letter will be provided to Congress summarizing the results of the review. Per the requirements under the WIIN Act, all reviews that have taken place since the passage of the Act are included in this transmission to meet that 180 calendar day requirement. All future reviews shall take no longer than 180 calendar days, excluding the periods when Reclamation is waiting for additional information from the study lead.

Project specific reports are provided to summarize the results of each feasibility study review, provide a brief project description, and identify conditions.

City of Anaheim

Project Sponsor: City of Anaheim

Location: Anaheim, California

Project: Anaheim Recycled Water Project

Total Estimated Project Cost: \$13,170,000

Date Completed: January 11, 2013¹

Short Project Description: The City of Anaheim has been evaluating various options to diversify its water supply portfolio through development of local drought-proof supplies such as recycled water in order to reduce its dependence on imported water. The recommended project will provide approximately 1,775 acre-feet per year of recycled water on an average annual basis through nearly 130 service connections. Major infrastructures for the proposed project include approximately 10.5 miles of new pipes, a pump station, and a potable water backup tank. The recycled/non-potable water will be applied primarily towards commercial air conditioning cooling towers, commercial laundry facilities, toilet and urinal flush water in new dual plumbing buildings, and parks, schools, and streetscape/landscape irrigation.

Feasibility Study Review Finding: The feasibility study report meets the requirements of a feasibility study as defined under section 1604 of Pub. L. 102-575, as amended. The feasibility study, and the process under which the study was developed, each comply with Federal laws and regulations applicable to feasibility studies of desalination and water recycling projects. The project is technically and financially feasible and provides a Federal benefit in accordance with the reclamation laws.

Funding Conditions:

- Reclamation will include the City of Anaheim Recycled Water Project on a publicly available list of entities on the Bureau of Reclamation website who have completed a feasibility study that has been determined to meet program requirements.
- The project sponsor is eligible to apply for funding through an annual competitive funding opportunity announcement, but the total Federal funding received towards the planning, design, and construction of this project may not exceed 25 percent of the total cost of the project or \$20 million, whichever is less.
- Planning, design, and construction activities completed prior to the transmission of this list of eligible projects or outside of the scope of the project described in the completed feasibility study are not eligible for funding.
- Prior to receiving Federal funding the project must comply with all applicable environmental laws, including the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.).
- Prior to receiving Federal funding the project sponsor must demonstrate that it is financially capable of funding the non-Federal portion of project construction costs and all necessary project operation, maintenance, and replacement costs, pursuant to Bureau of Reclamation Manual Directives and Standards WTR-11-02.

¹ In September 2017, the project sponsor contacted Reclamation to confirm that this project is active and to request that the project be included in this transmission.

City of Benicia

Project Sponsor: City of Benicia

Location: Benicia, California

Project: Benicia Water Reuse Project

Total Estimated Project Cost: \$20,100,000

Date Completed: October 12, 2017

Short Project Description: The City of Benicia is exploring water supply options for water and wastewater services for approximately 28,000 residents within its service area. The City evaluated the feasibility of producing and delivering recycled water to the Valero Benicia Refinery for cooling tower makeup water and to other City customers for landscape irrigation. The recommended project consists of producing up to 2 million gallons per day of recycled water at the City's wastewater treatment plant and delivering it to the Refinery via a new recycled water conveyance pipeline. The project will offset up to 2,000 acre-feet per year of raw water deliveries to the refinery and approximately 30 to 40 acre-feet per year of potable water irrigation demands.

Feasibility Study Review Finding: The feasibility study report meets the requirements of a feasibility study as defined under section 1604 of Pub. L. 102-575, as amended. The feasibility study, and the process under which the study was developed, each comply with Federal laws and regulations applicable to feasibility studies of desalination and water recycling projects. The project is technically and financially feasible and provides a Federal benefit in accordance with the reclamation laws.

Funding Conditions under the Competitive Grant Program:

- Reclamation will include the City of Benicia Water Reuse Project on a publicly available list of entities on the Bureau of Reclamation website who have completed a feasibility study that has been determined to meet program requirements.
- The project sponsor is eligible to apply for funding through an annual competitive funding opportunity announcement, but the total Federal funding received towards the planning, design, and construction of this project may not exceed 25 percent of the total cost of the project or \$20 million, whichever is less.
- Planning, design, and construction activities completed prior to the transmission of this list of eligible projects or outside of the scope of the project described in the completed feasibility study are not eligible for funding.
- Prior to receiving Federal funding the project must comply with all applicable environmental laws, including the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.).
- Prior to receiving Federal funding the project sponsor must demonstrate that it is financially capable of funding the non-Federal portion of project construction costs and all necessary project operation, maintenance, and replacement costs, pursuant to Bureau of Reclamation Manual Directives and Standards WTR-11-02.

City of Camarillo

Project Sponsor: City of Camarillo

Location: Camarillo, California

Project: North Pleasant Valley Desalter Facility

Total Estimated Project Cost: \$37,408,893

Date Completed: October 11, 2017

Short Project Description: The City of Camarillo evaluated a groundwater treatment program to develop a reliable, high quality, local water supply. The recommended project is the North Pleasant Valley Desalter Facility, which will produce potable drinking water for the City of Camarillo. The facility is a key component of the regional solution to address impaired groundwater in the Calleguas Creek Watershed. This effort to desalinate groundwater will be a critical aspect of the City's future drinking water supply portfolio because of reduced production due to poor quality groundwater, the State of California experiencing a severe drought, and significant water restrictions imposed on imported water supplies.

Feasibility Study Review Finding: The feasibility study report meets the requirements of a feasibility study as defined under section 1604 of Pub. L. 102-575, as amended. The feasibility study, and the process under which the study was developed, each comply with Federal laws and regulations applicable to feasibility studies of desalination and water recycling projects. The project is technically and financially feasible and provides a Federal benefit in accordance with the reclamation laws.

Funding Conditions:

- Reclamation will include the City of Camarillo North Pleasant Valley Desalter Facility on a publicly available list of entities on the Bureau of Reclamation website who have completed a feasibility study that has been determined to meet program requirements.
- The project sponsor is eligible to apply for funding through an annual competitive funding opportunity announcement, but the total Federal funding received towards the planning, design, and construction of this project may not exceed 25 percent of the total cost of the project or \$20 million, whichever is less.
- Planning, design, and construction activities completed prior to the transmission of this list of eligible projects or outside of the scope of the project described in the completed feasibility study are not eligible for funding.
- Prior to receiving Federal funding the project must comply with all applicable environmental laws, including the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.).
- Prior to receiving Federal funding the project sponsor must demonstrate that it is financially capable of funding the non-Federal portion of project construction costs and all necessary project operation, maintenance, and replacement costs, pursuant to Bureau of Reclamation Manual Directives and Standards WTR-11-02.

City of Mountain View

Project Sponsor: City of Mountain View

Location: Mountain View, California

Project: Recycled Water Project

Total Estimated Project Cost: \$28,300,000

Date Completed: February 10, 2015²

Short Project Description: The City of Mountain View conducted a Recycled Water Feasibility Study to determine the feasibility of expanding the existing recycled water system to replace or augment existing irrigation or process supplies in the City of Mountain View. The Recommended Project is divided into three phases, short-term, mid-term, and long-term. All project phases include distribution pipe lines and pump stations that build on each phase to further expand the system. The expansion of recycled water service within the City will lessen the demand for potable water and help the City meet the requirements of the State of California's Water Conservation Act of 2009, which requires a 20 percent reduction in urban per capita water use by the year 2020 and increase the water system's reliability since recycled water is a drought-resistant resource.

Feasibility Study Review Finding: The feasibility study report meets the requirements of a feasibility study as defined under section 1604 of Pub. L. 102-575, as amended. The feasibility study, and the process under which the study was developed, each comply with Federal laws and regulations applicable to feasibility studies of desalination and water recycling projects. The project is technically and financially feasible and provides a Federal benefit in accordance with the reclamation laws.

Funding Conditions:

- Reclamation will include the Mountain View Recycled Water Project on a publicly available list of entities on the WaterSMART Title XVI Program website who have completed a feasibility study that has been determined by Reclamation to meet program requirements.
- The project sponsor is eligible to apply for funding through an annual competitive funding opportunity announcement, but the total Federal funding received towards the planning, design, and construction of this project may not exceed 25 percent of the total cost of the project or \$20 million, whichever is less.
- Planning, design, and construction activities completed prior to the transmission of this list of eligible projects or outside of the scope of the project described in the completed feasibility study are not eligible for funding.
- Prior to receiving Federal funding the project must comply with all applicable environmental laws, including the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.).
- Prior to receiving Federal funding the project sponsor must demonstrate that it is financially capable of funding the non-Federal portion of project construction costs and all necessary project operation, maintenance, and replacement costs, pursuant to Bureau of Reclamation Manual Directives and Standards WTR-11-02.

² In September 2017, the project sponsor contacted Reclamation to confirm that this project is active and to request that the project be included in this transmission.

Irvine Ranch Water District

Project Sponsor: Irvine Ranch Water District
Location: Orange County, California
Project: Syphon Reservoir Improvement Project
Total Estimated Project Cost: \$83,800,000
Date Completed: August 22, 2017

Short Project Description: Irvine Ranch Water District is a California Water District located in Orange County, California which provides potable and recycled water supplies, sewage collection, treatment and water recycling services. The district evaluated alternatives for increasing its recycled water storage and investigated the engineering feasibility of expanding the capacity of the Syphon Reservoir along with other improvements to the facility. The Syphon Reservoir located in Irvine, California, within the service area, was historically used to store agricultural irrigation water, but was purchased by the district in 2010 to store recycled water. The proposed Syphon Reservoir Improvement Project includes replacement of the existing 59-foot high Syphon Dam with a new 136-foot high embankment dam. Additional facilities will also be needed for the expanded use, including a pumping station and 8,000-foot long pipeline. The Syphon Reservoir Improvement Project, is recommended to meet the district's additional recycled water seasonal storage needs of 4,100 acre-feet per year.

Feasibility Study Review Finding: The feasibility study report meets the requirements of a feasibility study as defined under section 1604 of Pub. L. 102-575, as amended. The feasibility study, and the process under which the study was developed, each comply with Federal laws and regulations applicable to feasibility studies of desalination and water recycling projects. The project is technically and financially feasible and provides a Federal benefit in accordance with the reclamation laws.

Funding Conditions:

- Reclamation will include the Irvine Ranch Water District Syphon Reservoir Improvement Project on a publicly available list of entities on the WaterSMART Title XVI Program website who have completed a feasibility study that has been determined by Reclamation to meet program requirements.
- The project sponsor is eligible to apply for funding through an annual competitive funding opportunity announcement, but the total Federal funding received towards the planning, design, and construction of this project may not exceed 25 percent of the total cost of the project or \$20 million, whichever is less.
- Planning, design, and construction activities completed prior to the transmission of this list of eligible projects or outside of the scope of the project described in the completed feasibility study are not eligible for funding.
- Prior to receiving Federal funding the project must comply with all applicable environmental laws, including the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.).
- Prior to receiving Federal funding the project sponsor must demonstrate that it is financially capable of funding the non-Federal portion of project construction costs and all necessary project operation, maintenance, and replacement costs, pursuant to Bureau of Reclamation Manual Directives and Standards WTR-11-02.

Santa Margarita Water District

Project Sponsor: Santa Margarita Water District

Location: Santa Margarita, California

Project: San Juan Groundwater Basin Recharge, Reclamation, & Reuse Project

Total Estimated Project Cost: \$308,000,000

Date Completed: October 11, 2017

Short Project Description: Santa Margarita Water District in conjunction with the San Juan Basin Authority has been actively pursuing development and expansion of groundwater production, while ensuring recharge, preservation and sustainability of the local water resources. Based on the analysis performed, the San Juan Watershed Project implementation plan includes (i) adaptive production management which consists of the continuation of existing monitoring, reporting, and policies to limit water rights permits, (ii) construction of rubber dams to increase storm water recharge within San Juan Creek and the Arroyo Trabuco, and construction of recycled water recharge and recovery facilities. The project will be implemented through a phased approach ultimately estimated to yield 5,100 to 8,220 acre-feet per year of supply.

Feasibility Study Review Finding: The feasibility study report meets the requirements of a feasibility study as defined under section 1604 of Pub. L. 102-575, as amended. The feasibility study, and the process under which the study was developed, each comply with Federal laws and regulations applicable to feasibility studies of desalination and water recycling projects. The project is technically and financially feasible and provides a Federal benefit in accordance with the reclamation laws.

Funding Conditions:

- Reclamation will include the Santa Margarita Water District San Juan Groundwater Basin Recharge, Reclamation, & Reuse Project on a publicly available list of entities on the WaterSMART Title XVI Program website who have completed a feasibility study that has been determined by Reclamation to meet program requirements.
- The project sponsor is eligible to apply for funding through an annual competitive funding opportunity announcement, but the total Federal funding received towards the planning, design, and construction of this project may not exceed 25 percent of the total cost of the project or \$20 million, whichever is less.
- Planning, design, and construction activities completed prior to the transmission of this list of eligible projects or outside of the scope of the project described in the completed feasibility study are not eligible for funding.
- Prior to receiving Federal funding the project must comply with all applicable environmental laws, including the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.).
- Prior to receiving Federal funding the project sponsor must demonstrate that it is financially capable of funding the non-Federal portion of project construction costs and all necessary project operation, maintenance, and replacement costs, pursuant to Bureau of Reclamation Manual Directives and Standards WTR-11-02.

Note: Estimated project costs include the total capital costs estimated to implement all project phases.