



Santa Paula Water Recycling Facility



The City of Santa Paula, California relied on an innovative project delivery model to build a new privately-owned and operated wastewater treatment facility, taking advantage of private capital as well as integrated design, construction and operations. While the plant came online ahead of schedule and was recognized for its innovative, high performance design, perceptions about the high cost of private capital led the City to issue tax-exempt debt to buy back the facility five years after its completion.

The Santa Paula Water Recycling Facility is an example of a performance-based infrastructure project delivery mechanism. Faced with very aggressive and potentially costly wastewater discharge compliance deadlines (\$8 million in potential fines), the City of Santa Paula entered into a Design Build Operate and Finance (DBOF) agreement with a private entity. An important goal of using the DBOF model was to shift key elements of construction and finance risk to the private sector with the goal of expediting construction and encouraging cost effective creativity and innovation. The plant went online well in advance of the compliance deadline and was recognized by multiple organizations for its creativity and design. The City then decided to exercise a contractual buyout clause and purchase the facility from the private owners five years into the 30-year contract, a possibility that was envisioned at the outset of the project. City staff, their advisors, project bidders, and members of the City Council heavily debated the financial value and benefits of different risk allocation decisions, both during project procurement and after the project was completed. Ultimately, the

City chose to take over a significant amount of risk associated with capital replacement and operation from the private sector and lower capital cost by funding the buyout with low interest tax-exempt revenue bond financing.

Key Project Details

Table 1. Key Project Details

| | |
|----------------------------------|--|
| Project Title: | Santa Paula Water Recycling Facility |
| Primary Facility/Service: | Wastewater treatment and water reuse (3.4 MGD, expandable to 4.2 MGD) |
| Local Government Entity: | Santa Paula Utility Authority and City of Santa Paula |
| Primary Partner: | Santa Paula Water, LLC, a special purpose entity owned by Alinda Capital Partners (capital investor) and contracted with PERC Water Corporation (project developer and DBO firm) |
| Project Lenders: | DZ Bank and CoBank (lenders to Santa Paula Water, LLC) |
| City's Primary Advisors: | Carollo Engineers (engineering), FCS (financial analysis), and Richards, Watson, and Gershon (legal services) |
| Delivery Model: | Design Build Operate Finance (DBOF) |
| Contract Period: | 30 years |
| Population Served: | Approximately 29,000 people; 7,000 residential and non-residential connections ¹ |
| Major Initial Outlays: | \$62 million (initial capital cost of the Water Recycling Facility and related facilities) |
| Flow of Revenues: | Santa Paula collects wastewater fees from retail customers and uses revenue to pay contractually required capital and operating fees. In addition, the City collects development impact fees and connection fees from new customers. |

Background

The City of Santa Paula in Ventura County, California promotes itself as the “Citrus Capital of the World.” The City’s Public Works Department directly manages a drinking water system that includes two treatment plants and serves 29,000 people. The Public Works Department also administers an operations contract with American Water to manage the wastewater collection system.²

Prior to 2010, the City relied on a wastewater treatment plant that had originally been constructed in 1939 and was not meeting regulatory standards.³ It also did not have sufficient capacity to meet the future growth needs of the City. In 2006, the Los Angeles Regional Water Quality Control Board threatened to fine the City over \$8 million if it did not stop releasing non-compliant discharges into the Santa Clara River.⁴ In September of 2007, the City entered into a consent decree with the Regional Water Quality Control Board. To avoid fines, Santa Paula needed to come into compliance by December 2010.⁵

In order to construct new, compliant facilities, the City decided to abandon the Design-Bid-Build (and public ownership) approach in favor of a Design-Build-Operate-Finance (DBOF) public-private partnership. After an approximate 9 month procurement process, the City entered into an agreement with Santa Paula Water, LLC, a team made up of PERC Water Corporation (PERC Water) and Alinda Capital Partners, a large infrastructure investment fund, to design, construct, finance, own and operate a new wastewater treatment facility (referred to as a water recycling facility) with high quality effluent that could be recycled for beneficial purposes. The resulting Santa Paula Water Recycling Facility went online in 2010, seven months ahead of the compliance deadline.

¹ 2015 Wastewater Enterprise Revenue Bonds Official Statement, Series A and Series B. Santa Paula Utility Authority. April 14, 2015.

² Public Works Department Description. City of Santa Paula. <http://ci.santa-paula.ca.us/PublicWorksDept.htm>

³ 2015 Wastewater Enterprise Revenue Bonds Official Statement, Series A and Series B. Santa Paula Utility Authority. April 14, 2015

⁴ Final Report: Santa Paula Waste Water Treatment Plant. Ventura County Grand Jury. June 26, 2013.

http://vcportal.ventura.org/GDJ/docs/reports/2012-13/Santa_Paula_Waste_Water_Treatment_Plant.pdf

⁵ 2015 Wastewater Enterprise Revenue Bonds Official Statement, Series A and Series B. Santa Paula Utility Authority. April 14, 2015.

The plant was built entirely with private capital. The City did not have to borrow funds or contribute any upfront capital.⁶ According to some sources, the Santa Paula Water Recycling Facility was the first fully privately-funded wastewater treatment/water recycling facility in the country,⁷ as well as the first facility created under California's Government Code Section 5956, which authorizes public-private partnerships for specific types of infrastructure projects.⁸

The plant blends in with the nearby community. The entire facility footprint uses less than two acres of land but provides capacity of 4.2 MGD, with all process tanks constructed underground. The underground plant includes an influent sewer lift station, three digester tanks, three anoxic tanks, three aerobic tanks, a UV disinfection system, a foam control system, two flow equalization tanks, a membrane bioreactor, bio solids treatment, and an odor control system. Treated effluent from the plant is recycled into the environment in outdoor percolation ponds within a larger 13-acre site.⁹

In 2011, the project received a P3 innovation award from the National Council for Public-Private Partnerships.¹⁰ The project has also received awards from the Design-Build Institute of America, Global Water Intelligence, and the Environmental Business Journal.¹¹

While the plant meets most effluent standards, it was not designed or intended to reduce the discharge of chlorides (attributed to the use of private household water softeners), leading to disagreement between the City and Santa Paula Water, LLC as to whether the facility should treat for chloride removal. A Ventura County Grand Jury found that installing technology at the plant to remove the chlorides was not part of the Request for Proposals (RFP) or DBOF contract. The Grand Jury report also recommended that the City take advantage of low interest tax-exempt bonds and buy the plant from Santa Paula Water, LLC.¹² Since the buying of the facility, the City has embarked on its previously planned water softener repurchase program, a strategy the City originally intended to use to comply with its chloride discharge requirements.¹³

In April 2015, the Santa Paula City Council approved issuing bonds to buy back the facility from Santa Paula Water, LLC. PERC Water continued to operate the plant. The City intended to enter into a new operating agreement in 2016 with one of three operators, including PERC Water.

Project Development and Procurement

The City engaged a local engineering firm to develop plans for a new wastewater treatment facility in the early 2000s. The engineer developed a 30 percent complete design and calculated cost estimates for the eventual construction price. The early estimates were between \$80 and \$100 million dollars, leading to significant concern over the City's ability to afford the facility.¹⁴

⁶ *Santa Paula Water Recycling Facility Receives Prestigious 2011 Public-Private Partnership Award For Innovation*. Water Online. August 24, 2011. <http://www.wateronline.com/doc/santa-paula-water-recycling-facility-receives-0001>

⁷ *Santa Paula Water Recycling Facility Receives Prestigious 2011 Public-Private Partnership Award For Innovation*. Water Online. August 24, 2011. <http://www.wateronline.com/doc/santa-paula-water-recycling-facility-receives-0001>

⁸ *Santa Paula Water Recycling Facility, United States of America*. Water Technology. <http://www.watertechnology.net/projects/santapaularecycling/>

⁹ *Santa Paula Water Recycling Facility Receives Prestigious 2011 Public-Private Partnership Award For Innovation*. Water Online. August 24, 2011. <http://www.wateronline.com/doc/santa-paula-water-recycling-facility-receives-0001>

¹⁰ *ibid.*

¹¹ *ibid.*

¹² http://vcportal.ventura.org/GDJ/docs/reports/2012-13/Santa_Paula_Waste_Water_Treatment_Plant.pdf

¹³ Boyd-Barrett, Claudia. *Santa Paula launches water softener buyback program*. Ventura County STAR. September 18, 2015.

¹⁴ John Quinn (Former Finance Director, City of Santa Paula), Email Correspondence with Author, October 13, 2016.

The City was considering alternative options when the Regional Water Quality Board began to threaten significant fines for non-compliance. The consent decree that the City eventually entered into with the Regional Water Quality Board had such an aggressive timeline that the City believed it would be unable to complete the project following a traditional procurement method.¹⁵

In October 2007, the City selected four teams to receive the Request for Proposals for the new facility. The four teams were EPCOR, Veolia, PERC Water, and American Water. The Environmental Impact Report (EIR) and Request for Proposals specified the type of treatment technology (Membrane Bioreactor), but left many design elements open and encouraged “creativity” and innovation.¹⁶

On February 4, 2008 PERC Water and Veolia Water submitted proposals for the new facility. American Water and EPCOR declined to participate, citing scheduling constraints. After receiving the two proposals, the City negotiated independently with each team to reduce costs through further innovation. On March 17, 2008 PERC Water and Veolia submitted Best and Final Offers. According to the City, both proposals were technically in compliance with the RFP and showed innovation.

City staff prepared a selection memo for an April 7, 2008 City Council meeting recommending that the City Council select the Veolia team. The memo included detailed technical memos from the City’s technical advisor (Carollo Engineers) and finance advisors (FCS). The analysis presented in the memo identified strengths of both proposals and referred to both proposals as being “thoughtful” and “creative”, but the memo concluded that the experience of Veolia and the cost of the project in the form of a lower calculated Net Present Value (NPV) supported the Veolia team.¹⁷ The financial analysis included in the selection memo listed the calculated NPV of PERC Water as \$169,549,150 and the NPV of the Veolia proposal as \$145,562,570.¹⁸ One of the financial advisors who helped evaluate the project commented that comparing the two proposals was challenging as PERC Water provided a set stream of anticipated capital payments and Veolia proposed that the City take responsibility for financing the project with tax-exempt debt, something that had not originally been envisioned in the RFP.¹⁹ In addition, the teams proposed multiple payment stream options, including one that involved level payments over the course of the contract term and another that involved payments that increased over time to allow for more gradual rate impacts.²⁰

City Council convened at its regularly scheduled meeting on April 7, 2008, discussed the project without making a formal selection decision, and asked staff to compile additional information. Both Veolia and PERC Water submitted additional information on April 10th, and the City Council reconvened on April 15th, the day the City was required to notify the Regional Water Control Board that the selection had been made. After reviewing the information, City staff and the City’s advisors prepared an additional memo for the City Council including a recommendation for the project to be awarded to Veolia.²¹ However, there was no clear consensus at the City Council meeting on April 15th. In the end, City Council voted 3 to 2 to proceed with PERC Water and instructed staff to negotiate an agreement.²² The progress of the negotiation was discussed at an April 28th City Council Meeting and the City Council directed staff to continue negotiations with the PERC Water/Alinda team. City Council also asked staff to solicit an alternative proposal from PERC Water for a DBO delivery method using City-provided capital (i.e. tax-exempt bonds), which was submitted by PERC Water on May 2, 2008.

¹⁵ *ibid.*

¹⁶ *Memorandum: Water Recycling Facility (WRF) – Selection of Team to Design, Build, Operate, and Finance the new WRF.* City of Santa Paula. April 2, 2008.

¹⁷ *ibid.*

¹⁸ *ibid.*

¹⁹ Ed Cebron (Former Principle in Charge, FCS Group), phone correspondence with author, October 6, 2016.

²⁰ *Memorandum: Water Recycling Facility (WRF) – Selection of Team to Design, Build, Operate, and Finance the new WRF.* City of Santa Paula. April 2, 2008.

²¹ *Memorandum: Water Recycling Facility (WRF) – Selection of Team to Design, Build, Operate, and Finance the new WRF.* City of Santa Paula. April 13, 2008.

²² *Special City Council Meeting Minutes.* City of Santa Paula. April 15th, 2008.

At the May 5, 2008 City Council Meeting, Staff recommended that the City Council award the DBOF Contract to PERC Water team doing business as Santa Paula Water, LLC stating, "...staff believes that there have been significant improvements to the PERC Water/Alinda Best and Final Officer approved by the City Council on April 15, 2008". The City Council voted 3-2 to award the DBOF Contract to Santa Paula Water, LLC. The final calculated NPV of the Santa Paula Water, LLC team was \$125.5 million compared to Veolia's \$127.7 million.

Santa Paula Water, LCC maintained financial ownership of the facility. Alinda Capital owned 100 percent of Santa Paula Water, LLC, and PERC Water had an option to purchase a 10 percent interest in Santa Paula Water, LLC; however, PERC Water did not exercise its option. Under the DBOF agreement, PERC Water was the lead developer, designer, builder and designated operator for the facility, and Alinda was responsible for providing initial and future project capital.

The debates around the selection of PERC Water and the later disagreements over chloride treatment responsibility contributed to the creation of a special County Grand Jury to examine the project and bidding process. In June of 2013, the Grand Jury issued a report that found that the "Council's actions have been made with the best interest of the City," and that "there was no evidence of wrong doing" and that "high levels of discharged chlorides which have plagued the Santa Clara River and local agriculture was not addressed in the original proposal or contract." The Grand Jury also recommended that the City purchase the plant from Santa Paula Water and take steps to address high levels of chloride.²³

According to the John Quinn, the former Santa Paula Finance Director, the city incurred substantial costs in developing and managing the project with approximately \$1.3 million going towards the 30 percent design and an additional \$1 million for project management and development costs.²⁴

²³ *Final Report: Santa Paula Waste Water Treatment Plant*. Ventura County Grand Jury. June 26, 2013.

http://vcportal.ventura.org/GDJ/docs/reports/2012-13/Santa_Paula_Waste_Water_Treatment_Plant.pdf

²⁴ John Quinn (Former Finance Director, City of Santa Paula), Email Correspondence with Author, October 21, 2016.

Timeline

Table 2. Project milestones

| Date | Milestone |
|--------------------|---|
| September 27, 2007 | Date of consent decree between City and Regional Water Quality Control Board that requires that new wastewater treatment facility go into service by December 2010 ²⁵ |
| October 2007 | RFP sent to four firms ²⁶ |
| February 4, 2008 | Two firms submit proposals in response to RFP |
| March 17, 2008 | PERC Water and Veolia submit Best and Final Offers |
| April 2, 2008 | Staff recommend selecting Veolia in staff memo ²⁷ |
| April 15, 2008 | City Council votes 3-2 to select PERC Water |
| May 5, 2008 | Staff recommends approving contract with Santa Paula Water, LLC (PERC and Alinda Capital) and City Council votes 3-2 to award DBOF Agreement to Santa Paula Water, LLC |
| June 16, 2008 | DBOF agreement reached between the City of Santa Paula, Santa Paula Water, LLC and PERC Water ²⁸ |
| November 9, 2009 | City creates Santa Paula Utility Authority to serve as public utility bonding and management conduit entity |
| May 2010 | Plant is completed and begins treating wastewater seven months prior to the December 2010 deadline set by the Regional Water Quality Control Board |
| June 2013 | A Ventura Grand Jury Report recommends that the Santa Paula purchase the plant from Santa Paula Water to “take advantage of historic low interest rates” ²⁹ |
| September 2013 | City initiates an arbitration proceeding against Santa Paula Water over disagreement concerning chloride treatment removal responsibility ³⁰ |
| April 30, 2015 | City closes on issuance of tax-exempt bonds and purchases facility from Santa Paula Water, LLC for negotiated price of \$70.8 million (the DBOF agreement allowed for a purchase of the facility in an agreed upon amount of \$73.5 million in 2015 and \$67.1 million in 2016) |
| February 26, 2016 | The City of Santa Paula issues a Request for Services to enter into a short term Operations and Maintenance Agreement for the plant. |

²⁵ *ibid.*

²⁶ April 2, 2008, Santa Paula Staff Memo to City Council regarding Selection of Team.

²⁷ *ibid.*

²⁸ 2015 Wastewater Enterprise Revenue Bonds, Series A and Series B. Santa Paula Utility Authority. April 14, 2015.

²⁹ Final Report: Santa Paula Waste Water Treatment Plant. Ventura County Grand Jury. June 26, 2013.

http://vcportal.ventura.org/GDJ/docs/reports/2012-13/Santa_Paula_Waste_Water_Treatment_Plant.pdf

³⁰ 2015 Wastewater Enterprise Revenue Bonds Official Statement, Series A and Series B. Santa Paula Utility Authority. April 14, 2015.

Key Financial Features and Outcomes

The City of Santa Paula entered into a DBOF agreement with Santa Paula Water to provide the City with wastewater treatment and water recycling services over a period of up to 30 years. Santa Paula Water was responsible for constructing, owning and operating the facility, and in return the City agreed to pay an established series of capital and operating fees. The figure below shows a schematic of the ownership model.³¹

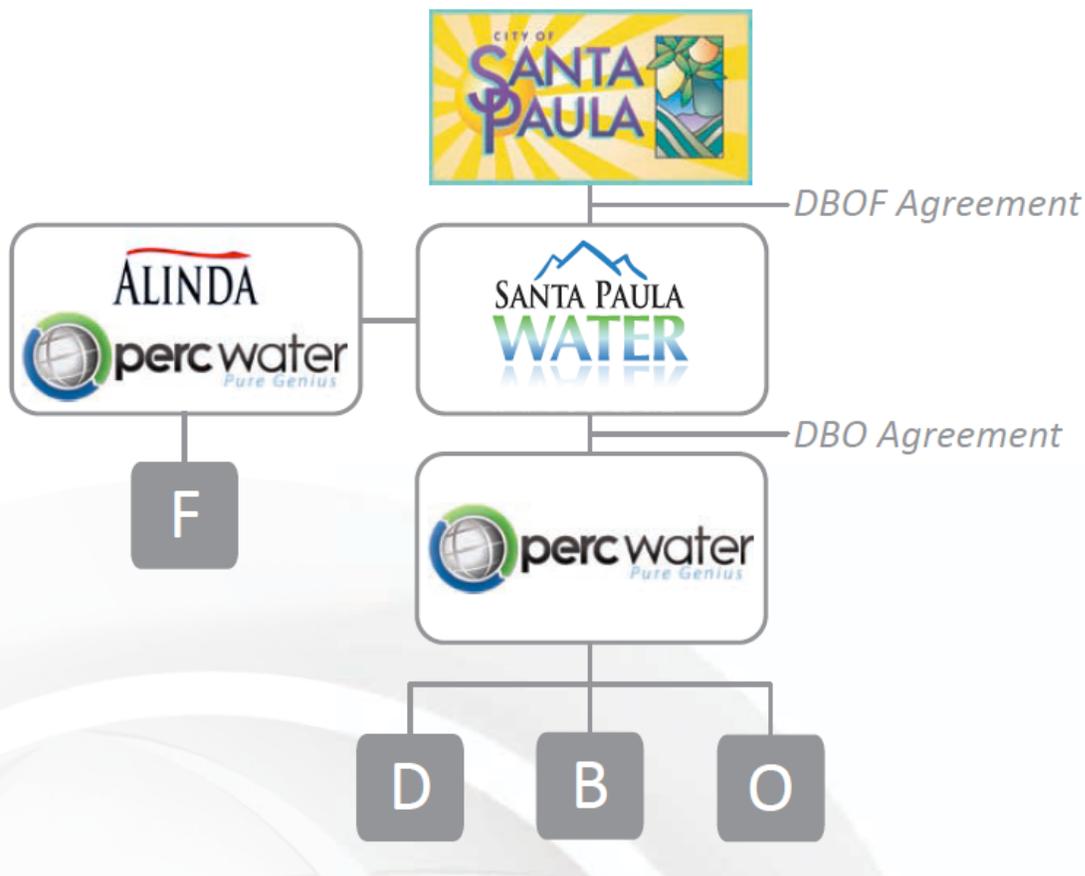


Figure 1. Partnership ownership model.³²

The model agreement was labeled a Design Build Operate and Finance contract; however, the structure of this particular agreement could also be characterized as Design, Build Own, Operate and Transfer (DBOOT) or a wastewater treatment purchase/service agreement. This model resulted in significant responsibility and risk being transferred from the City of Santa Paula to Santa Paula Water, LLC (see Table 3).

Table 3. Project Risks for Public and Private Entities.

³¹ Santa Paula Water Recycling Facility: Public Private Partnership Overview. PERC Water.

http://www.laytonconstruction.com/PDF%20Files/Santa%20Paula%20Executive%20Summary-Project%20Overview_email.pdf

³² *ibid.*

| Risk Category | Responsible Parties | Description |
|---|--|--|
| Permitting and Regulatory Fines | Santa Paula Water, LLC (Project Company) | Responsible for obtaining necessary construction permits and meeting contractually specified discharge requirements. |
| | City of Santa Paula | Remained liable for costs of chloride compliance, according to ruling from Ventura Grand Jury that DBOF proposal and contract did not address chloride reduction |
| Initial Construction and Capital Replacement | Santa Paula Water, LLC (Project Company) | Responsible for construction and plant ownership. DBOF agreement stipulated approximately \$30 million dollars in future scheduled capital improvements and funding over the 30 year contract |
| | City of Santa Paula | City agreed to pay design/build service fees to reimburse developer for capital costs only after plant was able to provide contractually required wastewater treatment services |
| Operations & Maintenance | PERC Water | Responsible for treating wastewater to contract specifications; responsible most operating costs including chemicals; responsible for electricity costs that exceed a guaranteed maximum |
| | City of Santa Paula | Responsible for paying established operating fees for contractually specified performance; responsible for increased costs due to “changes in law” and increases due to increased sludge disposal costs ³³ |
| Revenue/Demand | Santa Paula Water, LLC (Project Company) | DBOF established guaranteed capital fee payment stream regardless of volume of wastewater treated. Operating fees are largely independent of volume and protect operator from sudden reductions. |
| | City of Santa Paula | Responsible for raising revenue needed to pay required capital and operating fees. Operating fees include a relatively modest variable component that fluctuates with demand; however, most of the required operating expenditures will not be reduced if demand is much lower than anticipated. |
| Finance/Debt | Santa Paula Water, LLC (Project Company) | Responsible for all construction and long-term project financing |
| | City of Santa Paula | Water Recycling Facility is completely financed by private owner. City is obligated to make capital and operating fee payments as long as plant provides contractually specified services. |

The DBOF agreement

The total initial capital cost of the project incurred by the private partnership was \$62.6 million and included plant construction, capitalized interest during construction, and design as well as some project development costs. PERC

³³ *Design, Build, Operate and Finance Agreement*. City of Santa Paula, Santa Paula Water, LLC, and Pacific Environmental Resources Corp. June 16, 2008.

Water and Alinda were responsible for construction and long-term financing for the facility.³⁴ Alinda worked with CoBank and DZ Bank to arrange debt financing for the facility in the midst of a turbulent capital market (2008).³⁵ The final financing arrangement included a mix of approximately \$47 million in private debt from CoBank, DZ Bank and \$15 million of Alinda equity. PERC Water had an option to obtain an equity interest in the plant by foregoing part of their contractual construction payments in exchange for an equity share. This equity option was never executed and as a result, Alinda maintained full ownership of the plant after construction.³⁶

The DBOF agreement included a specified series of capital payments designed to recover the initial capital outlays as well as the cost of capital financing, future planned capital expenditures of \$30 million, and recurring costs such as property tax and property/liability insurance. The City calculated the cost of capital for the project as approximately 8 percent; however, the annual capital payments included future capital replacement reserves, property tax, and property/liability insurance, which do not contribute to the developer's return on investment. The net capital payments to Santa Paula Water, LLC resulted in a blended rate of return of approximately 6 to 6.5 percent, according to PERC's president.³⁷

The DBOF agreement also specified the schedule of subsequent capital improvements that would be made over the term of the contract, including a stipulation that PERC Water, on behalf of Santa Paula Water, LLC, would expand the plant to 4.2 MGD from 3.4 MGD at no additional cost to the City once the plant reached 90 percent of its 3.4 MGD capacity in a given year. The agreement also provided an option for the City to buy the plant at five-year intervals during the 30-year contract period based on agreed-upon buyout fees.³⁸

The operating portion of the agreement included a fixed rate component of approximately \$100,000 per month to Santa Paula Water adjusted annually at the CPI.³⁹ Approximately \$75,000 of the fixed operating payment went to pay PERC Water operating fees, and \$25,000 was used by Santa Paula Water to cover facility administrative costs. The agreement specified that if the City exercised its buy out option and became owner of the facility, it would take over payment of the administrative portion of the fee, thereby reducing the fixed operating fee to approximately \$75,000 per month. The operating agreement also included a variable rate component of \$0.43 per 1,000 gallons adjusted annually at the CPI.⁴⁰ The DBOF agreement includes a fee (\$940,000) for terminating the O&M contract early that is reduced in 5-year increments during the course of the contract (it is currently \$830,000). See appendix for a schematic that shows a simplified flow of funds involved in the initial outlays and recurring payments.

The DBOF agreement placed the risk for any excess energy consumption on PERC Water; however, it requires that documented savings and efficiencies below the PERC Water performance guarantee be shared equally between PERC Water and the City. In the first 6 years of operations, the energy consumption has averaged 30 percent below the maximum consumption under the performance guarantee.

The City of Santa Paula's current and future wastewater customers as well as future property developers are ultimately responsible for all of the costs of constructing and operating the wastewater treatment plant. The City must adhere to state constitutional rate setting requirements that provide customers with the opportunity to contest and deny rate

³⁴ Brian Cullen (President, PERC Water), Email Correspondence with Author, October 10, 2016.

³⁵ *Testimony of David Dornbierer Before the Subcommittee on Water Resources and Environment Committee on Transportation and Infrastructure U.S. House of Representatives on A Review of Innovative Financing Approaches for Community Water Projects*. March 21, 2012.

³⁶ Brian Cullen (President, PERC Water), Phone conversation with Author, October 25, 2016

³⁷ Brian Cullen (President, PERC Water), Email Correspondence with Author, October 10, 2016.

³⁸ *Final Report: Santa Paula Waste Water Treatment Plant*. Ventura County Grand Jury. June 26, 2013.

http://vcportal.ventura.org/GDJ/docs/reports/2012-13/Santa_Paula_Waste_Water_Treatment_Plant.pdf

³⁹ *Design, Build, Operate and Finance Agreement*. City of Santa Paula, Santa Paula Water, LLC, and Pacific Environmental Resources Corp. June 16, 2008.

⁴⁰ *ibid*

adjustments (“Prop 218”). The City’s former Finance Director stresses that “rate setting” risk is significant in California and that this risk remained with the City after the DBOF agreement was executed.⁴¹

After the facility went into operation, wastewater rates were adjusted to provide sufficient revenue to meet the long-term capital and operating costs of the facility. Santa Paula’s wastewater rates were structured in a way that reduces the demand risk associated with current residential customers in that a majority of the revenue is collected from fixed customer fees rather than variable fees. In 2015, a residential customer paid a \$77.21 base charge and a variable price of \$1.12 per hundred cubic feet (hcf). Nonresidential rates carry a much larger demand risk with a variable price of \$8.40 per hcf.⁴²

DBOF converted to public ownership and an O&M agreement

After three years of plant operations, the city entered into arbitration with Santa Paula Water, LLC over a disagreement related to the responsibility for meeting chloride discharge requirements. Instead of proceeding with the arbitration with Santa Paula Water, LLC, the City decided to execute its option to buy the facility at a negotiated purchase price of \$70.8 million compared to the contractually stated price of \$73.5 million.⁴³

The City issued \$76.6 million in tax-exempt revenue bonds to cover the purchase price and ancillary costs associated with the purchase (issuance costs, prepayment of future lease payments to the City, reserve funds). Approximately \$970,000 of the tax-exempt portion of the bond was used to cover the issuance costs of the bonds. The bonds are structured to spread the debt service over 35 years (through 2050) at a weighted average interest rate of approximately 3.75 percent.⁴⁴ As part of the 2015 bond issue, the City also issued a smaller amount of taxable bonds to cover the early operation agreement termination fee associated with the PERC Water operating contract that was not eligible for tax-exempt financing. The bonds were rated as A+ by S&P and were formally issued by the Santa Paula Utility Authority, not the City.⁴⁵ Bond security consisted of a pledge of the net revenues of the wastewater enterprise. Additional security was provided from a 1.2 times rate coverage covenant requirement. The City of Santa Paula created the Santa Paula Utility Authority in 2009 to support provision of water and wastewater services and to serve as the City’s bonding entity. The Authority owns or controls many of the City’s key water and wastewater assets, and it has standing as a separate unit of government. However, the Authority’s governing board is comprised of the City Council.

PERC Water’s operating contract with Santa Paula Water, LLC was assigned to the City upon the purchase of the facility, and PERC Water continued to operate the facility under the original operating agreement terms, however the City selected a new operator (American Water) in late 2016 who will take over operation responsibilities in 2017. Due to requirements under the bond documents, and due to the City’s compliance requirements with Internal Revenue Code 97-13, the City had issued a Request for Proposals for a new 4-year Operation and Management contract in February of 2016.⁴⁶

Assessing the financial impact

As the project progressed, the framing of the financial impact of constructing and operating the facility shifted. The initial decision to proceed with an alternative project delivery mechanism was made in response to concern over the rising estimated project cost that was presented by the City’s previous consulting engineer and the belief that an

⁴¹ John Quinn (Former Finance Director, City of Santa Paula), Email Correspondence with Author, October 21, 2016.

⁴² *2015 Wastewater Enterprise Revenue Bonds Official Statement, Series A and Series B*. Santa Paula Utility Authority. April 14, 2015.

⁴³ Brian Cullen (President, PERC Water), Email Correspondence with Author, October 10, 2016.

⁴⁴ *2015 Wastewater Enterprise Revenue Bonds Official Statement, Series A and Series B*. Santa Paula Utility Authority. April 14, 2015.

⁴⁵ *ibid.*

⁴⁶ *Request for Proposal to Provide Services*. City of Santa Paula. February 2, 2016.

alternative delivery model could produce the facility faster and in a more cost effective, innovative manner.⁴⁷ The initial estimate for the services to be provided by a City-owned, traditionally procured facility was \$80 to \$100 million.⁴⁸

Later, as the City evaluated the final two competitive P3 proposals, the financial impact was framed primarily in terms of the NPV of the two proposals; however, there were references to an underlying concern over the different potential financing risks associated with the two proposals. While the NPV of the Veolia bid (\$145,562,570) was presented to City Council as lower than the NPV of the PERC Water bid (\$169,549,570), in the first selection recommendation memo for the April 7th City Council Meeting, staff and their financial consultants underscored that some elements of the different approaches were difficult to compare, such as the uncertainty regarding the proposed financing costs of the Veolia bid which relied on the City issuing its own debt.⁴⁹

The initial financial analysis and selection recommendations presented to the City Council focused primarily on the projected payment requirements that were provided by the two proposal teams. The analysis did not quantify the costs of risk associated with the City taking responsibility for financing the plant (as was proposed by Veolia).⁵⁰ Under the financial plan proposed by Veolia, the City would have had to successfully issue significant revenue bonds in October 2008 in order for the facility to be completed. PERC Water believed that this risk should be taken into account in the analysis and believed it would have resulted in PERC Water's proposed NPV comparing more favorably to Veolia's.⁵¹ Other Communities that have valued the risk reductions associated with an integrated financing structure such as PERC's have assigned monetary values to risk reductions that were included in their financial analyses.⁵² Eventually, the majority of the City Council decided to choose PERC Water, believing that PERC Water's additional pledged cost proposal provided the best value and avoided uncertainty around Veolia's financing risk. The City Council instructed staff to proceed with PERC despite a lack of clear consensus among Council members, staff and their advisors.⁵³

The competitive pressure of the award process led to clear reductions in costs. After requesting further cost reductions between April 7 and April 15, both Veolia and PERC Water adjusted their proposals. The April 15th Report to City Council listed the NPV of the Veolia bid as \$127,438,097 and the PERC Water of the PERC bid as \$149,718,750. During the negotiation period between the time the City voted to select the PERC Water team and completion of the final agreement, additional changes were made to the final payment terms that together with a change in financial analysis discount factor assumptions led to a final Net Present Value for the project of \$125.5 million, \$24.2 million less than the NPV presented at the April 15, 2008 Council Meeting.⁵⁴

The plant's initial operator, PERC Water, reports that the project delivery method and innovative design it endorsed helped encourage a plant with much lower operating costs than many similar plants.⁵⁵ During the final phases of plant construction, PERC Water identified several energy saving modifications that were successfully implemented, resulting in significant energy savings that were shared between PERC Water and the City – estimated to be as much as \$200,000 per year.⁵⁶ The structure of the DBOF agreement created an incentive for PERC Water to invest in more expensive equipment since it would be able to recoup significant savings based on the terms of the operating payments. This incentive during construction would not have existed had the plant been built with a traditional design-bid-build model.

⁴⁷ *Final Report: Santa Paula Waste Water Treatment Plant*. Ventura County Grand Jury. June 26, 2013.

http://vcportal.ventura.org/GDJ/docs/reports/2012-13/Santa_Paula_Waste_Water_Treatment_Plant.pdf

⁴⁸ *Santa Paula Private Plant Shines*. Public Works Financing, Volume 255. December 2010.

⁴⁹ *Memorandum: Water Recycling Facility (WRF) – Selection of Team to Design, Build, Operate, and Finance the new WRF*. City of Santa Paula. April 2, 2008.

⁵⁰ *Project Memorandum attached to April 13, 2008 Staff Memo*. FCS Consultants. April 12, 2008

⁵¹ *ibid*.

⁵² *City of Regina Wastewater Treatment Plant Expansion & Upgrade Project: Value for Money Report*. Deloitte. July 24, 2014.

⁵³ Minutes of April 15th, 2008 Santa Paula Town Council Meeting

⁵⁴ May 4, 2008, Santa Paula Staff Memo to City Council regarding Approval of Award to PERC Water.

⁵⁵ Brian Cullen (President, PERC Water), Email Correspondence with Author, October 10, 2016.

⁵⁶ *Santa Paula Private Plant Shines*. Public Works Financing, Volume 255. December 2010.

After the plant was completed, the City's concern over financial impacts shifted from the construction cost to the perceived financing costs associated with private ownership versus a government owned and financed model. One of the major justifications for the decision to purchase the facility from Santa Paula Water was that it enabled the City to reduce wastewater rates, reflecting the difference between the cost of tax-exempt debt service payments for the facility and the capital payments due to Santa Paula Water, LLC under the DBOF agreement. At the time of the decision, the local paper published a story that the purchase would reduce the wastewater bills of Santa Paula residents by as much as \$450 per year. This story, as well as other stories published at the time, focuses on a comparison of the 3.75 percent tax-exempt rate the City was able to get, with an imputed (estimated) total cost of capital of approximately 8 percent. According to PERC Water, the higher rate was not exactly comparable, as the capital payments to Santa Paula Water, LLC included significant non-financing costs such as future capital investments, property tax payments and property/liability insurance which represented approximately \$63 million over 30 years.⁵⁷ The City's decision to take over ownership of the facility will transfer the full cost of future capital replacement (scheduled for \$30 million) back to the City. The City will likely forego receiving a portion of property tax on the facility, and will need to purchase the comparable property/liability insurance previously held by Santa Paula Water, LLC. The City also had to cover the financing transaction costs associated with the bond issue in addition to the early termination fee. The decision to take over ownership and use tax-exempt financing also resulted in a longer remaining term of repayments (35 years vs. 25 years remaining in the DBOF contract).

The shift from a privately-owned, privately funded facility to a tax-exempt bond funded facility leads to other interesting financial impacts that are difficult to quantify. For example, the bond covenant will require the City to collect additional revenues beyond the debt service payments to comply with requirements for debt service coverage.⁵⁸ Also, the City was released from asset management and investment under a performance based service agreement payment structure, but the City will now maintain that risk as a direct owner. It is not clear what the cumulative impact of all of these issues will have on the actual long term "savings" to wastewater customers; however, in the short term, the City made a point of offering customer rebates after the purchase agreement was finalized.⁵⁹

Taking into consideration the full series of events beginning with the decision to employ an alternative service delivery method, there is documented evidence that suggests the decision had a positive financial impact on the City. The City paid \$71 million for a plant that was originally estimated to cost much more than that, and received a facility with more capacity, that uses less electricity and takes up less land than was originally planned under the traditional approach. The competitive process of negotiations between the two proposal teams led to a reduction in the final offer and acceptance price. Advocates for greater private sector participation in the water sector cite multiple benefits, including costs savings from more innovative, integrated design, as well as cost efficiencies from strategic risk allocation between the public and private sector. The Santa Paula experience demonstrates some of the potential for cost savings during the construction and early phase of the project. The early purchase of the plant and transfer from the private sector to public sector in some ways ends an interesting service delivery experiment. It will be interesting to see how the diverse costs, which are now the responsibility of the City, will compare over time to the "all-in" costs under the original model.

⁵⁷ Brian Cullen (President, PERC Water), Phone Correspondence with Author, October 7, 2016.

⁵⁸ *2015 Wastewater Enterprise Revenue Bonds Official Statement, Series A and Series B*. Santa Paula Utility Authority. April 14, 2015.

⁵⁹ Kelly, Peggy. *Council Approves Wastewater Customer Rebate Program*. Santa Paula Times. March 11, 2016.

Appendix A.

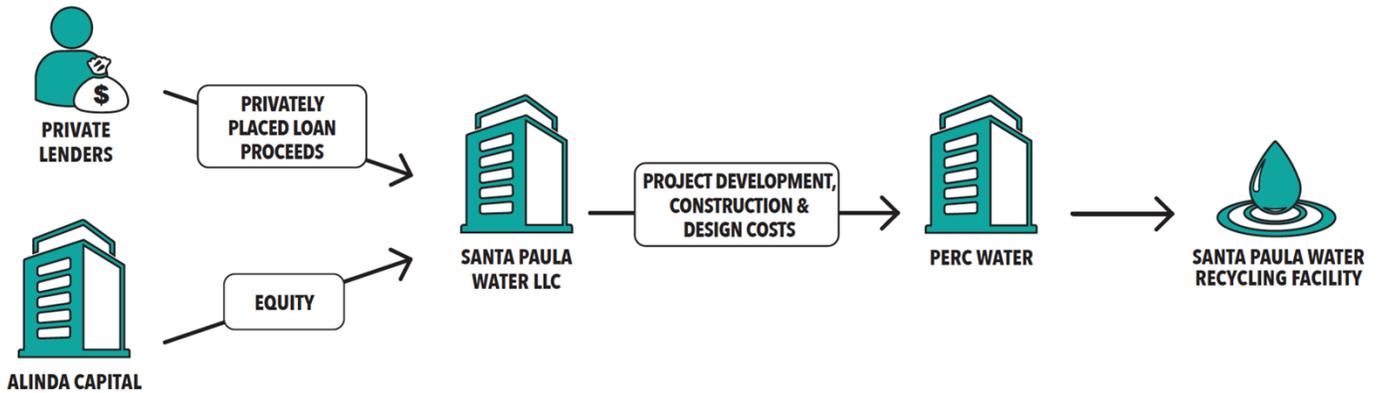


Figure 2. Flow of initial outlays under DBOF service delivery model.

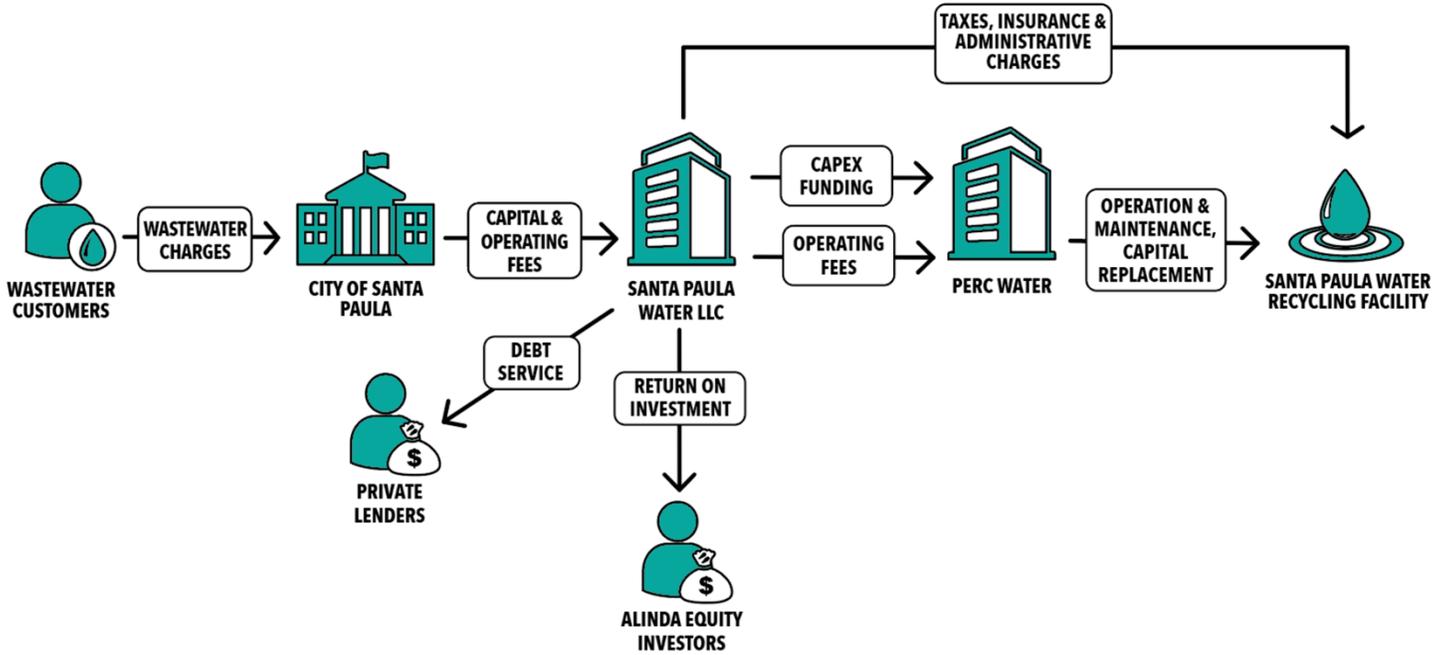


Figure 3. Recurring financial flows under DBOF service delivery model.

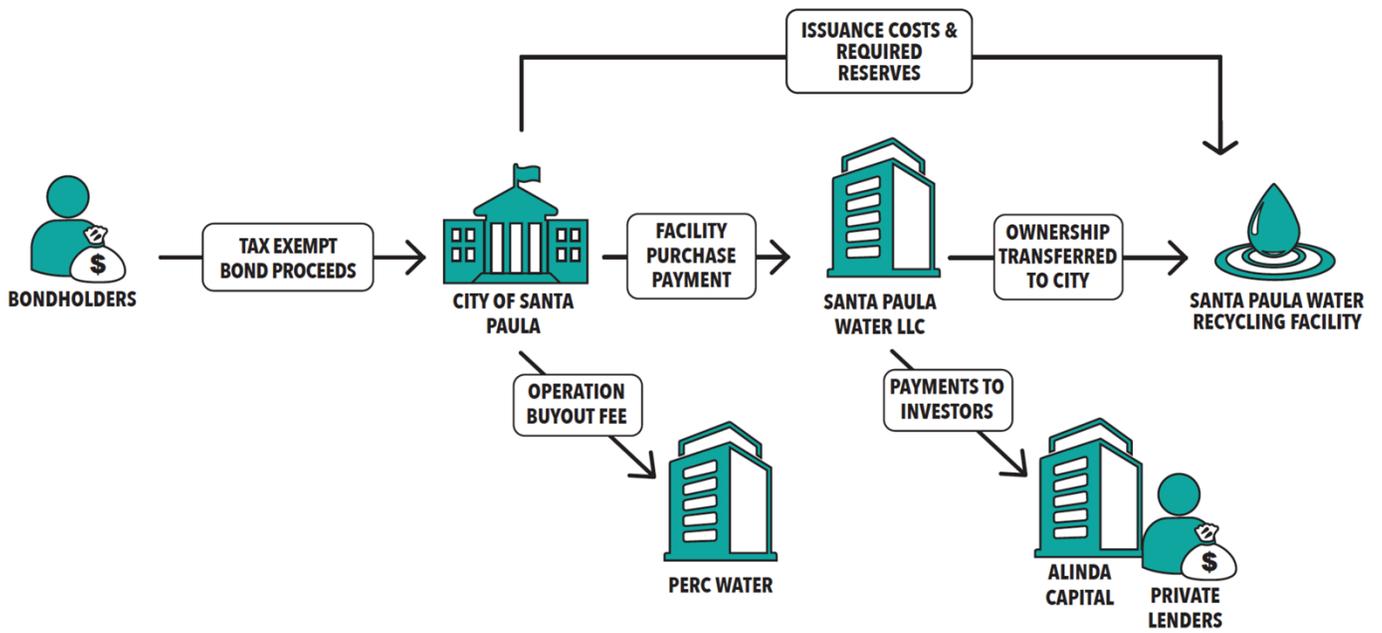


Figure 4. Flow of initial outlays under city-owned service delivery model.

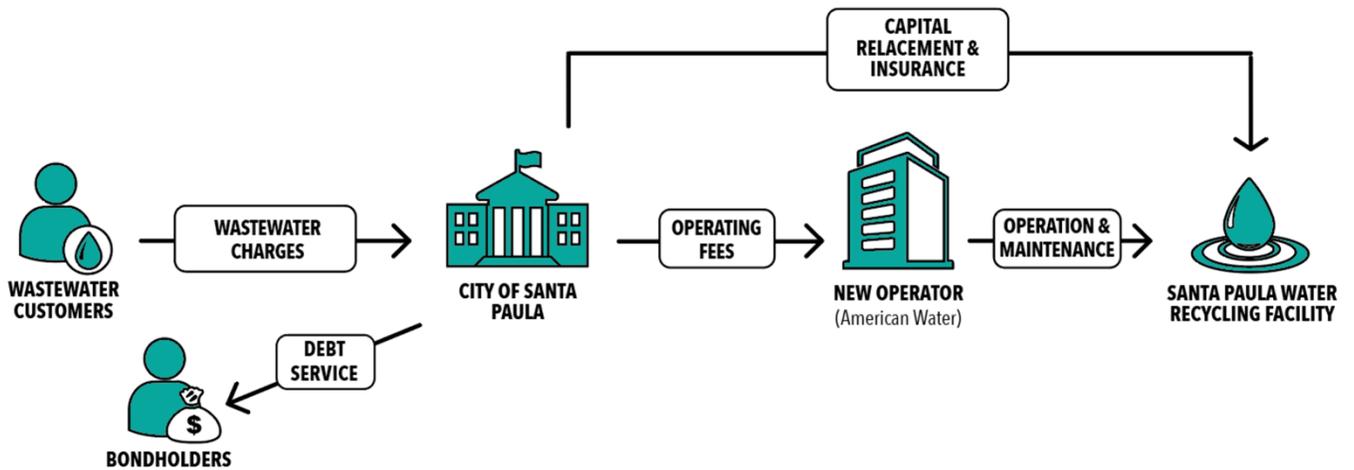


Figure 5. Recurring financial flows under city-owned service delivery model.

Acknowledgements

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† Jeff Hughes is a member of the United States Environmental Protection Agency's Environmental Finance Advisory Board.

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