

NIPOMO COMMUNITY SERVICES DISTRICT

JANUARY 14, 2013

1:00 P.M.

SPECIAL MEETING NOTICE & AGENDA

SUPPLEMENTAL WATER ALTERNATIVES EVALUATION COMMITTEE

APPOINTED COMMITTEE MEMBERS

MICHAEL K. NUNLEY, CHAIRMAN (NON-VOTING)
PETER V. SEVCIK, VICE CHAIRMAN (NON-VOTING)
DAN GARSON (VOTING)
DENNIS GRAUE (VOTING)
KATHIE MATSUYAMA (VOTING)
ROBERT MILLER (VOTING)
SAM SALTOUN (VOTING)
DAVE WATSON (VOTING)
DAN WOODSON (VOTING)

PRINCIPAL STAFF

MICHAEL S. LEBRUN, GENERAL MANAGER
LISA BOGNUDA, ASST GM/FINANCE DIRECTOR

MEETING LOCATION - District Board Room
148 S. Wilson Street, Nipomo, California

1. CALL TO ORDER, FLAG SALUTE AND ROLL CALL

2. GENERAL MANAGER'S REPORT

RECOMMENDATION: Receive updates and reports from the General Manager on items relevant to the Committee's work.

3. REVIEW DRAFT MINUTES FROM DECEMBER 19, 2012, COMMITTEE MEETING

RECOMMENDATION: Provide revisions or corrections to meeting minutes from the December 19, 2012, Committee meeting. Accept minutes as revised.

4. DISCUSS RANKING PROCESS

RECOMMENDATION: Discuss and refine draft ranking criteria and weighting approach. Walk through the draft evaluation matrix; review schedule for completion of the evaluation; and discuss any data "gaps" or needs from subcommittees to meet schedule goals.

SUPPLEMENTAL WATER ALTERNATIVES EVALUATION COMMITTEE

5. OVERVIEW OF DISTRICT'S 2010 UWMP DEMAND AND SUPPLY PROJECTIONS

RECOMMENDATION: Receive overview of the 2010 Urban Water Management Plan water supply and demand projections from Vice Chair Peter Sevcik.

6. DISCUSS NEED FOR SPOKESPERSON TO PROVIDE UPDATE TO THE BOARD

RECOMMENDATION: Discuss whether an update should be provided by the Committee to the Board. Nominate a voting member of the committee to serve as spokesperson for an upcoming Board meeting, if desired.

7. PRESENT REFERENCE DOCUMENTS FOR REVIEW AND ACCEPTANCE

RECOMMENDATION: Identify and propose reference documents to be used by Committee members in the evaluation. Approve or reject these documents as acceptable reference materials for conducting the evaluation.

8. SET NEXT COMMITTEE MEETING DATE AND TIME

9. ADJOURN

TO: EVALUATION COMMITTEE

FROM: MICHAEL K. NUNLEY, PE
CHAIRMAN

MKN

DATE: January 10, 2013

AGENDA ITEM

#2

JANUARY 14, 2013

GENERAL MANAGER'S REPORT

ITEM

Nipomo CSD General Manager, Michael LeBrun, will provide an update to the Committee on activities relevant to the Committee's work.

BACKGROUND

The General Manager will present updates relevant to the Committee's work and will also respond to questions posed by the Committee to District staff at prior meetings. This is a standing item for each Committee meeting.

RECOMMENDATION

Receive the report from the General Manager

ATTACHMENT

NONE

TO: EVALUATION COMMITTEE

FROM: MICHAEL K. NUNLEY, PE
CHAIRMAN

MKN

DATE: January 10, 2013

AGENDA ITEM

#3

JANUARY 14, 2013

**REVIEW DRAFT MINUTES FROM DECEMBER 19, 2012,
COMMITTEE MEETING**

ITEM

Review the Draft Meeting Minutes from the December 19, 2012, Supplemental Water Alternatives Evaluation Committee (Committee) meeting.

BACKGROUND

According to the Bylaws, the Committee must approve the meeting minutes. Draft minutes are to be posted online. If revised by the Committee during the approval process, final minutes will be posted to replace the draft minutes.

RECOMMENDATION

Provide revisions or corrections to the meeting minutes from the December 19, 2012, Committee meeting. Accept minutes as revised.

ATTACHMENT

DRAFT SWAEC Meeting Minutes – December 19, 2012

NIPOMO COMMUNITY SERVICES DISTRICT

DECEMBER 19, 2012

1:00 P.M.

MEETING MINUTES

SUPPLEMENTAL WATER ALTERNATIVES EVALUATION COMMITTEE

APPOINTED COMMITTEE MEMBERS

MICHAEL K. NUNLEY, CHAIRMAN (NON-VOTING)
PETER V. SEVCIK, VICE CHAIRMAN (NON-VOTING)
DAN GARSON (VOTING)
DENNIS GRAUE (VOTING)
KATHIE MATSUYAMA (VOTING)
ROBERT MILLER (VOTING)
SAM SALTOUN (VOTING)
DAVE WATSON (VOTING)
DAN WOODSON (VOTING)

PRINCIPAL STAFF

MICHAEL S. LEBRUN, GENERAL MANAGER
LISA BOGNUDA, ASST GM/FINANCE DIRECTOR

MEETING LOCATION - District Board Room
148 S. Wilson Street, Nipomo, California

1. **CALL TO ORDER, FLAG SALUTE AND ROLL CALL**

Chairman Nunley called the Special Meeting of December 19, 2012, to order at 1:00 PM. and led the flag salute. At roll call, all Committee members were present except Members Matsuyama and Watson who arrived during Agenda Item 2.

2. **PRESENTATION BY DR. BRADLEY NEWTON**

Chairman Nunley presented the item and introduced Dr. Newton, who responded to comments and questions from the Committee and the public.

Member Garson asked Dr. Newton to provide a brief overview of the health and status of the groundwater basin and to discuss studies that have been conducted in the past. Dr. Newton responded that documents had been produced representing a wide range of objectives and scientific quality (from scientific research documents such as those produced by USGS to planning documents). He discussed the development of the geology within the Santa Maria river watershed through natural deposition, riverine erosion, and other processes. He noted that various groundwater elevation records indicate water levels within the Nipomo Mesa Management Area (NMMA) of the basin are approximately 20 feet lower than were identified in the 1960's. Seawater intrusion is the most significant threat anticipated by the NMMA Technical Group (TG) – once contaminated by seawater, future use of groundwater is limited without significant flushing or other mitigation measures. Contamination from the surface by nitrogen and other compounds related to agriculture could also occur.

Member Garson asked if health and status of the basin are debatable or are in dispute. Dr. Newton described the management area boundaries developed within the 2005 Court Stipulation, and the requirement that technical groups within each management submit reports summarizing groundwater data. These reports must be unanimously approved by all parties within a technical group and can be disputed but as of yet, none have been disputed in the past four years of submittal to the court.

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Member Garson asked if there was evidence that the groundwater basin volume has been in decline. Dr. Newton said records indicate that groundwater elevations have been in decline in some locations, and water volumes could have decreased in these areas but could be higher in others to offset that impact. The court recognized that areas of the groundwater basin can go through wet and dry cycles and the overall water volume has not been calculated. Cross sections have been prepared and the NMMA continues to develop cross sections using available well logs in order to determine groundwater flow. By quantifying flow and other parameters such as rainfall and usage for a series of years, the NMMA may be able to estimate the native safe yield.

Member Watson asked if an opinion had been developed for the range of native safe yield. Dr. Newton responded that the NMMA TG had prepared a Key Well Index that reflects drought conditions in the late 80's/early 90's as well as the wet period in late 90's/early 2000's but may be less reliable in the earlier periods of the 70's and 80's since less data is available from that period. Over the past 5 years, the NCSD has developed a groundwater index from 45 wells which behaves similarly to the Key Well Index (KWI). This indicates the Key Well Index is robust. Dr. Newton stated that there have been no catastrophic results of past groundwater usage but there is no detail regarding the location of the seawater/groundwater interface. Member Matsuyama asked if monitoring wells could be installed to identify this interface and Dr. Newton noted this would be very challenging and very costly. USGS and DWR had installed a series of sentinel wells close to the coastline from Pismo Beach through Guadalupe in the 1950's/60's to allow early recognition of seawater intrusion. Monitoring of a couple of the sentinel wells has indicated seawater intrusion. A well near Pismo Beach had experienced seawater intrusion. In response, the Five Cities water agencies stopped pumping groundwater by importing Lopez and State Water. This stopped seawater intrusion and has allowed the groundwater levels to recover.

Director Bob Blair asked about the Oceano Community Services District (OCSD) well that the OCSD had claimed was contaminated by surface water. Dr. Newton noted that well 30N02 was not the same well, and 30N02 had indicated seawater intrusion had occurred.

Member Graue asked if the KWI represented only part of the groundwater basin since the basin extends to Rancho Sisquoc. Dr. Newton responded that the KWI covers only the NMMA. Each management area collects its own data. Member Garson asked if the NMMA Technical Group looks at data from the other management area and Dr. Newton answered that they do. However, Santa Barbara County collects their data at a different time of year than the NMMA TG. This complicates the comparison of data, although the NMMA TG has found ways to translate or modify seasonal data for comparison purposes. NMMA data is not collected throughout the year, only a couple of times per year, and therefore it may not capture groundwater behavior during certain high rainfall periods or other short-term events.

Member Saltoun asked if the 20-foot groundwater elevation decline was limited to a small area or representative of the entire basin. Dr. Newton noted this only represented groundwater elevations in the NMMA. He said that DWR did not report the wells used to generate their contours so this interpretation is based on general groundwater levels from DWR profiles and not individual wells. Member Saltoun asked if water from surrounding agricultural areas could flow into the cone of depression within the NMMA and Dr. Newton responded that it could. Member Saltoun further asked if a bypass or similar strategy was required to move water into the depressed area to prevent further depression of groundwater levels. Dr. Newton said that provided seawater intrusion did not occur, the impact of continuing to pump water from the depression could not be determined. However, the NMMA is connected to the other management areas and impacts in one will affect the others. Member Saltoun discussed the opinion among some in the community that there is

SUPPLEMENTAL WATER ALTERNATIVES EVALUATION COMMITTEE

no groundwater problem. Dr. Newton discussed the community's reliance on groundwater and hypothetically asked how the District would respond if seawater intrusion or another event reduces usage of groundwater. Member Saltoun asked if seawater could find a channel to contaminate groundwater without being observed in the sentinel wells and Dr. Newton indicated this could happen. However, there is no evidence of old channels that could allow seawater to flow preferentially into one part of the fresh groundwater basin. This presents a challenge since predicting where seawater intrusion could occur is more difficult than areas with old channels. Member Matsuyama asked if Blacklake Canyon could present an opportunity for seawater intrusion and Dr. Newton responded that it did not appear to present the right conditions due to presence of an underlying clay layer. This condition also results in various lakes holding surface and shallow groundwater.

Member Woodson asked if evidence of subsidence or reduced groundwater storage capacity had been observed. Dr. Newton and Member Woodson discussed observance of this in the western San Joaquin Valley. Dr. Newton had no knowledge of observances of this within the NMMA.

Member Watson asked what techniques could be effective for reducing seawater intrusion. He discussed regional water interties and recycled water among other concepts. Dr. Newton cited examples in the Los Angeles area (Orange County, Huntington Beach, and West Basin) where recycled water was injected to prevent seawater intrusion and noted this was very expensive and was an ongoing cost. Cooperation among groundwater users to manage the interface would be a cost-effective and beneficial solution. Challenges include a number of individuals who would need to agree to cooperate, but have different positions on the issues and have no desire or interest in cooperating or have pumping agreements that allow them to produce water without regard to current groundwater conditions. Member Watson also asked if surface percolation of recycled wastewater could prevent seawater intrusion. Dr. Newton said it would depend on the confining layers between the surface and the aquifer and this information would be necessary to determine if injection wells or percolation ponds could be effective. He noted that reducing extractions would have a more direct impact on reducing risk of seawater intrusion.

Member Garson noted that there would be benefit to developing a groundwater model to address some of the challenges being discussed and referenced the subcommittee meeting with Dr. Newton and the related discussion. Member Matsuyama added that she was surprised there had been multiple, competing models but not one definitive model developed in conjunction with the District's prior planning efforts. Dr. Newton responded that different questions require different models, and this is the reason multiple models had been developed and some did not agree. He also discussed the disparity between modeling and reality. He thinks a model could be constructed of the Santa Maria groundwater basin that would help plan to prevent seawater intrusion. He mentioned the major challenge in developing the model would be the initial data acquisition and organization. He also discussed the benefit to understanding the groundwater basin that would arise from the County's \$200,000 grant to study nutrient and salt issues.

Member Garson compared the \$26M cost to construct a water supply project to the hundreds of thousands that would be required to develop a groundwater model. Member Matsuyama noted the public was not convinced there was a seawater intrusion problem and this was critical to the public understanding and supporting the Board's actions to import water.

Director Blair noted there may be areas with groundwater depressions but some other areas may have adequate water. He discussed the availability of water in the Summit Station area

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and also stated that an emergency connection was constructed on the Central Coast Water Authority's (CCWA's) pipeline for District use. He expressed surprise that some people who had been involved with District's water issues for a long time did not understand as much as he did.

Member Saltoun asked if developing a model would just show what the District has already seen in the KWI and other monitoring data. Dr. Newton responded this was correct and a numerical model can only replicate history. The challenge is using historical observations with model-based analysis to predict future conditions. There is no guarantee that future rainfall events, etc., will be similar to historical observations.

Chairman Nunley asked if a model is required to indicate there is a problem, if there was already evidence of seawater intrusion and formation of a depression. Dr. Newton said this was a management question, but from the technical perspective a model may not be able to predict seawater intrusion if it happens in a way not represented in the model. A model will help with management decisions but will not replace importation of water, if that is required to address the need for water.

Member Saltoun stated that a model would help with wellfield management but would not change what is observed today. Dr. Newton agreed but said wellfield management would be very beneficial and has been a focus of the NMMA TG.

Member Saltoun asked if difference in gradients results in uncontrolled flow into the NMMA and if there is a danger associated with water quality contamination through neighboring agricultural activities. Dr. Newton said that in the early 1950's, Wertz had identified a thick clay layer that caps the Paso Robles Formation, which is the primary water producing zone. On top of the layer is sediment and the Mesa. The water in the shallow zone around Oso Flaco Lake, which lies above the clay layer, has been contaminated by agricultural activities. The shallow water levels can grow over time and tiles are used in some places to protect crops from waterlogged conditions. The geographic limits of this condition around the Mesa are unknown. Some shallow water wells are very productive in certain areas of the Mesa, but they have significant water quality concerns.

Member Saltoun asked if there had been evidence of communication or estimate of flow between the shallow and deep zones. Dr. Newton noted that Santa Maria River flow from Twitchell Dam releases were part of the recharge of shallow water to the deeper zones and this can be observed when reviewing groundwater contours.

Public Comment:

Bob Hensier, Nipomo resident, asked if satellite imagery including infrared and other technologies could help assess groundwater conditions. Dr. Newton responded that long-wave ground penetrating radar can be used and discussed examples, but the presence of vegetation and other land cover in the Nipomo area would prevent its use on the Mesa.

Bob Blair, District Director, said he was elected because people do not believe what is being discussed today. He wants to find a better solution than the \$26M water project because people are upset.

Ed Eby, Nipomo resident, was concerned about the amount of money and time required to collect the data needed for the modeling effort, in addition to the effort to develop the model. The time factor was a primary concern because of the risk of seawater intrusion.

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General Manager Michael LeBrun said the Board focused the Committee's effort on evaluating water supply options since the groundwater situation is very complicated and modeling would not result in addressing the need for new water on the Mesa. He noted the Nipomo CSD is the only water purveyor in the Santa Maria Groundwater Basin that has not participated in a supplemental water project to reduce groundwater pumping – all others have participated in reservoir projects or similar solutions. The District is charged with delivering water to 4300 connections. They have limited ability to prevent future groundwater production across the Mesa since they only pump approximately 15% of the total production. The District has a "junior" right to pumping the water that is lower priority than the agricultural users and other overlying landowners. As the Mesa has been developed and groundwater extraction has increased by golf courses and urban users, the District has had very limited control over pumping. The District intends to import supplemental water and has specified the quantity and schedule, and it is valuable that the Committee understands the background of local groundwater issues but its purpose is to evaluate supply alternatives. The Board plans to consider releasing bids on February 13th in conjunction with the Committee's findings. The District had an opportunity 20 years ago to participate in State Water and the Board is concerned about missing the opportunity to participate in the Santa Maria project.

Dr. Newton noted there is an ongoing cost to maintain and run the model, in response to questions about the modeling effort.

John Sonksen, Nipomo resident, noted OCSD had written a letter denying the conclusion that saltwater intrusion had been observed in a well and asked if Dr. Newton had a response to this. Dr. Newton noted that sentinel well 30N02, which yielded evidence of seawater intrusion, was not the same well discussed in the OCSD letter. The sample from 30N02 was collected and analyzed properly according to the records. Member Matsuyama asked how often the well was sampled and Dr. Newton said he thought it was collected monthly. He noted the well information was submitted in the Northern Cities Management Area Technical Group report and the TG had concluded the event had occurred. Dr. Newton did not have an opinion on the well discussed in the letter from OCSD.

3. GENERAL MANAGER'S REPORT

General Manager Michael LeBrun provided an update to the Committee on items relevant to their work. The Board met on December 12th and received a status update on the Committee's work from Member Watson. They ratified Mr. Saltoun's as a member to the Committee. District staff provided updated contact information for all the Committee members. The Board had heard in November that Supervisor Teixeira had been working on a supplemental water solution but the Board had not received an update on this. District staff has been keeping the Supervisor and the Supervisor's staff informed of Committee meetings and progress. The General Manager asked the Committee to please let staff know prior to the meeting day if hard copies of the Staff Report were desired.

Bob Blair, Director, said he and Supervisor Teixeira had met with ConocoPhillips and they would like to help the District with their water supply issues. Under Title 32, they need to reduce their carbon footprint. They also want to expand their refinery. They produce 3 to 4 acre-feet of water per year. They may be interested building a pipeline to bring water in from the South SLO County wastewater treatment plant. It is the only refinery he knows that relies on groundwater. He will provide an update after the holidays when he gets a chance to talk to the Supervisor.

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4. REVIEW DRAFT MINUTES FROM DECEMBER 7, 2012, COMMITTEE MEETING

Chairman Nunley introduced the item. The Committee voted to approve the draft minutes with no changes.

5. DISCUSS SUBCOMMITTEE PROGRESS

Chairman Nunley introduced the item. He noted he will continue to add meeting minutes and information provided by the Committee to the powerpoint file after each meeting. Member Woodson asked if the February 25th date to finalize the report was in conflict with the District's release of bids. Chairman Nunley responded that releasing bids would not require a commitment to build the project by the District, but if the Committee could present their report in rough draft form on February 11th, this would inform the Board's decision whether or not to release the bids. Member Matsuyama asked if the Board's plan was to go to bid in the middle of February and the General Manager responded they would authorize bidding on February 13th knowing the Committee's final report would come after that. He thinks the timelines are well synchronized between the Board and the Committee.

Member Watson asked what the cost would be to go out to bid. The General Manager responded it would not be expensive relative to the design cost. Chairman Nunley noted this was not a separate contract authorization and there is no expenditure of new funds to release bids. Member Watson asked if the Board needed a report prior to releasing bids. The General Manager said the Board would like the Committee's input. Member Miller noted each bidder would spend tens of thousands to prepare their bids and a request for bids should be taken seriously. Member Matsuyama asked if the District is prepared to release bids now and if the Board is just waiting for the Committee. General Manager LeBrun noted the District would not be ready until February and the Committee's work is not causing a delay.

Chairman Nunley asked if Member Saltoun would fill Mr. Armstrong's seat on the subcommittees for desalination, agricultural/industrial reuse, and State Water. Member Matsuyama expressed support for this but would leave it up to Mr. Saltoun, and noted his input would be valuable for other subcommittees as well. Member Saltoun said he would serve wherever he would be best utilized. Member Graue said Member Saltoun had already been asked to participate in their subcommittee.

State Water - Chairman Nunley provided a review of items added to the State Water progress report. Member Matsuyama asked for a definition of chloramination in the report.

Director Blair stated that the City of Santa Maria removes chloramines from their State Water with carbon filters.

Member Garson asked if there was an emergency connection to the CCWA pipeline. Chairman Nunley stated it was his understanding there was no connection. Director Blair said there was a concrete bunker where the connection was constructed. Former General Manager Doug Jones had led the effort to construct this connection and the District had paid for it. They were the only community who did this, according to Director Blair. General Manager LeBrun noted there were many challenges (not just physical) to connecting to the CCWA pipeline and there were no agreements in place for this. Member Garson clarified that even if there is a connection, it cannot be used. Chairman Nunley said he would talk to CCWA to determine the location of this connection.

Demand Management (Conservation/Graywater) – Chairman Nunley said the subcommittee will be meeting with Ron Munds, City of San Luis Obispo Conservation Manager, tomorrow.

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Member Matsuyama will provide her slides before Christmas and will provide her report to the Chairman to incorporate in the presentation.

Agricultural/Industrial Reuse - Member Matsuyama provided a written agricultural/industrial reuse report including completion of their agricultural tailwater analysis to be included in the overall progress report. The subcommittee had concluded agricultural tailwater would not meet the District's objectives. Member Saltoun noted that not all of the 220 AFY from Phillips 66 would be available for use, maybe 85% or so. Member Miller asked if the refinery's use of recycled water had been included in this analysis or another section. Chairman Nunley noted this was included in the Recycled Wastewater from Municipal Facilities report.

Santa Maria Waterline Intertie Project – Member Miller noted the City of Santa Maria was looking at a nighttime/daytime varied flow in their hydraulic model to determine if this would be acceptable. It would increase total Phase I delivery. Member Garson asked to explain what the City's issues or concerns would be with varying delivery. Member Miller said the City had some reservations related to operational concerns but he noted the volume requested by the District was small relative to their overall demands, in his opinion, and Chairman Nunley said the City would want constant deliveries all the time ideally. Varying the deliveries throughout the day would allow the District to ramp up initial deliveries more quickly since they could deliver more water than planned in the Phase I capital cost. Chairman Nunley noted capital costs would be the same but the \$/AFY would be lower if varied deliveries were acceptable to the City.

Recycled Wastewater from Municipal Facilities - Member Garson asked if there are pipelines between Oceano and the District distribution system. Director Blair said there was a pipeline from the refinery and it could possibly be sliplined. Members Watson and Miller noted the use of this pipeline alignment had been addressed in the various recycled water studies for the Five Cities agencies. Member Miller asked for a placeholder for the quantity of water that could be used by Phillips 66. Member Watson noted Phillips 66 future water needs should be requested. Chairman Nunley said he would contact Phillips 66 to request this information. Member Miller noted it would be approximately \$4000/AF to treat and deliver water from SSLOCSD WWTF to the refinery based on the SSLOCSD Recycled Water study. He said Pismo WWTF effluent would also need to have similar treatment if that water was used by the refinery. Member Miller asked the Chairman to acquire any information on the capacity of the Phillips 66 outfall. Member Graue noted the outfall can be buried during some times of the year. Members Saltoun and Miller said the current discharge limit is permit-based but Member Miller was curious about the actual physical capacity, including how adding pumps could increase capacity. Chairman Nunley noted that discharging reverse osmosis brine through the outfall could be viewed favorably by regulatory agencies. Member Matsuyama said the outfall was 2500 feet long and 16 feet deep according to her notes and was rated for 300 gpm. Chairman Nunley will request this information and will send a copy of the email to the subcommittee.

Member Garson asked if the presence of an existing pipeline would reduce delivery cost to the Phillips 66 refinery. Member Miller noted the estimates from the Pismo Beach and SSLOCSD studies included the pipeline cost to deliver water to the refinery. If an existing pipeline could be rehabilitated or reused, it could reduce cost from estimates quoted in the study. Member Miller noted he could look into the possible cost reduction if a pipeline is reused or rehabilitated. Member Saltoun said the condition of the pipeline would be a significant factor in determining rehabilitation costs. Director Blair said he thought it would be cheaper to build a pipeline from Oceano than from Santa Maria.

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Local Groundwater – Member Graue noted the subcommittee is working on a revision to this progress report. He said using the Dana wells instead of the Blacklake wells could help reduce the gradient. Member Miller stated some of the recommendations from the Committee should be provided to the Board even if they do not result in importing new water. Director Blair noted there was a new well site near the Santa Maria River. General Manager LeBrun said there was a well site near Riverside Road that was given by the County to the District. Their water resources attorney said they could not produce water from this location since they did not have the right to pump water from a different management area such as where this well is located. Member Graue added that he thought he had seen this opinion in the Boyle Constraints Analysis.

Member Garson asked if the Dana wells had the same issue. General Manager LeBrun responded that the Dana wells were pump-tested over 20 years ago and were very small (in the neighborhood of 300 gpm total). It would not resolve the overall problem since the wells are not in a high-producing water zone.

Member Matsuyama asked if the District still has only 3 agricultural customers. General Manager LeBrun responded there had been no change in the number of agricultural customers.

Member Saltoun asked if there were water quality issues related to different wells in the NMMA. The General Manager responded there were water quality differences among the wells.

Member Graue asked if the Dana wells should be redrilled to produce more water and General Manager LeBrun responded it was his understanding that this would not significantly increase production since the wells are not located over a productive zone of the aquifer.

Member Graue will provide the updated report to the Chairman. The subcommittee is planning to meet later this week to work on their report.

Seawater – Chairman Nunley noted the Seawater subcommittee would be participating in a conference call with San Diego County Water Authority to discuss the Carlsbad desalter. Member Graue had met with Black & Veatch to request cost information on desalination projects. Chairman Nunley noted that Member Graue would be talking with Separation Processes, as well.

Ranking – Chairman Nunley presented the updated ranking information. Member Watson asked if compliance with the court order and also the total volume should be considered. Member Miller noted that the draft definition of reliability in a prior Staff Report had included total volume that could be reliably produced. Chairman Nunley said the bylaws require the Committee only look at alternatives that comply with the court order. He directed the Committee to review the summary ranking table prepared by Member Watson which had been provided in the updated progress report. Chairman Nunley will email the file in Excel format to the Committee members as requested by Member Miller. Member Garson asked how this table would be completed. Member Watson said he had envisioned a numerical ranking would be applied, and the columns could be arranged to prioritize the more important ranking criteria from left to right. Various members discussed how weighting could be applied. Member Miller suggested the summary table could be shown with and without ranking criteria – two different ways. Members and Matsuyama discussed including “compliance with the court order” as part of the feasibility criterion. Member Watson noted that another way to use this column would be to identify that some alternatives may not

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directly meet the court order, but could still be useful to the Board. Various members discussed how this criterion could be applied relative to feasibility. Member Garson supported including the “compliance with court order” column separately from feasibility.

Member Saltoun suggested that the court may allow the District to use a different alternative if it meets the quantities required in the stipulation.

General Manager LeBrun said the Court and Board would likely consider any alternative that meets the requirements of the stipulation (“new” or imported water, delivery of 2500 AFY, and other provisions) even if it is not the Santa Maria Waterline Intertie Project.

Chairman Nunley noted the Committee could produce both the ranking and a “white paper” or discussion of recommendations that may not directly address the Court stipulation. Member Saltoun said he thought the court may be amenable to other water supply alternatives that meet the required quantity of imported water even if they are not the Santa Maria Waterline Intertie Project.

Member Watson said it may be possible to organize several of the criteria to address the District’s “long-term” concerns in addition to the need to import water on a short-term basis.

Member Garson noted it may be beneficial to take two of the alternatives to walk through the analysis in order to better consider an appropriate weighting approach.

Member Saltoun said there could be a row of weighting factors across the top of the table and a column across the right that multiplies the ranking by the weight and provides a total for each alternative.

Member Miller suggested that the Chairman or Member Saltoun come back with a spreadsheet with this functionality.

Various members expressed support for an upcoming meeting that would walk through the numerical ranking process.

Member Matsuyama noted that definitions of the criteria were needed to help with the ranking.

Member Garson suggested the next meeting focus on walking through the numerical ranking process with less emphasis on the other typical agenda items.

Member Miller said the Chairman could draft a scoring rubric and send to the Committee for consideration.

Public Comment:

Bob Blair, Director, noted that Oso Flaco does not have adequate water quality and Santa Maria River water is needed to percolate into the groundwater basin so these supplies may not be appropriate. He said OCSD has State Water available and would bring back more information on this. He noted a heat source is needed for desalination and Phillips 66 has a heat source. He thinks it should be looked at since they must comply with Title 32 and they may be willing to fund part of a project.

Member Miller said the progress report should be updated to reflect conclusions such as these.

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Member Saltoun noted that there are other ways to desalinate water without a heat source. Member Graue said there is an optimal temperature for membrane desalination processes.

The Committee voted (with Member Saltoun abstaining) to accept Member Saltoun in place of Member Armstrong on the subcommittee for State Water, Seawater, and Agricultural/Industrial Reuse. All members then voted unanimously to approve a second motion to direct the Chairman to bring back a written description of ranking criteria and range of scoring and incorporate input from Committee members into a revised ranking worksheet for consideration at the next meeting.

6. DISCUSS NEED FOR SPOKESPERSON TO PROVIDE UPDATE TO THE BOARD

Chairman Nunley presented the item. There was no public comment. The Committee had no action on this item.

7. PRESENT REFERENCE DOCUMENTS FOR REVIEW AND ACCEPTANCE

Chairman Nunley presented this item. There was no public comment. The Committee had no action on this item.

8. SET NEXT COMMITTEE MEETING DATE AND TIME

The Committee voted unanimously to schedule the next meeting for January 14 at 1:00 PM. There was no public comment.

9. ADJOURN

Chairman Nunley adjourned the meeting at 4:06 PM.

TO: EVALUATION COMMITTEE

FROM: MICHAEL K. NUNLEY, PE
CHAIRMAN *MKN*

DATE: January 10, 2013



DISCUSS RANKING PROCESS

ITEM

Committee to discuss evaluation criteria and ranking approach.

BACKGROUND

At the October 2, 2012, Committee meeting, the following schedule was established for completion of the Committee's evaluation:

Selection of Subcommittees and Beginning of Evaluation	October 2, 2012
Development of Alternative Analysis by Subcommittees (Including Subcommittee Meetings)	October 2 through week of November 12 th , 2012
Committee Meeting – Progress and Development of Ranking Criteria (if time allows)	November 1
Committee Meeting - Development of Ranking Criteria	Week of November 12 th , 2012
Completion of Alternative Analysis by Subcommittees	Through Week of January 21st, 2012
Committee Meeting - Subcommittees to Present Alternatives	Week of January 21st, 2013
Committee Meeting – Perform Ranking	Week of January 28 th , 2013
Committee Meeting – Review Rough Draft of Report	Week of February 11th, 2013
Committee Meeting – Finalize Report	Week of February 25 th , 2013

It is requested that the subcommittees begin identifying additional data or information that may be required to complete the alternative evaluations for compliance with the schedule. Please forward these requests to the Chairman as your subcommittees are meeting and working through the evaluations. The Chairman will continue to add meeting notes to the report as appropriate.

At the December 19 Committee meeting, the Committee members discussed a desire to focus this meeting on walking through a draft evaluation matrix. The Chairman was directed to bring back a ranking matrix based on the draft table developed by Member Watson, which was presented in the last meeting's progress report.

Members Saltoun, Watson, and Chairman Nunley developed a draft matrix in spreadsheet format that will allow members to input scores and weighting factors for each of the ranking criteria. A memorandum discussing the matrix, a copy of the draft table from Member Watson, and the draft ranking spreadsheet have been provided as attachments. The spreadsheet file includes a draft scoring rubric for consideration by the Committee. On January 3, the Chairman forwarded these attachments to the Committee members with the following requests:

- 1) Review the draft ranking matrix and scoring rubric. Provide comments, suggestions, and opinions regarding the drafts.

- 2) Work through the spreadsheet based on available information from prior meetings and your subcommittee meetings. Use this as an opportunity to identify any "data gaps" or additional information you need to complete your subcommittees' work.
- 3) Be prepared to walk through the rubric, worksheet, and weighting recommendations at our next meeting on January 14th.

RECOMMENDATION

Discuss and refine draft ranking criteria and weighting approach. Walk through the draft evaluation matrix; review schedule for completion of the evaluation; and discuss any data "gaps" or needs from subcommittees to meet schedule goals.

ATTACHMENTS

- Attachment 1 - Alternatives Ranking Suggestion for SWAEC (January 3, 2013)
- Attachment 2 - Proposed Ranking Matrix
- Attachment 3 - Draft SWAEC Ranking Matrix

MEMORANDUM FOR THE SUPPLEMENTAL WATER ALTERNATIVES EVALUATION COMMITTEE

Subj: Strategy for Ranking of Supplemental Water Alternatives

Background:

There are numerous formal optimization techniques that are used in decision making, and more than a dozen commercial software programs - utilizing various approaches - that are designed to help decision makers faced with complex choices. Most of these analytical methods are specialized and sophisticated. Although effective, they often lack an important feature that is desired in SWAEC deliberations – transparency.

One of the final tasks of the SWAEC will be to agree on a methodology for evaluating, and ranking alternatives. Member Watson presented an outline for a straightforward ranking matrix at the December 19 SWAEC meeting that passes the transparency test (Attachment 1).

This memorandum offers a suggestion for using that matrix as a numerical tool for ranking alternatives by using a classic weighted additive (WADD) strategy. It is simple enough to calculate manually, but is most easily maintained on a single spreadsheet. WADD is the strategy for alternative selection that most frequently self-evolves in the natural world.

This ranking strategy is most easily understood using a simplified example.

Example of a WADD Strategy:

In this example, four alternatives (A, B, C, and D) are ranked by assigning integer point values between 1 and 10 for each of four criteria (1 through 4). Each criterion is weighted by a percentage that totals 100% across all criteria. The ranked alternative point value (1-10) is multiplied by corresponding criterion weighting factors (in %). The results are summed giving each alternative a final score. The highest score is the top ranked alternative.

(Alternative B is ranked highest)

Ranked Alternatives	Weight (%)	Weighted Criteria				Final Score	Weighted Ranking
		1	2	3	4		
		10%	30%	40%	20%		
A	<i>points assigned for rank (1-10) x weight of criterion (%)</i>	1 x 0.1	3 x 0.3	6 x 0.4	10 x 0.2	5.4	2nd
B		4 x 0.1	6 x 0.3	8 x 0.4	2 x 0.2	5.8	1st
C		5 x 0.1	5 x 0.3	5 x 0.4	5 x 0.2	5.0	4th
D		7 x 0.1	4 x 0.3	5 x 0.4	6 x 0.2	5.1	3rd

Strawman Methodology:

Step 1: List each alternative. Subcommittees propose, for SWAEC approval, lists of alternatives to be included in the final ranking matrix. Each variation would normally be a separate alternative as shown in Member Watson's example.

Step 2: List each criterion. The SWAEC is currently close to finalizing the list of criteria to be applied to each alternative. The above WADD example applies the same criteria evenly to all alternatives.

Step 3: Weight each criterion. Applying numerical weight as percentages (as in the example) or with points is possible. Individual criterion can either be weighted differently, or all can be weighted equally at the Committee's discretion.

Step 4: Rank each alternative for each criterion. Every alternative should be ranked separately for every criterion by assigning a point value (integers from 1 through 10 in the above example) that reflects how effectively each alternative meets each criterion.

This can be accomplished in several ways. The most straightforward approach is to follow Committee discussion on an item with a vote to assign an integer point value. The assigned points would simply be a numerical average of Member votes. (This would usually result in a decimal average, which better discriminates between alternatives.)

To aid Committee members in the point assignment, a rubric can be a useful tool. A draft scoring rubric has been proposed by Chairman Nunley, and is included in Attachment 2.

Step 5: Calculate numerical ranking. Attachment 2 is an example of a spreadsheet that automates the WADD calculations based on the proposed ranking matrix. Three spreadsheets are included: a calculation sheet containing arbitrary sample data that was used for testing purposes, a summary sheet, and a proposed scoring rubric.

Submitted by: Dave Watson, Sam Saltoun, and Mike Nunley

Date: 01/03/2013

Attachments:

1. Proposed Ranking Matrix (by Dave Watson)
2. Draft SWAEC Ranking Matrix and Rubric (Microsoft Excel workbook)

10b – Ranking

Ranking Criteria and Topics

Option Ref #	Project Considered	Supply Potential			Cost Considerations		Complies w/Court	Critical Milestones for Delivery			Reliability	Phasing	Quality	Feasibility	Public Support
		1,000 afy	3,000 afy	6,200 afy	Capital	O&M		1,000 af by 2015	3,000 af by ASAP	6,200 af by ???	<i>details to be added.....</i>				
State Water Project															
1	Acquire Unused or Excess Table A Allocation from SLO County														
2	Acquire Unused or Excess Table A Allocation from SB County														
3	Reactivate Desal Plant in SB / Exchange for SWP Supplies														
Demand Management / Conservation / Graywater															
4	Conservation Programs (current and future)														
5	Graywater Programs														
Agricultural and Industrial Reuse															
6	Agricultural Reuse														
7	Industrial Reuse														
Santa Maria Waterline Intertie Project															
8	Acquire Water from Santa Maria														
Recycled Water Supplies															
9	Acquire Supply from South SLO County Sanitary District														
10	Acquire Supply from Pismo Beach														
Local Groundwater															
11	Local Shallow Aquifer														
12	Dana Wells														
13	Riverside Wells														
Surface Water															
14	Oso Flaco Lake														
15	Santa Maria River														
16	Lopez Reservoir														
Seawater/Brackish/Other Desalination Options															
17	Seawater Desalination Project														
18	Phillips 66 Refinery Thermal Waste Recapture														
20	Solar Distillation														
21	Enhanced Reverse Osmosis (VSEP) Orcutt Oil Fields														
22	Liquid-Liquid Extraction of Brine														

DRAFT SCORING RUBRIC			1/6/2013
SCORING CATEGORIES	POINT ASSIGNMENT		
	1-3	4-7	8-10
Supply Potential: 1000 AFY	1 Point - Alternative cannot deliver 1000 AFY	--	10 Points - Alternative can deliver 1000 AFY
Supply Potential: 3000 AFY	1 Point - Alternative cannot deliver 3000 AFY	--	10 Points - Alternative can deliver 3000 AFY
Supply Potential: 6200 AFY	1 Point - Alternative cannot deliver 6200 AFY	--	10 Points - Alternative can deliver 6200 AFY
Cost Considerations: Capital	Three alternatives with the highest capital costs (most expensive capital costs) to deliver 3000 AFY	"Middle" capital costs to deliver 3000 AFY	Three alternatives with the lowest capital costs to deliver 3000 AFY
Cost Considerations: Operation & Maintenance	Three alternatives with the highest O&M costs (most expensive O&M) for 3000 AFY. Alternatives with energy or chemical costs that are less likely to fluctuate in the future will score higher.	"Middle" O&M costs for 3000 AFY. Alternatives with energy or chemical costs that are less likely to fluctuate in the future will score higher.	Three alternatives with the lowest O&M costs for 3000 AFY. Alternatives with energy or chemical costs that are less likely to fluctuate in the future will score higher.
Court Compliance	1 Point - Is in conflict with Stipulation or does not import water to the Mesa	--	10 Points - Imports water to the Mesa and complies with the Stipulation
Critical Milestones for Delivery: 1000 AFY by 2015	1 Point - Cannot deliver 1000 AFY by Jun 2015	--	10 Points - Can deliver 1000 AFY by Jun 2015
Critical Milestones for Delivery: 3000 AFY by 2020	1 Point - Cannot deliver 3000 AFY by 2020	--	10 Points - Can deliver 3000 AFY by 2020
Critical Milestones for Delivery: 6200 AFY (Future)	1 Point - Cannot ultimately deliver 6200 AFY in future (past 2030)	--	10 Points - Can ultimately deliver 6200 AFY in future (past 2030)
Reliability	Considered not reliable (<80%) on a long-term basis based on historic performance or availability of 3000 AFY. Projects may not be able to produce at least 2400 AFY of water or may not be able to do so reliably.	Considered moderately reliable (80%+) on a long-term basis based on historic performance or availability of 3000 AFY (ex. only 2400 AFY may be available at some times). Subject to seasonal limitations or fluctuations that would impact supplies available to District.	Considered highly reliable on a long-term basis based on historic performance or availability of 3000 AFY. Not subject to seasonal limitations or fluctuations that would impact supplies available to District
Feasibility	Permitting is expected to represent a significant hurdle - either adding five (5)+ years to project implementation for 3000 AFY delivery, or may be opposed by resource agencies or in conflict with their policies. May require significant contract negotiations with multiple outside entities that are expected to challenge the project	May require CEQA permitting and some contract negotiation with an outside entity, but negotiation is not expected to be challenged by outside entities or to take longer than 1-2 years.	Can be accomplished without new CEQA or additional "major" resource agency permits (CDFG, NOAA Fisheries, CA Coastal Commission, etc.) Can be accomplished with minor effort to update existing contracts or without any contract modifications
Phasing	Project either cannot be upgraded from 1000 to 3000 AFY or will require more than 100% of the initial (1000 AFY) capital cost	Project can be upgraded from 1000 to 3000 AFY but will require 60 to 80% of the initial (1000 AFY) capital cost	Project can be upgraded from 1000 to 3000 AFY without requiring more than 50% of the initial (1000 AFY) capital cost
Water Quality	Requires "high" level of treatment - reverse osmosis or similar desalination - for intended use, or has significant health/safety concerns or risks	Requires "moderate" level of treatment - basic filtration & disinfection - for intended use	Requires minor chemical addition (disinfection) or no treatment for intended use
Sustainability	Significant negative environmental impact due to energy usage, carbon footprint, greenhouse gas emissions, or other similar measures.	Some environmental impact with an increase in carbon footprint, greenhouse gas emissions, or other similar measures.	Positive environmental impact or no increase in carbon footprint, greenhouse gas emissions, or other similar measures.
Public Support	Opposition is anticipated	Indifferent	Positive

TO: EVALUATION COMMITTEE

FROM: MICHAEL K. NUNLEY, PE
CHAIRMAN

DATE: January 10, 2013

AGENDA ITEM

#5

JANUARY 14, 2013

OVERVIEW OF DISTRICT'S 2010 UWMP DEMAND AND SUPPLY PROJECTIONS

ITEM

The Committee Vice Chair, Peter Sevcik, will provide an overview of the District's 2010 demand and supply projections from the Urban Water Management Plan.

BACKGROUND

Vice Chair Sevcik and District staff recently led the effort to update the District's Urban Water Management Plan (UWMP). One of the requirements of the UWMP is to develop demand projections and also to indicate how the water purveyor will meet future demands. Vice Chair Sevcik has prepared the following table to summarize the analysis in the UWMP.

<i>Supply</i>					
Source	2010	2015	2020	2025	2030
Groundwater	2367	1404	1588	1275	1495
Supplemental Water	0	2000	2000	2500	2500
Total	2367	3404	3588	3775	3995
<i>Demand</i>					
Water Use	2010	2015	2020	2025	2030
Retail Demand	2293	2838	3013	3191	3400
Wholesale Demand	0	416	416	416	416
Losses	74	149	159	168	179
Total	2367	3403	3588	3775	3995

Notes:

1. All units are in acre feet per year.
2. Based on Table 14 and Table 26 of NCSD 2010 Urban Water Management Plan, June 29, 2011.

RECOMMENDATION

Receive the presentation from the Vice Chair.

ATTACHMENT

NONE

TO: EVALUATION COMMITTEE

FROM: MICHAEL K. NUNLEY, PE
CHAIRMAN

DATE: January 10, 2013

AGENDA ITEM

#6

JANUARY 14, 2013

**DISCUSS NEED FOR SPOKESPERSON TO PROVIDE UPDATE TO
THE BOARD**

ITEM

If determined appropriate by the Committee, identify and select a member of the Committee to serve as a spokesperson for the Committee at an upcoming Board meeting.

BACKGROUND

Paragraph 7A of the Bylaws requires that "The Committee will provide written reports and oral presentations to the NCSD Board of Directors". The Chairman's and Vice Chair's responsibilities do not include regular reporting and correspondence with the Board. The Committee can select a Spokesperson from among the voting members to represent them before the Board. The Spokesperson's responsibilities may include:

- Providing updates to the Board of Directors at major milestones in the evaluation process; and
- Leading the presentation of the findings of the Committee.

At the September 24, 2012, Committee meeting, the Committee decided to select a spokesperson on an "as-needed" basis, depending on whether an update should be provided to the Board at an upcoming meeting. A different Spokesperson could be selected for each update or presentation, if desired. This discussion and selection will be a standing item at each Committee meeting.

RECOMMENDATION

Discuss whether an update should be provided by the Committee to the Board. Nominate a voting member of the Committee to serve as Spokesperson, if desired by the Committee.

ATTACHMENT

NONE

TO: EVALUATION COMMITTEE

FROM: MICHAEL K. NUNLEY, PE
CHAIRMAN 

DATE: January 10, 2013

AGENDA ITEM

#7

JANUARY 14, 2013

PRESENT REFERENCE DOCUMENTS FOR REVIEW AND ACCEPTANCE

ITEM

Identify and propose reference documents to be used by Committee members in the evaluation.

BACKGROUND

The Bylaws list the following "primary" reference documents to be used in the Committee evaluation:

- 2010 Santa Maria Urban Water Management Plan
- 2010 NCSD Urban Water Management Plan
- 2010 CCWA Urban Water Management Plan
- 2007 Boyle Alternatives Analysis
- 2011 NMMA TG Annual Report
- 2009 NCSD Supplemental Water Project EIR
- 2005 Stipulation
- 2008 Court Order

The Bylaws also state that, "Other published technical analyses may be used if the SWAEC finds them to be rigorously accurate." The list was amended at prior Committee meetings to include the following documents:

- 2011 Northern Cities Management Area Monitoring Report
- 2011 Santa Maria Valley Management Area Monitoring Report
- Final Supplemental Water Project Phasing Study (August 8, 2012)
- Nipomo CSD Water Conservation Program (February, 2008)
- City of Arroyo Grande Recycled Water Distribution System Conceptual Plan – City of Pismo Beach WWTP (Wallace Group - June, 2010)
- City of Arroyo Grande Recycled Water Distribution System Conceptual Plan – South SLO County Sanitation District WWTP (Wallace Group - June, 2010)
- South SLO County Sanitation District Water Recycling Update Report (Wallace Group - January, 2009)
- Sweetwater Authority Groundwater Desalination Facility Brochures (provided by Director Eby at November 1, 2012, Committee Meeting)
- San Luis Obispo County Master Water Plan – May 2012
- San Luis Obispo County Conservation Manual
- Appellate Court Ruling (November 21, 2012)

As discussed in our September 5, 2012, meeting, Committee members are encouraged to bring documents to Committee meetings for their consideration as additional reference documents. The Committee would need to determine that the documents are "rigorously accurate" as required in the Bylaws.

It is assumed this will be a standing item for each Committee meeting.

RECOMMENDATION

Identify, discuss, and vote on documents presented by Committee members for use as reference materials in the Committee's evaluation.

ATTACHMENT

NONE

TO: EVALUATION COMMITTEE

FROM: MICHAEL K. NUNLEY
CHAIRMAN



DATE: January 10, 2013



SET NEXT COMMITTEE MEETING DATE AND TIME

ITEM

Committee members to set the next meeting date and time.

BACKGROUND

As directed by the Board, the Committee is directed to meet as needed to perform the Supplemental Water Alternatives Evaluation in an efficient and thorough manner.

RECOMMENDATION

Recommend that the Committee members schedule the next meeting during the week of January 21, 2013, if possible.

ATTACHMENT

NONE