

Categorical Exclusion Determination

Bonneville Power Administration
Department of Energy



Proposed Action: Sterile Grass Carp Stocking for Aquatic Weed Control

Project No.: 1995-015-00

Project Manager: Cecelia Brown, EWM-4

Location: Lake Billy Shaw, Duck Valley Indian Reservation, Owyhee, Nevada.

Categorical Exclusion Applied (from Subpart D, 10 C.F.R. Part 1021): B1.20 Protection of Cultural Resources, Fish, and Wildlife Habitat

Description of the Proposed Action: Sterile/triploid grass carp will be stocked into Lake Billy Shaw for biological control of dense aquatic vegetation (milfoil) that is degrading and displacing game fish and waterfowl habitat. An average of six fish per acre will be stocked following guidance in scientific literature for partial control of problem plants without misbalancing the ecology of the lake. This is a repeat stocking of what was applied in 2011 that produced effective results without ecological disruption.

Findings: In accordance with Section 1021.410(b) of the Department of Energy's (DOE) National Environmental Policy Act (NEPA) Regulations (57 FR 15144, Apr. 24, 1992, as amended at 61 FR 36221-36243, July 9, 1996; 61 FR 64608, Dec. 6, 1996, 76 FR 63764, Nov. 14, 2011), BPA has determined that the proposed action:

- (1) fits within a class of actions listed in Appendix B of 10 CFR 1021, Subpart D (see attached Environmental Checklist);
- (2) does not present any extraordinary circumstances that may affect the significance of the environmental effects of the proposal; and
- (3) has not been segmented to meet the definition of a categorical exclusion

Based on these determinations, BPA finds that the proposed action is categorically excluded from further NEPA review.

/s/ Robert W. Shull

Robert W. Shull
Contract Environmental Protection Specialist
FirstTekDOS, LLC

Reviewed by:

/s/ Chad Hamel

Chad Hamel
Supervisory Environmental Protection Specialist

Concur:

/s/ Stacy L. Mason

Stacy L. Mason
NEPA Compliance Officer

Date: February 1, 2019

Attachment(s): Environmental Checklist

Categorical Exclusion Environmental Checklist

This checklist documents environmental considerations for the proposed project and explains why the project would not have the potential to cause significant impacts on environmentally sensitive resources and would meet other integral elements of the applied categorical exclusion.

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Project Site Description

Sheep Creek Reservoir was constructed in 1955 by a dam across Sheep Creek just north of the town of Owyhee off of Idaho State Highway 51. It is the oldest and largest of the Duck Valley Indian Reservation reservoirs. It covers 855 acres with a maximum depth of 23 feet near the dam at the south end of the lake. It is surrounded by a narrow, broken, strip of riparian vegetation (willows and emergent plants) along its shores with sagebrush-steppe habitats beyond that. The southwest shores are bordered by bluffs rising approximately 150' or more above the lake but the terrain is comparatively flat elsewhere. The northern and eastern halves of the reservoir are composed of somewhat shallow coves that support abundant submerged, floating, and emergent aquatic vegetation.

This reservoir is turbid, with visibility typically less than two feet or less following a severe 2005 storm event that produced a massive runoff of fine sediments that have settled out only minimally.

The lake provides abundant habitat for large populations of waterfowl for nesting and migration stop-overs. It supports populations of large rainbow trout which the Shoshone Paiute Tribes established and maintain through artificial production. A comparatively recent trophy smallmouth bass fishery has developed, though it is discouraged by the tribe which favors management of the lake for rainbow trout.

The reservoir is nearly surrounded by graveled and unsurfaced two-track roads with developed recreation facilities (campsites, boat launch, and toilets) along its eastern shore and numerous dispersed recreation sites wherever road access and terrain allow.

Evaluation of Potential Impacts to Environmental Resources

Environmental Resource Impacts	No Potential for Significance	No Potential for Significance, with Conditions
1. Historic and Cultural Resources	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<u>Explanation:</u> There are no ground-disturbing activities proposed with this action, thus there is no potential to disturb cultural resources.		
2. Geology and Soils	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<u>Explanation:</u> There are no ground-disturbing activities proposed with this action, thus there is no potential to affect geology or soils.		

3. **Plants** (including federal/state special-status species)

Explanation: No terrestrial plant species will be affected by the introduction of grass carp. There will, however, be changes to aquatic vegetation by the feeding habits of these fish with declines expected in both the target species (native milfoil) and non-target aquatic plants. This introduction is a repeat of a similar release in this reservoir in 2011. Aquatic vegetation changes from that release were within the range targeted for that and the current release with no permanent loss of species or adverse changes to lake ecology. Grass carp have the potential for adverse loss of aquatic vegetation and ecological disruption in ponds and reservoirs if stocked too densely. From available research, the stocking rate proposed here (six fish per acre) is on the low end of stocking rates shown to be effective for aquatic vegetation control without adverse effect to the ecology of the water body. There are no federal/state special-status plant species or habitats present.

4. **Wildlife** (including federal/state special-status species and habitats)

Explanation: No terrestrial habitats will be modified, so there is no potential to affect terrestrial species. There will, however, likely be habitat improvements for waterfowl, as a more desirable open-water to aquatic vegetation ratio is established on Lake Billy Shaw. In some areas, native milfoil now dominates the water surface precluding use by waterfowl. There are no federal/state special-status species or habitats present.

5. **Water Bodies, Floodplains, and Fish** (including federal/state special-status species and ESUs)

Explanation: Grass carp have the potential to adversely affect water bodies and fish habitat if stocked too densely. If grass carp populations are too dense, they can remove all vegetation, alter the nutrient cycling regimes, and create conditions for problematic algae blooms and other undesirable conditions for water bodies and fish habitat. From available research and past on-site experience, the stocking rate proposed here would not adversely affect the ecology of the water body. The objective is to reduce the density of aquatic vegetation to 25-50% coverage, which will be an improvement in habitat conditions for insects, fish and birds. No adverse effects to the reservoir or fish populations and their habitat are anticipated. Rather, improvements to fish habitat and the ecology of this reservoir are expected with the reduction of aquatic vegetation in areas where native milfoil now occupies 100% of the available aquatic habitat.

The inlet and outlet canals of Lake Billy Shaw are both screened to prevent escapement of the trout that are stocked there. These screens will also prevent unwanted dispersal of the grass carp to other water bodies. Additionally, only sterile fish, "certified triploid grass carp", will be stocked – they will be unable to reproduce. Their life-span and vegetation-controlling effect in this water body is anticipated to last 6 to 8 years (as was experienced with the 2011 introduction).

There are no federal/state special-status species or habitats present.

6. **Wetlands**

Explanation: The vegetation-controlling effects of these fish will be limited to the aquatic and shoreline habitats of Lake Billy Shaw. No off-reservoir wetlands would be affected. There are some wetland habitats on the shores of this reservoir that could be affected if overstocking and overgrazing by grass carp removed the more preferred aquatic forage species and the fish were forced to feed in these areas. Such overpopulation is not anticipated because stocking levels are low and the fish would be unable to reproduce (only sterile fish are stocked).

7. **Groundwater and Aquifers**

Explanation: There are no ground-disturbing activities and no water withdrawal or discharge proposed with this action, thus there is no potential to affect groundwater or aquifers.

8. **Land Use and Specially Designated Areas**

Explanation: Grass Carp introduction would require no change in land use and the reservoir is not within a specially designated area. There would be no changes to land use and no impact to specially designated areas.

9. **Visual Quality**



Explanation: There are no ground-disturbing activities, no non-aquatic vegetation modifications, and no structures being constructed with this action, thus there is no potential to affect the visual character of the area.

10. **Air Quality**



Explanation: This action would not emit pollutants and would have no potential to degrade air quality beyond that caused by the vehicles delivering fish to introduction sites for the few days necessary for effective release.

11. **Noise**



Explanation: The action would require fish transport by truck which would create the only noise produced. This level of noise is consistent with that created by existing recreational vehicle and boat traffic on and around the lake and would not modify the soundscape of the area.

12. **Human Health and Safety**



Explanation: The introduction of grass carp and the presence of grass carp in Lake Billy Shaw would have no impact on human health and safety. This species is commonly introduced into recreational waters throughout North America with no record of human health or safety concerns.

Evaluation of Other Integral Elements

The proposed project would also meet conditions that are integral elements of the categorical exclusion. The project would not:

- Threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, or similar requirements of DOE or Executive Orders.

Explanation, if necessary:

- Require siting and construction or major expansion of waste storage, disposal, recovery, or treatment facilities (including incinerators) that are not otherwise categorically excluded.

Explanation, if necessary:

- Disturb hazardous substances, pollutants, contaminants, or CERCLA excluded petroleum and natural gas products that preexist in the environment such that there would be uncontrolled or unpermitted releases.

Explanation, if necessary:

- Involve genetically engineered organisms, synthetic biology, governmentally designated noxious weeds, or invasive species, unless the proposed activity would be contained or confined in a manner designed and operated to prevent unauthorized release into the environment and conducted in accordance with applicable requirements, such as those of the Department of Agriculture, the Environmental Protection Agency, and the National Institutes of Health.

Explanation, if necessary: This is an introduction of a non-native species (*Ctenopharyngodon idella*). Two protections are in place to geographically and temporally limit the effects of these fish as required by the permit issued by the State of Nevada for this action (NRS 503.597; NAC 503.110 & 504.720-.730):

1) The inlet and outlet canals of Lake Billy Shaw are both screened which would prevent unwanted dispersal of the grass carp to other water bodies.

2) Only sterile fish ("certified triploid grass carp" verified by the U.S. Fish and Wildlife Service) will be stocked – they will be unable to reproduce and their effects will be limited to their lifetimes.

This species has been introduced into recreational waters throughout North America for many decades; it is well-researched and its weed-controlling benefits and risks are well understood.

Landowner Notification, Involvement, or Coordination

Description: The landowner (Shoshone Paiute Tribes on the Duck Valley Indian Reservation) is the proponent for this action and there are no other landowners nearby. The tribe has an information and engagement process for tribal members for projects funded by BPA each year. This project has been reviewed by tribal members.

Based on the foregoing, this proposed project does not have the potential to cause significant impacts to any environmentally sensitive resource.

Signed: /s/ Robert W. Shull
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Date: February 1, 2019