

## 2nd Draft Recon Model

Oct 20th after Friday call: Doug, Sue, Rick, Erica, Rosemary, Karen, Nicholas (Mark sent notes).

### Implementability

**Note:** The likelihood of getting this approach done.

**Question:** How much does each subcriterion matter to you in meeting the requirements for implementability?

#### Technically Feasibility

**Note:** Technical feasibility is an estimate of whether this approach would work as envisioned.

**Question:** How feasible is this approach technically?

*Proven in cities, Demonstrated in field, Promising in 3-5 years, Promising in 6-10 years, Not promising*

#### Legal and Regulatory Feasibility

**Note:** This addresses siting, water rights, environmental and regulatory review and other legal and regulatory issues related to supply as well as legal and regulatory issues related to demand reduction.

**Question:** Is the approach feasible from a legal and regulatory perspective?

*Precedented, simple, Precedented, complex, No precedent but likely, No precedent difficult, Very unlikely*

#### Politically Feasibility

**Note:** Extent to which an approach will claim and retain the support of formal political entities as well as informal social and political groups. This applies to demand reduction (e.g. volunteerism, finances for incentives or enforcement of regulations) and to supply. (E.g. majority public vote requirement for desalination, willingness to make large capital investments or concerns about oversupply and water immigration.)

**Question:** What level of political reaction is this approach likely to have?

*Broad Enthusiastic, Solid, Moderate, Indifference, Active Resistance*

### Cost-Effectiveness

**Note:** Cost-Effectiveness includes capital expenditure, operational expenditure and lifecycle costs.

**Question:** How cost-effective is this approach?

*(This criterion has no subcriteria.)*

## Community Well-being

**Note:** Encompasses a range of social and community values.

**Question:** How important are the subcriteria to you in evaluating the criterion 'Community Well-being?'

### Traditional Community Character

**Note:** This goes to the desire to have a future Santa Cruz that looks like Santa Cruz does now, in terms of landscaping and gardens and in other ways as well.

**Question:** How well would this approach support traditional community character?

*No change, A few minor changes, Significant change, Major changes, Water migrants leave area*

### Climate-Adapted Community Character

**Note:** The look and feel of the community as it relates to a climate-adapted paradigm. Santa Cruz would change, but the change could be as beautiful or pleasing as the present landscape or character, but be more sustainable. This change would be embraced by the community.

**Question:** How well does this approach foster a shift towards a community character that differs from the present: While being more frugal of water is beautiful in a different way? [note I meant 'resounding' as in—wholeheartedly accepted but now that I am working on the text output I see that doesn't work.]

*Resounding Beautiful, Accepted often pleasing, Some stresses, Discord displeasing, Severe distress*

### Regional Water Stability

**Note:** This gets at approaches that would not only redound to the benefit of SC water customers, but to the region.

**Question:** Would this approach improve regional water stability?

*Greatly Improves, Improves, Has little effect* [The fact that this scale is so generic suggests that I am not really sure what the subcriterion means. Not that there isn't a meaning, just that I don't know it.]

### Local Economy

**Note:** This refers to the health of Santa Cruz's economy.

**Question:** How might this proposal affect Santa Cruz's economy?

*Water isn't an issue, Water a mild concern, Water concerns drag, Key worry in BUSI plans, Major disincentive* [BUSI is the official abbreviation for 'business.' Doug, could I please use 'biz?']

## Environmental Well-being

**Note:** This criterion relates to the degree to which a water supply or demand management strategy contributes to or impacts the quality and sustainability of the natural environment.

**Question:** How important are the subcriteria to you in evaluating the criterion "Environmental Well-being?"

### Energy Intensity

**Note:** The degree to which a proposal will demand energy from cradle to grave: the making of component parts, the building or installation of materials or facilities including delivery systems, operation and maintenance as well as disposal.

**Question:** Taking the entire cycle into account, from producing parts to disposal, how much energy will this approach require per MG of water?

*0 -1,000 tonnes/MG,*

*1,000 -2,000 tonnes/MG,*

*2,000 -3,000 tonnes/MG,*

*3,000 - 4,000 tonnes/MG,*

*> 4,000 tonnes/MG*

### Marine Ecosystem Health

**Note:** I'd like to have a better scale--how does it harm? Then the bottom of the scale would be "creates severe turbidity" or "confuses fish" or whatever the feared impact is....

**Question:** How would this approach affect marine ecosystem health?

**Note:**

*Negligible effect, May harm, Will harm*

### Freshwater Ecosystem Health

**Note:** This rating encompasses the positive (e.g. when restoring watersheds or by creating an easier option to leave more water in the river) as well as potential harm. One of the commenters on the Convention model referred to the former as 'direct impact' and the latter as 'indirect impact.'

**Question:** If this approach were implemented, how would it affect freshwater ecosystems?

*Plentiful healthier water, About as it is now, Degraded ecosystem health*

### Terrestrial and Riparian Health

**Note:** There's some question about whether to put 'riparian' with 'freshwater.'

**Question:** How does this approach affect terrestrial or riparian health?

*Actively restores, Allows restoration, Does not affect, Depletes Resource, Greatly Depletes Resource* [between 'actively' and 'allows' trying to get at the difference between pumping water in versus just leaving it alone to recover]

### Groundwater Resources

**Question:** How would this approach affect groundwater resources?

*Actively restores, Allows restoration, Does not affect, Depletes Resource, Greatly Depletes Resource*

## Adaptability

**Note:** Characteristic of a supply project that relates to how well the approach can be modified over time to respond to changing conditions.

**Question:** How important are the subcriteria to you in evaluating the criterion 'Adaptability?'

### Infrastructure Resilience

**Note:** Infrastructure resilience relates to the approach's ability to withstand earthquakes, fires, disruption of energy supply etc.

**Question:** How well would this approach withstand natural disasters and other disturbances?

*Most challenges well, Many moderately well, Some somewhat, Few barely, Fragile*

### Reliable Supply

**Note:** Reliability of water supply relates to how much water can be produced under various climate conditions such as drought or extreme precipitation.

**Question:** Will this approach consistently produce as envisioned?

*98% of the time or more, 90 to 98% of the time, Less than 90% of the time*

### Scalability

**Note:** Scalability measures the extent to which an approach can be scaled up or down as needs change. This includes changes in cost-effectiveness.

**Question:** How easily can this approach be scaled up or down while still working as envisioned?

*Easy broad range, Moderate ease and range, Not scalable*

### Preserves Future Choices

**Question:** How well does this approach preserve future choices?

*Many options kept open, Some kept open, Few closed off, Some closed off, City locked in*

## Effectiveness

**Note:**

The ability for a particular alternative to align supply and demand.

**Question:** How well will this alternative align supply and demand?

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### Yield

**Note:** Reduction in demand or increase in supply.

**Question:** How much water will this approach save or produce?

*More than 3 MG / day,*

*2 MG - 3 MG /*

*day,*

*1 MG - 2 MG / day,*

*0.2 MG - 1 MG / day,*

*Less than 0.2 MG / day*

### Flexibility

**Note:** The degree to which this approach increases management flexibility that in turn helps the system "get by with less" while still meeting resilience, reliability and other goals. (This is particularly designed for approaches that

don't actually increase supply or reduce demand, but might nevertheless be useful.)

**Question:** To what extent does this approach increase flexibility?

*Maximizes, Greatly increases, Moderately increases, Somewhat increases, Does not increase*

#### **Addresses Peak Demand**

**Question:** Does this approach address peak demand?

*Yes, Maybe, No*

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