

National Asian Carp Plan Priorities

The *Management and Control Plan for Bighead, Black, Grass, and Silver Carps in the United States* (Plan) was finalized in 2007 through an effort led by the U.S. Fish and Wildlife Service and initiated by the Aquatic Nuisance Species Task Force. The Service has since been charged with leading the implementation of the Plan on a national scale. As part of this effort, the Plan's 133 management recommendations needed to be ranked in an order of general priority to better direct any dedicated resources to the most beneficial projects. It has been and continues to be important that these priorities be developed across the geographic entirety of the United States and with the input of a variety of partners and stakeholder groups. More specifically, areas of the country that have Asian carp and do not have Asian carp, have different priorities for what should be done in their particular area (e.g. prevent them from getting into a new basin, or remove as many as possible from basin).

Initially the Asian Carp Working Group, the group originally responsible for drafting the Plan, ranked all of the management recommendations within (but not across) the 6 overarching goals of the Plan (research, outreach, prevention, control, removal, minimize impacts). The Service took the top 40 management recommendations from that exercise and queried the Aquatic Nuisance Species Task Force regional panels to get an across goal, comprehensive ranking of the top Plan recommendations. Rankings were received from the Mississippi River Basin Panel, the Great Lakes Panel, the Western Panel, and the Gulf and South Atlantic Panel. Having input from these panels gives us perspectives and input from almost the entire geographic coverage of the United States, save the northeast and Alaska and Hawaii. The rankings sent include the input from over forty different individuals representing state and federal agencies, universities, non-governmental organizations, and private industry. The top 15 recommendations are listed below for brevity. The entire top 40 list is available from sam_finney@fws.gov

- 1) Develop Rapid Response Plans that identify where rapid response actions can effectively eradicate Asian carps and how those actions will be carried out.
- 2) Develop and implement reasonable and effective measures that prevent the spread of Asian carps via canals, water ways, or other water diversions between basins.
- 3) Develop and provide information to commercial and recreational baitfish harvesters that will help prevent accidental and deliberate unauthorized introductions of Asian carps.
- 4) Encourage states that allow the legal importation of grass carp to adopt consistent, uniform regulations that allow only certified triploid grass carp to be shipped or stocked.
- 5) Develop effective physical and behavioral barriers for controlling the movement of Asian carps.
- 6) Assist states to develop, promulgate, and enforce regulations that manage the harvest, transport, import, trade, and release of live wild-harvested aquatic bait.
- 7) Encourage states to prohibit the use and production of diploid black carp on aquaculture facilities.
- 8) Evaluate the potential for physical removal of feral Asian carps to control their abundance in public waters.
- 9) Encourage states to develop regulations that prohibit the stocking of any diploid Asian carps into non-aquaculture waters for biological control.
- 10) Natural resources managers should employ pathway management tools, such as Hazard Analysis and Critical Control Point planning in the review of Standard Operating Procedures, to prevent introductions of Asian carps through natural resources management related pathways.
- 11) Develop and evaluate effective methods for sampling feral populations of Asian carps.
- 12) Evaluate the effectiveness afforded by alternative technical containment measures (i.e., physical and behavioral barriers).
- 13) Describe movements and distribution of Asian carps in waters of the United States (e.g., habitat preference, habitat selection, and habitats used).
- 14) Examine commercial fishing regulations and consider changes to increase harvest.
- 15) Evaluate gear and harvest method effectiveness, develop new gears if necessary, and provide information to commercial fishers.

- 16) Develop and provide information on the USFWS Triploid Grass Carp Inspection and Certification Program.
- 17) Require federal and state agencies to consider the potential range expansion and ecological effects of Asian carps when designing or reviewing water control structure projects and permits.
- 18) Monitor populations of species most likely to be affected by Asian carps.
- 19) Where legal for commercial or recreational fishers to possess Asian carps, encourage states to prohibit the possession of live wild-caught Asian carps.
- 20) The USFWS and other natural resources management agencies should provide technical assistance and biological information to the USACE and participate in collaborative planning of fish passage and habitat restoration projects.
- 21) Develop an information module and provide materials to commercial and recreational fishers and commercial live haulers that will help prevent accidental and deliberate unauthorized introductions of Asian carps.
- 22) Inform boaters, barge operators, and others of the risks of moving infested water and encourage voluntary actions to reduce this risk.
- 23) Determine life history parameters of Asian carps in the Mississippi River Basin.
- 24) Create population, biomass, and recruitment models for Asian carps.
- 25) Explore the use of baitfish grown in monoculture, and certified to be disease-free and uncontaminated by other aquatic species.
- 26) Review Standard Operating Procedures and actions of commercial fishers to identify Best Management Practices that reduce risks of live transport and introduction.
- 27) Develop an information module on why and how to report sightings of Asian carps.
- 28) Form a coordinating research group that includes representatives from the aquaculture industry, the ethnic retail grocer industry, marketing scientists and developers, aquaculture scientists, and natural resources managers to focus research efforts on the highest priority alternatives to the use of Asian carps.
- 29) Develop a decision model to prioritize locations for construction or removal of carp barriers
- 30) Identify conditions where rotenone or antimycin could be used to control populations of Asian carps.
- 31) Describe current and temporal changes in distribution to better understand the invasion and colonization process.
- 32) Encourage the USFWS to provide ploidy determination for states conducting inspections of grass carp shipments.
- 33) Develop and provide information to natural resources managers and field staff that will help prevent unintentional introductions and spread of feral Asian carps.
- 34) Develop an information module and provide materials to recreational fishers and boaters that will help prevent accidental and deliberate unauthorized introductions of Asian carps.
- 35) Protect or restore native species through methods other than stocking.
- 36) Determine effectiveness of registered piscicides to control Asian carps.
- 37) Provide financial incentives to commercial fishers to increase harvest of Asian carps.
- 38) Develop an information module on the construction and maintenance of effective spillway barriers to reduce the risk of escape of Asian carps from private impoundments.
- 39) Develop new markets for Asian carps.
- 40) Develop an information module on the identification of all life stages of Asian carps.