Memorandum

To: Water Supply Advisory Committee Members

From: Karen Raucher, Stratus Consulting Inc.

Date: 9/19/2014

Subject: Evaluation Criteria Definitions – September Iteration

In this document we provide a clean copy of the Evaluation Criteria Definitions. This cleaned-up version is based on the Criteria developed by the Water Supply Advisory Committee (Committee) in August 2014 and the definitions and comments provided by Rosemary and Dana in late August and early September. Any suggested changes to the definitions are noted in italics. This iteration also includes a slightly different sorting of the Criteria into Sub-criteria in order to respond to the many comments concerning how the Criteria work together.

We look forward to the next round of discussions with the Committee in order to further refine the Criteria, Sub-criteria, and definitions.

	From Rosemary and Dana (*with suggested additions by Stratus Consulting in italics)*
Criteria	**Brief description**
Supply	*Not really a criteria – big versus small is probably not a sorting criteria – but this value is important to WSAC in Alternatives to meet Demands in the different Scenarios*
Implementability	Characteristic of a supply project that relates to the siting and environmental and regulatory review processes associated with a project.
Technically feasible now	Approaches, technologies and regulations guiding the development and operation of the supply project, particularly related to production, storage and treatment, are known and examples of their application elsewhere provide confidence that they could be applied here.
Technically feasible in future	Approaches, technologies and regulations guiding the development and operation of the supply project, particularly related to storage and treatment, are not firmly established but are under development and likely to be available for implementation within no more than 5 years.
Permit/Legally feasible now	
Permit/Legally feasible in the future	

	From Rosemary and Dana (*with suggested additions by Stratus Consulting in italics)*
Criteria	**Brief description**
Fatal flaw	*What is the fatal flaw, is it still fatal and what could be done to remove it*
Politically feasible	
Effectiveness	
Reliability	Characteristic of a supply project that relates to the certainty of project yield under a range of foreseeable and unforeseeable conditions. Reliability is mainly related to hydrologic and/or hydrogeological conditions that are variable over time and under various climatologic conditions.
Curtailments	*Scale includes curtailment size, frequency and duration*
Financial Costs and Benefits of Water	Financial Characteristics of each Alternative.
Financial cost effectiveness – Cost per AF or MG water	*This is a summary value developed into a metric.*
Implementation cost	Implementation costs are those required to get a project or program up and running.
O & M costs	Operating costs are those that result from the day to day operation of the project or program.
Lifecycle cost	Implementation, planning and O & M costs discounted over the project life time. This value is used to develop the Financial cost effectiveness value.
Environmental Well-being	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.
Sustainability	Manages and protects natural and water resources so that they are sustainable at the current level over time.
Promote biodiversity and env'l resilience	Recognizes and values the contributions that biodiversity and environmental resilience play in supporting human activity and takes steps to protect and enhance the environment's ability to produce and deliver these benefits.
Carbon costs	Energy consumption and carbon footprint.
Eco-system values	Enhance the community's ability and capacity to plan and operate in a manner that is sustainable and protects the natural environment.

	From Rosemary and Dana (*with suggested additions by Stratus Consulting in italics)*
Criteria	**Brief description**
Fishery values	Minimizes impacts on fishery resources and aquatic ecosystems.
Water resources – gw and surface – values	Designed to minimize or appropriately mitigate the impacts of water supply projects and operations on terrestrial resources and ecosystems.
Community Well-being	Encompasses a range of social and community value issues
Community character	The look and feel of the community as it relates to the availability of and demand for water.
Supports local economy	Degree to which the availability of water supports or constrains the creation and sustainability of the local economy.
Social and political stability	To the degree to which the availability of water supports or constrains the community's social and political stability.
UCSC vibrant	Availability of water supports or constraints the University's ability to create and sustain a level positive activity that contributes to and is supportive of the desired characteristics of the larger community in Santa Cruz.
Impact on long-term growth	Availability of water supports or constrains the community's ability to grow in ways that are established by, for example, the City's General Plan.
Support local parks and recreation opportunities	
Supports community gardens	
Supports a climate change-adapted community garden	Modified by the large scale elimination of plantings and landscaping requiring irrigation during the dry season.
Energy consumption	Slightly different than carbon footprint.
Politically acceptability	Placed in Implementability – but could be inserted here instead.
Affordability of water – rates	The degree to which water cost increases make water less available to those with lower incomes or require a disproportionate amount of a household's income to pay for water service.
Public health – air	Addresses the degree to which the Alternative affects public health. Protection of public health – *includes air quality impacts due to increases in energy air pollution.*

	From Rosemary and Dana (*with suggested additions by Stratus Consulting in italics)*
Criteria	**Brief description**
Allows for growth	The degree to which the availability of water supports or constrains the community's ability to grow in ways that are established by, for example, the City's General Plan.
Pride in the community's water strategy	Degree to which the selected strategy would align with the community's desire to be a leader and to look at issues and adopt solutions.
Adaptability	Characteristic of a supply project that relates to how well the approach can be modified over time to respond to changing conditions.
Resilience	Ability to effectively operate under a range of foreseeable and unforeseeable conditions.
Scalable	Flexibility to add capacity increments over time (scalability), or treat water from a variety of sources with different quality, would be examples of adaptability.
Preserves future choices	Saves options that may be needed if the future looks different that the one projected.
Demand	*Not really a criteria but this value is important to WSAC in developing portfolios of Alternatives to meet Demands in the different Scenarios.*
Supply Demand Alignment	Supply = Demand (S mg/y = D mg/y) (D is defined in each scenario)
Demand – traditional	D = garden needs + baseline
Demand-enhanced traditional (best-case)	D = non-landscape needs + baseline
Demand – climate change	D = landscape needs + baseline
Demand – economic change	D = parks & recreation + baseline
Demand – fish and regulatory	D = Fishery + baseline
Demand – sustainable Santa Cruz	D =Growth + baseline
Demand reliability	The need for the supply to be reliable
Supports long-term economic growth as defined in City Vision	D = Water for the economy + baseline