

Appendix 3.7 Objectives, conservation actions, and performance measures for Kentucky's aquatic Species of Greatest Conservation Need.

Objective

Conservation action

Performance measure

1: Protect aquatic habitat (minimize physical, chemical, or biological alterations and water quality issues) and preserve key aquatic habitats (identify priority areas, communities, unique habitats and conserve property through purchase or easements)

161: Acquisition and conservation easements of critical aquatic habitat.

- 1 Amount of critical aquatic habitat (i.e., stream miles and/or acres of riparian habitat) acquired and protected in land purchase, conservation easement, or other agreement.
- 2 Number of priority species benefiting from such action.
- 3 Number of priority watersheds that are affected by such action.

158: Financial incentives to protect riparian corridors and watersheds.

- 1 Stream miles and/or acres restored, enhanced, and/or protected using conservation easements, Fees in Lieu, or other federal grant programs (ultimate).
- 2 Number of landowners benefiting from financial incentives.
- 3 Number of priority species benefiting from such action.
- 4 Number of priority watersheds that are affected by such action
- 5 Funds dedicated to riparian restoration through use of programs such as Fees in Lieu, or other federal grants awarded for habitat restoration, enhancement, or protection (intermediate).

176: Develop, encourage, and initiate local watershed improvement initiative.

- 1 Number of projects established that address conservation issues affecting aquatic species and habitats (intermediate).
 - 2 Implementation of coordinated conservation and protection efforts aimed at preserving aquatic resources (ultimate).
 - 3 Number of priority species benefiting from such action.
 - 4 Number of priority watersheds that are affected by such action.
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Appendix 3.7 Continued.

Objective

Conservation action

Performance measure

175: Work with municipalities, industries, and government agencies to reduce physical impacts of non-point and storm water runoff including Total Maximum Daily Loads (TMDL's)

- 1 Number of cooperative agreements formed with other state and federal agencies, industries, and NGOs to minimize or eliminate non-point and storm water runoff.
- 2 Measurable reduction in TMDLs attributed to non-point and storm water runoff and improvement in aquatic habitat integrity.

2: Manage aquatic habitat (manipulate existing habitat to benefit species, develop management plans for watersheds, and apply best management practices) and species abundance (e.g., augmentation, enhancement, reintroduction)

159: Encourage and assist in using, developing, and implementing Best Management Practices, including revision and evaluation as applied to aquatic systems.

- 1 Number of BMPs developed and implemented that apply to aquatic habitats (intermediate).
- 2 Measurable improvement of aquatic habitat integrity resulting from BMPs (ultimate) (e.g., increased abundance, enhanced amount of aquatic habitat, changes in community structure)

164: Restoration of degraded aquatic habitat through use of programs such as Fees in Lieu, or other federal grants.

- 1 Number of priority watersheds that are affected by such action.
- 2 Number of restoration projects implemented by KDFWR
- 3 Stream miles restored, enhanced, and/or protected
- 4 Number of priority species benefiting from such action.

163: Coordinate and implement existing Farm Bill programs, or other federal incentive programs as applied to aquatic systems.

- 1 Funds dedicated to restoration of aquatic habitat.
 - 2 Number of landowners benefiting from financial incentives.
 - 3 Number of priority species benefiting from such action.
 - 4 Number of priority watersheds that are affected by such action
 - 5 Number of Farm Bill or other cost-share restoration agreements made with landowners to develop wetland, riparian, and aquatic habitat.
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Appendix 3.7 Continued.

Objective

Conservation action

Performance measure

168: Develop mitigation plan for impacted aquatic systems.

- 1 Number of priority watersheds that are affected by such action.
- 2 Number of priority species benefiting from such action.
- 3 Stream miles containing impacted aquatic habitat, or acres of habitat restored through mitigation plans developed through KDFWR.
- 4 Number of mitigation plans administered through KDFWR

166: Work with dam and hydroelectric operators to enhance and protect aquatic habitat.

- 1 Number of priority species benefiting from such action
- 2 Plans developed to monitor changes in status and condition of aquatic communities in response to modified dam operations.
- 3 Number of priority watersheds that are affected by such action.
- 4 Number of dams operated with more natural flow regimes
- 5 Amount of habitat enhanced (i.e., stream miles with more natural temperature and flow regimes)

180: Develop priorities and technology for reintroducing and enhancing aquatic populations.

- 1 Number of priority watersheds that are affected by such action.
- 2 Number of research projects funded to develop and refine techniques for holding and propagating rare aquatic species
- 3 Criteria developed to determine optimal conditions for reintroductions or population enhancement.
- 4 Number of partnerships established to develop strategic plans for reintroductions or population enhancement.
- 5 Number of reintroductions or population enhancement efforts completed.
- 6 Number of individuals released through augmentation, expansion, or reintroduction
- 7 Number of monitoring plans established to evaluate the effectiveness of these efforts.
- 8 Number of priority species benefiting from such action.

187: Restore populations of conservation concern using captive propagation/release efforts and translocation efforts in areas where habitats have been restored

- 1 Successful reproduction of reintroduced individuals
 - 2 Survival rates associated with reintroduction
 - 3 Number of species successfully propagated in captivity
 - 4 Number of species and number of individuals released into restored habitats.
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Appendix 3.7 Continued.

Objective

Conservation action

Performance measure

190: Partner with Kentucky's In Stream Flow network to identify and work to resolve high-priority issues (e.g. timing of dam release, fish barrier removal, development of in-stream flow standards which integrate biological and hydrological data).

- 1 Formation and annual meeting occurrence of an In Stream Flow network of experts and professionals in Kentucky
- 2 Number of barriers (e.g. culverts, low head dams) removed.
- 3 Number of watersheds for which watershed-specific in-stream flow standards have been developed
- 4 Number of watersheds for which timing of dam release is specifically targeted to optimize aquatic habitat for high priority species

3: Develop an effective outreach program that articulates the economic and other values of aquatic ecosystems.

160: Inform and educate user groups on significance and importance of riparian corridors and watersheds.

- 1 Number of outreach programs, workshops, symposia, and publications produced and groups involved

170: Develop public aquatic education programs to inform and educate user groups.

- 1 Number of outreach programs developed
- 2 Outreach products produced (e.g., materials for teachers/ environmental education programs, website, posters, maps, and information packets).

174: Establish working groups to address various broad issues and needs that pertain to water.

- 1 Number of working groups established that would identify problems, recommend potential solutions, and help foster communication among researchers, managers, partners, and stakeholders on specific aquatic conservation issues.

4: Utilize priority monitoring, research and survey needs from this CWCS to gather and disseminate the biological knowledge/information necessary to effectively conserve and recover species of greatest conservation need.
