

Water Supply Advisory Committee

Meeting July 31 – August 1, 2014

Fellowship Hall, Peace United Church of Christ

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 co-facilitators will to the best of their abilities note these qualifiers. Where the co-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 co-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 co-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 meeting Summary captioned "Post Script".

This meeting consisted of two consecutive daily sessions. The first lasted 4½ hours, the second last 3½ hours. Here is a list of the members of the Committee. All members attended both sessions except as specified.

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

First Session, Thursday July 31

Public comment

There was no public comment

Committee Member updates

Mark Mesiti-Miller and Sid Slatter reported that the Chamber of Commerce and the County Business Council meet regularly to confer about the progress of the Committee and that they look forward with excitement to the SIAC event. Rick Longinotti reported that Desal Alts hopes that the Committee will find ways to use water rates to encourage conservation.

Agenda review

Co-Facilitator Nicholas Dewar reviewed the meeting's agenda with the Committee. This included a brief review of the Gantt chart to see where the July meeting fits in the work plan. All agreed on the agenda.

Supply and demand update and Recon Report

Rosemary Menard reported on updates to the Supply and Demand slide-deck. The Committee members discussed the policies concerning the reasonable level of water conservation that is appropriate in wet years and the use of wet-year water to create a substantial buffer. Some pointed out how such wet-year conservation could allow Loch Lomond to be used to provide more supply during peak demand seasons and thereby reduce curtailments. Some noted how climate-appropriate landscapes create greater resilience. Discussing the Master Conservation Plan it was noted that the MCP contains pro-conservation landscaping but that the expected savings produced by this are low.

Rosemary discussed the update to slide 55. Members discussed the importance of using this slide to define a baseline. Bob Raucher has been tasked with defining the baseline as represented on this slide. See Appendix 1 for more information from Bob about this.

Previous Alternatives

Bob, with help from Terry Tompkins and John Ricker, led a discussion about the alternatives that have previously been considered by Santa Cruz.

Members asked about the possibility of getting back the water rights that were given up when the Zayante Dam project was abandoned. Although there seems to be a possibility of obtaining the rights again, none of the presenters was able to give a certain answer.

Members discussed the Felton Diversion and noted how turbid the water there becomes in heavy rains. It was pointed out that the Diversion was originally intended to pump water to the Loch and to Zayante dam. Although there is more storage space available in Loch Lomond, without the second dam it is questionable whether Santa Cruz would be able to perfect its permit amount of 3,000 acre feet/year. Sending water to storage in Loch Lomond is further complicated because there is only a single pipe to the Loch.

Carie Fox led an exploration of the multi-criteria decision support (MCDS) process using software to show how a comparison of five of the previous alternatives would appear when viewed through the MCDS process. The selected five were:

- Zayante Creek
- North Coast brackish groundwater
- Water reclamation for agricultural exchange for groundwater
- Seawater desalination
- Demand management strategies

The presenters emphasized that this was a demonstration exercise only and that no alternatives would be harmed by this process.

In the ensuing discussion Members wondered how to use MCDS to show differences between the feasibility of each project, felt that it needed to be calibrated to show demand at a level reduced by half, and asked for the sequence of alternatives displayed on various bar charts to be kept in the same sequence to facilitate comparison.

Soquel updates

Heidi Luckenbach described recent activities at the Soquel Water District to update the Members.

Strategies and Ideas Convention

Doug reported to the Committee the progress of the Subcommittee. He described the issues about which the Subcommittee needed the Committee's direction. The Committee reached consensus on the following directives to the Subcommittee:

- The Committee will host an event at which the proponents of alternatives will display posters of their proposals arrayed around a room so that Committee Members and participating members of the public can easily see them and ask each proponent questions about them.
- This poster session will be immediately preceded by a plenary session lasting about one hour in which proponents will each have one minute to make a very brief presentation – like an elevator speech – intended to attract the attention of participants and encourage them to visit their poster exhibit.
- The event will take place at the Civic Auditorium on Thursday, September 25. The poster exhibit will last into the early evening to permit participation by proponents and members of the public who are only able to participate after the end of the normal workday.
- The response to the proponents will:
 - encourage collaboration among proponents with similar proposals
 - ask them to describe how their proposal meets more comprehensive criteria. The Subcommittee should develop these

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criteria based on the “Simplified Criteria for the Exercise with Rosemary’s Rather Sophisticated Ratings Scales” that were used by the Committee in the exercise during the consideration of Previous Alternatives

- include a check-list to facilitate the preparation of complete responses by proponents
- explain that the Water Department has offered to provide support to proponents for the production of large-format printed materials
- The proponents will be instructed to respond no later than Friday, September 12 so that the Subcommittee will have an opportunity to review the proposals, identify any that are non-responsive and do what they can to assist the proponents to make complete proposals. Proponents who have not yet contacted WSAC will be allowed to submit proposals up until the September 12 deadline even without submittal of an initial “overview”.
- The Subcommittee will draft the response to the proponents and will send it to all Committee members for any comments. The Subcommittee will resolve any comments received from members of the Committee and will send the response to proponents on Monday, August 11.
- The Subcommittee will oversee the development of an application that permits easy evaluation of each proposal using the specified criteria.
- The Subcommittee will oversee the development of a public feedback mechanism to provide the Committee and the City with information about the reaction of community members to the alternatives as a whole.
- The Subcommittee need not attend to any outreach effort. The Recon Outreach Subcommittee will do that.

Postscript:

Following a request for Committee Members’ comments on an early draft of this section of the Summary some members submitted the following comments and suggestions that were not mentioned during the Committee meeting:

- *The Green House Gas (GHG) criterion needs to have a rating scale that accounts for the fact that some projects may consume lots of energy (and thus deserve to be given a poorer GHG rating) but be designed to produce their energy supply from carbon-neutral sources (and thus deserve a favorable GHG rating).*
- *Proponents should be asked to use a relatively coarse set of criteria so that they are not encouraged to prepare a proposal that is more detailed and fleshed-out than is needed for this exercise.*
- *Perhaps two of the criteria are so similar that they should be merged. One member felt that “Aligns supply and demand” is so similar to “Reliable” that they should either be combined or described in ways that make them clearly distinguishable. Another member suggested changing “Reliable” to “Resilient” in order to better distinguish between them.*
- *Another Member recommended that the Committee make a first pass of the proposals at an early stage to eliminate those that are evidently inapplicable, already addressed elsewhere (i.e. in the Conservation Master Plan) or dependent on unproven technology*

Research for Scenarios

Bob described how two key uncertainties – fish-flow requirements and climate change – might interact with plausible future scenarios. Members formed small groups to reflect on the information about these key uncertainties and to imagine how a future Santa Cruz would look if the City takes no action to adapt. Then, as a second step, the Members imagined the future Santa Cruz that they hope for and discussed how this would affect the imagined future without adaptation.

Each of the four groups reported to the Committee as follows:

- If climate change follows general trends the City will have a higher proportion of drought years, curtailment will become a way of life, business will be affected and there will be heavy economic impacts. If the City adapts and organizes a reliable water supply this will reduce the stress on the community that results from continuing imbalance, will be good for fish

and for business. It will create jobs so fewer people go over the hill to work. Applying this vision to the scenarios neutralizes most of the negatives in the scenario.

- If climate change follows general trends and fish flow requirements demand lots of water the big difference in a no-adaptation scenario will be the inability to obtain water for storage. There will be tight water controls to support fisheries, intense rationing during periods of shortage and economic stress on local businesses. The group had reached clear agreement on a vision of high-density housing, permeable roads and driveways, fewer lawns, artificial turf, and elaborate green building codes that would increase conservation and provide more water for storage. In particular we need to enable fish to thrive. Water shortage puts stress on fish and also on us.
- If climate change follows general trends and is accompanied by extreme events the Boardwalk will become a dystopian Coney Island with gang fights, a silted-in river, severe erosion in the upper watershed, trees dying, Loch Lomond silted up; neighbors fighting each other; businesses failing; tourists disappearing. Attention to proper adaptation would be to increase storage capacity and better infiltration of rainwater into aquifers. This provides a better environment for everything: less run-off and silting so more clearer water in the river. Pathways run along both river banks engage the community in the health of the river; better shade trees; green building codes; collaborative businesses; surf at the river mouth and better availability and management of water resources. Features such as rain gardens in the upper watershed improve water storage. Businesses adopt a sustainability ethic. Local employment grows so commuting over the hill becomes unnecessary.
- If climate change follows general trends and is accompanied by extreme events curtailment will become frequent and more dramatic, there will be strong incentives for conservation, coastal wells will be lost to salt water intrusion, community resentment about living through droughts year after year will grow. Water rates will continue to increase and service will diminish. We will see Santa Cruz lose its quality of a lush garden community: there will be no redwoods, tomatoes or corn growing in our yards. Existing businesses will suffer and the City will be less attractive to

new businesses. If accompanied by a more significant allocation of water to support fish, the results would be more dramatic. Businesses will close, outdoor water parks will disappear, public open spaces will dry up, there will be severe impacts on wildlife, significantly increased impacts on plumbing and significant community and political unrest. A reliable supply of water gives us back our utopian community with our gardens thriving – not just surviving. Reliable supply means not living in fear each season, and a reliable habitat for fish and other wildlife.

In further discussion Members emphasized the importance of establishing reliable baseline data, repeated the importance of protecting fish habitat and noted that much of the shortfall this year is being provided on the backs of the fish. Rick Longinotti explained to the Committee his understanding that the scenario that envisioned Tier 3 flows for fish habitat was unrealistic, given that state and federal fisheries agencies are not considering Tier 3 flows, but rather advocating for a flow scenario, DFG-5. Rick added that fisheries agencies argue that the City can accommodate DFG-5 without a new water supply.

Facilitators' note: the concerns raised by Rick were questioned by others and have been referred to a Fact-finding process that the co-facilitators are currently conducting. Any results from this process will be provided to the Committee as soon as possible.

Copies of the notes provided by the small groups that performed the Scenarios exercise are collected at Appendix 2.

Wrap up, plan for second session and evaluation of this session

The remaining items on the agenda for this session were postponed to the second session.

Second Session, Friday August 1

Public comment

A member of the public gave the Committee a satirical adaptation of “American Gothic” with the caption “What! Meter our wells?”

Correspondence received from the Community

Mike Rotkin reported on correspondence received from the community. All of this has been forwarded to Committee members and will in future be posted to the Committee’s website.

Reflections on yesterday’s session

Carie drew attention to the discussion on Thursday evening of slide 55 and described the facilitator’s task to enable Committee members to report and receive information and feel assured that it is accepted and acceptable. This task also includes ensuring that implicit questions and doubts about information presented as facts are made explicit and answered appropriately. She requested the agreement of the Committee to the use of a fact-finding process to resolve any questions that remain about slide 55. The Committee agreed by consensus.

Members asked if it would be possible for consultants to give Members a periodic product review as they prepare their materials for the Committee. They agreed by consensus that, as an experiment, Bob should provide early drafts of his material so that they can review it and submit questions. It was pointed out that there will only be twelve working days between the end of this meeting and the date for delivering the August meeting’s packet to Members, so it may be difficult to assess the utility of this process in August.

Members agreed by consensus that the entire meeting packet will be delivered before the weekend preceding each Committee meeting.

Research for Scenarios

The Committee resumed its work to provide Stratus Consulting with instructions regarding the development of scenarios.

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Members discussed the importance of providing fish flows to enable fish to thrive. Some wondered if our support for the fish would continue if we knew it would mean shutting down the City. Members noted that fish habitat is not only a question of in-stream flows, but concerns the whole habitat including, for example, the condition of riverside vegetation, the shading of the river, the condition of the stream bed etc. They noted that the Water Department has programs for watershed restoration that include the whole habitat so consideration of this whole habitat can be included within the scope of the Committee's work. They remarked on the close relationship between a healthy habitat for fish and the health of the human habitat. In general, what is healthy for the fish is healthy for the people. They also noted the importance of an outdoor lifestyle to the people of Santa Cruz: a healthy habitat is what the community wants.

Members asked for the scenarios to reflect uncertainties with respect to the economy and the scarcity of resources as well as considering jobs created by water policies. They asked how to make a connection between the economic resources of the region and the situation of the local water resource.

They noticed that the volume of greenhouse gases (GHGs) emitted by vehicles may increase if workers are obliged to commute over the hill to find work.

Members noted the importance of accounting for the costs of conservation: costs are born by the City and costs are born by individual households. The total cost needs to be consolidated and its impact considered not only in total but also in terms of price per gallon as water use falls and costs increase.

The Committee agreed by consensus to ask Bob to develop four or five scenarios based on the exercise conducted in the first session and these discussions. See Bob's description of this in Appendix 1.

Members noted the importance of considering the vulnerability of the water system and asked for an assessment of its vulnerability to climatic, seismic and other natural but hazardous events. Rosemary said that the Water Department will provide a synopsis of what has already been assessed in this regard and then ask Stratus to fill any gaps that it finds. See Bob's description of this at Appendix 1.

Members discussed sea level rise (SLR) and asked how and how soon this might affect the Beltz wells, the Tait Street facility and the sewage treatment plant. The Committee agreed by consensus to ask Bob to survey existing information to see if it reveals any risk to those facilities as a result of SLR. See Bob's description of this at Appendix 1.

Facilitator's note: in Recon, the Committee's task is to list desirable research topics. In November, at the end of Recon, their task is to use analytic tools in combination with their own experience and perspectives to prioritize these research topics.

“Real” Criteria

Members reviewed the Dialog Map depicting the Criteria gleaned from the Co-Facilitators' interviews during the Assessment Phase. They felt that “Resilience” is a “first-order” criterion that deserves its own “light bulb” on the Dialog-Map.

Members discussed the significance of growth to the work of the Committee. They recognized that growth can mean many different things. They asked whether water policy is deliberately used as a growth-regulating tool or if water policy should accommodate the growth that is expected to occur in the General Plan. They recognized that population growth and economic growth are not necessarily the same.

The Committee agreed by consensus that using water scarcity to change the GP growth levels is *not* part of the Ctte's decision space. However, there are several growth issues that are still part of the Ctte's discussion:

- Impacts to growth beyond the GP's planning horizon
- The relationship between GP growth and increased water needs
 - The effect of additional water-neutral policies
 - Analysis of existing policies which might be water-neutral

Members asked whether the General Plan specifies anything about the water supply. Rosemary and Mark Mesiti-Miller agreed to review the GP and documents associated therewith and report back their findings.

Members proposed to add “Adaptive capacity” to the list of criteria.

Independent Review Panel

Rosemary reported that a ratings sheet for the IRP selection will be provided to the IRC Subcommittee next week. Sue Holt volunteered to join the Subcommittee and was enthusiastically added to it.

Recon Outreach Subcommittee

Charlie Keutmann reported that the Subcommittee has decided to work as a reporter of the Committee’s work and a recruiter of interested members of the public, but to avoid getting involved directly in debate. He provided the following information:

- To develop outreach, the subcommittee will work in partnership with the City. The City will provide much of the staff work and the subcommittee members and City will provide oversight.
- Sarah Mansergh continues to manage website details, although the responsibilities of the Website Subcommittee have been assumed by the Recon Outreach Subcommittee.
- The staff will initiate the outreach sections of the Recon Report and the subcommittee will provide comment.
- Charlie is delivering a monthly radio spot to describe the activities of the Committee. The next one is Monday August 18 at 7:15 a.m. KSCO AM 1080.
- Erica is leading the Subcommittees efforts to schoolchildren and homeschoolers
- Tina Shull is developing a proposal for a survey to discover “What is the vision for the City?”

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Facilitator's note: there is confusion about various proposals to conduct different types of activity to discover the opinions and visions of the community. We expect that there will be a concerted effort to resolve this confusion.

- The subcommittee is reaching out to other organizations, especially neighborhood organizations, to develop a useful interface with them. City staff will research this.
- The subcommittee will use a small version of the 100 slide slide-deck for it's outreach work. This smaller slide deck will be developed with the help of a graphics person.
- The subcommittee is discussing with Civinomics ways to conduct a public evaluation of the SIAC/Alts Fair.
- The subcommittee intends to reach out beyond the City limits to include all customers of the Water Department.

Charlie invited Members to send the Subcommittee ideas about information to be sent out in the outreach effort.

Carie asked if the Committee whether it wanted Rosemary and Tina to prepare a paper about a survey related to public perceptions of quality of life visions. Doug volunteered to collaborate with them.

Carie asked whether the Committee would like to appoint spokespersons in the event that, for instance, Keith Sterling is contacted by a reporter who asks to speak to a Committee member. The spokesperson would be bound by the charter rules about representation. The Committee agreed by consensus that the three Subcommittee members (Charlie, Erica and Peter) as well as Mike Rotkin would be those spokespersons.

WSAC Website

Sarah reported that the Committee website is now live and can be visited at www.SantaCruzWaterSupply.com

Agendas for August and September

Nicholas facilitated a discussion about the agenda for August. The agenda for September was not discussed in any detail.

Facilitator's note: Here is the latest draft of the August agenda. This is going to change a lot before we meet again, the sequence will change and we may even have to remove items if we decide that we will have insufficient time.

Session 1

Roll Call

Welcome to the public and public comment

Committee member updates

Soquel updates

Agenda review

SIAC

- *Update from Scctee. Initial consideration of questions to be given to Stratus at September meeting.*

Growth

- *Follow-up July's decisions re growth. Clarification about how water issues are handled in the GP*

Survey

- *Request to Council for authorization to conduct a survey*

Presentation of report to Council

- *Reports from Outreach and SIAC Subcommittees. Decision on recommendations to Council. Consider and agree on content of presentation to Council, and who will do it.*

Supply/demand update

- Rosemary updates re changes to the slide deck. Stratus reports on changes to slide 55. Will include discussion of Fiske's role and the preparation of baseline information by Stratus

Scenarios

- Stratus reports on progress with development of scenarios. Explanation of TBL: how it supports Cttee and how it works w/ MCDS. Exercise to develop scenarios and nexus with criteria.

Criteria

- Take results from Scenario exercise and conduct exercise to add criteria

Online Decision Model

- Demonstrate the online decision model. Determine how it needs to be updated.

Materials resulting from the previous meeting

- Review and approve Action Agenda, Summary, etc.

Wrap up, plan for next session and evaluate session

Adjourn

Session 2

Roll call

Public comment

Correspondence received from the community

Reflections on Wednesday's session

Review online decision model (updated) and consider Rating Scales

- *Review the updates entered into the decision model since Wednesday and consider Ratings Scales. Consider the interactions between uncertainty and Ratings Scales. Consider what technical support needs are indicated by the ratings scales. Instruct Stratus regarding subcontractors.*

Resiliency

- *Bob describes significance of resiliency, how to regard it and how to represent it in the decision model. [Should this be folded into the Scenario/Criteria/Ratings work?]*

Decision Rules for Recon Alts

- *Although Cttee will probably use MCDS to winnow the range of alts that will be carried forward from Recon to Real Deal, this need not be the the only way to reach decisions. Agree on other rules to apply during the decision making process.*

Consultant for Real Deal

- *Agree on whether or not to use Stratus for technical support during Real Deal. Make recommendations to City accordingly.*

Agenda for Sep/Oct

Recon Outreach Scttee update

Oral communication

Evaluation and wrap up

Adjourn

Subconsultants in November

Rosemary led a discussion about the technical resources that the Committee and Bob need immediately. Heidi provided a list of likely candidates to fill various roles. The Committee Members felt that they needed more opportunity to

consider this list and instead focused on who Bob really needed now. The Committee agreed by consensus to recommend that Stratus should, as soon as possible, retain David Mitchell of M.Cubed. The Committee also agreed by consensus to authorize the IRP Subcommittee to approve the subcontracting of additional consultants in cases where delays in starting the work of such a consultant would have serious consequences.

Materials resulting from previous meetings

Nicholas facilitated a review of the Summary and the Action Agenda of the June meeting. The Committee approved both by consensus.

Written evaluation and wrap up

Carie encouraged Committee Members and members of the public to go to the Committee's SurveyMonkey site at <https://www.surveymonkey.com/s/SZQ6BSB> to give feedback about the meeting.

Members made the following comments about the meeting:

- We revisited tools that we can use in the future
- We're slowly getting going: it's like climbing – we're on track and we're starting to see when the substantive discussion will start and how the process will play out.
- I'm loving the progress we're making as our mutual understanding grows. The scenarios exercise broadened our scope and showed our shared values.
- We appreciate having Bob and Karen on the team
- We're starting to take ownership of the process

Adjourn

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Dear Water Supply Advisory Committee (WSAC) members:

It was great to have the opportunity to meet you and to begin the process of working together. It is quite evident (and exciting) that the Committee consists of smart, hard-working individuals committed to working collaboratively to address a series of very tough questions facing your community. We look forward to providing objective and timely technical support for the important work you are tackling.

This short note is intended to concisely capture the key work items and administrative issues that were discussed with WSAC during the course of the July 31/Aug 1 meeting. Our intention is to make sure we have identified all of the important items and are clear on our next steps. It is not intended to provide complete details. Please let us know if we have missed or incorrectly characterized any of the information below. Thanks.

I. Work Topics/Items requested by WSAC:

Several items were requested by WSAC – some of which we are clearly tasked to do, and some were deferred to the Water Department or to a later time. Here is an overview of our understanding:

1. Define the Baseline

This was raised in concert with Rick's request to "update slide 55" from Rosemary's Supply and Demand PowerPoint deck, and expanded upon during the scenario discussion. Rosemary will be updating the slide, and this provides an appropriate starting point for defining the baseline.

The baseline establishes *what the Santa Cruz water situation is likely to look like in the future, if no additional actions are taken (beyond current policies and actions to which the Dept is already committed)*. Our experience is that "defining the baseline" can be both the most challenging and most important component of a sound and informative technical analysis. We commend you for recognizing the importance of establishing a baseline that can be broadly accepted. This will greatly increase your ability to communicate your choice and evaluation of Alts.

We recommend the following elements be considered as we work together to define the baseline:

Time frame: As we look out into the future to characterize the baseline, we need to select a timeframe (e.g., a year such as 2030? 2040? Other?) that will serve as our benchmark for defining scenarios and comparing alternatives. That is, we want to pick some logical point(s) in time to use for the analysis (rather than a vague notion of "the future").

Climate change: Climate change is happening, therefore we recommend including a plausible but conservative (least impactful) estimate of the impact on water issues as part of developing a long-term baseline. (Later, a separate climate change scenario can be used as a vision of what happens if the community faces a more adversely impactful suite of climate change impacts; i.e., drawing from the more severe end of the climate change uncertainty spectrum). This will help ensure the baseline used to compare scenarios includes at least a minimal consideration of climate impacts – while allowing each additional scenario to support your understanding of what happens for a given future uncertainty.

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Economic Implications: In addition, we suggest providing insights into the implications of the baseline water supply on the economic loss/impacts associated with projected long-term curtailments. This would entail a fairly significant, longer-term work effort – but one we believe is worth starting to frame up in the near term.

Fishery Flows: The baseline needs to accommodate an assumption of fish flow requirements and associated HCP implications. This is an aspect that will require some consideration and deliberation (e.g., do we insert DFG 5 as part of the baseline?).

In sum, we believe developing a baseline that includes a range of plausible social (e.g. community and regional economic implications), financial (e.g. Water Department implementation and operational costs), and environmental (e.g. carbon footprint, impact on fisheries) implications will serve the WSAC well as they engage in developing alternative scenarios and identifying and evaluating alternatives.

Action Items for Baseline:

Timeframe - We will work with the Water Department to identify timeframes that make sense with their and the City's planning processes. We will make specific suggestions for WSAC review once this information has been gathered.

Climate Change: We will investigate how to characterize a low-end suite of climate change impacts that we will suggest be included in the baseline, and may have some input for your review as part of the next package.

Updates on both of the above items, and other aspects, will be shared no later than the Friday before the next WSAC meeting.

2. Develop Draft Scenarios

In addition to the baseline, we will develop 4 (possibly 5?) alternative future scenarios. We will use the scenarios outlined during the Friday (Aug 1) WSAC session; which were based on the Thursday discussion.

We propose establishing a simple framework that can be used to describe each draft scenario, including:

- a vision statement,
- a metric that can be used to objectively measure if the vision has been achieved (or at least identify how close an alternative may come to meeting the vision),
- a list of questions that need to be addressed. The question section will include an overview of the "what factors need to be considered?" to help ensure we collectively look at the issues most pressing to the Committee. We may define these as "elements" (e.g., carbon footprints) and these in turn may lead into and reinforce what is embedded in the "criteria" that may ultimately be used in the Multi-Criteria Decision Support process.

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- suggestions for analysis that can be conducted to increase your understanding of the water supply and demand associated with each vision.

Scenario Development Action Items:

We will provide the WSAC with draft scenarios using the framework described above, no later than the Friday before the next WSAC meeting.

3. Sea Level Rise (SLR) and Coastal Wells/Infrastructure.

WSAC asked for a quick and superficial look by Stratus at whether there is existing information that reveals a risk to the Beltz wells and Tait facilities, from SLR and storm surge, seawater intrusion, etc. The idea is to quickly glean if there is available information about a probable timeframe with which to gauge whether there is a vulnerability in the mid- to long-term. We will conduct a cursory review of available information (including input as may be available from the Water Dept.), and report back on what we discern. There could be future, more in-depth investigation if this turns out to be a potential risk – and such potential future work probably require adding hydrologic expertise.

SLR Action Item:

A brief update of this item will be provided to WSAC no later than the Friday before the next meeting.

4. Resiliency, Reliability, and Redundancy of the Water System. No work assigned here for Stratus. The Water Dept will provide a synopsis of what has already been assessed in terms of the vulnerability and resiliency of the system to climatic, seismic, and other natural hazards/events.

II. Administrative/Process/Contractual Issues

- Approved Subcontractors. WSAC approved adding David Mitchell (M.Cubed) to the contract. Gary Fiske is already approved.
- Process for adding other subs. We anticipate needing to add other subs over time, as technical needs become better defined. Engineers, hydro-geologists, fisheries are among the foreseen needs in the near future. We need to work within and manage the WSAC approval process by providing (1) a clear justification of need for any tech expertise sought, and (2) a rationale for our recommended subcontractor (or short list).
- Timeline for providing materials to WSAC. Time is of the essence for the WSAC process, and we will strive to provide the Committee with written work products no later than the Friday preceding the next WSAC meetings. This will enable Committee members time to review the materials and raise questions prior to the Committee meetings.
- Process for Interacting with the Committee. We need to be mindful of the Brown Act and other concerns in terms of how we interact and communicate with the Committee, outside of official meetings. We will rely on Carie and Nicholas, as well as Rosemary and Heidi, to help facilitate open

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communication while also adhering to the applicable rules and the need to manage the work load and information flow.

I think that covers it. Please let us know what we may have missed or mis-interpreted.

Thanks,

Bob and Karen

Question #1

- ③ - More frequent curtailment & more dramatic
- Greater reliance/incentives for conservation
 - Loss of coastal wells due to sea level rise
 - Community resentment re. increased rates/less service
 - Inability to realize "garden community"
 - Adverse impacts to existing business
 - Less attractive to new business

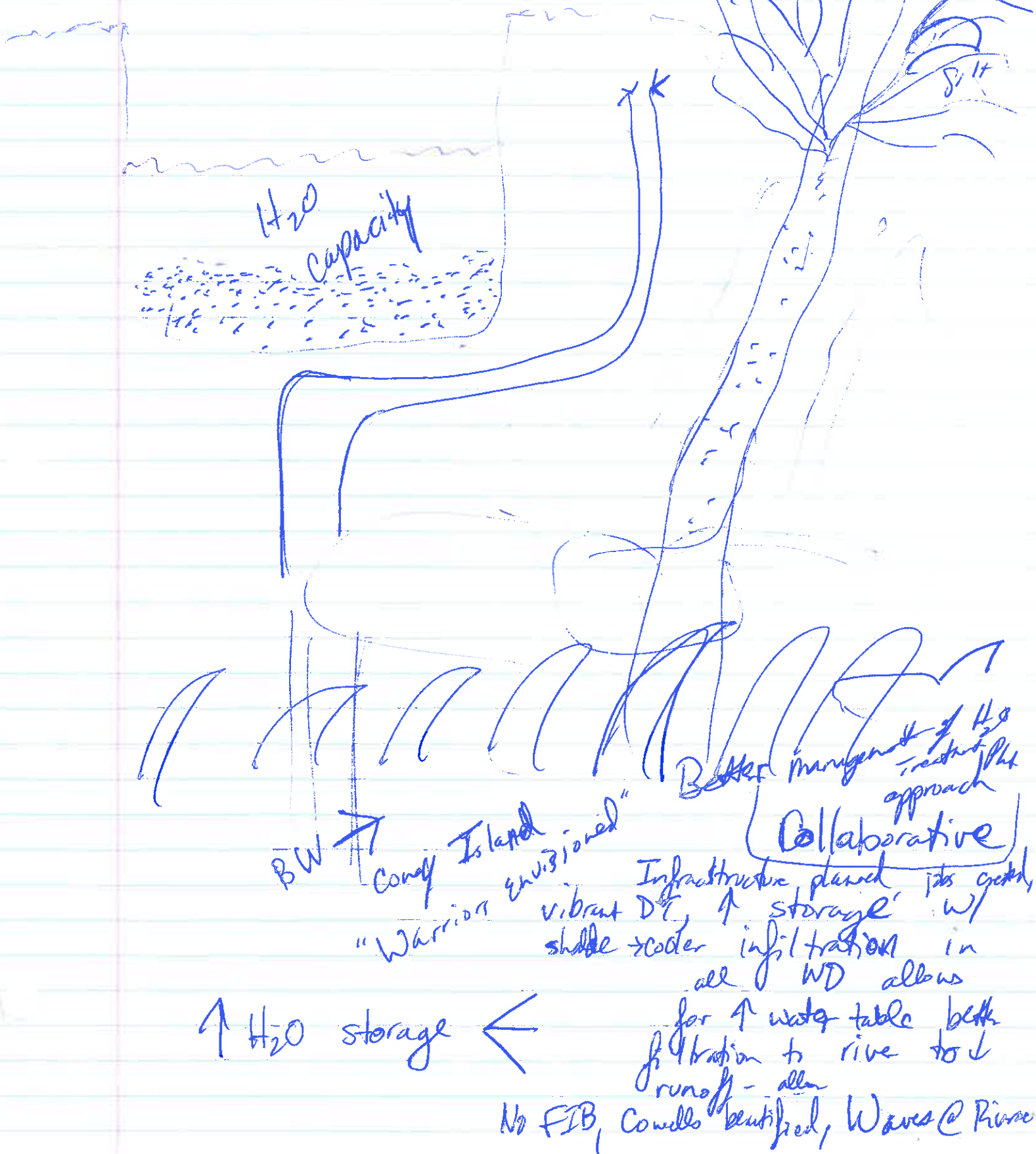
2nd Reflection - involved conservation/limited curtailment

- ability to garden/enjoy outdoor spaces
- vibrant, attractive economic/business environment
- reliable water supply & natural habitat

- ④ - Lost Businesses - increased unemployment - ^{severe economic impact}
- Reduced property values - residential/commercial
 - Loss of outdoor enjoyment
 - Prohibition of outdoor water use
 - Brown parks & public
 - Severe wildlife impacts fish - birds -
 - Domestic & municipal plumbing impacts
 - Community/political unrest

Do current containment ~~is~~
achieve our goal?

Cell 3



DO NOTHING

VISION

1.

rationing
tight controls on flows
business stress

more storage
treated water gets
~~more~~ recycled water
few personal lawns
more native landscape
artificial turf for
golf courses

2.

minimum flow ^{enough} needed to meet
rationing
business stress

permeable surfaces
ultimate ~~for~~ green bldg codes
~~water retention~~
growth controls that
increase density
→ universal capture
of graywater & rainwater
→ paved roads