

DETAILED EVALUATION CRITERIA AND RATING INFORMATION

Here you will find complete descriptions of all the criteria, their full rating scales and the related questions and assumptions.

1. Technical Feasibility:

Technical feasibility is an estimate of whether this Plan would work as envisioned. This criterion is focused on the likelihood that the Plans would be technically successful when applied in the local physical environment of Santa Cruz.

(Note: Other criteria test political, regulatory, legal, and administrative feasibility. Please focus your ratings of this criteria on the issues of technical success here in Santa Cruz, given what is known and not known about technical factors and required conditions for success that may influence the success or failure of a Plan.)

a. Question: How likely is each Plan to be technically successful?

For the Plan B's, consider the technical feasibility at the time the Plan would actually start.

b. Scale:

- Without question, would be technically successful;
- Highly likely to be technically successful – more than a 70% chance;
- Reasonably likely to be technically successful – 40% to 70% chance;
- Highly likely to be at least partially successful – will produce at least 50% of necessary yield;
- Reasonably likely to be at least partially successful – probably will produce at least 50% of necessary yield;
- Highly unlikely to be technically successful
- Without question, would not be technically successful

2. Time Required to Demonstrate Technical Feasibility

Demonstrating technical feasibility takes time. This criterion evaluates the range of time required for Plan to be demonstrated to be technically feasible.

- ### **a. Question:** How much time is required to demonstrate whether a Plan is technically feasible? When rating Plan Bs, start from the time Plan B actually begins.

- a. Scale:**
- Zero to 24 months
 - 2 to 5 years
 - 5 to 8 years
 - 8 to 10 years
 - More than 10 years

3. Time Required to Full Scale Production

The amount of time required to take a project or program from the conclusion of permitting and the resolution of regulatory and legal issues to the implementation of full scale production. Time requirement includes any necessary additional field work, pilot testing and demonstration projects, developing any intergovernmental agreements or partnerships, and engineering design and construction.

- a. Questions:** What is the time required to reach full scale production? For all Plans, start the clock from when the Plan is permitted, has all rights and property ownership issues resolved and is ready to proceed. (Note: The reason for the assumption about permitting is that you address permitting and legal delays elsewhere.)

- b. Scale:**
- 0 to 5 years
 - 5 to 10 years
 - 10 to 15 years
 - 15 to 20 years
 - More than 20 years

4. Adaptive Flexibility (Scalability)

Adaptive Flexibility measures the capacity of a Plan to respond to changing conditions, for example to higher or lower demands, or to more or less impact of climate change. Adaptive flexibility enhances the ability to meet the requirements of changing circumstances in a timely and cost effective manner.

- a. Questions:** What benefits in terms of adaptive flexibility is each Plan likely to contribute in the face of external conditions such as changes in climate, demand levels or streamflow requirements?

- b. Scale:**
- Plan provides significant adaptive flexibility benefits;
 - Plan provides moderate adaptive flexibility benefits;
 - Plan provides minimal adaptive flexibility benefits;
 - Plan does not increase or decrease adaptive flexibility;
 - Plan reduces or eliminates existing adaptive flexibility in the system.

5. Supply Reliability:

Reliability of water supply relates to how much water can be produced under various climate conditions, such as drought or extreme precipitation and includes the system's ability to perform well in a variety of conditions, for example, high flow conditions that may increase turbidities in source waters. The focus of this criteria in this instance is on the likelihood that a Plan would significantly improve the reliability of the Santa Cruz water system. Significantly means providing at least 80% of the required 3 billion gallons of storage or providing a climate independent source of supply.

- a. **Questions:** How likely would each Plan be to improve the reliability of Santa Cruz's water system in the face of different operating conditions, such as low flows, turbidity, etc.?
- b. **Scale**
 - This Plan would resolve the Santa Cruz water supply reliability problem;
 - This Plan would be highly likely to significantly improve the Santa Cruz water supply reliability problem;
 - This Plan would be somewhat likely to significantly improve the Santa Cruz water supply reliability problem;
 - This Plan would be somewhat unlikely to appreciably improve the Santa Cruz's water supply reliability problem;
 - This Plan would be highly unlikely to appreciably improve the Santa Cruz's water supply reliability problem;
 - This Plan would not appreciably affect the Santa Cruz water supply reliability problem;
 - This Plan would make the Santa Cruz water supply reliability problem worse.

6. Supply Diversity – Full Portfolio Rating Only

This criterion measures how well prepared or positioned the system is to respond to future uncertainties based on the diversity of its supply portfolio. The premise is that supplies coming from different sources create a system that is less likely to be as vulnerable to any single kind of uncertainty.

- a. **Questions:** How do the Portfolios affect the diversity of Santa Cruz's water supply portfolio?
- b. **Scale:**
 - Portfolio significantly increases the diversity of Santa Cruz's supply portfolio.
 - Portfolio somewhat increases the diversity of Santa Cruz's supply portfolio.
 - Portfolio does not increase the diversity of Santa Cruz's supply portfolio.
 - Significantly increases,
 - Somewhat increases,

- Does not increase

7. Energy Profile:

This criterion focuses on the energy use of the Plan.

- Questions:** How much energy does each Plan require? Units are mw/mg, expressed as a weighted average by Plan.
- Scale:**
 - Numeric 0 top, 16 bottom

8. Environmental Profile:

The environmental profile of a Plan takes into account all the potential environmental impacts and benefits associated with that Plan.

- Questions:** What is the environmental profile of each Plan? (Note: this this rating synthesizes many different pieces of information. This is a great place to provide details about your rating using the comment button!)
- Scale:**
 - The Environmental profile of this Plan provides significant environmental benefits
 - This Plan has some environmental benefits
 - The environmental profile of this Plan is acceptable without mitigation
 - The environmental profile of this Plan is acceptable with appropriate and effective mitigation
 - The environmental profile of this Plan is not acceptable and/or cannot be made acceptable even with effective mitigation

9. Regulatory Feasibility:

Regulatory Feasibility addresses the certainty, ease and likely timeframe of receiving necessary regulatory approvals for the Plan.

- Questions:** How easy or difficult would the regulatory approval process be for these Plans?
- Scale**
 - Highly certain for regulatory reviews and approvals to be easy and quick; regulatory issues are limited, routine, and/or non-controversial;
 - Regulatory review process likely to be slow but relatively likely; regulatory issues include some challenges but approvals and completed processes likely achievable within 6 to 12 months;
 - Regulatory review process likely to be slow but with some questions due to number or complexity of regulatory issues needing to be resolved; Can probably acquire; achievable within 12 to 36 months;

- Regulatory approvals likely to be difficult to acquire; new regulations may need to be developed, the scope or number of regulatory process or approvals involves complex, contentious issues, timeframe for completion likely more than 3 years;
- Significant regulatory challenges make approvals or completion of the regulatory review process in a reasonable, predictable time highly uncertain, likely would be expensive and require more than 5 years, if ever, to complete.

10. Legal Feasibility

Legal Feasibility addresses siting including acquisition of land, easements or rights of way, water rights, or other legal rights relevant to implementing the alternative as envisioned. This criterion is distinct from Regulatory Feasibility, which relates to specific regulatory approvals that would be required, separate from the legal requirements addressed here.

- a. Questions:** How easily and within what time period are these Plans likely to obtain the necessary rights in the form needed? When considering a Plan B that 'would' start after a trigger, clock the legal feasibility from the time that Plan the trigger actually occurs.
- a. Scale:**
- Unambiguous yes; legal issues are routine, non-controversial;
 - Yes, but with some ambiguities; achievable within 6 to 12 months from the start point;
 - Can probably acquire; achievable within 12 to 24 months from the start point;
 - Difficult to acquire; complex, contentious issues involved, likely requiring more than 2 years to resolve from the start point;
 - Very unlikely; significant and contentious legal issues involved, likely requiring more than 5 years from the start point, if ever, to resolve.

11. Administrative Feasibility

Extent to which success of the Plan is dependent on the actions, cooperation, collaboration, financial participation or willingness to enter into intergovernmental agreements of other partners or players.

- a. Questions:** To what degree do each of these Plans require the cooperation, collaboration, financial participation and/or intergovernmental agreements to succeed? How likely is it these can be obtained?
- b. Scale:**
- Agreement with other parties is not essential
 - Agreement is essential and highly likely
 - Agreement is essential and likely
 - Agreement is essential and not likely
 - Agreement is essential but almost impossible

12. Potential for Outside Grant Funding and/or Special Low Interest Loans for Engineering and/or Construction

Significant state and possibly federal resources are available for a variety of water supply improvements at this time.

- a. Questions:** What is the potential for these Plans to qualify for grants and/or special interest loans?
- b. Scale:**
 - Strong candidate for significant engineering and/or construction grant funding;
 - Moderate candidate for significant engineering and/or construction grant funding,;
 - Strong candidate for low interest loans for construction
 - Moderate candidate for low interest loans for construction
 - Low potential for outside funding

13. Political Feasibility:

Extent to which a Plan will claim and retain the support of the community, both formal political entities as well as informal social and political groups and the community at large.

- a. Question:** What level of support is each of these Plans likely to have? When rating Plan B components, take into account the impact that additional time and the (hypothetical) failure of Plan A would have on Santa Cruz's political landscape. Also, of course, when rating B's consider the clock to have started at the time of the 'trigger transition.'
- b. Scale:**
 - Widely acceptable;;
 - With timely and appropriate informational and educational outreach to the community may be acceptable in the near future;
 - Not acceptable now but highly likely to be acceptable in 5 or more years;.
 - Not acceptable now and uncertain about acceptability in the future;
 - Likely never acceptable.

14. Cost Metrics:

A variety of cost metrics have been developed and presented. In this case, using a unit cost metric provides the best way to compare various Plans and portfolios. The metric to be rated will be annualized unit cost in dollars per million gallons (\$/mg)

- a. Questions:** How much do each of these Plans cost?
- b. Scale:**
 - Numeric Scale

15. Trigger: Providing Sufficient Time to Demonstrate Success

Demonstrating the potential for a project to succeed takes time. This criterion rates the certainty of whether the time allowed for the trigger is sufficient to provide for a reasonable and appropriate assessment of the project/program's potential to succeed.

- a. **Question:** Does the trigger allow sufficient time to demonstrate the potential for success of Plan A?
- b. **Scale:**
 - Trigger clearly provides adequate time to assess potential for success.
 - Trigger may not provide enough time to assess potential for success.
 - Trigger does not provide enough time to assess potential for success.
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16. Trigger: Avoiding Negative Consequences

Efforts to demonstrate potential for success can be expensive and result in negative consequences such as increased risks of curtailments. This criterion rates the certainty of whether the trigger is initiated soon enough to avoid unnecessary negative consequences.

- a. **Question:** Is the trigger invoked soon enough to avoid unnecessary spending or other adverse consequences?
- b. **Scale:**
 - Trigger is highly likely to be initiated soon enough to avoid significant negative consequences, especially financial consequences.
 - Trigger likely to be initiated soon enough to avoid significant negative consequences.
 - Trigger highly unlikely to be initiated soon enough to avoid significant negative.
 - Trigger does not provide enough time to assess potential for success.

17. Trigger: Flexibility to Adapt to Changed Circumstances

Casting a trigger in stone may unduly limit decision-making in the future when conditions have changed. This trigger criterion evaluates the adequacy of the trigger to meet changed circumstances and unanticipated eventualities.

- a. **Question:** Does the trigger strike the right balance of clarity and flexibility?
- b. **Scale:**
 - Trigger contains a very good balance between providing certainty and clarity about an agreed upon direction and adaptability to changed circumstances;
 - Trigger contains only an adequate balance between providing certainty and clarity about an agreed upon direction and adaptability to changed circumstances;
 - Trigger is unclear and inflexible.