

## Water Supply Advisory Committee

Meeting February 12 and 13, 2015

First session at the Fellowship Hall, Peace United Church of Christ

Second session at the Police Department Community Room

### Meeting Summary

#### ***Use and Meaning of the Meeting Summary:***

*The Summaries of the Water Supply Advisory Committee are intended to be general summaries of key issues raised and discussed by participants at meetings. The presentation of issues or items discussed is not designed to be totally comprehensive, or reflect the breadth or depth of discussions. However, it is intended to capture the gist of conversations and conclusions.*

*Where a consensus or other agreement was reached, it will be so noted. Where ideas or comments are from only one or several participants, or where a brainstormed list is presented the content of which was not agreed to by all Committee Members, the facilitators will to the best of their abilities note these qualifiers. Where the facilitators believe that the insertion of additional information would be useful to the group they insert it in this summary and indicate that the insertion comes from them, rather than from the Committee.*

*An early draft of this summary is sent to Committee Members so that they may provide comments to the facilitators and permit the preparation of a more reliable Presentation Draft for review at the Committee's next meeting. If the Members' comments conflict with each other the facilitators do their best to resolve the conflict in the Presentation Draft. When Members raise comments about the meeting Summaries, or make other suggestions or comments following meetings that propose changes that are more than "corrections" to the Summaries, the facilitators add these in a section at the end of the item or at the end of the meeting Summary captioned "Post Script".*

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This meeting consisted of two daily sessions. The first lasted 4½ hours, the second lasted 4 hours. Here is a list of the Members of the Committee. All Members attended both sessions except as specified.

David Green Baskin, Dana Jacobson (tardy first session), Charlie Keutmann (tardy first session), Sue Holt, Rick Longinotti, Sarah Mansergh, Rosemary Menard, Mark Mesiti-Miller, Mike Rotkin, Sid Slatter, Erica Stanojevic, Doug Engfer, Peter Beckmann (absent from both sessions), Greg Pepping (tardy second session), David Stearns.

### **First Session, Thursday February 12**

#### **Public comment**

There was public comment including the following:

- Appreciation of the presentations by David Mitchell and John Rosenblum on February 11
- Concern that the Committee should not make decisions before obtaining correct data.
- Concern that the projections being used by the Committee must be updated based on most recent data.

#### **Committee Member updates**

Members reported that the Water Commission had recently discussed Development Demand Offset Fees (water neutral development) where much public comment was received on this topic. The Commissioners indicated that the need or appropriateness of such fees is in large part dependent upon the supply portfolio that is recommended by this Committee.

Another Member reported on the continued active interest among residents of Live Oak in the Committee's work.

#### **Agenda review**

Nicholas Dewar reviewed the meeting's agenda with the Committee. The Committee agreed by consensus to accept the agenda as presented. The Flow Agenda and the Official Agenda can be downloaded from the list of documents at [this link](#) and [this link](#).

## **Update on Results of January 27<sup>th</sup> City Council Meeting**

Rosemary Menard, and the other Committee Members who attended the City Council Meeting (David Baskin, Sarah Mansergh, Mike Rotkin, Charlie Keutmann) reported on the outcome of the City Council meeting. They reported that the Council approved all the requests of the Committee and gave generally positive responses to the Committee's report. The Council's only concern is that outreach to the community regarding the work of the Committee needs to be energetic enough to ensure that the community is aware of the progress of the Committee's work and is not caught unawares by any conclusions that it reaches in a way that may produce sudden community response in the final few weeks of the Committee's work.

## **WSAC Phase Two Work Plan**

Rosemary Menard, Director of the Water Department, joined by Bob Raucher of Stratus, described the current status of the work plan.

The Committee agreed by consensus that John Rosenblum will review the work of Maddaus Consulting.

In answer to Committee Members' questions the presenters explained that:

- The net present values of costs will be calculated for each consolidated alternative in order to allow cost comparison in a way that accurately reflects the value of very-long-life investments (e.g. those whose lifespan exceeds our solution horizon).
- Consideration of drought risks will include climate data from the paleo record.
- The Technical Team would provide to the Committee the Phase 1 work product from John Rosenblum and Maddaus relating to the 4 alternatives that they have researched.
- The work plan will include consideration of the length and severity of drought for which Santa Cruz's water system should be designed.

## **Presentation of Baseline Demand, Supply and Reliability Analyses**

Bob introduced the following presentations:

Dave Mitchell of M.Cubed described the estimated interim baseline demand. His presentation can be downloaded at [this link](#). He also referred to his written responses to questions about the estimation of baseline demand and to LAFCO. These written responses can also be downloaded at [this link](#) and [this link](#).

Heidi Luckenbach, Assistant Director of the Water Department, described the existing system resources and assumptions used in the estimation of baseline supply.

Gary Fiske of Fiske & Associates described the Confluence model results that compare the estimated baseline supply to the interim demand forecast, to reveal the anticipated frequency and severity of curtailments under alternative fish flow HCP regimes. His presentation can be downloaded at [this link](#).

### Public Comment

The Committee recognized the significance of this topic and invited public comment. Members of the public commented on the following issues:

- There was, 25 years ago, a proposal to pipe treated water to north coast users;
- The Committee should think deeply about the meaning of sustainability and consider measures that will allow Santa Cruz to use no more than the amount of water that nature provides;
- Scenarios should be developed that reflect the significance of sustainability;
- The reduction in size of the Bay Street Reservoir;
- The model should include not just wage income but also investment income, social security income, unemployment income etc.

### **Committee Discussion of Baseline Information**

Bob, joined by Karen Raucher of Stratus Consulting, led the Committee in a discussion of the baseline information. The Committee discussed the assumptions used to generate the interim demand forecast. They generated a list of assumptions to ask the Technical Committee to review and then provided the Committee with additional information. The list of assumptions to examine is provided in the agreement below. The Committee also asked the Technical

Team to develop a plausible range to use as the interim demand forecast so they can identify the sensitivity of their Portfolios to changes in the demand forecast.

The Committee agreed by consensus to use the baseline information as the point of departure in its development of scenarios.

The Committee agreed by consensus to use the Confluence model as a tool in the scenario planning process.

The Committee agreed by consensus to direct the Technical Team to develop a plausible range for the interim demand forecast and run it through the Confluence model to see how sensitive the system is to potential changes in demand. The plausible range will be specifically derived from empirically-based (to the extent possible) high and low estimates of the assumptions listed below, and will be run through Confluence to bound the problem. The Technical Team will provide a memo describing the results and explaining the professional judgments used to create the ranges. Assumptions to consider include:

- a. UCSC growth – including gal/day/person metric
- b. Commercial growth rate
- c. Income (and perhaps similar metrics, such as wages)
- d. Rebound- permanence of behavior changes after droughts
- e. Anchors (metrics of typical use per entity, e.g. gpcd)
- f. Use of wage income growth rates when adjusting demand to reflect future income growth
- g. Other assumptions based on the Technical Team’s professional judgment

### **Subcommittee Reports**

Charlie Keutmann reported on behalf of the Outreach Subcommittee:

- Subcommittee members met with the Editorial Board of the Sentinel, which agreed to include a column from Committee members. Greg and Doug Engfer prepared the first of these columns and it was published on February 7.
- The Subcommittee has contacted KUSP Radio and hopes to feature on programs with Wes Sims. Eileen Cross (Water Department Communications) received a request from Sunrise Rotary for a speaker to discuss the work of the Committee.
- The Subcommittee will discuss improvements to the website with City staff.

- The Subcommittee recommended that the Committee consider an alternative name for this phase of its work as “Real Deal” is not usefully descriptive. The Committee discussed possible alternatives including “Decision Phase,” “Agreement Phase” and “Solutions Phase.” After some discussion the Committee agreed to “sleep on” this decision and reconsider it during the Friday session.

Doug reported on behalf of the Real Deal Planning Subcommittee that it has worked with staff and consultants as they have developed the following elements that will be reported on separately during this meeting:

- Recommendations for the curriculum of the Enrichment program.
- A recommended approach to the development of consolidated alternatives.
- A recommended approach to the refinement of criteria and rating scales.
- A recommended approach to the development of a problem framework.
- An updated workplan.

### **Correspondence Received from the Community**

Mike reported on correspondence received from the community.

### **Materials resulting from the previous meeting**

The Committee agreed by consensus to approve the Action Agenda of its December meeting.

### **Evaluation of the session**

Nine Committee Members and one member of the public entered evaluations of this session at SurveyMonkey or by handing in written evaluations.

- How well did the session meet your needs?

- Comments indicated that the meeting met the needs of the participants who used terms such as “great meeting,” “very well,” “perfectly” and “sufficient.”
- Participants said in particular that the session “refined my understanding of the baseline model,” made progress, shifted the emphasis of the meeting towards a discussion among Committee members to talk about ideas, and felt more structured and organized than some past meetings.
- One participant noted that the tech team was very accessible and answered all questions clearly.
- How did this session help the Committee work towards its long-term goal?
  - All respondents appreciated that agreement on the baseline condition is fundamental to progress in the Committee’s work
  - The participating member of the public noted that the Committee didn’t really take account of the community’s opinions.
- What were the strengths and weaknesses of the session?
  - Participants appreciated the Committee Members’ flexibility and willingness to listen to each other. They noted that they cleared a challenging hurdle in this session by reaching agreement on the use of the Confluence model. The clarity of technical presentations was noted, as was the useful mixture of presentations and Committee-led discussions.
  - Weaknesses included the fact that some Committee Members participated rarely, the meeting, although it ended within its schedule, still lasted late into the evening, and the Committee deferred some decisions. One also noted that some microphones still don’t work.
  - One noted a preference for Wednesday/Friday meetings.
  - The participants graded the session with a weighted average of 3.9 out of 5.0. Most graded it as “surpassed expectations.”
- What would you like to see at the next meeting?

- Most respondents asked for more time for discussion among Committee members. One hoped for opportunities for members to share their “honest concerns.”
- One participant asked for fewer sugary snacks and more salty ones.

**Adjourn**

PRESENTATION DRAFT



## Second Session, Friday February 13

### Public comment

There was public comment including the following:

- We need a 2-page summary of each meeting that explains what was said in discussion, not just a list of presentations.
- A hypothetical description of the cost of water for hotel operators was described
- Harvesting more water from the San Lorenzo is the solution.
- The Committee should as soon as possible start conversations with the Soquel Creek Water District about water rights and the aquifer.
- Dave Mitchell's report should be accelerated so that it is available early in the decision-making process.
- The "Guidance Questions" need to be answered as a priority.

### Reflections on Wednesday's session

Rick Longinotti described progress on the development of the Enrichment curriculum that he had asked to defer until this second session:

- A panel on regional water exchanges is under consideration. It might include John Ricker, Piret Harmon and Kim Adamson, and might take place immediately before the first session of the March Committee meeting.
- A panel on aquifer recharge and climate change is under consideration for mid April. It might include consultants from Pueblo Water Resources, Bruce Daniels and Shawn Chartrand.
- A presentation about how to think about long-range planning is being considered. This might include someone from the Institute for the Future and/or Heather Cooley from the Pacific Institute.

Members asked about attention to fisheries, in particular anadromous species. Rick explained that a presentation on fisheries by Donna Myers is contemplated. Others suggested Steve Lindley and Gary Griggs as resources for marine fisheries.

After “sleeping on” the question of an alternative name for the Real Deal, Members discussed this further and reached consensus, with David Baskin standing aside, to refer to the current phase of the Committee’s work as the Solutions Phase.

### **Update on Work on Consolidated Alts**

Bill presented a description of the proposed approach to consolidating the ~70 Alternatives into ~20 consolidated alternatives. His presentation can be downloaded at [this link](#).

Members made the following comments:

- The consolidated alts must include an explanation of why the alts have been merged and why any have been left behind. It must be clear that no alts have been ignored.
- An update about the consolidation will need to be published on the website with an explanation about how the Committee has progressed from the many alts provided at the Water Supply Convention and including those that have been subsequently submitted.
- Technical Team should be attentive to any substantive “missing” alternatives and add them if appropriate.
- The description of each consolidated alt needs to be clear that this is prepared as “planning level” information.
- The example of off-stream storage is Liddell Quarry: this is just an example and is not necessarily a preferred alt.
- The Committee needs the consolidated alts to be presented in a way that dovetails conveniently with the selected criteria.

Bill noted that the City had other water planning going on in parallel with the Committee’s work including participation in Integrated Regional Water Planning and pursuit of grant money to investigate opportunities such as wastewater effluent recycling and reuse. None of these other City activities will prevent the

City from adopting or implementing alternatives under consideration by the Committee.

### **Risk Assessment and Scenario Planning**

Karen and Bob led the Committee in a discussion of the scenario process and risk assessment/risk management, and agreement on a list of risks to bring forward to the scenario-planning task. The Committee discussed the risks that the system faces. Bob and Karen explained the use of a risk management frame in scenario development.

The Committee agreed by consensus to include risks in scenario planning and for evaluating alternatives.

The Committee noted that they need the Technical Team to bring them additional information about the risks facing Santa Cruz. The Committee agreed by consensus to direct the Technical Team to develop the following additional information about risks to be built into scenarios:

1. An analysis of the sensitivity of the current system to the two largest risks: drought and climate change. Include a review of the how Santa Cruz can use its current resources to reduce the probability and consequences of an event.
2. Provide additional information on:
  - a. Will new state groundwater regulations mean less supply from the Beltz wells
  - b. How demand changes as temperature increases
  - c. Where the system is sensitive to the impacts of extreme weather – wind and rain events, wildfire, and a combination of these.
  - d. GHWTP vulnerability to slides, flood, etc
  - e. Separate data on curtailment impacts on Business and Residential customers
  - f. Risks to/from: credit ratings, business cycles, terrorism, good neighbors
  - g. How to plan for unknown risks
  - h. The big risks to a rainfall dependent system
  - i. The solutions that are robust
  - j. The solutions that are independent (resilience? Single risk?)
  - k. What risk factors could bring down the Santa Cruz water system?
  - l. How the guidance questions provided by Jerry Paul are being used
  - m. Capacity of pipes
  - n. Conditions that create 15% shortage
  - o. Conditions that create 25% shortage

### Update on Plan for Refining Criteria

Doug and Rosemary presented the approach for refining criteria and rating scales. This is described in a document that was distributed at the meeting and is available at [this link](#).

Committee Members agreed to review the document and send comments to Doug and Rosemary no later than Wednesday February 18. Rosemary asked them in particular to consider any additional criteria to cover such issues as robustness and diversity of supply. She explained that if any criteria are missing we will need assistance from the tech team to properly identify and describe them. She explained that the aim of this work is to develop a clearly understood list of criteria.

### IRP Panel – Perspectives on Decentralized Water Systems

The members of the IRP commented on David Sedlak’s book “Water 4.0”

- Decentralized, or self-sufficient distribution systems, are being considered as water 4.0 in light of numerous challenges centralized systems are facing such as aging infrastructure, water shortages, constrained funding, etc.
- We need to start integrating water supply, wastewater management and storm water management. This is complicated by existing legal regulatory and management structures. Making these systemic changes will be very expensive, but not making them is likely to be more costly in the long run.
- Two IRP members agreed with Sedlak’s concept of distributed water management (i.e., storm water treatment/groundwater recharge and Wastewater treatment/reuse) while one of these recognized that large scale totally off-the-grid systems are problematic. Experience has shown that the failure of one organization or individual to maintain their decentralized facilities can damage the system of entire communities.
- Distributed generation - using rain water capture and grey water reuse - has been in use in various places for millennia. Despite this long tradition this may appear to be revolutionary when added to a conventional, centralized linear water system in an urban setting.
- Decentralized systems seek to become self-sufficient through recycling wastewater, capturing storm water runoff and rain water or using other

small-scale sources, then treating and delivering the water. Different water qualities would be used differently in the house and landscape.

- Major challenges with this decentralized approach at this time are due to the institutional changes required such as shifting the governance, risk, liability, regulatory compliance and funding from a governmental or private business enterprise to a local community or individual citizens. Moreover there still needs to be a connection to a centralized system as backup, which could drive up the costs.
- Personal experience with a neighborhood non-potable irrigation system on one Panel Member's street, using riparian water flowing in the stream behind the neighborhood's homes, reduced collective use of the central system by one million gallons per year. This system, paid for its expense through one year's savings in purchased drinking water from the central system, also had a social impact of unifying the neighborhood.
- Each early adopter of alternative water sources helps the community at large achieve a lower per capita water usage number, which is reported monthly to the State Water Board and then released to the media. This gives those communities, whose residents are widely implementing such practices, bragging rights for saving drinking water during droughts and beyond.
- While decentralization likely has its merits in the future, and the city is already examining some elements such as water reuse and enhanced conservation, the implementation of truly decentralized systems as a solution to the city's water needs does not appear to be a practical solution at this time.

### **Overview of March Agenda**

The Committee reviewed the March agenda and noted that about 4.5 hours will be dedicated to Scenario Planning including a public participation process on Friday afternoon.

Members noted that if there is to be substantial public participation the event will need to be announced on the website and otherwise advertised. Members commented that the consolidated alts that are used in this exercise will need to be individually described and the way that each original alt has been incorporated in the consolidation will need to be explained.

Rosemary noted that the March sessions will be held on Wednesday and Friday and that the Scenarios will be developed by breakout groups of the Committee during the final agenda item on Wednesday. Each breakout group will report to

the Committee as the first agenda item on Friday. Consequently Committee Members will, if they wish, have time on Thursday and on Friday morning to meet in their breakout groups to further develop their ideas in preparation for the report-out on Friday. She advised any who might be interested in working in this way to mark their calendars accordingly.

### Oral Communication

There was oral communication including the following:

- The economic analysis from Dave Mitchell will not be available to the Committee until later in the decision-making process. Can ball-park data be provided before then?
- Make available to the public all the documents presented at this meeting.

### Evaluation of the Session

Eight Committee Members and no members of the public entered evaluations of this session at SurveyMonkey or by handing in written evaluations.

- How well did the session meet your needs?
  - Comments indicated that the meeting met the needs of the participants who used terms such as "very well," "well enough" and "solid progress."
  - Participants said in particular that the session improved their understanding of the risks to the City's system.
  - One participant noted the good quality of the IRP discussion about David Sedlak's book "Water 4.0".
- How did this session help the Committee work towards its long-term goal?
  - Some noted how the interrelationship of the various decision process is becoming clearer, and the Committee's path is becoming clearer
  - One considered that the issue of decentralization had been eliminated and that this will allow time for progress exploring other issues

- What were the strengths and weaknesses of the session?
  - Participants appreciated that the meeting started the Committee's conversation about the risks confronting the system, that the Committee's time was well managed and that the material presented by the technical team was good.
  - Weaknesses included the fact that there was not much discussion among Committee Members and that not all Committee Members participated in what discussion there was.
  - One noted that consultants included in their presentations material that they had provided in the documentation distributed in the packet.
  - The participants graded the session with a weighted average of 3.5 out of 5.0. All graded it as "satisfied expectations" or "surpassed expectations."
- What would you like to see at the next meeting?
  - Many respondents asked for more time for discussion among Committee members, and more involvement by quiet Members.
  - One asked for a hard copy of every slide deck in advance of the sessions
  - One participant asked for more salty snacks (rather than sweet ones).

**Adjourn**