

## Option Submittal Form

Contact Information (optional):

Keep my contact information private

Contact Name: _____	Title: _____
Affiliation: _____	
Address: _____	
Telephone: _____	E-mail Address: _____

Date Option Submitted: February 1, 2012

Option Name:

Air Quality Improvement/Reduction of Soot causing Snow to Melt

Description of Option:

A new report from Stanford University has found that black and brown soot is adding to the rapid melting of arctic sea ice, as well as the Sierra Nevada snow pack. The report claims black carbon is the second-leading cause of climate change. When soot lands on snow and ice it changes the reflectivity of the snow and ice, causing it to warm quickly and melt earlier. Earlier melt is a real threat to the security of the water supply in California and other western states (via the Sierra's and Colorado basin) over the long term. Water agencies could support legislation and possibly provide funding to programs that requires carbon particulate filters to reduce soot transportation onto snow and ice. (Source: <http://egpnews.com/?p=19901>)

**Location:** Describe location(s) where option could be implemented and other areas that the option would affect, if applicable. Attach a map, if applicable.

Diesel engines – industrial and transportation, Smoke stacks, wood burning fire places,

**Quantity and Timing:** Roughly quantify the range of the potential amount of water that the option could provide over the next 50 years and in what timeframe that amount could be available. If option could be implemented in phases, include quantity estimates associated with each phase. If known, specify any important seasonal (e.g., more water could be available in winter) and/or frequency (e.g., more water could likely be available during above-average hydrologic years) considerations. If known, describe any key assumptions made in order to quantify the potential amount.

NA

## Additional Information

**Technical Feasibility:** Describe the maturity and feasibility of the concept/technology being proposed, and what research and/or technological development might first be needed.

NA

**Costs:** Provide cost and funding information, if available, including capital, operations, maintenance, repair, replacement, and any other costs and sources of funds (e.g., public, private, or both public and private). Identify what is and is not included in the provided cost numbers and provide references used for cost justification. Methodologies for calculating unit costs (e.g., \$/acre-foot or \$/million gallons) vary widely; therefore, do not provide unit costs without also providing the assumed capital and annual costs for the option, and the methodology used to calculate unit costs.

NA

**Permitting:** List the permits and/or approvals required and status of any permits and/or approvals received.

NA

**Legal / Public Policy Considerations:** Describe legal/public policy considerations associated with the option. Describe any agreements necessary for implementation and any potential water rights issues, if known.

NA

**Implementation Risk / Uncertainty:** Describe any aspects of the option that involves risk or uncertainty related to implementing the option.

NA

**Reliability:** Describe the anticipated reliability of the option and any known risks to supply or demand, such as: drought risk, water contamination risk, risk of infrastructure failure, etc.

NA

**Water Quality:** Identify key water quality implications (salinity and other constituents) associated with the option in all of the locations the option may affect.

Reducing exotics like saltcedars could reduce salinity of water supplies.

**Energy Needs:** Describe, and quantify if known, the energy needs associated with the option. Include any energy required to obtain, treat, and deliver the water to the defined location at the defined quality.

Energy Required	Source(s) of Energy
NA	NA

**Hydroelectric Energy Generation:** Describe, and quantify if known, any anticipated increases or decreases in hydroelectric energy generation as a result of the option.

Location of Generation	Impact to Generation
NA	NA

**Recreation:** Describe any anticipated positive or negative effects on recreation.

Locations	Anticipate Benefits or Impacts
NA	NA

**Environment:** Describe any anticipated positive or negative effects on ecosystems within or outside of the Colorado River Basin.

Locations	Anticipated Benefits or Impacts
NA	NA

**Socioeconomics:** Describe anticipated positive or negative socioeconomic (social and economic factors) effects.

NA

**Other Information:** Provide other information as appropriate, including potential secondary benefits or considerations. Attach supporting documentation or references, if applicable.

NA