

LOWER COLORADO RIVER GIANT SALVINIA TASK FORCE ACTION PLAN

INTRODUCTION

Salvinia molesta (*Salvinia*), also known as Giant *Salvinia*, is a free floating aquatic fern native to South America that grows rapidly to cover the surface of lakes and streams, spreading aggressively by vegetative fragments. Depending on environmental conditions the plant can double in area every 2 to 10 days. Due to this prolific growth rate it is often described as the worlds worst aquatic weed. There are three growth stages for *Salvinia*, the first stage the plants are small and easily overlooked. The secondary stage the ferns lie flat on the water surface, during the tertiary stage the plants mature and aggregate into mats, leaves are folded and compressed into upright chains. The sporocarps of *Salvinia* are functionally sterile. Thick mats of *Salvinia* will reduce oxygen content and degrade water quality for fish and other aquatic organisms. Floating mats will impede boating, fishing, swimming and clog water intakes for irrigation and electrical generation. *Salvinia* is an undesirable exotic plant that has no known value to wildlife.

On August 4, 1999 the U.S. Fish and Wildlife Service found *Salvinia* in the Imperial National Wildlife Refuge on the Colorado River. Plants were also seen floating down the Colorado River, on the Cibola National Wildlife Refuge, in Pretty Water and Three Finger Lake. Subsequent investigation determined that the source of the infestation was the West Side/Outfall Drain of the Palo Verde Irrigation District (PVID) near Blythe, California.

Since this discovery a series of activities have taken place in an attempt to control and eradicate *Salvinia*. These activities include the placement of a barrier above Walters Camp in the old river channel and intensive herbicide application, and clearing of PVID's West Side Drain. These efforts have not been fully successful in eradication but have afforded some control. During the winter, as water temperatures decrease the *Salvinia* dies back and can only be found in the Palo Verde Outfall Drain. The Three Fingers Lake population was quite extensive in August/September 1999, was not treated with herbicide and has not become reestablished. The *Salvinia* outside of the drain may be limited by some environmental factors.

The following is an action plan proposed by the Lower Colorado River (LCR) Giant *Salvinia* Task Force to aid in the control and eradication of *Salvinia molesta*. This action plan will be utilized to accrue funding, maintain interagency cooperation, develop and implement control and eradication measures, and increase public awareness.

GIANT SALVINIA ACTION PLAN/STRATEGY

GOAL

Fully implement a coordinated strategy designed to eradicate *Salvinia molesta* from the Colorado River and the associated backwaters and also prohibit the spread of *Salvinia* to other waters.

Objective 1: Coordinate all activities on the lower Colorado River and collaborate with appropriate Federal, State and Private organizations.

1A. Problem: Various groups along the Lower Colorado River have some management authority or interest in *Salvinia* infestation. This problem needs an organized and coordinated approach to prevent duplication of effort and to recognize additional needs.

1A1. Strategic Action: Assemble and manage teams and assign members from Federal, State and Private organizations to address objectives.

1A1a Task: Teams that are necessary to complete control and/or eradication and restrict spread of *Salvinia* are:

Steering Committee	Monitoring
Financial	International
Regulatory and Compliance	Research
Field Implementation	Outreach
Rapid Response	

1A1b Task: The Steering Committee is composed of major Points of Contact for each agency/entity involved in the active participation of control and eradication of *Salvinia*. Bob Pitman (U.S. Fish and Wildlife Service) and Don Young (U.S. Bureau of Reclamation) are co-chairman of this committee.

1B1. Strategic Action: Steering Committee will coordinate all activities pertaining to the control and eradication of *Salvinia* on the Lower Colorado River, and will be the liaison between teams. The Committee will focus on coordinating implementation of the Action Plan.

1B1a Task: The Steering Committee will hold quarterly meetings to review actions of teams, to update on status of *Salvinia* infestation, and to coordinate

DRAFT (version 12/06/02)

activities between teams. These meetings will be open to all, but will focus on Steering Committee agendas.

1B1b Task: The Steering Committee will sponsor annual meetings of the LCR Giant *Salvinia* Task Force to meet in October of each year. This annual meeting will be used to update the whole Task Force on activities of the past year.

OBJECTIVE 2: Secure adequate funding for manpower, staff time, equipment and supplies necessary to control and eradicate *Salvinia* from the Palo Verde Irrigation Drain and the Lower Colorado River.

Financial Issue Team Membership:

Don Young - U.S. Bureau of Reclamation (Lead)

Bob Pitman -U.S. Fish and Wildlife Service

Fred Nibling- U.S. Bureau of Reclamation

Tom Zale-U.S. Bureau of Land Management

Dan Hamon -U.S. Dept. of Agriculture /APHIS

2A. Problem: There are no established budgets or funding for nuisance aquatic weed control or eradication on an emergency basis.

2A1. Strategic Action: Determine costs, equipment, manpower, supplies and time required to control and eradicate *Salvinia* from the river and begin funding the control program.

2A1a Task: Through coordination with the Steering Committee and the Implementation Team, determine what actions can be taken each year to achieve control and eradication of *Salvinia* in the Palo Verde Irrigation Drain and the Lower Colorado River.

2A1b Task: Obtain in October of each year listing of funding, personnel, material, supplies or other support each agency can provide for the next fiscal year or calendar year depending on the agencies budget cycle. Determine how these will be utilized in coordination with implementation of the action plan.

2A1c Task: Coordinate with Field Implementation Team and the Steering Committee to determine the total amount of funding required to implement the action plan. If adequate funding is available, proceed with action plan

implementation; if adequate funding is not available, prioritize action plan so that most critical activities are implemented first.

2A1d Task: Determine the total amount of funding available from affected Federal and State agencies each year. The team will look for ways to persuade agencies to budget in advance for work involved with the control and eradication of *Salvinia*. The team will work with agencies to start looking into the future to obtain resources for outlying years.

2A1e Task: Determine how much funding will be available from the National Fish and Wildlife Foundation (NFWF) Pulling Together Initiative grant request submitted and received from the Fish & Wildlife Service. This initiative will be managed by the Palo Verde Irrigation District with help from this team.

2A1f Task: Obtain costs expended by non-federal agencies participating in the effort to control and eradicate *Salvinia* from the Lower Colorado River and prevent its spread to other water sheds. These dollars can be eligible for cost sharing from the NFWF grant. Obtain information on what qualifies as cost sharing dollars for the grant, or other funding sources.

2A1g Task: Evaluate funding to determine shortfall or surplus and, if needed, determine other possible sources of funding:

USDA - ARS

Aquatic Nuisance Species Task Force

Others

2B. PROBLEM: *Salvinia* in the Colorado River does not observe political boundaries or agency jurisdictions and regulations. Barriers exist that may prohibit the expenditure of funds or the use of manpower and equipment in various locations on the river.

2B1. Strategic Action: Stakeholders need to address issues that could preclude the efficient use of funds and manpower for *Salvinia* eradication.

2B1a. Task: The Arizona Board of Pesticide Control needs to recognize and permit Certified California Pesticide Applicators on the Arizona side of the river to eradicate *Salvinia*.

2B1b Task: The California Board of Pesticide Control needs to recognize and permit Certified Arizona Pesticide Applicators on the California side of the river to eradicate *Salvinia*.

2B1c Task: Federal Land management agencies need to recognize and permit Certified Pesticide Applicators from both Arizona and California to work on Federal lands without additional Federal training.

OBJECTIVE 3: Application of Herbicide and the Use of Biological Control Agents on the Lower Colorado River.

Regulatory and Compliance Issue Team Membership:

Karen Reichhardt – U.S. Bureau of Land Management (Lead)

Theresa Olson- U.S. Bureau of Reclamation

April Fletcher- U.S. Fish and Wildlife Service

Ron Falkowski- CA. Regional Water Quality Control Board

Robert Leavitt - California Department of Food and Agriculture

Joe Millosovich - California Department of Fish and Game

3A. Problem: There are human health and environmental concerns with the application of herbicide to a lotic environment with potable water supplies and listed fish species.

3A1. Strategic Action: Approval is needed prior to herbicide application on the Lower Colorado River.

3A1a Task: The U.S. Fish and Wildlife Service and the U.S. Bureau of Land Management has completed Environmental Assessments (EA) for the use of herbicide/surfactant mixtures to eradicate *Salvinia*. These EA's will be reviewed for accuracy and updated as needed.

3A1b Task: The U.S. Fish and Wildlife Service, Phoenix Ecological Services Field Office has reviewed the EA's for NEPA and Section 7 compliance for the Colorado River and associated backwaters, including the Palo Verde drainage system.

3A1c Task: The U.S. Fish and Wildlife Service, Carlsbad Ecological Services Field Office has reviewed the EA's for NEPA and Section 7 compliance for the Imperial and Coachella Irrigation Systems.

3A1d Task: Environmental Assessments have to be expanded to use alternative herbicides (chealated copper) for *Salvinia* control. Environmental assessments or appropriate NEPA Compliance would also

DRAFT (version 12/06/02)

need to be prepared for other removal techniques such as cleaning and clearing of banks, mechanical removal on refuges, etc.

3A2. Strategic Action: Environmental documentation and assessment is needed to use the *Salvinia* weevil (*Cyrtobagous salviniae*) as a biological control agent on the Colorado River.

3A2a Task: California Department of Food and Agriculture, is working with USDA-APHIS to get clearance to use the weevil in California.

OBJECTIVE 4: Control and Eradicate Salvinia from the Lower Colorado River.

Field Implementation Issue Team:

Fred Nibling- U.S. Bureau of Reclamation (lead)

Karen Reichhardt- U.S. Bureau of Land Management

Dan Hamon -U.S. Dept. of Agriculture/APHIS

Jackie Record -U.S. Fish and Wildlife Service Imperial NWR

Billy Solomon -U.S. Bureau of Reclamation

David Sisneros -U.S. Bureau of Reclamation

Jennifer Green - U.S. Bureau of Land Management

Joe Millosovich - California Department of Fish and Game

4A. Problem: *Salvinia* is currently established in the Palo Verde Drain and is the source of the downstream infestations. The banks of the drain are heavily overgrown with terrestrial and aquatic vegetation that protect and harbor the *Salvinia*. Eradication efforts must begin upstream and proceed downstream.

4A1. Strategic Action: Eradicate *Salvinia* from the Palo Verde Westside and Outfall Drains. Eradication of *Salvinia* from these drains is the priority issue and the tasks presented below are for immediate action.

4A1a Task: Contain the *Salvinia* within the Palo Verde Drain with the use of floating barriers (booms) or nets. Booms will be installed in several key locations as to prevent the eradication from entering critical areas. A skimmer/harvester will be utilized to clear the vegetation from behind the booms.

4A1b Task: Clear ditch bank vegetation in the Westside Drain to eliminate hiding areas by *Salvinia* and for ease of chemical control. Ditch bank vegetation will be cleared using long reach back hoes to dig out all vegetation

from center to upper banks. Vegetation cleared will be dried and burned alongside the drain.

4A1c Task: Maintain cleared ditches for a period of two years with a no tolerance policy. The ditch bank must be maintained sufficiently clear to monitor, locate and remove any *Salvinia* plants. This can be accomplished by a combination of mechanical removal, herbicide application and burning. Brush removal began near the bait shop January 2001 and has proceeded downstream to the interstate utilizing equipment from the U.S. Bureau of Reclamation and the Palo Verde Irrigation District.

4A1d Task: Treat both the Westside Drain and the Outfall drain with appropriate herbicide to control spread into the Lower Colorado River. Survey and retreat infested areas as necessary (U.S. Bureau of Reclamation and Palo Verde Irrigation District).

4A1e Task: Explore options for control and eradication in the Outfall drain including a combination of chemical, biological, and mechanical controls.

4B. Problem: The Old River Channel contains pioneer populations of *Salvinia*. This area has become infested by the downstream migration of *Salvinia* from the Palo Verde Drain and is the source of *Salvinia* entering the main stem of the Colorado River.

4B1. Strategic Action: Control and/or eradicate *Salvinia* from the Old Colorado River Channel. The following tasks are long term actions and should be implemented when eradication or sufficient control is accomplished in the Palo Verde Drain. However, if the *Salvinia* population expands rapidly, control measures should be employed.

4B1a Task: A boom or barrier system should be installed across the Old River Channel as far upstream as feasible, to prohibit live plants from moving into the Colorado River.

4B1b Task: *Salvinia* that accumulates upstream from the barrier system should be removed either by harvester or through herbicide application before the barrier becomes nonfunctional due to accumulation of *Salvinia*. All viable plants that are removed by the harvester should be piled and either burned or buried in an approved landfill.

4B1c Task: Treat the Old River Channel above barrier system where *Salvinia* has been established with herbicide, and explore other methods of control including chemical, biological, and mechanical.

4B1d Task: Survey and retreat infested areas as necessary.

4C. Problem: The Colorado River below the Old River Channel and the associated backwaters including some National Wildlife Areas have some populations of *Salvinia*. These populations do not appear to be thriving and seem to fluctuate with water temperatures.

4C1. Strategic Action: Control and/or Eradicate where possible *Salvinia* from the Colorado River and associated backwaters. The following tasks are long term actions and should be implemented when eradication or sufficient control is accomplished in the Palo Verde Drains and Old River Channel. However, if the *Salvinia* population expands rapidly, control measures should be employed.

4C1a Task: The U.S. Fish and Wildlife Service will treat The National Wildlife Areas with the appropriate herbicide.

4C1b Task: Explore options for control and eradication in the Outfall Drain including a combination of chemical, biological, and mechanical controls.

4D. Problem: The Colorado River encompasses a very large area and has numerous locations that *Salvinia* can remain undetected for long periods of time. Economic and environmental damage will be greater without an effective monitoring program to quickly detect new *Salvinia* infestations.

4D1. Strategic Action: Surveys will be conducted throughout the river and the backwaters to monitor the continued growth and expansion of *Salvinia*. The monitoring surveys will be conducted on a quarterly basis along the Palo Verde drains, Old River Channel, mainstem Lower Colorado River below outfall drains, Cibola and Imperial National Wildlife Refuges, and other infrastructure to the Southern International Border.

4D1a Task: Bureau of Land Management has hired personnel to develop a monitoring survey protocol and complete surveys along the LCR and Palo Verde Drains. Maps will be completed showing both new and old areas of infestation and the degree of infestation. Cooperating agencies in this effort include the U.S. Bureau of Reclamation, Arizona Game and Fish

DRAFT (version 12/06/02)

Department, U.S. Fish and Wildlife Service and other State agencies. Established areas will be monitored for change.

4D1b Task: The U.S. Fish and Wildlife Service will conduct surveys on the Imperial and Cibola National Wildlife Refuges. New areas of infestation will be mapped and established areas will be monitored for change.

4D2. Strategic Action: To accurately measure extent of infestations and changes over time a monitoring protocol is to be developed to include times of year to survey and survey techniques.

4D2a Task: The Bureau of Land Management in cooperation with the Bureau of Reclamation developed a monitoring protocol and has distributed the protocol to survey personnel. Copies can be obtained from the Bureau of Land Management's Yuma office.

OBJECTIVE 5: Conduct monitoring activities to address environmental and human health concerns.

Monitoring Issue Team Membership:

Ed Northam- AZ. Dept. of Agriculture (lead)

Don Young- U.S. Bureau of Reclamation

Marc Dahlberg - AZ. Game and Fish Dept.

Ron Falkowski -CA. Regional Water Quality Control Board

Dave Sisneros/Denise Hosler-U.S. Bureau of Reclamation

Jennifer Green - U.S. Bureau of Land Management

5A. Problem: There are unknown and unidentified effects of applications of pesticides in the outfall drain, including effects to surface water, sediments, and the biotic community. There is often a public perception that spraying herbicides will negatively impact the environment or effect human health.

5A1. Strategic Action: Develop baseline data to determine environmental conditions prior to herbicide application.

5A1a Task: Establish a water quality database by measuring the following parameters:

Water temperature

Water dissolved oxygen concentration

Water hydrogen ion concentration (pH)

Water conductivity
Water dissolved metals concentration incl. copper, sodium, and potassium.
Water nitrate and phosphate concentration
Water total dissolved solids
Water total suspended solids
Sediment herbicide residues

5A2. Strategic Action: Measure water quality parameters concurrent with efforts to remove *Salvinia* from Palo Verde Irrigation District outfall drain (PVID drain). These evaluations will determine how actions described in the control/eradication portion of this abatement plan affect physical and chemical characteristics of drain water as it mixes with Colorado River water. Keep in mind water moving through PVID drain is runoff and seepage from land subjected to intensive agriculture uses and is expected to be lower quality than river water. Therefore, water analyses described below will be used to document changes in water quality attributes as various components of this overall *Salvinia* abatement project progress toward completion.

5A2a Task: Obtain dissolved oxygen, water temperature, pH and conductivity measurements on site, but analysis of samples for remaining metals, nutrients solids and herbicide residues will be accomplished by shipping water and sediment samples to a Bureau of Reclamation water analysis laboratory.

5A2b Task: Personnel from Bureau of Reclamation office in Denver, CO and Yuma, AZ along with personnel from the BLM in Yuma, AZ will accomplish collecting water/sediment samples and field data.

5A2c Task: Schedule sampling periods are on a monthly basis independent of herbicide application.

5A2d Task: Choose fixed (permanent) sites for monitoring seasonal effects, but sites monitoring herbicide impacts will be selected depending on location of chemical treatment.

5A2e Task: Establish a three-month sampling schedule to track seasonal effects on water quality parameters.

5A2f Task: Establish a protocol for water quality sampling along with biotic sampling if necessary.

5A3. Strategic Action: Determine environmental conditions after completion of a herbicide application event.

5A3a Task: Water and sediment samples will be collected after completion of an herbicide application collect water and sediment samples from the river.

5A3b Task: Water and sediment samples will be analyzed for a broad range of parameters.

5A4. Strategic Action: Evaluate effects of herbicide application from collected data.

5A4a Task: Conduct literature search regarding various herbicides and their effects. Analyze data from above samples keeping in mind the aquatic biota and environment.

OBJECTIVE 6: Conduct Research on Methods of Eradication and Environmental Factors That May Affect Sustained Viability of *Salvinia* in the Colorado River.

Research Issue Team Membership:

Kevin Fitzsimmons - University of Arizona (Lead)

Lars Anderson - University of California Davis

Ed Glenn - University of Arizona

Al Cofrancesco - U.S. Corps of Engineers

Marc Dahlberg - Arizona Game and Fish Dept.

Dave Sisneros - U.S. Bureau of Reclamation

Fred Nibling - U.S. Bureau of Reclamation

Earl Andress - U.S. Dept. of Agriculture/APHIS

Jennifer Green - U.S. Bureau of Land management

Joe Millosovich - California Department of Fish and Game

6A. Problem: Many aspects of *Salvinia* establishment remain poorly understood. The different habitat types and environmental conditions found in the Colorado River may stimulate or restrict *Salvinia* growth.

6A1. Strategic Action: Assess water quality conditions and requirements for *Salvinia* growth.

DRAFT (version 12/06/02)

6A1a Task: Water samples will be collected and analyzed from a variety of locations along the Colorado River in cooperation with the Monitoring Team.

6A1b Task: *Salvinia* will be collected from the Colorado River at various locations for tissue analysis.

6A1c Task: The Arizona Department of Agriculture will issue a permit to allow transportation of *Salvinia* out of the quarantine area to Phoenix for analysis.

6A1d Task: Fish species such as carp will be harvested for gut content analysis to see if they are consuming *Salvinia*.

6B. Problem: Research is needed to develop new eradication/control techniques for *Salvinia* and to find more effective ways to use existing techniques.

6B1. Strategic Action: Evaluate types of herbicide and formulations and their effects on *Salvinia* in the Colorado River. Evaluate alternative control methods and pros and cons of each method.

6B1a Task: The Bureau of Reclamation in cooperation with Bureau of Land Management has developed and is in the process of completing herbicide trials and research in backwaters along the Palo Verde outfall drain to evaluate effectiveness of different herbicides and application rates.

6B1b Task: Identify research needs and evaluate effectiveness of biotic control such as the *Salvinia* weevil (*Cyrtobagous salviniae*) and other agents for *Salvinia* infestations along the LCR.

OBJECTIVE 7: Work in cooperation with Mexico to limit the spread of *Salvinia* across the border and into Mexico.

**International Issue Team:
Don Young U.S. Bureau of Reclamation (Lead)
Ed Glenn -University of Arizona**

Al Goff -International Boundary and Water Commission - U.S.
Francisco Bernal - International Boundary and Water Commission - Mexico
Billy Solomon – U.S. Bureau of Reclamation
Jennifer Green – U.S. Bureau of Land Management

7A. Problem: The Lower Colorado River is an international river that flows into Mexico. *Salvinia* has entered into Mexico through flow from the U.S. at Morelos Dam and other outfalls.

7A1. Strategic Action: Restrict the flow of *Salvinia* into Mexico through the Morelos Dam and other transportation pathways.

7A1a Task: Evaluate and proceed with placing boom in front of Morelos Dam to catch *Salvinia* prior to entering Mexico's irrigation system.

7A1b Task: Provide information and training to Mexican officials on methodology to identify the plant and procedures to prevent the plant from entering their country via the river or through business or tourists carrying the plant into their country.

7A2. Strategic Action: Monitor and evaluate for *Salvinia molesta* along the U.S.-Mexico border and into Mexico.

7A2a Task: Provide funding to Dr. Ed Glenn for monitoring the Delta, Rio Hardy, water distribution canals and Cienega de Santa Clara for Giant *Salvinia* in August or September.

7A2b Task: Set up a work team with Mexico to survey for *Salvinia* along the U.S.-Mexico border and water districts adjacent to the Lower Colorado River.

7A2c Task: Develop and implement a plan for annual monitoring for *Salvinia* in Mexico.

7A3. Strategic Action: Work with Mexico to keep *Salvinia* from being carried across the border by tourists, Mexican Citizens, equipment, or personnel traveling to Mexico for Business or other purposes.

7A3a Task: Complete informational pamphlet for distribution in Mexico

DRAFT (version 12/06/02)

that is written in Spanish and includes a Mexican representative contact person or agency.

7A3b Task: Distribute pamphlets and set up poster session during Minute 306 Conference.

7A3c Task: Inform vendors selling aquatic plants in Mexico of the threats from *Salvinia* and make sure they are neither selling nor exporting *Salvinia*.

7A3d Task: Inform and distribute pamphlets to Border Patrol to be on alert for aquatic nuisance species.

7A3e Task: Encourage Mexico to establish monitoring programs and laws to control *Salvinia* from entering into or being sold within their country.

OBJECTIVE 8: Prevent the spread of salvinia into other waters

Outreach Issue Team Membership:

Bob Pitman- U.S. Fish and Wildlife Service

Larry Riley- Arizona Game and Fish Dept.

Theresa Olsen- Bureau of Reclamation

Jeff Humphrey -U.S. Fish and Wildlife Service

Renee Robichaud - U.S. Fish and Wildlife Service

Lorrie Cook - U.S. Bureau of Land Management

8A. Problem: New introductions of *Salvinia* into waters outside of the Colorado River can increase the economic and environmental damage. Prevention is the most cost effective and environmentally sensitive method of eliminating this problem.

8A1. Strategic Action: Develop an outreach program to inform the public of the problems associated with *Salvinia* and the actions they can undertake to prevent further spread. Provide a consistent message about the present status of *Salvinia* and the control actions underway.

8A1a Task: Routinely contact other agencies and individuals to provide status reports and control information on *Salvinia*. The team will then suggest outreach actions complimenting controls and providing public information.

DRAFT (version 12/06/02)

8A1b Task: Develop short video describing *Salvinia* and possible impacts in the southwest. Arizona Game & Fish will produce the video and FWS will fund copies (2,000).

8A1c Task: Use poster/flier developed in 2000 to produce a similar document with Spanish on one side and English on the other for distribution in Mexico and US.

8A1d Task: A poster/flier specific for the LCR similar to poster used for *Salvinia* in Texas has been developed and will be distributed through the Task Force. 20,000 copies at cost of \$2,500 (source of funds - FWS) are available and usable for 2 years. These flyers should be distributed to all boat, license and bait dealers.

8A1e Task: Arizona Game and Fish will provide information in boater registration material.

8A1f Task: The Arizona Game and Fish Department has incorporated a presentation on *Salvinia* into the Boater Safety Classes. The Arizona Game and Fish Department has included information on Aquatic Nuisance Species in the 2000 Arizona Fishing Regulations and published an article on *Salvinia* in their *Wildlife Views* Magazine.

8A1g Task: Develop LCR Giant *Salvinia* Task Force web page. A Web page has already been developed and will be continuously updated as long as needed. It will be FWS responsibility for updating.

DRAFT (version 12/06/02)

OBJECTIVE 9: Documenting any new reports of Giant Salvinia in the lower Colorado River, and act fast to contain the infestations.

Rapid Response Issue Team Membership:

Robert Leavitt -CA Dept. of Food and Agriculture (Co-Lead)

Ed Northam- AZ. Dept of Agriculture (Co-Lead)

Marc Dahlberg- Arizona Game and Fish Dept.

Bob Pitman- U.S. Fish and Wildlife Service

Kim Webb -U.S. Fish and Wildlife Service

Joe Millosovich - California Department of Fish and Game

9A. Problem: There is a lack of infrastructure to document new occurrences of *Salvinia* in the lower Colorado region, allowing the uncontrolled spread of this invasive plant.

9A1. Strategic Action: Respond to detections of *Salvinia* at they are first reported to gather information on the new infestation.

9A1a Task: Document the reported sighting by a site visit, collection (or photographs) of specimens, and a written narrative of findings. Identify source of new infestation, potential for spread, and potential problems associated with the new infestation.

9A1b Task: Notify the Steering Committee and Field Implementation immediately to begin plans to eradicate or control the *Salvinia*.

9A1c Task: Identify key agencies and persons who would need to be contacted for the new infestations. A list of key contact agencies needs to be developed and utilized when new infestations are found.

9A2. Strategic Action: A Rapid Response Plan will be prepared to identify how new infestations can be controlled rapidly to lessen the potential for further spread of the plant.

9A2a Task: Prepare a plan that would include emergency control measures, contact agencies, and recommendations for quick eradication if infestation is small.

9A2b Task: Work with the Field Implementation Team to initiate any recommendations that are put forth in the Rapid Response Plan if activated by new infestations.