

GAO

Report to the Ranking Member,
Committee on Transportation and
Infrastructure, House of
Representatives

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**WASTEWATER
INFRASTRUCTURE
FINANCING**

Stakeholder Views on
a National
Infrastructure Bank
and Public-Private
Partnerships



GAO

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Highlights of [GAO-10-728](#), a report to the Ranking Member, Committee on Transportation and Infrastructure, House of Representatives

Why GAO Did This Study

Communities will need hundreds of billions of dollars in coming years to construct and upgrade wastewater infrastructure. Policymakers have proposed a variety of approaches to finance this infrastructure, including the creation of a national infrastructure bank (NIB) and the increased use of privately financed public-private partnerships (PPP).

In this context, GAO was asked to identify (1) stakeholder views on issues to be considered in the design of an NIB and (2) the extent to which private financing has been used in wastewater PPPs and its reported advantages and challenges. In conducting this work, GAO developed a questionnaire based on existing NIB proposals and administered it to 37 stakeholders with expertise in wastewater utilities, infrastructure needs, and financing; GAO received 29 responses from stakeholders with a variety of perspectives about an NIB. To determine the extent to which wastewater PPPs have been privately financed and their advantages and disadvantages, GAO identified and interviewed municipalities involved in privately financed PPPs and wastewater services companies, conducted case studies in states with privately financed PPPs, and conducted a literature review.

GAO is not making any recommendations. While this report discusses a number of funding approaches, GAO is not endorsing any option and does not have a position on whether an NIB should be established.

View [GAO-10-728](#) or [key components](#). For more information, contact David Trimble at (202) 512-3841 or trimbled@gao.gov.

WASTEWATER INFRASTRUCTURE FINANCING

Stakeholder Views on a National Infrastructure Bank and Public-Private Partnerships

What GAO Found

Stakeholders who responded to GAO's questionnaire discussed issues in the following three key areas that should be considered in designing an NIB:

- *Mission and administrative structure.* While a majority of stakeholders supported the creation of an NIB, their views varied on its mission and administrative structure. One-third supported an NIB to fund only water and wastewater infrastructure, while two-thirds responded that it should also fund transportation and energy projects. There was no consensus among stakeholders on whether an NIB should be administered by an existing federal agency, structured as a government corporation, or structured as a government-sponsored enterprise. GAO has previously reported that an entity's administrative structure affects the extent to which it is under federal control, how its activities are reflected in the federal budget, and the risk exposure of U.S. taxpayers.
- *Financing authorities.* A majority of stakeholders agreed on an NIB's financing authorities. Specifically, a majority said the federal government should provide the initial capital; an NIB should be authorized to use a variety of options to generate funds for operating expenses and lending; and an NIB should offer a variety of mechanisms for financing projects, such as providing direct loans, loan guarantees, and funding for the Environmental Protection Agency's existing wastewater funding program—the Clean Water State Revolving Fund.
- *Project eligibility and prioritization.* Stakeholders' views varied on which types of projects should be eligible for NIB financing, such as whether it should exclusively finance large projects. In addition, a majority agreed an NIB should prioritize projects that address the greatest infrastructure need and generate the greatest environmental and public health benefits.

GAO identified seven municipalities that have entered into privately financed PPPs—contractual agreements in which the private partner invests funds in the wastewater infrastructure—since 1992: Arvin, California; Cranston, Rhode Island; Fairbanks, Alaska; Franklin, Ohio; North Brunswick, New Jersey; Santa Paula, California; and Woonsocket, Rhode Island. Municipal and wastewater company officials GAO interviewed identified the following examples of advantages of privately financed PPPs:

- Provide access to financing for municipalities that have difficulty using traditional financing sources, such as municipal bond markets.
- May make operations more efficient, for example, by taking advantage of economies of scale by buying key supplies, like chemicals, in bulk.
- May bring new infrastructure online faster than traditional public procurement because companies have more flexibility.

These officials identified challenges of privately financed PPPs, including:

- Local opposition may arise out of concerns about higher wastewater rates and the potential loss of municipal wastewater jobs.
- Private financing is generally more costly than tax-exempt municipal bonds because of higher interest rates; a 2002 National Research Council study reported that private financing is 20 to 40 percent more expensive.
- Contracts can be costly and difficult to develop because they are complex, and municipalities and companies are unfamiliar with this type of PPP.

Privately Financed Wastewater PPPs Are Uncommon and Have Several Reported Advantages and Challenges

We identified seven privately financed wastewater PPPs developed since 1992. Municipal and wastewater services company officials we interviewed identified numerous potential advantages to these partnerships, including faster construction of new facilities, access to alternative sources of financing, increased efficiency, and access to outside experts and technology solutions. Officials also identified numerous potential challenges to these partnerships, including public and political opposition, the higher cost of private financing, and concerns over a loss of municipal control over wastewater equipment, operations, or rates.⁴⁴

Seven Municipalities Have Developed Privately Financed Wastewater PPPs Since 1992

As shown in table 4, we identified seven municipalities that have developed privately financed wastewater PPPs since 1992.

Table 4: Privately Financed Wastewater PPPs Developed Since 1992 Identified by GAO

| Municipality | Company | Year initiated | Type | Initial term (years) | Assets included | Up-front payment (Y/N) |
|----------------------------------|---|----------------|---------------------------------|----------------------|---|------------------------|
| Arvin, CA | U.S. Filter (now Veolia Water) | 1999 | Lease & DBFO | 35 | Lease: existing treatment plant DBFO: upgraded treatment plant components | Y |
| Cranston, RI ^a | Triton Ocean State LLC (now Veolia Water) | 1997 | Lease | 25 | Treatment plant, collection system, pumping stations, industrial pretreatment | Y |
| Fairbanks, AK | Golden Heart Utilities | 1997 | Lease & Asset Sale ^b | 30 | Lease: treatment plant Asset sale: collection system | Y |
| Franklin, OH ^c | Wheelabrator EOS (now Veolia Water) | 1995 | Lease & Asset Sale ^d | 20 | Asset sale: treatment plant Lease: one process within the treatment plant | Y |
| North Brunswick, NJ ^e | U.S. Water (now United Water) | 1995 | Lease | 20 | Collection system & pumping stations ^f | Y |

⁴⁴Our examination of privately financed PPPs did not include an evaluation of the effect of these agreements on communities' sewer rates and cost or level of service. Since most of the privately financed PPPs we identified are more than 10 years old, reliable information about these issues was not readily available.

| Municipality | Company | Year initiated | Type | Initial term (years) | Assets included | Up-front payment (Y/N) |
|-----------------------------|---|----------------|------|----------------------|-------------------------------------|------------------------|
| Santa Paula, CA | Santa Paula Water, LLC ^a | 2008 | DBFO | 30 | New water recycling facility | N |
| Woonsocket, RI ^b | U.S. Filter (now Veolia Water) with third-party financing through LaSalle Bank and ABN AMRO | 1999 | DBFO | 20 | Upgrade of existing treatment plant | Y |

Source: GAO.

^aSince officials from Cranston declined to speak with us, this information about Cranston's privately financed PPP is derived from publicly available sources.

^bThe city of Fairbanks leased its wastewater treatment plant, which falls within this report's definition of a privately financed PPP. Fairbanks sold its collection system, which falls outside of the scope of this report.

^cThe wastewater treatment plant involved in the 1995 lease and asset sale was originally owned by the Miami Conservancy District, a flood-control agency in southwestern Ohio. The treatment plant serves the communities of Franklin, Carlisle, and Germantown, as well as unincorporated areas of Warren and Montgomery counties.

^dThe city of Franklin leased a portion of its wastewater treatment plant, which falls within this report's definition of a privately financed PPP. Franklin sold other parts of the treatment plant.

^eThe North Brunswick lease was terminated in 2002.

^fNorth Brunswick also leased their drinking water assets, including a treatment plant, as well as the distribution system.

^gSanta Paula Water, LLC, is a partnership between PERC Water and Alinda Capital.

^hThe wastewater treatment plant involved in the 1999 DBFO serves multiple communities: Woonsocket, Rhode Island; North Smithfield, Rhode Island; Cumberland, Rhode Island; Bellingham, Massachusetts; and Blackstone, Massachusetts.

Although all seven of these municipalities entered into privately financed wastewater PPPs, their reasons for doing so differed, as did the contract terms. Two examples illustrate these differences:

- Santa Paula, California, entered into a DBFO in 2008. The city of Santa Paula had an existing wastewater treatment plant that was not compliant with the waste discharge requirements of the Los Angeles Regional Water Quality Control Board.⁴⁵ The city entered into a consent agreement with

⁴⁵The Los Angeles Regional Water Quality Control Board, a part of the California Environmental Protection Agency, conducts a broad range of activities to protect ground and surface waters under its jurisdiction, including enforcing water quality laws and regulations; preparing, monitoring compliance with, and enforcing waste discharge requirements, including NPDES permits; and implementing and enforcing local storm water control efforts.

the board in which it agreed to achieve full compliance with water quality requirements by December 15, 2010, or else face \$8.5 million in penalties. According to city officials, the Santa Paula City Council decided to enter into a DBFO partnership because it believed a DBFO would be less expensive than a traditional procurement and could better ensure the city would meet its deadline. The city awarded a contract to Santa Paula Water—a company formed by PERC Water and Alinda Capital—to design, build, and finance a new water recycling facility as well as to operate the facility for 30 years. Through monthly service fees, the city is to repay Santa Paula Water for its investment in the plant and pay for operations, maintenance, repair, replacement, and a profit margin. PERC Water owns the treatment facility over the 30-year contract term, after which ownership reverts to the city.

- Fairbanks, Alaska, entered into a lease partnership in 1997. Fairbanks' wastewater treatment system faced a multimillion dollar deficit and needed substantial capital improvements. However, according to a city official, Fairbanks city residents were reluctant to approve bond issuances, and local government officials were reluctant to raise rates. In addition, Fairbanks was in a unique situation in that the city owned several other utilities, including a telephone utility and an electric utility. The city was approached by a consortium of companies that proposed to buy or lease all the city's utilities, and voters approved the action. As part of this deal, Golden Heart Utilities leased the wastewater treatment plant in 1997 for a 30-year term. In exchange, the company pays Fairbanks about \$33,000 per month in lease payments. Golden Heart Utilities also operates and maintains the treatment plant, and its service fee is paid by ratepayers.

Reported Advantages of Privately Financed Wastewater PPPs

Municipal and company officials we spoke with identified several potential advantages of privately financed wastewater PPPs for municipalities as compared with traditional publicly financed, operated, and maintained wastewater facilities.

Faster Delivery of New Facilities or Facility Upgrades

The most commonly cited advantage was the potential for faster or more certain delivery times for new facilities or facility upgrades, as compared with traditional public procurement.⁴⁶ Three municipalities cited faster delivery times as a reason they entered into privately financed PPPs; in two cases, the municipalities were facing regulatory deadlines that required them to upgrade their facilities or pay fines. Company and

⁴⁶This advantage would also apply to design-build partnerships that are not privately financed.