

Meeting Summary

DATE: October 18, 2010

FROM: Jerry M. Salsano

TO: Coquina Coast Representatives (via email only)

CC: Staff and Interested Parties (via email only)

SUBJ: Coquina Coast Seawater Desalination Alternative Water Supply Project Business Meeting Summary, September 8, 2010

Purpose

Conduct business as required to accomplish the Coquina Coast Seawater Desalination Alternative Water Supply Project PDR. The meeting agenda is at Attachment 2.

Action Items

| Person/Agency | ACTION ITEM(s) | Due/Status |
|--------------------|---|---------------|
| SJRWMD | Seek STAG funds for Phase 2 of the project at this time, with the option to pursue funds for subsequent design or construction phases. | Ongoing |
| Suppliers | Examine how conservation is treated on Supplier websites and consider increasing the prominence of that process. | Ongoing |
| SJRWMD/ Shelley | Assemble, sign and provide final MOA with original signature pages to all Parties. | Complete |
| Pirnie | Assure that consultant contract is in final form ready for review by the Council by the August 31, 9:00 a.m. workshop and fully signed and ready for City execution by the September 7, 6:30 p.m. Council regular meeting. | Complete |
| Taurant | Assure that PM support contract is in final form ready for review by the Council by the August 31, 9:00 a.m. workshop and fully signed and ready for City execution by the September 7, 6:30 p.m. Council regular meeting. | Complete |
| Fitzgerald | Convey to Governance Team Stan Niego's, suggestion that a strategy could be employed to take out options on multiple tracts early in the process to mitigate the potential for speculation. The MOA could be modified to allow such for the benefit of the Suppliers. | ASAP |
| Pirnie | Provide bullet list of project points for partners' use with their lobbyists. | ASAP |
| Pirnie/SKM | Provide partners common operating pressure data on most recent RO plants. | 9/8/10 TBD |
| Fitzgerald | Provide partners District study on the effectiveness of conservation strategies (Currently in draft form, with no firm plans for publication) | TBD |

Note: The author prepared this work product from notes taken during the meeting or teleconference. The work product is not intended to be verbatim text of the conversations, but a summary of the important points covered. If an addressee finds that an error in fact was made please contact the author and corrections will be made with a revised version circulated.

| Person/Agency | ACTION ITEM(s) | Due/Status |
|------------------|--|------------|
| Suppliers | Take action as and when appropriate to publicly notice site options in order to minimize/avoid land speculation. | TBD |
| Team | Post final signed version of Phase 2A MOA to project website. | TBD |
| Pirnie/Suppliers | Meet to discuss further issues and timing of conservation and demand data following 10/15 Water Conservation subgroup meeting. | TBD |
| Partners | Provide data request information to Pirnie. The team also discussed the actual content and makeup of the demand data. There was general agreement that, as a minimum, the utilities should provide: system-wide numbers and residential per-capita numbers. | 9/8/10 |
| SJRWMD | Provide a staff member at the 9/8 business meeting who can address demand issues during the discussion. | 9/8/10 |
| Pirnie | Attend the October 15, 2010, meeting of the DWSP Water Conservation Subgroup and be prepared to discuss The team discussed that the utilities are working with the District to derive numbers with which they are comfortable. In light of that meeting date they requested that Pirnie attend the meeting and defer the discussion to the November business meeting teleconference. | 10/15/10 |

Welcome and Introductions

The business meeting started at 9:05 a.m. Richard Adams, Chairman, Palm Coast, welcomed the attendees.

Public Comments—none.

Data request discussion (includes demand projections)

John Fitzgerald presented for the SJRWMD. He used the PowerPoint presentation shown at Attachment 3, noting that across the board there are Water Supply Assessment population and demand projection reductions when comparing the revised February 2010 projections to the original 2008 WSA projections.

Neil Shinkre noted that he has several systems and that the numbers John is using do not include the Intercoastal System. John understood that distinction. He then showed by-utility allocations, actual use and current projections from 1995 through 2030. Neil then noted that the demand projections include the Ponte Vedra system but the allocations do not.

Chris Hill noted that he has data from all but DeLand. He reminded all that he needs the conservation data as well. He did not have a list of the data received and not received. He suggested a separate discussion at the October teleconference on desired content of the conservation plan. Neil Shinkre noted that one of the data request items presented a problem with respect to District efforts and timing. In particular, the following:

Historic and current per capita potable water consumption beginning in at least 2000 (earlier if available). Projected future per capita water consumption as a result of future conservation efforts.

Tom Bartol noted that SJ intends to present data that shows the unit cost of achieving use reductions for various conservation strategies and that there would be a meeting on this issue in Palatka on October 15, 2010, from 10:00 a.m. to 12:00 noon.

The team discussed that the utilities are working with the District to derive numbers with which they are comfortable. In light of that meeting date they requested that Pirnie attend the October 15, 2010, meeting and defer the discussion to the November business meeting teleconference.

ACTION ITEM

The team also discussed the actual content and makeup of the demand data. There was general agreement that, as a minimum, the utilities should provide: system-wide numbers and residential per-capita numbers. **ACTION ITEM**

MOA and consultant contract discussion

Richard Adams noted that the signed original MOA had been distributed and received by the partners. He noted that both the Pirnie contract and the Taurant contract were approved at council last night (9/7/10).

Team introduction

Chris introduced the various members of the team, with each of them presenting the specific major task elements that they would be supporting. He noted that in addition to Pirnie they have 12 team members for this Phase, 10 of which are represented here today. The list of team members is included at Attachment 4.

Major task walk-through

Chris listed the 6 major tasks, highlighting several key components of each, and then turned the presentation over to the team members. This topic is shown in detail at Attachment 4 with some of the key elements highlighted here.

Public Relations (PR):

Michelle Robinson (Dialogue) introduced herself and noted the following three major PR goals:

- Insure community values are reflected in the project
- Insure consistent communications
- Strive to be the first and best source of information for the project

Some of the elements include press releases, fact sheets and potentially E-newsletters. Michelle touched on social media strategy, noting that an important element of that strategy is to listen to concerns and work to understand them. We will continue with our media relations in a manner similar to Phase 1, distributing news when we have it to share. We will also meet with editorial boards, providing them with accurate and timely information.

Water Quality

Ray Pribble (Janicki Environmental) presented this topic, illustrating the types of work involved using several previous studies they had performed and noting the importance of tailoring each study and models to the particular project. More detailed coverage is shown at Attachment 4.

Beach Well Investigation

Rick Cowles, (Malcolm Pirnie), noted that the team would be performing various hydrogeological evaluations necessary to determine the viability of beach wells. A site at the Marineland facility offers some value in that there are vertical wells that can be used for pumping tests. These tests will provide preliminary data that will reveal if beach wells are feasible. If so, a much more detailed investigation, including installation of multiple observation wells, will be performed. Chris noted that this work would begin as soon as possible and would require permits from the District and perhaps, others. Tom Bartol noted that the District does have some limited number of test wells in the area that may be of benefit. Rick noted that they would visit the District to acquire those data. Someone suggested that local drillers might also provide valuable information. Rick agreed and noted they would consider this as well. More detailed coverage of his discussion is shown at Attachment 4.

Preliminary Field Studies and Investigations

Dr. Peter Andersen (Whitney Lab) outlined what they would be doing in this Phase—surveying existing databases and information from local dive clubs and collecting data from shrimp by-catch, bottom grabs and plankton tows with the goal of determining species of possible concern and also the permitting requirements. The Northern Right Whale is one of the known species of concern, as are turtles, and other marine mammals, as well as sea grasses, corals and any other species that might be identified during the study. Someone suggested to Dr. Andersen that he should look at the Caymans for information on the turtle issue, noting that they have a very successful turtle hatchery program amidst several permitted desalination plants. When question about terrestrial species, Chris Hill noted that Pirnie includes that in their scope. More detailed coverage of this discussion is shown at Attachment 4.

Bathymetry Planning and Geotechnical Planning

Tom Richardson (Halcrow) noted that the bulk of the bathymetric work will be accomplished in Phase 2B. The work in 2A will be preliminary and focused on planning for the next Phase.

Tom also discussed the geotechnical work, again noting that the bulk of the work will be accomplished in Phase 2B, with any off-shore work being costly. The work in 2A will primarily be to plan and develop the scope for any work necessary in 2B based on the outcomes in 2A.

Pilot Study Plan and Permitting

Larry Jessup (Veolia Water) discussed this. He noted that some of their primary goals are to minimize energy use, chemical use, cleaning, and membrane replacement. They want to optimize pre-treatment and post-treatment design. Also a significant goal is to characterize raw water, permeate, and finished water quality for permitting purposes. In addition the goals are to demonstrate an obtainable design that is economical and maintainable. A trailer containing a pilot plant will be used, providing a single stage process using 4" x 40" membranes, with up to eight in series. The plant will operate typically at 50-60 gpm (approx. 72,000 to 86,000 GPD). Pretreatment evaluation will consist of several options including: none, flocculation/settling followed by media filtration or ultrafiltration as well as several other options. Also included in the study will be comparison among different manufacturers' products. Membrane advancements have achieved very dramatic improvements in recent months in reducing power requirements and fouling and increasing efficiency and service life. Finally the team will make

recommendations on the components and process. More detailed coverage of his discussion is shown at Attachment 4.

Site Selection/Land Acquisition Assistance

Scott Shannon (Pirnie) noted that Phase 2A would not accomplish site selection. He recalled the Phase 1 process for developing criteria and noted that the team would build on that process and refine it during Phase 2. The goal is to determine any additional criteria to incorporate. Also, a GIS database was developed in Phase 1 and it will be used to screen potential sites. More detailed coverage of his discussion is shown at Attachment 4. ***Scott cautioned the audience that the GIS screened sites illustrated in the presentation are not real sites and were placed in the maps for illustration purposes only.***

Permitting Requirements Determinations

Scott Shannon provided an overview of this task and introduced Tony Russo, also with Malcolm Pirnie, to discuss the National Environmental Policy Act (NEPA) issues and process.

Tony noted that, although the Environmental Information Document (EID)/Environmental Impact Statement (EIS) will not be accomplished in Phase 2A, many of the steps taken in Phase 1 and that you will take in Phase 2A will provide data for those documents later in the process. He outlined the NEPA process and the players in that process. There are two potential drivers that can impose the NEPA process on the project. The first is the use of Federal funding. The second is any action that triggers the need for a permit under the Act. He also explained the process and its various elements. In particular he showed how each task of 2A will, in some way, fulfill the needs of each part of the EID/EIS. At the same time he noted that, particularly with the Alternatives Analysis and the Environmental Consequences & Mitigation Measures, much more work must be accomplished in later phases to fully populate the EID/EIS. Finally he listed issues that highlight what must be avoided:

- Project not well defined & documented
- Project lacks specific detail
- Elements of the project likely to have a significant environmental effect not disclosed
- Project costs not matching grant application
- Cross cutter issues and consultation with agencies not included and/or well documented
- Changing, inconsistent information circulated to agencies
- Issues raised by agencies not addressed
- Reasonable alternatives not proposed or evaluated...including no action
- A document that is ambiguous, inconsistent, overly complicated and/or biased

When asked, Tony provided information on timelines and staged approval.

- Categorical Exclusion - 3-4 months
- EA--9 months - no requirement for public scoping and public hearings
- EIS - 18 months minimum but can go much longer if controversial.
- On shelf life—typically within 5 years but funds and other permits might have more restrictive timeframes.

Phase 2A Project Report

Scott Shannon provided an overview of this. When asked, Scott agreed that the Phase 2B scope would likely change as a result of the Phase 2A work. More detailed coverage of his discussion is shown at Attachment 4.

Although they did not present today, Scott introduced three additional team members: Rob Denis (Liquid Solutions), Ian Watson (Rostek) and Elio Arniella (Halcrow).

Update on Global Desalination

Ralph Burch (SKM) presented on this issue, noting how similar this project is to Australia's Gold Coast process. It is also similar in the involvement by the community. Ralph explained that his role with SKM is to coordinate their desalination work around the world and noted that there was a slowdown in desalination work around the world due to the global financial crisis. He provided an overview of the major completed, underway and planned projects globally. Ralph noted the recent trend away from dual media filtration to ultrafiltration (UF) in the pretreatment process. That jump is not universal but more and more UF is being employed. There are two main types of UF, pressure vessel and submerged. UF does significantly reduce chemical cost. UF capital costs are much higher than dual media, but operating expense is lower. Also, the waste stream from UF is much lower than with flocculation/sedimentation and media filtration. UF does increase RO membrane life. On the negative side UF requires a very fine screen upstream and the technology is unproven with large seawater projects.

He also noted the potential emergence of larger pressure vessels at 16" and 18" versus the standard 8". These larger sizes are also not yet proven in seawater RO, don't have any real operating efficiencies, lack long-term service data and also require special handling equipment because they are so large. What they do offer is some cost savings in piping and slightly reduced footprint but the benefits may not outweigh the costs.

On the energy recovery side there have been some recent developments. These systems take advantage of available pressures at various stages in the process, and use those pressures to drive other systems or reduce electrical load. The systems do result in reduced energy costs. There has been some very recent consolidation of providers that resulted in larger companies that can do more research and development. This could lead to greater efficiencies in the future.

On the membrane front—the continuing trend is that you get more for less—higher flow and less fouling. Other areas of advances are

- New membrane types—ceramics and the use of nano particles
- Better pore size and surface characteristics resulting in
 - Less fouling
 - Higher flux
 - Lower pressures/ more efficient
 - Chemical resistance
- Improved membrane cleaning
 - Operation to reduce anti-scalant use (lower pH)
 - Environmentally friendly anti-scalant and cleaning chemicals

Project Schedule and Upcoming Deliverables

Chris Hill noted the following major deliverables for Phase 2A (Project and deliverables schedule will be posted to the project website):

- Supplier and Ex Officio data due September 8 (today)
- Project Requirements Letter Report
 - Draft—October 15
 - Supplier comments—October 22
 - Final—October 29
- Project Conservation Plan—Draft November 26*

Confirm next meeting(s) and agenda(s)

Next Business Meeting—Wednesday, October 20, 2010, 9:00 a.m., by teleconference

| | |
|---|-------------------|
| <i>Review draft Project Requirements Letter Report (Pirnie)</i> | <i>30 minutes</i> |
| <i>Conservation plan (Pirnie)</i> | <i>30 minutes</i> |
| <i>(discuss matter based on outcome of 10/15/10 District meeting)</i> | |
| <i>Project Data Requirements review (Pirnie)</i> | <i>30 minutes</i> |
| <i>Update and discussion on San Diego</i> | <i>30 minutes</i> |
| <i>County Project Coordination (Pirnie)</i> | |

Next Business Meeting—Wednesday, December 8, 2010, 9:00 a.m.

| | |
|--|-------------------|
| <i>Conservation plan discussion (Pirnie)</i> | <i>30 minutes</i> |
| <i>Siting Criteria Development Workshop (Pirnie)</i> | <i>4 hours</i> |

Member Comments

Neil Shinkre noted that there is a report due out by SJRWMD on demand-side management. The draft report is out, the final is not. He suggested that Pirnie review the report to benefit from the work and avoid overlap.

Public Comments—none.

Adjourn Business Meeting—adjourned 11:50 a.m.

Attachments

1. Attendance Lists and Appointee Attendance List
2. Agenda
3. SJRWMD Meeting Slides (included only in PDF version of this summary)
4. Malcolm Pirnie Meeting Slides (included only in PDF version of this summary)

| Business Teleconference Attendance List | | | |
|---|--------------------|-------------------|-----------------------|
| Name | Affiliation | Name | Affiliation |
| Richard Adams | Palm Coast | Carl Matthaedi | SACA |
| Jim Ailes | DeLand | Brian Matthews | Palm Coast |
| Peter Anderson | Whitney Lab, UF | Ryan Popko | McKim & Creed |
| Elio Arniella | Halcrow | Ray Pribble | Janicki Environmental |
| Ed Balchon | Malcolm Pirnie | Tom Richardson | Halcrow |
| Tom Bartol | SJRWMD | Michelle Robinson | Dialogue |
| Ralph Burch | Malcolm Pirnie/SKM | Tony Russo | Malcolm Pirnie |
| Rick Cowles | Malcolm Pirnie | Jerry Salsano | SJRWMD (Taurant) |
| Rob Denis | Liquid Solutions | Scott Shannon | Malcolm Pirnie |
| John Fitzgerald | SJRWMD | Ray Sharp | Leesburg |
| Mark Galvin | First Southwest | Neal Shinkre | St. Johns County |
| Chris Hill | Malcolm Pirnie | Ian Watson | Rostek |
| Lawrence Jessup | Veolia Water | David Wiles | St. Johns (SACA) |
| John Mampe | Hammock CCC | | |

| COQUINA COAST SEAWATER DESALINATION ALTERNATIVE WATER SUPPLY PROJECT | | | | | | | | | | | | | | | |
|--|-----------|----------|-----------|----------|-----------|----------|-----------|----------|-----------|-----------|-----------|------------|-----|-----|-----|
| Phase 2A Business Meeting Appointee Attendance | | | | | | | | | | | | | | | |
| Meeting (M) / Teleconference (T) | Phase 2A | | | | | | | | | | | Transition | | | |
| | T | M | T | M | T | M | T | M | T | M | T | | | | |
| Suppliers | 11-Aug-10 | 8-Sep-10 | 20-Oct-10 | 8-Dec-10 | 19-Jan-11 | 9-Mar-11 | 20-Apr-11 | 8-Jun-11 | 20-Jul-11 | 10-Aug-11 | 14-Sep-11 | TBD | TBD | TBD | TBD |
| City of Leesburg | ★ | ★ | | | | | | | | | | | | | |
| City of Palm Coast | ★ | ★ | | | | | | | | | | | | | |
| Ex Officio Members | | | | | | | | | | | | | | | |
| City of DeLand | ★ | ★ | | | | | | | | | | | | | |
| St. Johns County | ★ | ★ | | | | | | | | | | | | | |

| | |
|---|--|
| ★ | Appointed member(s) present |
| □ | Appointed member(s) not present |
| x | Appointed member(s) not present, with advance notice |



Business Meeting Agenda

Wednesday, September 8, 2010, 9:00 a.m. – 12:30 p.m.

City of Palm Coast Community Center
305 Palm Coast Parkway NE, Palm Coast, FL 32135

Directions: Exit I-95 at Palm Coast Parkway (Exit 289). Drive east through two stop lights to Club House Drive. Turn left – the entrance to the Community Center is immediately off Club House Drive to the left.

| <u>ITEM</u> | <u>WHO</u> | <u>START</u> |
|---|------------|--------------|
| • Welcome and introductions | Chair | 9:00 |
| • Public comments | Chair | 9:05 |
| • Data request discussion | Chair | 9:10 |
| (includes demand projections) | | |
| • MOA and consultant contract discussion | Chair | 10:10 |
| • Team introduction..... | Chair | 10:25 |
| • Major task walk-through | Pirnie | 10:35 |
| • Break | Chair | 11:35 |
| • Update on Global Desalination | Pirnie | 11:45 |
| • Project Schedule and Upcoming Deliverables | Pirnie | 12:00 |
| • Confirm agenda for next meeting(s)/next tasks | Chair | 12:15 |
| • Member comments | Chair | 12:20 |
| • Adjourn business meeting | Chair | 12:25 |