

**Dates:** March 9-17, 2011

**Notice:** Project website announcements, Twitter, direct email and handouts at March 9, 2011, public meeting

News coverage or calendar listings:

*Daytona Beach News Journal* (3/8/11; 3/10/11; 3/12/11)

*Palm Coast Observer* (3/17/11)

Flagler Live (3/8/11; 3/10/11)

**Number of  
Responses:** 63

### **Survey Overview:**

The Coquina Coast Seawater Desalination Project developed an online survey using Survey Monkey as a supplemental way to obtain community feedback on the project's siting evaluation criteria. The survey included detailed information on the evaluation process as well as the attributes associated with each of six siting criteria: Community Values, Environmental Stewardship, Project Reliability, Permittability, Risk and Comparative Cost.

The survey instrument paralleled the March 9, 2011, public meeting. Survey respondents were provided information on each criterion and its associated attributes, and were provided the opportunity to add attributes if they felt something was overlooked. Additionally, respondents were asked to identify the criterion or criteria they felt is or are most important. This part of the survey replicated the "sticky dot" exercise during the public meeting. The survey also included additional questions about the survey and project web site.

Following are summaries of the input received on each segment of the survey.

## **Attributes Residents Suggested Adding**

### **Community Values**

- Social justice for those funding the project
- Addresses on-going infrastructure needs, i.e. road surface maintenance
- Re-shaping of existing beach-line (a change of the existing sandbar.)
- Proper techniques to avoid endangering sea-life (turtles/lights etc)
- Water quality - ensure the water is safe
- Noise
- Avoid Scenic Highway and Byway Locations

### **Environmental Stewardship**

- Promotes and supports local environmental improvement efforts such as reefs, marsh land and wildlife corridors
- Damage to dune system
- Find alternative energy
- Avoid toxic waste sites
- Impacts to marine recreation, i.e. swimming, water sports, etc
- Flat roofs to promote nesting shore birds such as the least tern
- Effects of pipeline - the intake and its location will create a 'pier like' effect, much like the wave surfaces at the Flagler Pier

### **Project Reliability**

- Operating redundancy for critical systems; parts availability and repair
- Verify workers, and work done previously; a company with a good track record
- Hurricanes
- 24/7 highly trained security force

### **Permittability**

- Ensure the protection of Florida native plants and old growth trees

### **Risk**

- Protect aquifers and prevent any negative impacts
- Proximity to registered toxic waste areas, which are many in Florida -- just look on-line

### **Comparative Cost**

- Provide healthy incentive to any community that donates the land needed
- Cost of disposing of salt (waste products)
- Critical safety providers, on site and nearby; also overseen by another authority; dual control at least

### **Criteria Input Exercises**

Residents were given three opportunities to indicate which criterion or criteria is or are most important to them. They had the opportunity to check up to three boxes, but they could distribute their checks however they chose. For example, they could check all three boxes of one criterion; two boxes on one and one on another; or use one check among three different criteria. Respondents were first asked for their input on the five qualitative criteria, excluding Comparative Cost. Respondents then repeated the exercise on all six criteria, including Comparative Cost.

The results show that respondents ranked Environment Stewardship highest, with Risk and Project Reliability coming in second and third when Comparative Cost is not a factor. When Comparative Cost is considered, Environment Stewardship still ranks first, with Comparative Cost second and Risk and Project Reliability tied for third.

<b>Criterion</b>	<b>Input #1</b>	<b>Input #2</b>
Environmental Stewardship	49	39
Risk	39	30
Project Reliability	38	30
Community Values	32	27
Permittability	7	6
Comparative Cost		33

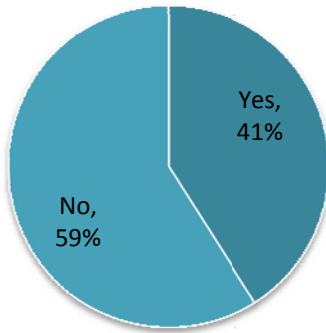
### **Additional Comments**

On a scale of 1-5, where 1 was “strongly disagree” and 5 was “strongly agree,” respondents were asked to rate information provided in the online survey. Fifty-nine of the 63 respondents completed this section. Below is an average response to each statement.

<b>The evaluation criteria and project siting information was helpful.</b>	3.6
<b>Having the ability to provide my input online was helpful.</b>	4.0
<b>I now understand the siting process and how the evaluation criteria will be used.</b>	3.4

Additionally, 81 percent of the respondents either agreed or strongly agreed that the ability to provide input online was helpful.

**Have you ever visited the project website, [www.coquincoastdesal.org](http://www.coquincoastdesal.org)?**



Fifty nine respondents answered the question about the project website. Of the 24 respondents that had visited the website, nearly 60 percent agreed or strongly agreed that the website as informative, with 25 percent responding neutrally. Only 17 percent reported that they strongly disagreed or disagreed that the website was informative.

**Answers to Questions/Comments Received Online**

Respondents were provided the opportunity to list questions they still have or provide comments. Following is a summary of questions received and their respective answers.

**1. Have you selected the Roberts Road location?**

No. Potential sites have not yet been identified.

**2. Will the plant be noisy?**

If a plant is built, there will be some noise associated with the heavy equipment needed during construction. Once operational, however, it will be very quiet, similar to a typical surface water treatment plant. Buildings will buffer any noise from equipment located inside, such as the pumps needed for the reverse osmosis process.

**3. Are there protocols in place if a site selection should prove to be a 'failure'?**

During the site selection process, potential sites will be ranked. If the project participants choose to purchase the top-ranked parcel, but are unable to for any number of reasons, then they would move to the second-ranked proposal.

**4. How will community input be use? How much weight will it be given? Will the public be included in helping you pick the site location? Do we have various sites to choose from now? Will we after the siting criteria are evaluated?**

Sites have not yet been identified for the proposed desalination facility. Community input will be used by the project participants as they determine relative weights for the siting criteria. The weighted criteria will be used to evaluate up to 30 potential parcels in St. Johns, Flagler and Volusia counties to develop a short-list of 5-10 potential plant locations, which is scheduled for August. A preferred site will be selected in 2012-2013.

5. **Is there going to be a power plant and/or sewer plant located in close proximity to the desalt plant? If so, isn't air pollution now a concern and shouldn't it have been listed as one of the negatives other than just noise.**

The location of the proposed plant is not yet known. A desalination plant itself does not have dangerous air emissions. Power for the plant would most likely be provided from the existing electrical grid. The only significant byproduct from the plant will be concentrated seawater, which will be returned to the ocean. So there are no plans to locate a power plant or wastewater treatment plant in close proximity to the desalination plant.

6. **What size intake pipe is contemplated? Will the intake pipe be buried across the beach? Will the intake pipe be buried across A1A, the ICW and inland?**

The exact intake method and location have not yet been determined, nor has the route for intake and discharge pipelines. Intake options under consideration include screened intake with a pipeline, off-shore infiltration gallery, or radial collector wells. A pipeline from the intake to the plant would probably range from 66-84 inches in diameter, and depending on the pipeline route, could be installed via tunnel to minimize disruption to major roadways, the Intracoastal Waterway, or other major features. Computer models, water quality testing and scientific studies will be used to examine viable intake options. The project's evaluation criteria will be used to rank intake options, pipeline routes and construction techniques, as well as concentrate disposal options.

7. **What are the plans for the overabundance of salt that is produced from the plant? Where is the brine to be disposed of?**

Desalination takes fresh water from seawater, leaving behind concentrated seawater that is roughly twice as salty as when it entered the plant. The exact concentrate disposal method and location have not yet been determined. Options under consideration include a subsurface dispersion field and various diffuser systems. Computer models and scientific studies will be used to examine viable options and determine the best method for mixing and dispersing the twice-as-salty seawater back into the environment without harming Florida's ecology.

8. **What will make-up the plant effluent? Could the salt concentration be available for commercial processing to produce a dried salt product?**

Depending on the seawater quality, the pretreatment process selected will determine what, if any, chemicals are added to the water prior to desalination. Any chemicals added to the seawater are removed by the treatment process, so there are essentially no residual chemicals in the water discharged back to the ocean. Regarding producing a dried salt product, several studies have been done in the past to examine the economic value of concentrated seawater. Existing technologies to evaporate the concentrate to derive sea salt and other minerals are energy intensive and not economically viable.

**9. What do we do about the critical habitat for the North Atlantic Right Whales? How much will an intake pipe impact the critical habitat?**

Protecting the Northern Right Whale and its calving grounds are of utmost importance to the project team. Construction activities, should they occur in the habitat, will be scheduled around calving season using methods of construction that do not impact the whale habitat or migratory patterns.

**10. What happens if there is an oil spill in the vicinity of the plant?**

Any kind of oil, fuel or chemical spill in the vicinity of a desalination plant intake would prompt concerns. If such an event were to occur, water managers would protect the facility by closely monitoring movement of the contaminant and shutting down plant before anything could reach the intake.

**11. Why isn't conservation being addressed? The problem is we are wasting water. How do we prevent the unnecessary wasting of water?**

Conservation and reuse are essential and remain important components of each partner's water supply planning. The project participants' goal is to conserve and reuse their way to the smallest alternative water supply project possible. Conservation and reuse can extend existing water supplies and reduce demand, but alternative water supplies will still be needed to protect groundwater resources and meet future drinking water needs. A sustainable, reliable water supply will require aggressive conservation, use of reclaimed water for irrigation and industrial purposes, plus new, alternative water supplies.

**12. What category hurricane can the plant survive?**

The plant has not yet been designed, and its design will vary depending upon the location selected. For planning purposes, contingencies are included in the engineer's estimates to assure adequate storm/hurricane protection is provided, but again, the plant has not yet been designed.

**13. What kind of illnesses can come from using ocean water?**

Seawater desalination produces some of the highest quality drinking water in the world. This project has established water quality requirements that meet or surpass state and federal drinking water standards. The goal is to provide the participants with high-quality water that requires little, if any, additional treatment before being blended with other water supplies. Pilot testing of treatment processes will be conducted to ensure that the established water quality requirements will be met.

**14. When will cost comparisons be available versus other alternatives, such as gray water conservation?**

The costs for other alternatives are being prepared by the St. Johns River Water Management District as a part of the regional water supply planning process. In addition, many of the project partners have evaluated alternatives to seawater as part of their water supply planning efforts. More refined cost estimates for this project will be available with the Phase 2A project report in the fall of 2011.

**15. Have plans been discussed with both the EPA (United States Environmental Protection Agency) and the Florida Water Management District?**

The project team has had preliminary discussions with the U.S. EPA and Florida Department of Environmental Protection, which oversees the state's water management districts. The St. Johns River Water Management District is a funding partner in the project. In addition, the project team has met with the U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, the U.S. Coast Guard, National Marine Fisheries, and other agencies to discuss this project and identify permitting and other requirements to assure the project is completed in the most environmentally responsible manner possible.

**16. Why don't you tap water from the freshwater springs off Crescent and Fernandina beaches?**

Tapping offshore springs has been studied, but the springs do not produce the quantity of water that is projected to be needed in the future. Additionally, the water still contains a significant salt concentration and would require some level of reverse osmosis treatment. However, the project team is investigating whether it would be advantageous to locate this project's intake near an offshore spring to benefit from the lower salinity.

**17. Where is the money coming from for this project? Will rates go up?**

The project is currently being funded by Palm Coast, Leesburg, DeLand, St. Johns County and the St. Johns River Water Management District. Funding of the Phase 2B will be determined in early 2012 and could include the current partners or other interested cities and counties. The St. Johns River Water Management District, which is funded through ad valorem taxes, is funding up to 30 percent of the eligible project costs for Phases 1 and 2A and has also set aside some funds for project cost sharing.

If the project moves forward into construction, financing will depend on plant ownership. However, project participants are investigating ways to reduce the cost to their customers. Water from the desalination plant would be blended with the project participants' other water supplies, which would lessen the rate impact to customers. Phasing construction to closely align with demand will also reduce impacts by delaying additional capital and operating expenses until the new supply is needed.

**18. Can a community that donates the land reap a financial benefit?**

The biggest financial benefit will be in jobs generated during construction, permanent jobs generated by the plant, as well as the economic benefit of an adequate supply of drinking water. An economic impact analysis would answer these types of questions, but one has not yet been conducted. While the plant will require a small number of workers, economic benefit to a municipality would depend on the whether the facility is owned and operated by a municipality, owned by the municipality but operated by private company, or owned and operated by a private company.

If the plant is privately owned, then it may generate tax revenues, but this cost to the owner would be reflected in the cost of water from the facility. If the facility is owned by a city or county, it would likely not generate tax revenues, and this savings would likewise be reflected in water rates.

**19. What will be done to minimize the carbon footprint? Look at alternative energy sources for this facility.**

The Coquina Coast Desalination Project is likely to receive its power from the Florida Power & Light (FPL) grid, so the power sources will include any power-generating facility that supplies the grid. The project team is committed to exploring the viability of alternative energy and has talked to FPL about alternative energy options and will continue to monitor FPL's progress. Additionally, the project design will include efficient energy recovery devices which can reduce energy costs as much as 40 percent or more, and may include other green energy alternatives, such as on-site solar panels for lighting and building power.

**Summary of Comments**

- I live in Flagler Beach, right behind the proposed Flagler County site. An adequate buffer to my residential neighborhood does not exist. There are sensitive wetlands and habitats in my back yard. The potential noise, dust, lighting and other negative factors make Flagler County (Roberts Rd) a poor choice for this facility. The impact on my property value and quality of life -- and that of my neighbors -- would be huge.
- Not in the Flagler Beach or Colbert Rd area. This is a residential area and should not be made into an industrial area.
- The land off of Roberts Road in Palm Coast seems to meet much of your criteria.
- Site selection is very important to me, since I live on the barrier island and the land will be at risk as will be the critical habitat for the North Atlantic Right Whale

- THANK YOU for this critical project!!
- Any “green initiatives” should be provably effective, and not just an emotional hook.
- It has not been proven that “carbon footprint” is anything that we should be worrying about. One good volcano surpasses the sum output of mankind since the beginning of the Industrial Revolution.
- Go online to find toxic waste sites.
- If it is such a good idea, why doesn’t a private developer do it?
- Impact on ground water, during hurricanes and floods. Absolute limit on gallons drawn, at one time.
- This site selection is only a small part of the program. There are alternatives out there and some possible alternatives to site selection and the discharge. It would be helpful to have a design plan and what properties you are looking at in particular.
- Give the residents a taste of bottled water from Dubai
- No litigation limit. Florida has way too many caps on serious litigation. Time to step up for the environment, and the future.
- Investigate other areas who have a working plant, then act accordingly as to not have any of the same problems.
- The project could become a political money train.
- Provide healthy incentive to any community that donates the land needed.
- Build a pipeline from Canada.
- Pay cash.