



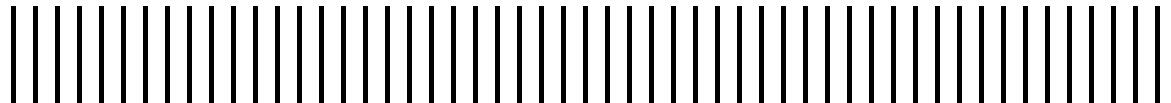
Coquina Coast Seawater Desalination Alternative Water Supply Project

Funding Initiative Plan Update



Funding Implementation Plan Update Technical Memorandum

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Executive Summary

In an effort to meet increasing water demands and address limitations in future groundwater usage, the cities of Palm Coast, Leesburg, and Deland and St. Johns County are working with the St. Johns River Water Management District to evaluate the Coquina Coast Seawater Desalination Project as a potential future alternative source of drinking water for the region. The purpose of this technical memorandum is to present an update to the Funding Initiative Plan submitted in November 2009, given a reduction in the projected size of the Project as well as the decreased availability of funding from the majority of programs since that Plan was submitted.

The current projected capital cost is approximately \$200 million for an initial 10 million gallon per day (MGD) desalination facility in 2020, which increases to \$400 million with a second stage expansion to 25 MGD in 2035. While these represent significant reductions from initial estimates, implementing a seawater desalination project of this scale will require a major investment of capital that exceeds the financing capacity of the current Partners. Despite this fact, the lead time needed to design, permit, and construct a facility of this type necessitates that work on the Project continue in order to meet projected water demands in 2020. Securing external funding sources represents a way for the Partners to finance the work that needs to be done now, while deferring a greater share of the costs into the future, when revenues from the project would be available to help repay those costs. To that end, it is recommended that:

1. *The Partners continue to pursue traditional sources of public funding.* This includes meeting with state and federal legislators and officials, both to highlight the need for the project and to provide necessary details and status updates of the project as it develops. It also includes submitting necessary documentation and funding applications to ensure the project is “in line” for future funding consideration. By taking these actions, the Project would be in the forefront of state and US officials and be better positioned for funding consideration when design and construction dollars are needed in three to four years. It may also increase the possibility of the pilot plant being a candidate for earlier funding opportunities that could arise.
2. *The Partners begin to explore the potential for a Public-Private Partnership as a way to implement the Coquina Coast Project.* Private financing, available through a variety of Public-Private Partnership (PPP) types, provides a way for the Coquina Coast Partners to secure the design and construction of the plant with minimal or no up-front capital cost. PPP agreements are inherently complex, and

if such an arrangement ultimately proves a beneficial way to implement the Project, there is likely to be a significant learning curve for the Partners and their respective communities to overcome first.

1. Background

1.1. Background

Throughout Florida, municipalities, regulatory agencies, and various other groups concerned with the impacts of increasing water demands on our environment are seeking to identify alternative water sources and treatment methods to meet those demands. In the Coquina Coast region of Florida, a group of municipalities have been evaluating the Coquina Coast Seawater Desalination Alternative Water Supply Project (hereinafter referred to as “the Coquina Coast Project”) as a means to accomplish the goal of meeting future water supply demands while continuing to serve as proper stewards of the environment.

The Coquina Coast Project currently includes two Supplier utilities (the cities of Palm Coast and Leesburg), and two “Ex Officio” utilities (DeLand and St. Johns County). In an effort to meet increasing water demands and address limitations in future groundwater usage, these entities, known collectively as “the Partners,” together with the St. Johns River Water Management District (SJRWMD), are evaluating seawater desalination as a potential future alternative source of drinking water for the region.

The preliminary planning for the Project will be completed in two phases. Phase 1 included establishing preliminary project requirements (size, water quality and treatment requirements, transmission system, etc.), a project feasibility determination, and a comparison of land-based and vessel-based desalination. Phase 1 concluded in January 2010 and included a recommendation to proceed with further investigation and preliminary design of a land-based desalination project. Phase 2 includes pilot-testing, National Environmental Policy Act (NEPA) activities, including required Environmental Impact Statement or Environmental Impact Document, and preliminary design of the recommended solution.

Phase 2 of the Project is divided into Phase 2A – Continued Engineering Investigations and 2B – Preliminary Engineering Report. Phase 2A, the current project phase, includes preliminary plant site locations, field investigations, public outreach, and permitting investigations necessary to further reduce project alternatives and begin to identify the viable intake, treatment, discharge, and other technical components. Phase 2A also includes the preparation of a pilot testing plan. Phase 2B includes all of the remaining investigations necessary to site the facilities, complete a 35-percent preliminary design, pilot testing of treatment alternatives, and prepare the required National Environmental Policy Act (NEPA) documentation.

1.2. Purpose of Document

In November 2009, a Funding Initiative Plan was submitted to the Partners that presented an overview of the important considerations for, and potential sources of, outside funding that could potentially aid the Partners with the financing of the Coquina Coast Project. That plan focused primarily on sources of funding from state and federal programs, and was based on the anticipated ranges of project size and costs required to meet the projected water demands of the 11 municipalities who participated in Phase 1.

Over the past 18 months since that Funding Initiative Plan was submitted, the projected size, costs, and schedule of the Project have been revised. These revisions are the result of reductions in the projected water demands of the individual Partners, as well as a fewer number of Partners participating in Phase 2A.

In addition to these revisions to the project, there have been significant changes to many of the funding programs described in the Funding Initiative Plan, due largely to current policy, shifting priorities, and budget challenges at all levels of state and federal government. In recognition of these changes to the project and the funding landscape in general, the purpose of this report is to present an update on the availability of funding from the various programs, and to provide recommendations for pursuing funding from these sources to help finance future phases of the Project. This report addresses the requirements of Phase 2A, Task 4 – Funding Program Development.

1.3. Estimated Project Costs

Based on the projected water supply needs of the current four Partners, the initial supply capacity of the Coquina Coast project is likely to be between 10 and 15 million gallons per day (MGD) and would need to be online by approximately 2020. The ultimate supply capacity of the Project could be between 25 and 50 MGD to meet the Partners needs in 2050. The projected capital cost of the initial 10 MGD stage is approximately \$200 million, which increases to \$400 million with a second stage expansion to 25 MGD.

These capital costs represent a significant reduction from those estimated in Phase 1 (\$539 million for the initial stage and \$1.35 billion at an ultimate supply capacity of 80 MGD). However, the estimated delivery cost of water on a unit basis – which incorporates estimates of capital, operations, maintenance and finance costs – remains unchanged from the Phase 1 estimate of \$5-6 per thousand gallons of desalinated water. This is generally due to increased unit production costs (due to loss in economies of scale) being roughly balanced by the reduction in transmission costs (due to fewer Partners somewhat more concentrated geographically).

These capital cost estimates do not include the costs of project planning and preliminary design activities that would have to be completed before final design and construction

could commence. Some of these activities were completed during Phase 1, while others are being completed under the current Phase 2A of the Project. The estimated cost to complete project planning and preliminary design activities remaining after the conclusion of Phase 2A is approximately \$5 million.

1.4. Need for Funding Assistance

While the current capital cost estimates for the Project represent significant reductions from initial estimates, implementing a seawater desalination project of this scale clearly will require a major investment of capital, which will likely exceed the financing capacity of any of the current Partners. In addition, current political and economic conditions in Florida have created budget challenges at the municipal government level as well. As a result, the Partners have less financial resources of their own to commit to the project at the present time.

Despite this fact, the lead time needed to design, permit, and construct a facility of this type necessitates that the work on the Project continue in order to meet projected water demands in 2020. Securing one or more of the external funding sources presented in this report represents a way for the Partners to finance the work that needs to be done now, while deferring a greater share of the costs into the future, when revenues from the project would be available to help repay those costs.

2. Public Funding

The current challenge associated with implementing alternative water supply projects is obtaining funding, because fewer of the traditional public funding sources are available due to the recent economic downturn, federal government budget deficit, and State of Florida budget cuts. The following subsections outline state and federal funding sources available for alternative water supply projects and present their current funding status.

2.1. State Funding Programs

2.1.1. St. John's River Water Management District

The Water Management Districts of Florida are sustained by state funds and property taxes levied to the residents of their particular district, and have historically been big contributors of funds to regional water projects in Florida. The Water Management Districts administer flood protection programs and perform technical investigations into water resources. The Ecosystem Management and Restoration Trust Fund was established in 1996 pursuant to Section 403.1651, F.S. The trust fund is funded through various sources, such as documentary stamp tax, transfers from other trust funds, general revenues, interest earnings, and fines. It provides funding to the District for the detailed planning and implementation of programs for the management and restoration of ecosystems, including the Surface Water Improvement and Management (SWIM) Program. Revenues received from the trust fund are accounted for in the Ecosystems Management Trust special revenue fund. The budgeted amount in FY 2010-2011 will be used to support seven surface water basin programs, including the Lower St. Johns River Basin program (\$12,377,774), the Middle St. Johns River Basin program (\$2,992,943), the Ocklawaha River Basin program (\$770,338), the Upper Ocklawaha River Basin program (\$10,000), the Lake Apopka Basin program (\$44,760), the Northern Coastal Basin program (\$115,500), and the Indian River Lagoon Basin program (\$4,524,111). (Source: SJRWMD Certified Audited Financial Report for FY 2010-2011 CAFR, http://www.sjrwmd.com/budget/FY2010-2011_TENT_budgetSF.pdf).

The St. Johns River Water Management District (SJRWMD) is responsible for managing groundwater and surface water resources in all or part of 18 counties in northeast and east-central Florida, including the Coquina Coast Region. In the past, the SJRWMD has set aside approximately \$14.82 million of state and district funds in advance of the construction of the Coquina Coast Project. The SJRWMD budget for fiscal year 2010-2011 is approximately \$254.7 million, of which \$110.87 million is from ad valorem taxes. However, due to recent legislative action, the SJRWMD ad valorem tax revenues could be capped, resulting in a funding reduction of approximately 22 to 30 percent. (Source: SJRWMD website, <http://www.sjrwmd.com/budget/index.html>.) This cut will

likely affect current projects and projected future projects, including the funds previously encumbered for the Coquina Coast Project. It is important, however, to keep considering SJRWMD as a potential source of funding for this project, because as economic conditions improve, the SJRWMD may have additional funds available for both state and District funding programs for alternative water supply projects. Funding by SJRWMD is typically provided only for construction related costs, although to date it has provided 30 percent of the costs associated with planning and preliminary design of the Coquina Coast Project.

2.1.2. Florida Department of Community Affairs

The Department of Community Affairs (DCA) assists the public in many ways. Through the Small Cities Community Development Block Grant (CDBG), many areas have received grant funds for water and sewer projects which primarily benefit low to moderate income homes (typically defined as households with annual incomes between \$19,000 and \$50,000 per year). The objective of the Small Cities program is to promote a better community for low to moderate income households, prevent or eliminate slum or blight, and address urgent community development needs. The typical types of projects that the Small Cities program funds are rehabilitation and preservation of housing, water and sewer improvements, economic development activities, job creation for low and moderate income people, downtown revitalization, parks and recreation projects, and drainage improvements.

Since 1983, Florida has received between \$18 and 35 million dollars annually in CDBG funds from the DCA. These grant funds are provided through a competitive application process and depend on the “Community-wide Needs Score,” which is the numerical representation of an area’s disadvantaged status. The community with the higher needs score receives a higher allotment of funds.

Another program offered by the DCA is the Economic Development (CDBG-ED) Program. The total funds available for the CDBG-ED program is dependent on the total amount allotted to the State, minus several percentage amounts for program activities, named the “Total Pass Through” amount. The CDBG-ED program is 20% of the Total Pass Through amount. In fiscal year 2010, 20% of the Total Pass Through amount was approximately \$5.4 million for job creation/retention activities. These funds are slated for water and wastewater projects that serve job-creating locations. To qualify for these grant funds certain requirements need to be met, such as, 51 percent of jobs created must benefit low and moderate income persons and are jobs that are available to people qualified for those positions.

Governor Rick Scott signed Senate Bill 2156 on June 14, 2011, which transferred portions of the DCA to the newly created Department of Economic Opportunity. The overall outlook for funding the remaining CDBG program is still uncertain. The projects

typically funded by the DCA benefit the low to moderate income population and may help assist in funding the distribution lines from the plant to the smaller communities.

2.1.3. Florida Department of Environmental Protection

The State of Florida offers the Drinking Water State Revolving Fund (DWSRF) through the Florida Department of Environmental Protection (FDEP). Through state and federal funds, this program offers low interest loans to eligible communities within Florida to fund drinking water infrastructure projects. The funds can typically be used to finance the pre-construction, design, and construction phases of a water project. The DWSRF provides 20-year loans (30-year loans for Small Disadvantaged Communities of a population of 10,000 or less) at a low interest rate between 2.00 and 3.25 percent. The current interest rate until June 30th is 3.06 percent. The DWSRF program began in August of 1998 and has been revolving money through the system ever since. To date, the DWSRF program has been able to fund projects with up to \$8 million per year. Small Disadvantaged Communities are eligible to receive Pre-Construction loans to assist in funding the planning and design phases of projects. Approximately 15 percent of the annual allocation is reserved specifically for disadvantaged communities.

The DWSRF programs are one of the most widely used funding programs in the State of Florida. The DWSRF typically allocates \$3 million to \$8 million per year per community or entity. At these current funding levels, the DWSRF program could provide funding for certain portions of the overall project.

2.1.4. Florida Rural Water Association

For infrastructure projects that are moving quickly, it can be difficult to obtain the necessary financing in time to keep the project moving forward. To assist communities in funding these types of infrastructure projects, the Florida Rural Water Association (FRWA) offers an interim financing mechanism that, in coordination with Federally Insured Banks and Bond programs, provides funding in the short-term while U.S. Department of Agriculture – Rural Development (USDA-RD) and/or DWSRF loan funds become available. This allows communities to obtain loan proceeds at a very low cost of borrowing. As soon as the funds are available, the proceeds are paid off through the loans obtained from the USDA-RD or DWSRF. However, funding must be secured from the USDA-RD or DWSRF prior to being approved for FRWA funds. Through these programs, FRWA has provided interim financing in amounts ranging from \$277,000 to as much as \$25 million. The participant, FRWA and Financial Advisor typically determine the most cost-effective source of funding based on the borrower’s individual needs, market conditions, and timing.

FRWA also provides a program which has successfully funded high dollar projects, and more recently includes long-term construction loans, through banks and bond proceeds at interest rates between 2 and 4 four percent.

2.2. Federal Funding Sources

The Obama Administration released a National Clean Water Framework on April 27, 2011, which emphasized the importance of partnerships and coordination with states, local communities, stakeholders, and the public to protect public health and water quality, and promote the nation's energy and economic security. During the press release of the National Clean Water Framework, Secretary of the Interior Ken Salazar stated that "with growing pressures on our natural systems, we must work to secure cleaner, safer, and more reliable water supplies for our communities."

The U.S. Congress considers various authorizations and annual appropriation measures to help fund regional, state, and municipal clean water, drinking water and other water resource management efforts. For the annual appropriation process, it starts with the President submitting to the U.S. Congress the Administration's Budget Recommendation generally on or before the first Monday in February (if the deadline is not extended by Congress). The President's Budget Proposal is for the next federal Fiscal Year (FY), which runs from October 1st through September 30th.

The U.S. House of Representatives and the U.S. Senate develop and consider their own versions of a federal budget typically each spring. A budget proposal, which may or may not pass either chamber, is not enacted into law. It merely serves as a blueprint for the House and Senate to follow during the annual appropriation process and when considering authorization measures.

Both the House and Senate consider 12 annual appropriation bills to fund the federal government. The legislative process starts in the House and Senate appropriation committees where typically, the House Energy and Water Development Subcommittee and the Interior and Environment Subcommittee have the jurisdiction for water projects. In the Senate, the two panels are also the Energy and Water Development Subcommittee and the Interior and Environment Subcommittee.

The appropriation levels decided upon by the House and Senate appropriation committees, and then ultimately by the U.S. Congress in a final appropriation, may or may not be the same level recommended each year in the President's Budget or identified in the corresponding authorization. Should a final appropriation not be enacted by October 1st of each year, the U.S. Congress may pursue a Continuing Resolution for a

certain time period to keep the Federal government operating while the U.S. Congress and the Administration work towards a final funding package.

Decision-makers on Capitol Hill are now debating funding the FY 2012. President Obama submitted to the U.S. Congress the Administration's Budget February 14, 2011. The House passed its FY 2012 Budget on April 15, 2011. The U.S. Senate continues to consider its version of a FY 2012 Budget with no agreement having been reached to date. A mark-up schedule has not been announced by the Senate Appropriations Committee to date. It remains uncertain, at this time, how the House and Senate will address their respective self-imposed ban on earmarks particularly as it pertains to infrastructure funding.

2.2.1. United States Environmental Protection Agency - USEPA

Each year in the Appropriations Bill, Congress identifies a number of "special needs" projects by name and dollar amounts for funding as grants from the United States Environmental Protection Agency (USEPA). The authority to award these special appropriation grants has been delegated to USEPA's 10 regional offices. These projects are often referred to as SPAPs (Special Appropriation Projects) or more specifically, STAGs (State and Tribal Assistance Grants). STAG funds are considered earmarks. Currently there is an earmark ban, and no earmark projects are being considered for funding. However, the STAG program could be a potential source of funding for the Project if the current earmark ban is eliminated in the future. STAG grants have historically funded planning, design, land acquisition and construction phases of projects. Therefore, in the interests of moving the Coquina Coast Project forward, it will be critical to keep legislators and other state representatives informed of the need and importance of this project, to keep it in the forefront for consideration in future funding.

STAG funds are used to carry out the planning, design, land acquisition, and construction of water and wastewater infrastructure projects. In FY 2010, the federal government allocated approximately \$157 million to the STAG program nationally. Of that \$157 million, Florida received approximately \$5 million for 11 projects. The largest grant amount awarded was \$970,000. (Source: EPA Memorandum dated March 29, 2010, RE: Award of Special Appropriations Act Project Grants Authorized by the Agency's FY2010 Appropriations Act.)

The STAG program can also be used in conjunction with DWSRF loans. The STAG program has a requirement that the community match a percentage of the funds in the grant award. With prior approval of the DWSRF program, funds can be used as the matching funds to be paid back over 20 years at a low interest rate. In 2010, USEPA

earmark funds for identified projects ranged from \$100,000 to \$6.0 million on individual projects. Given the amount of funds that are allocated each fiscal year to each project per USEPA region, the STAG program would provide limited funding for a multimillion dollar project and would require other sources of funding. However, in concurrence with the DWSRF program, this funding source can be useful to partially fund a large infrastructure project.

USEPA offers a variety of funding programs such as Watershed Funding, Beach Act Grants, Wetland Program Development Grants, Section 319 Nonpoint Source Implementation Grants, Section 106 Water Pollution Control Program Grants and Section 104(b)(3) Water Quality Cooperation. These programs typically do not have large sums of funds tied to them; however, they can be used in a combined effort to help address pollution control and water quantity/quality issues.

2.2.2. Water Resources Development Act of 1992

Under its civil works program, the Army Corps of Engineers (Corps) plans, constructs, and operates water resource facilities primarily for flood control, navigation, and environmental purposes.

The Corps is a federal agency in the Department of Defense with military and civilian responsibilities. At the direction of the U.S. Congress, the Corps plans, builds, operates, and maintains a wide array of water resource facilities in the United States and U.S. territories. The agency's traditional civil responsibilities are creating and maintaining navigable channels and controlling floods. In the past two decades, the U.S. Congress had increased the Corps' responsibilities to include ecosystem restoration, municipal water and wastewater infrastructure, disaster relief, and other activities. The Corps' regulatory responsibility for navigable water extends to issuing permits for private actions that might affect wetlands and other waters of the United States.

The U.S. Congress generally authorizes Corps water resources studies and other efforts typically through the Water Resources Development Act of 1992 (WRDA). In addition to authorizing specific projects, over the years WRDA has resolved longstanding policy disputes related to cost-sharing, user fees, and environmental requirements. Other elements that tend to drive the WRDA debate include: community and political pressure to authorize new projects; growing funding needs for projects and programs; and, modifying the scope of already authorized projects.

While the congressional intent typically is to put forth a new WRDA every couple of years, it has been increasingly difficult for the U.S. Congress to achieve this. For instance, the current WRDA was enacted in 2007 following several years of debate on Capitol Hill including the eventual overriding of a Presidential veto in November 2007.

The Florida projects and authorized funding levels in the WRDA 2007, as indicated in the WRDA 2007 Conference Report, include:

Community	State	Project Type	Funding Level
Charlotte County	FL	Water supply infrastructure	\$3,000,000
Charlotte, Lee and Collier	FL	Water supply interconnectivity infrastructure	\$20,000,000
Collier	FL	Water infrastructure to improve water quality in the vicinity of the Gordon River	\$5,000,000
Hillsborough	FL	Water infrastructure and supply enhancement	\$6,250,000
Jacksonville	FL	Wastewater related infrastructure, including septic tank replacements	\$25,000,000
Sarasota County	FL	Water and wastewater infrastructure	\$10,000,000
South Seminole and North Orange Counties	FL	Wastewater infrastructure	\$30,000,000
Miami-Dade County	FL	Water reuse supply and a water transmission pipeline	\$6,250,000
Palm Beach County	FL	Water infrastructure	\$7,500,000

The project types shown above are typically defined broadly to give the grant requester/grant recipient the flexibility to request federal funding for various efforts, as well as to provide flexibility, as project scopes, community preferences, and state and local funding options can change during an authorization period.

The Water Resources and Environment Subcommittee of the House Transportation and Infrastructure Committee and the Water and Wildlife Subcommittee of the Senate Environment and Public Works Committee have jurisdiction over WRDA. Although numerous hearings have been held this year in both subcommittees, no legislation that

would reauthorize WRDA has been introduced to date. Factors that make it difficult to move a new WRDA on Capitol Hill include: the self-imposed earmark ban, \$60 billion + for over approximately 500 already authorized construction projects that have yet to be appropriated; and, the overall current Federal budget/deficit situation.

An additional complicating factor is that the current Administration has not released its version of a new WRDA. However, the Administration continues to work on its new Policies and Guidelines document (as required by WRDA 2007) and recently released an outline of some of its water policy priorities in the document, Clean Water: Foundation of Healthy Communities and a Healthy Environment. It is anticipated that the current Administration will continue to evaluate, refine and possibly expand its water policy priorities moving forward.

2.2.3. Clean Renewable Water Supply Bond Act of 2009

Senator Bill Nelson introduced the Clean Renewable Water Supply Act of 2009 on June 25, 2009. This act was intended to amend the Internal Revenue Code to provide for the issuance of tax-exempt clean renewable water supply bonds to finance water supply technologies, including desalination and groundwater remediation. This act included establishing a limitation of the amount of bonds designated as clean renewable water supply bonds for each year between 2009 and 2019. Co-sponsors for the bill were John Ensign (NV), Mel Martinez (FL) and George Lemieux (FL). The bill was not voted upon in the Senate.

The Act was reintroduced by Representative Xavier Becerra (CA) on November 19, 2009. Representative Becerra had 22 co-sponsors including several from Florida (Vern Buchanan, Mario Diaz-Balart, Alcee Hastings, Bill Posey, Thomas Rooney, Ileana Ros-Lehtinen and John Mica who is the US Representative for Florida's 7th District). As in the Senate, this bill did not make it through the House.

Tax-exempt bonds would help offset some of the costs associated with bond issues. Discussions with the Florida Representatives that co-sponsored this bill are recommended to determine if the Act can be reintroduced during the current 112th Congress.

2.2.4. Tax Exempt Bonds and Innovative Federal Financing Options

In order to fund the capital outlay required for the innovative technologies that can supply substantial new sources of clean water, tax credit bonds can be employed to provide a significant tax subsidy that may make these projects more cost effective. Utilizing tax credit bonding for a wide array of projects including bonds for inner-city schools rehabilitation, renewable energy initiatives, and post-Katrina and Rita hurricane reconstruction projects are an important tool for communities to consider.

The U.S. Government has the authority to issue bonds to qualified borrowers, like local government agencies, to sell bonds for a specific, qualified project.

Conversely, with a conventional tax-exempt bond, the issuer must pay interest to the bondholder. But with a tax credit bond, the Federal government pays a tax credit to the bondholder in lieu of the issuer paying interest. The U.S. Treasury Department sets the rate of the tax credit on a daily basis and the bondholder is able to deduct the amount of the tax credit from their total income tax liability. Since the Federal government is subsidizing the interest on the bonds, this provides the issuer with the equivalent of an interest-free loan. This up-front subsidy can be a critical factor for the agency or utility building these innovative technologies.

Alternative financing tools such as federal tax-exempt or federal tax-credit bonding options and national infrastructure bank concepts are gaining momentum in light of the Federal deficit situation and ever growing infrastructure needs.

On May 10, 2011, Senators Robert Menendez (D-NJ) Mike Crapo (R-ID) and Representatives Bill Pascrell (D-NJ) and Geoff Davis (R-KY) – introduced the Water Infrastructure Investment Act of 2007, S. 939/H.R. 1082. These bills would remove the state volume caps on Private Activity Bonds (PABs) for water and wastewater financing. Airports, inter-city high speed rail, and solid waste disposal sites are already exempted from state volume caps. S. 939 has been referred to the Senate Finance Committee and H.R. 1082 has been referred to the House Ways and Means Committee.

One measure that has received significant attention is the BUILD ACT (Building and Upgrading Infrastructure for Long-Term Development), S. 652. This measure, introduced by Senator John Kerry (D-MA) on March 17, 2011, would establish an American Infrastructure Financing Authority to leverage federal funding. Eligible projects would include transportation infrastructure; water infrastructure; and energy infrastructure. In general, projects would have to be at least \$100 million in size and be of national or regional significance. Projects would have a clear public benefit, meet rigorous economic, technical and environmental standards, and be backed by a dedicated revenue stream. Geographic, sector, and size considerations would also be weighed.

This bill has strong bi-partisan and key geographic support with these cosponsors: Mark Warner (D-VA), Lindsey Graham (R-SC), and Kay Bailey Hutchison (R-TX). It has been referred to the Senate Finance Committee. To date, there is no companion bill in the House.

2.2.5. United States Department of Agriculture

Communities can obtain funding for water, wastewater, and solid waste projects from the United States Department of Agriculture (USDA) through the Rural Utilities Service (RUS) program. This program provides funding to small, rural, incorporated towns/cities to fund installation, repair, improvement, or expansion of a rural water facility. The funds can also be applied toward the cost of distribution lines and well pumping facilities. This program has certain constraints associated with its requirements. To meet the requirements, no other source of funding can be available to the community and the population of the municipality cannot be greater than 10,000 people according to the most recent Census. Although the respective populations of the current Partner municipalities each exceeds 10,000, this funding could be considered by potential future Partners whose populations are less than 10,000.

The total grant/loan funds available per project vary annually and by region or state. In FY2009, Florida (whose region also includes the U.S. Virgin Islands) received approximately \$44 million to allocate between all approved projects.

2.2.6. United States Department of Commerce

The United States Department of Commerce (DOC) offers a program through the Economic Development Agency (EDA), to provide opportunities for economically distressed areas to regenerate and improve their existing infrastructure. The eligibility requirements state that the region to be funded must have an unemployment rate that is at least 1 percent higher than the national average and an average per capita income that is 80 percent or less than the national average for the most recent 24 month period, or an EDA determination that there is a “Special Need” for that area.

There are several factors that aid in the consideration of eligibility such as the severity of unemployment and poverty levels based on data that EDA collects during its independent analysis. However, it is the responsibility of the community to provide reliable data substantiating its claim for funding need. The maximum amount that EDA would fund is also dependent upon the severity of the economic situation for the area. EDA can fund 50-80 percent of the project cost (80 percent being the maximum allowable amount). To receive 50 percent of the allowable amount, the area’s unemployment rate must be at least 1percent greater than the national average and the per capita income is not more than 80 percent of the national average. To receive 80 percent of the allowable amount the area’s unemployment rate must be at least 225 percent of the national average and the per capita income is not more than 50 percent of the national average.

The EDA program offers significant funding opportunities for communities that have had an extreme economic downturn. The program is geared to provide entrepreneurship, innovation and productivity through investments in infrastructure development, capacity

building and business development in order to attract private capital investments and higher-skill, higher wage jobs to regions experiencing substantial and persistent economic distress.

EDA typically has four funding cycles to review applications. Applications must be received by December 15th for funding cycle 1, March 10th for funding cycle 2, June 10th for funding cycle 3, and September 15th for funding cycle 1 of FY2012.

2.3. Identifying New Funding Opportunities

Due to the current economic climate, there are several challenges facing communities seeking funding as well as agencies that provide funding. There are a number of factors currently weighing on the potential to fund multi-million dollar projects, which were not seen in the past. There may be new requirements attached to funding opportunities, as well as program matches, and rate increases/decreases. Not only will the funding opportunities shift, but there may be changes within the scope of the project as well as with the community. There are some agencies with programs that don't seem to be a viable source of multi-million dollar funding; however there are other alternatives to meeting the needs of communities and projects that have above average dollar amounts. Also new funding opportunities may emerge due to the changing political and economic climate.

Although funding opportunities may currently be limited, it is important that the Partners continue to move forward and meet with Florida Legislators and US Governmental officials to highlight the need for the project and provide necessary details and status updates of the project as it develops. It is also important that necessary documentation and applications into possible funding sources be submitted to ensure the project is "in line" for future funding consideration. If done successfully, and as the economy regains momentum and more funding becomes available, this project should be in the forefront of State and US officials and be well positioned for funding consideration.

3. Public-Private Partnerships

3.1. Overview of Public-Private Partnerships

To manage the costs of designing, constructing, and operating water supply and treatment infrastructure, municipal utilities have traditionally used rate revenue, taxes, and/or municipal bonds, in some cases supplemented by funding from outside public sources such as those described in Section 2 of this report. However, reduced availability of capital funding from these traditional sources, combined with rising costs of building new or replacing aging facilities and meeting stricter environmental standards, has brought an increased level of consideration toward private financing to help implement such projects that have long been the sole purview of the public sector.

The fundamental basis for privately financed public projects, known as Public-Private Partnerships (or PPPs) is that they provide a way for a municipal utility to avoid direct spending of capital on new facilities while maintaining, and potentially improving, the level of service it provides to its customers. Although there are many variations in PPP models, the most common arrangements involve a private entity designing, building, financing, and operating the project, receiving payment on the basis of its performance in meeting the contractually specified needs of the public entity. The private entity finances the project by borrowing capital from a lender and investing equity. The payments for services or product it receives from the public entity over the duration of the contract cover the cost of operating and maintaining the facility, repaying debt, and providing a return on the private investment.

3.2. Common PPP Types

The vast majority of publicly financed water supply and treatment projects, particularly in Florida, utilize the traditional Design-Bid-Build procurement model. Under this model, the municipal utility contracts directly with (separate) private companies to design and build the facility. The utility oversees the design and construction at some level, and once construction is completed, the utility assumes operation itself.

Under PPP arrangements, the private sector generally assumes a larger role in planning, design, construction, financing, operating and maintaining the facility than under the traditional Design-Bid-Build model. There are many variations of PPP models. And while no two projects are exactly alike, the most common types of PPP arrangements for implementing new facilities include the following.

- **Design-Build (DB):** Under this model, the public entity contracts with a private partner to design and construct a facility in accordance with the requirements it sets. When construction is complete, the public entity assumes responsibility for operating and maintaining the facility.
- **Design-Build-Maintain (DBM):** This model is similar to Design-Build except that the private partner also maintains the facility for a specified period of time. Under this model, operation of the facility is the responsibility of the public entity.
- **Design-Build-Operate (DBO):** Under this model, the private partner designs and constructs the facility. When construction is complete, the private partner operates and maintains the facility for a specified period, while the public entity retains ownership.
- **Build-Operate-Transfer (BOT):** This model combines the responsibilities of the Design-Build procurement method with the operations and maintenance of the facility by the private partner for a specified period of time. At the conclusion of that period, the facility's operation is transferred back to the public entity.
- **Build-Own-Operate-Transfer (BOOT):** Under this model, the private partner designs, constructs, finances, operates and maintains the facility for a specified period of time. During that period, the private partner retains ownership of the facility. At the end of that period, ownership is transferred back to the public entity.
- **Build-Own-Operate (BOO):** The private partner designs, constructs, finances, operates and maintains the facility, while retaining ownership without the requirement to transfer that ownership back to the public entity.

The models above are presented in the order of increasing private sector responsibility. From the standpoint of funding for the Coquina Coast Project, the responsibility for funding and capital financing of the project ranges from fully with the Coquina Coast Partners (under DB) to completely with the private sector entity (under BOOT or BOO). Between these two extremes, the models present a variety of options for the Partners to combine funding options, defer or avoid direct capital expenditure to implement the Project.

3.3. Major PPP Considerations

In the context of project funding, the main advantage of a PPP is that it provides an option for the public entity to secure the design and construction of a major facility without up-front capital cost, as the private partner can supply the capital under many of the PPP models. Such an arrangement could also include the pilot plant being mostly or fully funded with private funds, as a condition of a full-scale project implementation

agreement. A private partner's total package of financing, design, construction, operation and maintenance may be more cost-effective, and typically requires less time to implement a project than one utilizing a combination of public debt financing private design and construction (and perhaps operation and maintenance). However, capital costs are eventually borne by the public utility customers (and taxpayers) as they are repaid over the duration of a long-term agreement with the private partner through user charges (and subsidies from tax revenue).

Another advantage of a PPP is that it can allow a public entity to better protect itself by transferring to a private partner certain risks and responsibilities that the private sector is better equipped to mitigate or manage. There are risks associated with the operation of any business, and those risks specific to implementation of the Coquina Coast project will include:

- demand risk (e.g., fluctuations in water demands that can make the project too big or too small)
- design and construction risks (e.g., cost and schedule overruns)
- operational risk (e.g., seawater intake and concentrate discharge requirements, as well as the technical complexity and energy consumption of a desalination plant compared to a conventional groundwater treatment plant)
- environmental risk (e.g., stringent permitting and environmental requirements that can change over the course of the facility's operation)
- financing risk (e.g., fluctuations in interest rates)
- political and legal risks

In traditional publicly financed projects, the majority of these risks are assumed by the public sector. Shifting the appropriate risks, and the liabilities associated with them, to the private sector may help to minimize the overall risk and cost of providing water services, which has the potential to benefit all parties, including the water utility customer.

Even with the increased role of the private sector under a PPP, utility customers generally hold the public entity accountable for delivery and quality of their water services. In recognition of this fact, as well as the public entity's desire to maintain fundamental control of the project, contractual arrangements can be made to enable public control under most PPP models. For instance, if the public entity is dissatisfied with the private partner's service relative to the terms of the agreement, it can require the contractor to rectify its performance or terminate the contract. Further, most PPP models enable the public entity to keep full control over user rates in the hands of the municipality. Rates or subsidies may need to be raised if new investment is required or operating standards are upgraded, or they could be reduced if cost savings from operating efficiency can be

realized. The decision whether to recover full costs of providing water through rates, or through a combination of rates and subsidies is not necessarily affected by the implementation of a PPP.

There are disadvantages to implementing a PPP that must be considered as well. While certain responsibilities and risks are more appropriately shifted from the public to the private sector, others are not easily transferred without creating additional issues that must be addressed. For example, having the private partner responsible for obtaining required permits can create challenges if operating and permitting information are treated as confidential or proprietary. More generally, PPPs can create public perception issues that must be managed, such as those stemming from beliefs that the private sector should not have such a major role in, nor derive additional profits from, the provision of such a vital human necessity.

Finally, PPPs involve complex agreements and require long-term commitments from both the public and private entities. Before entering into any such agreement, the public entity should secure experienced engineering, legal, and financial advisors to support the negotiations and to ensure the public interest will be protected for the term of the agreement. Such support is likely to be required continually throughout the life of the contract to review the performance of the private partner relative to contractual guarantees, help enforce contractual terms, resolve disputes, and develop contract amendments that may be required to account for changing circumstances (e.g., a new environmental regulation).

3.4. Potential Private Partners

There are many types of private sector entities, including engineering, construction and financial institutions that could be potential partners in the Project. For larger types of infrastructure projects such as this one, a consortium of partners, each with different fields of expertise, would likely serve as a private partner. This would enable the Coquina Coast Partners to benefit from the expertise, knowledge, resources and experience that the individual entities in a private consortium have with project design, finance, management, operations, or other specific project components beyond that of most public entities. The challenge is finding the appropriate partner or partners, based on qualities that include:

- Expertise
- Financial capabilities
- Experience in delivering similar projects
- Experience working with similar public entities
- Acceptable (and appropriate) allocation of project risks

- Duration and terms of agreement
- Value for price

Some of these qualities should be used to identify and pre-qualify those prospective partners that have the greatest potential for developing and delivering the proposed project. Other qualities are more project-specific, and would therefore be determined (and perhaps negotiated) when the requirements of the Coquina Coast Project and its public sector Partners become more well-defined.

4. Other Funding Considerations

4.1. Project Governance

As stated in the Funding Initiative Plan submitted in November 2009, the decision regarding the governance structure for the Coquina Coast project is one of the most important decisions the Partners will ultimately have to make with regard to the success of the project and future funding opportunities specifically. The significance of the governance decision lies in its effect on the funding process, including the total dollar amount available to the project and the speed with which the funding process may proceed. That plan provided an overview of many of the governance structures that will ultimately be available to the Partners, and the impact those structures have on the eligibility of the project for sources of public funding.

Fundamentally, those governance structures remain as available options to the Partners, and their impacts on funding eligibility are largely the same. Because there have been no further discussions among the Partners regarding project governance since that Funding Initiative Plan was submitted, there is no update to provide here. As the project proceeds and the lineup of Partners evolves, it is recommended that the various structures be reviewed by the Partners at such time as governance discussions resume.

4.2. Stakeholder Involvement

Stakeholder involvement and community acceptance are key selection criteria for many funding programs. Stakeholder involvement ensures that the project reflects the community's values. It is critical that the Partners and the project team work to keep residents informed and involved as the project moves from feasibility studies to preliminary design, and that has continued support throughout the course of the Project. All business meetings and teleconferences are open to the public. Project information is currently posted on the Project web site and made available to the public as deliverables are finalized. In addition, a Public Meeting was held at the University of Florida Whitney Laboratory on March 9, 2011 specifically to gather public input on the weighing of criteria to be used in the site selection process. An additional public meeting is scheduled for the same location on August 17, 2011 to update the public on the status of the project and the findings of the current Phase 2A.

4.3. Governmental Relations

Efforts to educate legislators about the imperative for establishing alternative water supplies can include initiatives to identify new sources of funding, free up existing funding, or place this desalination project at the top of priority lists, by making rule changes that place a priority on desalination. Legislative efforts to change existing rules to encourage separate and distinct competitive funding opportunities specific to alternative water supplies is critical. The Partners should continue to monitor and participate in discussions relating to future funding initiatives specific to alternative water supply.

5. Summary and Recommendations

Over the past 18 months the projected size, costs, and schedule of the Coquina Coast Project have been revised, primarily the result of reductions in the projected water demands of the individual Partners, as well as a fewer number of Partners participating in Phase 2A. In addition to these revisions to the project, there have been significant changes in many of the traditional public funding programs, due largely to current policy, shifting priorities, and budget challenges at all levels of state and federal government.

Despite the limited opportunities for funding from these public sources at present, it is recommended that the Partners continue to pursue these sources by meeting with State and federal legislators and officials, both to highlight the need for the project and to provide necessary details and status updates of the project as it develops. While there may be limited funds available for the project now, the majority of funding needed to implement the project is associated with construction of the necessary facilities, which, on the current schedule would not commence for at least three to four years. It is the availability of funding dollars at that time that is more important to the Project than what is available today.

Given the capital requirements of \$200 to \$400 million for the Project, it is expected to take at least that long to elevate the status of the Project on the priority lists of the applicable public funding sources to ensure it receives its share of the dollars when they are available. This includes submitting necessary documentation and funding applications to ensure the project is “in line” for future funding consideration. By taking these actions, the Project would be in the forefront of the State and US officials and be well positioned for funding consideration when the economy regains momentum and funding becomes increasingly available.

Given the uncertain nature of traditional state and federal funding programs, it is not prudent for the Partners to rely solely on the future availability of these funds to finance and implement the Coquina Coast Project. Private financing, available through a variety of Public-Private Partnership types, provides a way for the Coquina Coast Partners to secure the design and construction of the plant without up-front capital cost. Additional benefits can also include the ability to shift some of a municipal utility’s traditional risks to the private sector, while maintaining control over the project as well as the rates charged to its users.

PPP agreements are inherently complex, however, and there is likely to be a significant learning curve before the Partners would be comfortable entering into such an agreement. Therefore, it is also recommended that the Partners begin to explore the potential for a Public Private Partnership as a way to implement the Coquina Coast Project.