

Environmental Assessment

for Ouray Randlett National Fish Hatchery to Construct Raceway and Settling Basin

May 2024

Prepared by

Zane Olsen, Project Leader

U.S. Fish and Wildlife Service

Ouray Randlett and Jones Hole NFH Complex

1380 S. 2350 W., Vernal, Utah 84078

435-899-0503

Contents

PROPOSED ACTION	4
BACKGROUND	4
PURPOSE AND NEED FOR THE ACTION	6
ALTERNATIVES	6
ALTERNATIVE A – CONSTRUCT RACEWAY AND SETTLING BASIN ON OURAY NATIONAL FISH HATCHERY - PROPOSED ACTION ALTERNATIVE	6
ALTERNATIVE B – NO FURTHER DEVELOPMENT – NO ACTION ALTERNATIVE	6
AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES	7
NATURAL RESOURCES	8
TERRESTRIAL WILDLIFE AND AQUATIC SPECIES	8
THREATENED AND ENDANGERED SPECIES, AND OTHER SPECIAL STATUS SPECIES	10
HABITAT AND VEGETATION	12
GEOLOGY AND SOILS	15
WATER QUALITY	15
FLOODPLAINS	17
VISITOR USE AND EXPERIENCE	18
CULTURAL RESOURCES AND SUBSISTENCE	19
REFUGE MANAGEMENT AND OPERATIONS	21
LAND USE ON THE REFUGE	21
ADMINISTRATION	22
SOCIOECONOMICS	23
LOCAL AND REGIONAL ECONOMIES	23
ENVIRONMENTAL JUSTICE	24
MONITORING	24
SUMMARY OF ANALYSIS	25
ALTERNATIVE A – CONSTRUCT RACEWAY AND SETTLING BASIN – PROPOSED ACTION ALTERNATIVE	25
ALTERNATIVE B – NO ACTION ALTERNATIVE	25
LIST OF SOURCES, AGENCIES AND PERSONS CONSULTED	25
LIST OF PREPARERS	26
STATE COORDINATION	26
TRIBAL CONSULTATION	26
PUBLIC OUTREACH	26
DETERMINATION	26
SIGNATURES	27
REFERENCES	28

<u>APPENDIX A</u>	<u>28</u>
CULTURAL RESOURCES	28
FISH AND WILDLIFE	29
<u>APPENDIX B</u>	<u>29</u>
<u>APPENDIX C</u>	<u>30</u>
<u>APPENDIX D</u>	<u>30</u>

Environmental Assessment for Ouray NFH Raceway and Settling Basin Construction

Date: April 2024

This environmental assessment (EA) is being prepared to evaluate the effects associated with this proposed action and to comply with the National Environmental Policy Act (NEPA) in accordance with Council on Environmental Quality regulations (40 Code of Federal Regulations [CFR] 1500-1509) and Department of the Interior (43 CFR 46; 516 DM 8), and United States (U.S.) Fish and Wildlife Service (Service) (550 FW 3) regulations and policies. NEPA requires examination of the effects of proposed actions on the natural and human environment. For additional compliance information, see Appendix A: list of relevant laws and executive orders.

Proposed Action

The Service is proposing to construct a new raceway, settling basin and discharge system to enhance operations on Ouray National Fish Hatchery (NFH). The system is intended to enhance production and processing of endangered fish species including the razorback sucker, bonytail, humpback chub, and Colorado pikeminnow, while rerouting discharge water back into the Green river.

Background

The United States Fish and Wildlife Service's Ouray National Fish Hatchery (Randlett Unit) is a cool-warm water fish hatchery that has been in operation since 1996. Ouray's focus is rearing and maintaining threatened and endangered fish species for supplementation to their native habitat, genetic refuge, and aquaculture research/development. Ouray is a significant contributor and partner to the Upper Colorado River Endangered Fish Recovery Program.

Since 1996, the Ouray NFH has been producing razorback suckers, bonytail, maintaining a refuge population of humpback chubs, and most recently, conducting research on the Colorado pikeminnow. Over these many years, the exciting infrastructure has been slowly degraded and not updated to keep up with current culture practices.

Ouray National Fish Hatchery (NFH) is embedded within Ouray National Wildlife Refuge (NWR) thus much of the analysis in this Environmental Assessment (EA) will follow National Wildlife Refuge Policy. National wildlife refuges are guided by the mission and goals of the National Wildlife Refuge System (Refuge System), the purposes of an individual refuge, Service policy, and laws and international treaties. Relevant guidance includes the National Wildlife Refuge System Administration Act of 1966 (NWRSA), as amended by the National Wildlife Refuge System Improvement Act of 1997 (Improvement Act), Refuge Recreation Act of 1962, and selected portions of the Code of Federal Regulations and Fish and Wildlife Service Manual.

The refuge was originally established on May 25, 1960, as a prime waterfowl production area that would also provide needed resting and feeding areas for migratory birds traveling along the Green River corridor. The current refuge management strategy accounts for new biological information and insight into the importance of western riparian and floodplain systems to a variety of fish and wildlife species. The most vital contribution Ouray National Wildlife Refuge can make to the Upper Colorado River Ecosystem is to restore and enhance riparian woodlands and seasonal wetlands along its 12 river

miles. The 11,987-acre refuge is managed for a variety of native plants and wildlife with emphasis on migratory birds, threatened and endangered species (including razorback sucker and bonytail chub), and compatible wildlife-dependent public uses.

The mission of the Refuge System, as outlined by the NWRSA, as amended by the Improvement Act (16 U.S. Code 668dd et seq.), is

“ . . . to administer a national network of lands and waters for the conservation, management and, where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans. ”

The NWRSA mandates the Secretary of the Interior in administering the Refuge System to (16 U.S. Code 668dd [a][4]):

- provide for the conservation of fish, wildlife, and plants, and their habitats within the Refuge System;
- ensure that the biological integrity, diversity, and environmental health of the Refuge System are maintained for the benefit of present and future generations of Americans;
- ensure that the mission of the Refuge System described at 16 U.S. Code 668dd(a)(2) and the purposes of each refuge are carried out;
- ensure effective coordination, interaction, and cooperation with owners of land adjoining refuges and the fish and wildlife agency of the states in which the units of the Refuge System are located;
- assist in the maintenance of adequate water quantity and water quality to fulfill the mission of the Refuge System and the purposes of each refuge;
- recognize compatible wildlife-dependent recreational uses as the priority general public uses of the Refuge System through which the American public can develop an appreciation for fish and wildlife;
- ensure that opportunities are provided within the Refuge System for compatible wildlife-dependent recreational uses; and
- monitor the status and trends of fish, wildlife, and plants in each refuge.

The refuge possesses three key wildlife values: (1) its wetlands provide important migration and breeding habitat for waterfowl and waterbirds, (2) riparian habitat provides important migration and breeding habitat for songbirds, and (3) riparian wetlands provide critical nursery habitat for larval razorback suckers and other Colorado River endangered fish species. The refuge also provides unique and important values for people. Wildlife, solitude, scenery, and cultural history combine to make Ouray NWR and NFH a national treasure.

The United States Fish and Wildlife Service’s Ouray National Fish Hatchery (Randlett Unit) is a cool-water fish hatchery that has been in operation since 1996. Ouray’s focus is rearing and maintaining threatened and endangered fish species for supplementation to their native habitat, genetic refuge, and aquaculture research/development. Ouray is a significant contributor and partner to the Upper Colorado River Endangered Fish Recovery Program.

Since 1996, the Ouray NFH has been producing razorback suckers, bonytail, maintaining a refuge population of humpback chubs, and most recently, conducting research on the Colorado pikeminnow. Over these many years, the existing infrastructure has been slowly degraded and not updated to keep

up with current culture practices.

The proposed new Raceway and Settling Basin will support the continuation in fish production for endangered fish species while enhancing wetland management opportunities in the refuge's Leota Unit.

Purpose and Need for the Action

The purpose of this proposed action is to construct a new Raceway and Settling Basin to support the continuation of fish production for endangered fish species recovery in the Colorado river system. An additional benefit would be to reroute discharge water from the Ouray National Wildlife Refuge, Leota Unit, to allow for periodic desiccation of floodplain wetlands. At present, discharge water is directed at the unit resulting in permanent, perennial emergent wetland habitat. Floodplain wetlands require periodic drawdowns for proper hydrologic function.

Alternatives

Alternative A – Construct Raceway and Settling Basin on Ouray National Fish Hatchery - Proposed Action Alternative

Raceway Overview

A dual-raceway system would greatly benefit ONFH. It would be used as an intermittent holding location between the ponds and hatchery building. The raceway would be used for treatments, sorting, and sampling before fish enter the hatchery building. This would decrease the risk of infecting the building with parasites/diseases and adding organic load to the filters. The raceway outflow would enter the Settling Basin and decreases the risk of Aquatic Invasive Species and nascent species from entering the main production areas.

Settling Basin Overview

The current outflow structures drain from the ponds/hatchery building in two separate pipes. Both pipes drain into a ditch system on the refuge. The ditch system is inadequate to handle the flow from the hatchery and the water backflows up the pipes. This backflow in the drainpipes creates sediment buildup and decrease outflow, sometimes plugging the system. The ditch also has a large amount of vegetation load that decreases the flow rate. These decreases in drain flow, in turn increases the pond drain time, drastically increasing the likelihood of ponds going anoxic and creating fish kills. These drains also create a gateway for small animals entering the facility and increases the risk of AIS species entering the facility. Additionally, the current system does not allow the refuge to simulate natural hydrologic processes such as periodically drying the wetlands to set back vegetative succession. Constant inflow artificially sustains permanent wetland habitat which is not natural for floodplain wetlands. This action is described in the Ouray NWR Habitat Management Plan (USFWS 2021).

Alternative B – No further development – No Action Alternative

Under the No Action Alternative, the hatchery would not develop a new raceway and settling basin and hatchery operations would continue as they are at present. Discharge water would continue to be directed to the Leota Unit and hatchery discharge would continue at a daily average rate of approximately 1.5 cfs. The hatchery will not have the needed infrastructure in place for expansion if needs arise for additional struggling species in the future.

Affected Environment and Environmental Consequences

This section is organized by affected resource categories and for each affected resource discusses (1) the existing environmental and socioeconomic baseline in the action area for each resource and (2) the effects of the proposed action and any alternatives on each resource. The effects of the proposed action considered here are changes to the human environment, whether adverse or beneficial, that are reasonably foreseeable and have a reasonably close causal relationship with the proposed action or alternatives. This EA includes the written analyses of the environmental consequences on a resource only when the impacts on that resource could be more than negligible and therefore considered an “affected resource.” Any resources that would not be more than negligibly affected by the action have been dismissed from further analyses.

Ouray National Wildlife Refuge, where Ouray National Fish Hatchery is located, consists of approximately 11,987 acres along 12 miles of the Green River in Uintah County, Utah. (See map in Appendix B).

The refuge is primarily bottomland riparian habitat along the Green River corridor, and the proposed action is in the northern part of the refuge near Leota marsh.

For more information regarding the general characteristics of the refuge’s environment, please see the “Summary Refuge and Resource Description” section of the refuge’s CCP, which can be found here: <https://www.fws.gov/mountain-prairie/refuges/ory.php>.

The Ouray National Fish Hatchery (Ouray NFH) was established in May 1996 as a fish refuge and technology development facility to assist in the recovery of the four listed Colorado River endangered fish: razorback sucker, Colorado pikeminnow, humpback chub, and bonytail chub (USFWS 2013a). The mission of the Ouray NFH is to serve as a genetic refuge for priority endangered Colorado River fishes (USFWS 1995).

The primary goal of the Ouray NFH is to preserve a genetically sound captive razorback sucker broodstock of approximately 600 adults and maintain a propagation program adequate to produce ample larvae needed for floodplain wetland studies as well as hatchery production. The goal will be modified in 2013 to include the production of bonytail chub (USFWS 2013g). The Ouray NFH is the primary source of genetic material that is needed to maintain a large genetic pool and work towards a viable reproduction population (USFWS 1995).

The end product of the Ouray NFH is to maintain endangered fish in Ouray NWR to prevent extinction; develop genetically sound broodstocks for production of young fish for stocking to stabilize or enhance wild stocks; and to produce captive reared endangered fish for priority laboratory and field experiments.

Refuge populations and broodstocks are often the ‘last line of defense’ to prevent species extinction or population extirpation. Therefore, they are irreplaceable components that are essential for recovery of these species. Similarly, successful stocking programs are often the first action that must be undertaken for species’ recovery. The razorback sucker stocking program (including the Ouray NFH) is a great example of how hatchery programs can avert the extinction of an endangered species (USFWS 2013b).

Natural Resources

Terrestrial Wildlife and Aquatic Species

Affected Environment

Description of Affected Environment for the Affected Resource

Habitats for numerous wildlife species, including small mammals, various species of rodents and bats, migratory birds, raptors, herptiles, and aquatic species, occur on Ouray NWR. These species occupy the area on a year-round or seasonal basis. Species' occurrences are typically dependent on habitat availability, carrying capacities, and the degree of existing habitat quality.

Small mammals found in Ouray NWR include the white-tailed jackrabbit, black-tailed jackrabbit, coyote, badger, striped skunk, northern river otter, American beaver, and various species of rodents, foxes, and bats. Large non-game mammals that are occasionally observed on the refuge include moose, black bear, and mountain lion. Bird species that may be present include the black-throated sparrow, Say's phoebe, ferruginous hawk, Brewer's sparrow, sage sparrow, grasshopper sparrow, and horned lark.

Herptiles potentially found in the region include the wandering garter snake, Great Basin gopher snake, western rattlesnake, northern leopard frog, western whiptail, sagebrush lizard, and short-horned lizard.

Some 237 species of migratory birds have been documented to visit Ouray NWR as seasonal residents or migrants, 114 of which are known to nest within the refuge. Potential occurrence is based on habitat (vegetation) types and the bird species that tend to use these habitat types. (Note: Most species use more than one habitat). Migrating birds often have special habitat needs.

Twenty-two species of raptors are known to occur within the project area and surrounding region year-round or on a seasonal basis. These include the bald eagle, golden eagle, ferruginous hawk, red-tailed hawk, Swainson's hawk, Cooper's hawk, sharp-shinned hawk, osprey, northern goshawk, northern harrier, prairie falcon, merlin, peregrine falcon, turkey vulture, American kestrel, great-horned owl, burrowing owl, short-eared owl, long-eared owl, western screech-owl, northern saw-whet owl, and rough-legged hawk. Most raptor species using the area migrate each fall and return to the region again the following spring. Exceptions include the golden eagle, bald eagle, rough-legged hawk, and great horned owl, which are year-round residents.

The Green River, immediately upstream and downstream of the project area, is host to 10 native fish species: roundtail chub, bonytail chub, Colorado pikeminnow, humpback chub, speckled dace, bluehead sucker, flannelmouth sucker, razorback sucker, mottled sculpin, and brook stickleback. Representative non-native species in the Green River in the vicinity of the project area include the green sunfish, smallmouth bass, walleye, channel catfish, black bullhead, northern pike, fathead minnow, common carp, and red shiner.

Environmental Trends and Planned Actions

The refuge is beginning to evaluate, and in some instances, implement components of a Habitat Management Plan (HMP). While most restoration efforts are designed to benefit Colorado endangered fish species utilizing backwater, riparian habitats for larval nurseries, late spring/summer flooding results in significantly higher summer water levels when floods occur, and more residual migratory bird migration habitat during fall. The Service is working with the Bureau of Reclamation to conduct facilitated releases from Flaming Gorge Dam during late spring, to allow passage of larval razorback suckers into refuge wetland units, which has increased flooding frequency and associated habitat for migration during fall.

Impacts on Affected Resource

Alternative A

While the character of upland habitats for terrestrial wildlife would remain essentially unchanged, construction of the settling ponds could have minimal dual effect. Potentially providing a supplemental water source for some small mammals it could also inhibit movement of larger animals using the construction site as a movement corridor between upland habitat and the Green river. Overall, the proposed action is not anticipated to have any substantive impact on terrestrial wildlife.

Redirecting flow from the Leota Unit to the Green river would have a minimal, detrimental impact to aquatic mammals by eliminating permanent water habitat in Leota Unit 4. Permanent water conditions have created habitat conducive to beaver use which has resulted in construction of a large den in the center of the unit. Beaver have been particularly detrimental to wetland infrastructure by blocking water flow through water control structures and burrowing in wetland unit levees. While they may be displaced by the proposed action, there are numerous locations along the Green river in close proximity that would provide suitable habitat for aquatic mammals.

There would be an overall positive benefit for the majority of migratory waterbird species. While some piscivorous species such as cormorant and common mergansers might lose a small amount of foraging habitat in Leota Unit 4, the vast majority of species using refuge wetlands for migration and nesting would greatly benefit by the positive effects of more closely simulating the natural hydrology. This would convert habitat from late successional species such as cattail, phragmites, and salt cedar to earlier successional habitat such as sago pondweed during wet cycles and moist-soil annual species such as goosefoot and sedges. This alteration in habitat would provide more optimal invertebrate resources for young waterbirds and more annual seed producing species for fall migrant waterbird species.

While minimal relative to base Green river flow, there would be an annual average of 1.5 cfs added to the Green river. This would have a minimal beneficial effect to the 10 native fish species in the Green river. Besides provided increased flow, it is also possible that discharge could result in more aquatic plant species along the Green river near the discharge site. Willows are utilized by multiple migratory bird species for migration and nesting.

Alternative B

There would be no beneficial or detrimental impacts to upland nor terrestrial wildlife species. They would continue at baseline abundance with no modifications to movement corridors. Aquatic mammal species would continue to benefit from continuous discharge flow to Leota Unit 4 and infrastructure damage would continue near water control structures and levees. Some waterbird species would benefit from semi-permanent water availability in Leota 4, but the majority of migratory and nesting waterbird species would see a slight decline in habitat quality because of the inability to simulate natural hydrologic

conditions and resultant natural succession in Leota 4. Hatchery discharge would continue to be directed to Leota 4 and there would be no benefit to the Green river from the 1.5 cfs contribution to base flow nor the potential increase in willow habitat near the discharge site for migratory songbirds and other riparian dependent species.

Threatened and Endangered Species, and Other Special Status Species

Affected Environment

Description of Affected Environment for the Affected Resource

Federally endangered or threatened species that occur or have occurred on the refuge include the bonytail, Colorado pikeminnow, humpback chub, razorback sucker, yellow-billed cuckoo and Uintah Basin hookless cactus. State-listed species and species of management concern include peregrine falcon, southwestern willow flycatcher, ferruginous hawk, bald eagle, and roundtail chub. Seven of these species are regularly encountered on the refuge throughout different seasons of the year.

Sightings of the peregrine falcons on the refuge are increasing. During spring and fall, peregrines can often be observed hunting for waterbirds over wetlands and bottomlands. Bald eagles have become a common sight particularly during fall and winter, when more than 30 individuals have been observed in one day. Eagles watch for prey from large standing cottonwood trees along the river's edge or along some of the bottomlands. Another relative of the falcon and eagle, the ferruginous hawk, can be seen occasionally hunting over the expanse of the semidesert shrubland on the refuge during summer. The federally listed yellow-billed cuckoo feeds, rests, and potentially nests in cottonwood galleries in the riparian areas of the refuge. To date, no nesting attempts by yellow billed cuckoo have been documented on Ouray NWR.

The federally endangered Colorado pikeminnow and razorback sucker, and the state-threatened roundtail chub, can be found within the refuge's stretch of the Green River. Ouray National Fish Hatchery is augmenting the extant populations of these fish that occur on the refuge and next to the refuge. Razorback suckers are propagated for 1.5-years in the hatchery, and then released into the Green River above, on, and below the refuge. Bonytail are propagated for 2-years in the hatchery and then released into the Green River in similar locations as the razorback sucker. Depending on the year, both razorback sucker's and bonytail's are stocked into flooded wetlands and/or flooded bottoms.

In addition, efforts are being coordinated through the Colorado River Endangered Fish Recovery Program and other agencies to mimic natural river flows that may aid in the recovery of these species that are on the brink of extinction.

Surveys conducted in 1997 revealed that the Uintah Basin hookless cactus is more common on the refuge than once believed. A survey undertaken in 1988 revealed the existence of 1,260 individual plants, while a count in 1997 led to the discovery of an additional 846 plants, bringing the known total of the Uintah Basin hookless cactus on the refuge to 2,106 individuals. This cactus is typically found toward the top of gravel-covered terraces.

The refuge has the potential to serve as a biological classroom for this species because this habitat is not presently manipulated for habitat management in any manner.

Environmental Trends and Planned Actions

Description of Cumulative Impacts, Environmental Trends, and Planned Actions

Oil and gas development continue throughout the Uintah Basin, and several active projects are occurring on or next to areas of the refuge where the proposed action would occur. State minerals managed by the State Institutional Land Trust Administration (SITLA) are under development in state section 36 immediately adjacent to the Ouray NFH and Leota Bottom. There is potential for development occurring on the bluffs above the hatchery to increase erosion and runoff through the uplands where the proposed project would occur.

Pursuant to the Endangered Species Act (1973), a section 7 consultation is warranted for this project. A concurrent biological assessment will be prepared using information compiled for this draft EA.

Impacts on Affected Resource

Alternative A

Uintah Basin hookless cactus occur in gravelly washes adjacent to the overlook area above the proposed action area. A comprehensive cactus survey was conducted concurrent to the Thurston -Ouray 2 Well EA (USFWS 2015, as amended 2019). No cactus was identified in the uplands adjacent to the Ouray NFH and it is unlikely that cactus could establish in the area because of unsuitable habitat conditions for cactus establishment.

While nesting yellow billed cuckoo have not been documented on Ouray NWR, they do use riparian habitat for migration. Additionally, the riparian corridor is considered critical habitat for nesting with the season typically running from June 15 until August 31. While there could be short term disturbance from excavating the pipeline corridor, it is anticipated that this action would occur towards the end of the nesting season and would cause minimal impact to nesting cuckoo. To minimize the chance of disturbance, a survey will be conducted to ensure that nesting is not occurring within the project area. If a nesting pair of cuckoo is documented, construction will halted until the pair has left the area.

The federally endangered Colorado pikeminnow and razorback sucker, and the state-threatened roundtail chub, can be found within the refuge's stretch of the Green River. Ouray National Fish Hatchery is augmenting the extant populations of these fish that occur on the refuge and next to the refuge. Razorback suckers are propagated for 1.5-years in the hatchery, and then released into the Green River above, on, and below the refuge. Bonytail are propagated for 2-years in the hatchery and then released into the Green River in similar locations as the razorback sucker. Depending on the year, both razorback sucker's and bonytail's are stocked into flooded wetlands and/or flooded bottoms.

In addition, efforts are being coordinated through the Colorado River Endangered Fish Recovery Program and other agencies to mimic natural river flows that may aid in the recovery of these species that are on the brink of extinction.

Alternative B

Under the no action alternative, cactus would continue to thrive in gravelly washes, on the bluffs above the hatchery. It is unlikely that they would expand into the uplands around the hatchery based on the soil type and related habitat suitability. The yellow-billed cuckoo would continue to use the riparian corridor near the hatchery for migration habitat and the riparian corridor would continue to be protected, critical habitat for nesting yellow-billed cuckoo.

The Ouray Nation Fish Hatchery would continue as in years past propagating and stocking 6,000 razorback suckers and 10,000 bonytail for the Upper Colorado River Endanger Fish Recovery Program annually. The hatchery would also continue holding backup brood of humpback chub and razorback suckers. Discharge would continue at an annual average rate of 1.5 cfs and semi-permanent – permanent conditions would continue in Leota Unit 4. The hatchery will not have the needed infrastructure in place for expansion if needs arise for additional struggling species in the future.

Habitat and Vegetation

Affected Environment

Description of Affected Environment for the Affected Resource

On the refuge, three general habitat categories occur: riverine, riparian, and uplands. The following defines and describes these general habitat categories, including improvements or developments within riparian areas.

Riverine

Riverine is any wetland or deep-water habitat contained within a channel, excluding those areas dominated by trees, shrubs, persistent emergents, emergent mosses, or lichens. Within the refuge boundary, 12 miles of the Green River meet this definition, which equates to approximately 1,180 acres.

The Green River watershed encompasses 45,000 square-miles, originating in Wyoming's Wind River Range, and stretching 730 miles through Colorado, and ultimately joining the Colorado River in Canyonlands National Park, Utah. The northern refuge boundary begins approximately 120 river-miles downstream from Flaming Gorge Dam. The Green River receives additional flows from the unregulated Yampa River that lies between the dam and the refuge, with an average of two flow peaks per year.

Seasonally, the Green River is a primary roost area for Canada and snow geese, mallard, gadwall, northern pintail, American wigeon, green-winged teal, and common merganser.

Shorebirds, such as greater and lesser yellowlegs, willet, and killdeer benefit from the shallow water margins next to riverbanks and sandbars. Mule deer, elk, moose, and black bear use the Green River as a watering source. Other mammals that are Green River or water obligate species include beaver and northern river otter. Several non-native fish species exist in the river and likely displace the state and federally endangered bonytail, Colorado pikeminnow, humpback chub, and razorback sucker.

Riparian

Riparian areas have one or both of the following characteristics: (1) distinctively different vegetative species than adjacent areas, and (2) species similar to adjacent areas but exhibiting more vigorous or robust growth forms. Riparian areas are usually transitional between wetland and upland. Besides the continuous transition between riverine and upland habitat occurring along the length of the Green River, there are five distinct riparian management units on the refuge. The following provides a brief description of Leota Bottom which is the affected area.

Leota Bottom: More than 1,250 acres of wetlands classified as palustrine occur in Leota Bottom.

According to 1983 aerial photography, temporarily flooded wetlands in Leota are emergent (40 acres), scrub/shrub (158 acres), and forested (220 acres). Other classified wetlands in Leota are excavated, semi permanently flooded unconsolidated bottom (0.47 acres), seasonally flooded emergent (4 acres), and impounded artificially/seasonally flooded scrub/shrub (24 acres). However, the bulk of palustrine wetlands in Leota are composed of impounded artificially/semi permanently flooded emergent wetlands

(808 acres) (USFWS 2000), which approximates the area in Leota units L-1 through L-10, including L-7A.

The 10 units within Leota Bottom provide an array of habitat gradients from pockets of deep to shallow open-water and areas of open-water interspersed with aquatic emergents. Cattail and hardstem bulrush are also the dominant plant species within these impoundments. Similar to Johnson Bottom, the dominant species are not known, but other vegetation specific to the forested and scrub/shrub classifications includes cottonwoods, willow species, Russian olive, Tamarix, squaw bush, greasewood, and sagebrush. Of all the wetland sites on the refuge, Leota has been the most intensively developed. Water sources for the Leota impoundments are the Green River and Pelican Lake.

Uplands

For the purposes of this document, uplands are defined as those areas that are neither riverine nor riparian.

However, on the refuge and from a management perspective, uplands are further divided into three categories: semi-desert shrubland, grasslands, and clay bluffs.

Uplands have received little attention and, therefore, habitat and wildlife information is lacking. The following discussions are in general terms. Acreage figures are estimates and may not be accurate.

Semidesert Shrubland: Approximately 2,669 acres of semi-desert shrubland cover the refuge. Greasewood, rubber and low rabbitbrush, spiny hopsage, shadscale, fourwing saltbush, winterfat, big sagebrush, bud sagebrush, black sagebrush, Indian ricegrass, needle- and-thread, sand dropseed, and non-native cheatgrass occur on this upland habitat type. This habitat also supports the state and federally threatened Uintah Basin hookless cactus. Semi-desert shrubland habitat is scattered within the boundary of the refuge, but generally occurs in the transition zone between riparian areas and the clay bluffs.

Grassland: Alkali sacaton, inland saltgrass, western wheatgrass, Great Basin wildrye, desert paintbrush, and Nelson and scarlet globemallow can be found in the 1,520 acres of grassland that occur on the refuge. This habitat, like semi-desert shrublands, is scattered within the boundary of the refuge but generally occurs above the clay bluffs on what is locally referred to as a bench.

Clay Bluffs: Little is known about the relative importance of the 1,935 acres of barren clay bluffs that occur on the refuge. These clay bluffs make up part of the geological Morrison Formation formed during the Jurassic period of the Mesozoic era. Although this upland is practically devoid of vegetation on the surface, it is believed to be rich in dinosaur artifacts.

As previously stated, less is known about upland habitats on the refuge. Before reasonable objectives for the management of this habitat can be developed, a better understanding of the existing flora and fauna is needed. This must be accomplished through baseline biological inventories, determining the potential natural communities for uplands, glean information from other scientific sources as they become available, etc.

Description of Cumulative Impacts, Environmental Trends, and Planned Actions

Environmental Trends and Planned Actions

Restoration actions through implementation of the refuge's HMP would enhance hydrologic periodicity of backwater flooding into riparian and associated wetland habitat in the Leota Bottom. This action is anticipated to increase the duration and area of wetland flooding, which would be expected to increase utilization by migratory waterbirds and entrainment of larval razorback suckers.

While the action was designed to improve nursery habitat for larval razorback sucker, it would incidentally enhance vegetative growth and subsequent habitat quality for migratory waterbirds, which could enhance habitat quality for migratory and breeding waterbirds.

Impacts on Affected Resource

Alternative A

Under the proposed action, there would be two direct impacts anticipated for habitat and vegetation. First, there would be a disturbance to upland shrub habitat related to construction of the two settling ponds and the pipeline redirecting discharge to the Green River. There is currently seasonal ponding where clay layers are located near the surface of the soil horizon, but the proposed action would construct two artificial settling ponds to allow deposition of particulates before release into the river which would create artificial wetland habitat. While this should not dramatically alter upland shrub habitat adjacent to the settling ponds, it will provide a water source and potentially, an artificial rise in groundwater levels that could provide conditions for the establishment of hydrophytic vegetative species immediately adjacent to the ponds. The construction impact at the settling pond location and the pipeline corridor would represent a permanent habitat alteration at these construction sites.

The other significant impact would come from redirecting hatchery discharge from the Leota Unit to the Green River. A continuous discharge flow of approximately 1.5 cfs has altered the composition of Leota Unit 4 by creating a permanent water habitat. This has resulted in aquatic species such as cattail forming homogenous communities around permanent open water near the outlet to Leota Unit 6. Because flow is continuous, there is no opportunity to draw down the unit, which is a necessary part of the cycle in floodplain wetlands. The proposed action would redirect flow in Leota Unit 4 and allow for drawdown and application of management practices such as prescribed fire, discing, mowing, or other disturbance intended to set back vegetative succession.

While loss of this continuous flow would eliminate permanent water in the Leota Unit which has resulted in late successional perennial emergent habitat, a slide gate will be left in the system to allow the refuge to continue to utilize discharge water to supplement fall habitat in dry years. It is desirable to return to natural hydrologic periodicity as the proposed action will allow; however, the ability to use discharge water to supplement fall habitat during dry cycles will give managers another option during dry years.

Alternative B

Under the no action alternative, there would be no impact to upland habitat adjacent to the hatchery, and no excavation of a pipeline corridor to direct discharge flow to the river. Upland shrub habitat as described would continue to be the dominant community in the area immediately adjacent to the hatchery.

Discharge would continue at an annual average rate of 1.5 cfs and semi-permanent – permanent conditions would continue in Leota Unit 4. Cattail would continue to be the dominant plant community and permanent water conditions would hamper management opportunities to set back vegetative succession.

Geology and Soils

Affected Environment

Description of Affected Environment for the Affected Resource

The Soil Survey of the Uinta Area, Utah – Parts of Daggett, Grand, and Uintah Counties, published by the U.S. Department of Agriculture (USDA) Soil Conservation Service, is the primary source of information concerning soils in the Project Area (USDA-NRCS 2003). This survey has been supplemented by additional information available on the Natural Resource Conservation Service (NRCS) soils survey website.

The development of soils is governed by many factors, including climatic conditions (e.g., the amount and timing of precipitation, temperature, and wind), the parent material that the soil is derived from, topographic position (e.g., slope, elevation, and aspect), geomorphic processes, and vegetation type and cover. Soils textures in the Project Area include stony fine sandy loam, gravelly sandy loam, fine sandy loam, very fine sandy loam, clay loam, and loamy fine sand. Badland-Rock outcrops are also present. Soils within the Project Area belong to the Badland, Green River, Greybull, Utaline, Jenrid, Ohtog, Parohtog, Shotnick, Walkup, Stygee, Tipperary, Blackston, and Turzo general soil series.

Description of Cumulative Impacts, Environmental Trends, and Planned Actions

Oil and gas development continue throughout the Uintah Basin, and several active projects are occurring on or next to areas of the refuge where the proposed action would occur. State minerals managed by the State Institutional Land Trust Administration (SITLA) are under development in state section 36 immediately adjacent to the Ouray NFH and Leota Bottom. There is potential for O&G development occurring on the bluffs above the hatchery to increase erosion and runoff through the uplands where the proposed project would occur.

Impacts on Affected Resource

Alternative A

Under the proposed action, there would be short term disturbance relative to project construction while there would be permanent conversion of soils where the settling ponds are constructed. This would be considered an irretrievable loss and may alter soil structure immediately adjacent to the project site as well. Reseeding disturbed areas with native seed would help disturbed areas return to a more natural state while inhibiting the possibility of invasive plant species occupying disturbed sites and potentially expanding into areas where these species are not currently present.

Alternative B

Under the no action alternative, there would be no changes to the structure, character, or current distribution of soils in the proposed project area.

Water Quality

Affected Environment

Description of Affected Environment for the Affected Resource

Water quality is defined by the biological, chemical, and physical characteristics of water observed in a given sample. The sample results can be compared against standards established for protection of drinking

water, aquatic organisms, and other water uses. Common indicators of water quality include: temperature, conductivity, pH, dissolved oxygen, nutrients, E. Coli, Total Dissolved Solids (TDS), metals and turbidity.

The assessment of water quality for the hatchery largely hinges on identifying and quantifying various chemical constituents within the water. This includes a broad spectrum of metals, ionic components like chloride, sulfate, and bicarbonate, along with Total Dissolved Solids (TDS). Another vital parameter is water hardness, which reflects the combined levels of calcium and magnesium in the water, expressed in milligrams per liter (mg/L) as calcium carbonate (CaCO₃). Hardness is critical as it influences the water's capacity to consume soap and its propensity to deposit mineralized residues on plumbing fixtures. Moreover, the hardness of water plays a crucial role in setting specific water quality benchmarks for trace metals.

The hatchery's current water supply is drawn from groundwater that shares a hydrological connection with the Green River, rendering its water quality largely similar to that of the river. Historical data indicate that certain segments of the Green River have been identified as not meeting the required standards for pH levels, E. coli bacteria concentrations, and selenium content. However, neither selenium nor E. Coli were detected in a recent sampling of the hatchery source water. The US Geological Survey (USGS) monitoring station near Jensen, Utah (Green River Near Jensen, UT - 09261000) plays a critical role in continuously tracking and documenting key water quality parameters including water discharge rates, pH levels, temperature, and turbidity. Intermittent samples are also collected at this location for comparison. This site is available for both tracking and comparison of water quality.

Flow rates in the Green River are subject to significant fluctuations, ranging from 3,000 cubic feet per second (cfs) to 30,000 cfs over the course of a year. Against this backdrop, the hatchery's proposed water releases of 1.5 cfs will represent a minimal fraction of the river's total flow, accounting for approximately 0.05% to 0.005%.

Description of Cumulative Impacts, Environmental Trends, and Planned Actions

Situated within the Upper Colorado Basin, the Green River is a target of a coordinated strategy aimed at safeguarding and enhancing both water quality and habitats for endangered fish species and a diverse array of other wildlife. This strategic approach involves an array of multi-agency collaborations and stakeholder initiatives that are expected to persistently influence and foster advancements in the river's water quality. Nevertheless, it's important to recognize that water quality dynamics are influenced by a complex interplay of factors including weather conditions, seasonal variations, land utilization practices, prevailing climate patterns, and the inherent characteristics of the landscape, such as soil composition and geological features.

Impacts on Affected Resource

Alternative A

Under the proposed action, 1.5 cfs of continuous flow would be discharged to the Green River from the hatchery. This flow would constitute a very small portion of the total flow (typically <0.05%) and have very similar water quality to the Green River. Therefore, minimal to no impact is anticipated within the mixing zone or the Green River. A discharge permit and quarterly testing will potentially be required, which will allow for tracking and trigger mitigation if necessary.

Alternative B

Under the no action alternative, 1.5 cfs continuous flow would continue to enter the Leota Bottom floodplain wetland. Given, that this water is similar to the other source of water to Leota Bottom (Green River), it has little impact on water quality.

Floodplains

Affected Environment

Description of Affected Environment for the Affected Resource

Floodplains are typically dry lands that are susceptible to inundation by adjacent rivers or streams. The extent of floodplain inundation depends in part on the flood magnitude. Floodplains generally contain unconsolidated sediments, often extending below the bed of the stream or river, which consists of accumulations of sand, gravel, silt, and clay formed by deposition of sediment carried by runoff from the mesa tops and canyon walls during storm and snowmelt events (USFWS 1979). These floodplains support riparian vegetation and wetlands and are often underlain by alluvial groundwater aquifers. Floodplains typically support rich ecosystems, both in quantity and diversity. Nutrient levels, primary productivity, and macro invertebrate populations are highest in the floodplain depressions following a flood event. The Green River floodplains also serve as important nursery and forage habitat for the endangered razorback sucker and bonytail chub.

Currently, floodplains are protected by Executive Order 11988, which requires that all Federal agencies take action to reduce the risk of flood loss; minimize the impact of floods on human safety, health, and welfare; and restore and preserve the natural and beneficial values served by floodplains.

Description of Cumulative Impacts, Environmental Trends, and Planned Actions

Efforts are being coordinated through the Colorado River Endangered Species Recovery Program and other agencies to mimic natural river flows that may aid in the recovery of fish species that are on the brink of extinction (e.g. razorback sucker, bonytail chub). These efforts include the recent restoration of the Stirrup wetland (BLM), located immediately upstream from the proposed project area, as well as proposed efforts to restore and rehabilitate the Leota and Woods (Old Charley) Bottom on Ouray NWR.

Impacts on Affected Resource

Alternative A

The vast majority of the construction area is located outside of the 100-yr floodplain with the exception of a small segment at the end of the proposed pipeline. Construction impact in this area would be minimal with disturbed sites restored to native vegetation to avoid invasive species concerns. The primary impact to floodplains through the proposed project would be the loss of 1.5 cfs continuous flow into the Leota bottom. This flow is artificial and alters the natural hydrologic periodicity and thus, character of adjacent floodplain wetlands in Leota Bottom. Artificial flow has resulted in homogenous establishment of perennial species such as cattail and the permanent water has resulted in colonization by beavers which would likely not occur in the absence of this input. While a slidegate would remain to allow use of discharge flow to supplement migration habitat for migratory waterbirds during fall, the unit would be allowed to draw down during dry cycles which would result in a more naturally managed floodplain wetland.

Alternative B

Under the no action alternative, 1.5 cfs continuous flow would continue to enter the Leota Bottom floodplain wetland. Management constraints such as lack of drawdown to set back vegetative succession and beaver impacts would continue and would detract from management of a more natural floodplain wetland basin.

Visitor Use and Experience

Affected Environment

Description of Affected Environment for the Affected Resource

No accurate counts of refuge or hatchery visitors are available, but current estimates are 10,000 visitors per year. Visitation includes school tours and programs, teacher workshops, senior citizen tours, boy scouts, and hunters and anglers. Most public use occurs from April through November.

Wildlife observation is the major public use activity on the refuge. The refuge's 12-mile auto tour route is enjoyed by many throughout the year. From spring wildflowers and broods of ducklings to large numbers of mule deer in the fall and winter, viewers are drawn from the local communities and throughout the area. Bird watching is rapidly becoming a popular activity on the refuge.

Additional wildlife-dependent public uses include wildlife photography, interpretation, and environmental education. Compatible activities that support some or all of these uses also include canoeing and rafting on the Green River; sightseeing, bicycling, and horseback riding on designated roads; and hiking.

Current public-use facilities include an informational kiosk with a nearby picnic table and outhouses, an auto tour route with observation tower, a visitor center, and parking areas for hunters, anglers, observers, and photographers. The kiosk contains general refuge information, a changeable panel, a cork board for posting hunting regulations, fishing regulations, and refuge hours, and leaflet dispensers. The tour route displays and information leaflet need updating to reflect changes in the landscape and management practices. Some informational and directional signs on the refuge have recently been updated.

Description of Cumulative Impacts, Environmental Trends, and Planned Actions

The refuge worked with the Federal Highways Administration in 2020 to develop an auto tour loop improvement project. This project provided additional pullout areas, improved the surface, and provided parking areas for visitors to use during flood periods when the refuge would periodically be required to close the loop to the public for safety reasons. The project was completed in November 2020 and provides a better cross-seasonal location for wildlife observation and photography as well as providing enhance access to Ouray NFH.

Impacts on Affected Resource

Alternative A

Construction of the proposed raceway would be anticipated to enhance and expand visitor opportunities to view and learn about endangered fish propagation at Ouray NFH. This would provide an additional, outdoor visitor experience immediately adjacent to the hatchery and would allow for future interpretive opportunities.

Elimination of continuous hatchery discharge flow to the wetlands could reduce observation and hunting opportunities in Leota marsh during dry years over what is occurring at present. This loss is anticipated to be offset by the enhanced quality of wetland habitat through simulation of natural hydrology in the wetlands. During extreme dry conditions, a slidegate has been retained in the rearing pond outflow so that if desired, fall habitat could be flooded to offset the loss of area for wildlife observation and waterfowl hunting during fall.

Alternative B

Without construction of the raceway, there would be no additional visitor opportunities at the hatchery. Continuous discharge flow would be routed to Leota Unit 4 resulting in semipermanent wetland habitat

throughout the year. This would result in continued use of this unit for wildlife observation and waterfowl hunting but would detract from the quality of habitat provided.

Cultural Resources and Subsistence

Affected Environment

Description of Affected Environment for the Affected Resource

Limited cultural resource studies have been conducted on lands included in the refuge. Information on the cultural history of the Uintah Basin is sketchy and difficult to compile. Much of the refuge was disturbed many years ago during construction of dikes, levees, and roads, so few intact sites remain to be surveyed. In recent years, seven project-specific cultural and paleontological resource surveys and inventories were conducted in Brennan Basin, the Ouray L-9/10 borrow site, for a powerline for the refuge, the Pelican Lake Pipeline, and the Ouray National Fish Hatchery and water pipeline sites. Five prehistoric sites (one of which may be the site previously identified) and four isolated finds of prehistoric material (mostly lithic acquisition materials) were located. Reports of these surveys are on file at the refuge office.

In 1998, three project sites for Leota Bottom levee and spillway construction were surveyed with no materials found. A thorough inventory of potential cultural and paleontological resource sites is needed for the majority of refuge lands. Other than an interpretive sign on Leota Bluff describing explorations by John Wesley Powell, no cultural or paleontology exhibits or materials have been developed for the refuge. The earliest archaeological work done in the refuge vicinity was by John Wesley Powell in 1869 and 1871. No prehistoric sites were reported by Powell from his explorations along the Green River through the refuge. In the early 1940s, Harvard University collected a large sample of fossil mammal specimens dating to the Late Eocene (38 to 56 million years ago) Uinta Formation from a site they called Leota Quarry. It has been determined that this site falls within the boundaries of the refuge.

The University of Utah Department of Anthropology conducted a survey of the proposed refuge in 1961. One surface site on the bank of the Green River in Leota Bottom and scattered artifacts on the river terraces were identified. The researchers determined that it was not necessary to salvage the little prehistorical material on refuge lands. In 1978, the Smithsonian Institute also conducted a paleontological study on this site. Several skulls of small sheep-like artiodactyls were found. Judging from the quantity as well as the quality of specimens, they felt that additional collecting is definitely warranted, but none has been done to date.

Environmental Trends and Planned Actions

Oil and gas development on State section 36 (which the refuge leases from SITLA) could result in further disturbance of cultural resources next to Leota Bottom and in upland areas where pronghorn hunting would occur. The companies working on this development are working with the State of Utah (Department of Oil, Gas, and Minerals; DOGM) to complete compliance documents to ensure adequate cultural resource protection. The refuge is not involved in the environmental compliance associated with mineral extraction activities on state-owned properties. Because the proposed action area would not occur on areas where known cultural resource sites are located, the proposed action is anticipated to have only negligible impacts on cultural resources. A Section 106, Request for Cultural Resources Clearance (RCRC) is being prepared and submitted concurrent with this draft EA.

Description of Environmental Trends and Planned Actions

Impacts on Affected Resource

Alternative A

At present, the only known cultural site is located upstream of the project area and would not be impacted by the proposed construction activities. To ensure that there are no undocumented sites within the project area, a section 106 request for cultural clearance has been submitted. Effects to cultural and paleontological resources are not anticipated due to construction of the proposed alternative.

Alternative B

No new cultural or paleontological resources would be identified or documented.

Refuge Management and Operations

Land Use on the Refuge

Affected Environment

Description of Affected Environment for the Affected Resource

The present acreage of the Ouray NWR totals 11,987. Refuge acreage is made up of 2,692 acres of leased Ute Tribal lands, 1,153 acres of land leased from the State of Utah, 3,110 acres transferred from the Bureau of Land Management, and 5,032 acres of land purchased in fee title. The Executive Order boundary of the refuge includes 13,984 acres. It is the desire of the Service to purchase all lands within the Executive Order boundary, including all leased lands, when they become available from willing sellers.

No refuge lands meet Wilderness criteria (at least 5,000 contiguous, roadless acres), so Wilderness has not been designated. The Green River in the region of the refuge is not currently being considered for Wild and Scenic River designation because it does not meet two basic designation criteria. The river is not free-flowing, and the majority is altered by protective levees and diking.

Fire management on Ouray NWR presently consists of prescribed fire, hazardous fuels reduction, and wildfire suppression preparedness. The refuge is a partner in the Uintah Basin Interagency Fire Center in Vernal, for wildland and prescribed fire activities. Prescribed fire at Ouray has been primarily used as a vegetation management tool in wetlands to control cattail and other emergent vegetation. Fire was also used experimentally to control non-native plants such as perennial pepperweed in upland areas with mixed results. The challenge in utilizing prescribed fire to manage refuge wetlands comes in preventing the spread of the fire into neighboring cottonwood and willow stands which results in injury or mortality of many trees. Fire damage and windthrow have contributed to the degradation of the refuge's riparian corridor. Prescribed burning of wetlands next to the riparian corridor is an appropriate tool used to manage this ecotype because fire is a naturally occurring event for these plant communities. The use of fire requires a thorough understanding of fire behavior and use of wide fire breaks to protect sensitive habitats.

Description of Environmental Trends and Planned Actions

There are no planned land use actions where the proposed action would have any positive or negative effects.

Impacts on Affected Resource

Alternative A

Under the proposed action, it would be possible to draw down the entire Leota unit and conduct prescribed burns to set back vegetative succession. This would enhance the refuges capability to control invasive species in the Leota unit as well as optimally manage for simulation of natural hydraulic function. It is possible that the new visitor opportunity at the hatchery could attract more visitors and increase maintenance needs on the refuge hatchery road. It is unknown whether this impact would be more than negligible.

Alternative B

Under the no action alternative, the refuge would not have the capability to completely draw down Leota Unit 4 which would hamper the ability to implement prescribed fire. Invasive species control on and

adjacent to Leota 4 would remain limited and damage to refuge infrastructure would continue. Road utilization would remain at current levels and no additional road maintenance needs would be anticipated.

Administration

Affected Environment

Description of Affected Environment for the Affected Resource

There are currently four personnel working on the Ouray NFH, including the hatchery manager, fisheries biologist, biotech, and maintenance worker.

Current Personnel

- Hatchery Manager, GS-12
- Fisheries Biologist, GS-9
- Biotech, GS-7
- Maintenance Worker WG-8

There are currently six personnel working on the Ouray NWR, including the project leader, refuge manager, maintenance worker, biotech, administrative support assistant, and fish and wildlife officer (FWO).

Current Personnel

- Project Leader, GS-13
- Refuge Manager, GS-12
- Maintenance Worker, WG-8
- Biotech, GS-7 (trm)
- Administrative Support Assistant, GS-7
- Fish and Wildlife Officer, GS-9

Description of Cumulative Impacts, Environmental Trends, and Planned Actions

There are no planned administrative actions where the proposed action would have any positive or negative effects.

Impacts on Affected Resource

Alternative A

Under the proposed action, there would be a minimal increase in hatchery workload to operate the new raceway and to maintain the settling ponds. Discharge water contains particulates which settle out of suspension and need to be periodically removed from the settling ponds.

There would be an anticipated decrease in workload for refuge personnel by rerouting discharge water to the Green river. At present, the existing discharge canal to Leota Unit 4 must be cleaned annually and water control structures impacted by beaver activity must be cleaned frequently for effective water distribution. These activities would require less labor following project completion.

There could be a minimal increase in road maintenance activity if more visitors came to the hatchery to view propagation activities, but this would be anticipated to be minimal. Overall, there would be a minor increase in hatchery staff workload and decrease in time required to maintain the existing discharge canal, clean water control structures, and repair beaver damage to levees in the Leota unit.

Alternative B

Under the no action alternative, the Ouray National Fish Hatchery would continue as in years past propagating and stocking razorback sucks and bonytail for the Upper Colorado River Endanger Fish Recovery Program. The hatchery would also continue holding backup brood of humpback chub and razorback suckers. Discharge would continue at an annual average rate of 1.5 cfs and semi-permanent – permanent conditions would continue in Leota Unit 4. The hatchery will not have the needed infrastructure in place for expansion if needs arise for additional struggling species in the future.

Refuge personnel would continue maintaining the discharge canal, Leota Unit water control structures, and repairing beaver damage to interior levees. These activities can range from several days to a few weeks annually, for the refuge manager to assess the level of damage and for the maintenance worker to effect operations.

Socioeconomics

Local and Regional Economies

Affected Environment

Description of Affected Environment for the Affected Resource

The economy of Uintah County, Utah, centers around the extraction of natural resources including oil and gas, phosphate, and gilsonite, which employs approximately 20 percent of the county population. Agriculture (primarily related to cattle and sheep production but including forestry, fishing, and hunting), construction, and retail round out the primary sources of revenue. As of 2010, there were approximately 33,000 residents, with 77 percent under the age of 44.

A survey of refuge visitor contributions to local economies (Caudill and Carver 2019) suggests that visitors (predominately hunters) annually contribute about \$894,000 to the local economy near Bear River Migratory Bird Refuge. This is primarily from resident hunters (\$596,000), which would be similar at Ouray NWR based on use demographics. Total visitor expenditures account for \$4.1 million annually when total economic output, jobs, and state and local tax revenue are considered. There are no specific estimates for Ouray NWR, but when compared to the estimated 158,000 recreational visits at Bear River Migratory Bird Refuge, this would equate to \$265,800 contributed to the local economy annually.

Description of Cumulative Impacts, Environmental Trends, and Planned Actions

The local economy is highly dependent on oil and gas, and further growth and expansion would be highly correlated with expansion of this industry. Recently, county leaders have explored the possibility of constructing a railroad capable of transporting oil to refineries located on the Wasatch Front, Utah.

Impacts on Affected Resource

Alternative A

Under the proposed action, there would be two anticipated benefits to the local economy. First, project construction would be offered to local contractors through a competitive bidding process. Construction costs are significant and provide a minimal input to the local economy through housing and meals for construction workers completing the project. If a local construction firm was awarded the bid, there would be a direct input to the local economy.

Additionally, it is possible that hatchery and refuge visitation will increase through development of the proposed project. Opportunities for observation and interpretation of endangered fish recovery, as well as wildlife observation and waterfowl hunting would similarly provide input to the local economy through visitor lodging, meal, and fuel costs to visit the hatchery and refuge. There would be no anticipated negative impacts to the local or regional economy through implementation of the proposed project.

Alternative B

Hatchery and refuge visitation would remain at current levels under the no action level resulting in no net benefit to the local or regional economy. Current visitation is approximately 10,000 visitors annually.

Environmental Justice

Affected Environment

Description of Affected Environment for the Affected Resource

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, requires all federal agencies to incorporate environmental justice into their missions by identifying and addressing disproportionately high or adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities.

The Ute Tribe owns approximately 1.2 million acres across 7 counties, primarily in the Uinta basin, and the refuge leases approximately 4,000 acres from the tribe, primarily located on the east side of the Green River. The tribe administers its own management and public use programs and provides permits as well as administrative and law enforcement support on lands it manages.

Description of Cumulative Impacts, Environmental Trends, and Planned Actions

There would be no anticipated cumulative effects or other planned actions associated with the proposed action.

Impacts on Affected Resource

Alternative A

There would be no anticipated impacts to minority or low-income populations associated with the proposed action. To ensure fair distribution of awarded contracts, bid packages will be sent to the Ute Tribal Business Committee for consideration by tribal owned contracting firms.

Alternative B

The refuge would continue leasing approximately 4000 acres from the Ute tribe under a 10-year lease agreement.

Monitoring

Water quality of hatchery discharge water will continue to be monitored to ensure that discharge outflow remains above baseline TDS readings for the Green river at Jensen. Disturbed areas will be closely monitored to ensure native vegetation becomes established to prevent further spread of invasive species in the proposed project area. A survey will be conducted to ensure there are no yellow-billed cuckoo nesting in the project area prior to construction. If nesting cuckoo are documented, construction will cease until the pair vacates the area.

The Ouray National Fish Hatchery will receive and maintain a Water Discharge Permit from the State of Utah, Department of Environmental Quality, Division of Water Quality. The hatchery will comply and

follow the discharge monitoring requirements outlined in the permit. Water samples will be sent in as requested or outlined in the permit to the following address.

Department of Environmental Quality
Division of Water Quality
PO Box 144870
Salt Lake City, Utah 84114-4870

The hatchery currently monitors daily for Alkalinity, Ammonia, Nitrite, pH, Temperature, and Dissolved Oxygen. Total dissolved solids are monitored during fish treatments when salt is used during disease outbreaks or high stress events. Daily monitoring information will be sent in upon request.

Summary of Analysis

Alternative A – Construct Raceway and Settling Basin – Proposed Action Alternative

As described above, the proposed action would have multiple benefits for the human environment. Besides enhancing opportunities for endangered fish recovery, the proposed action would also allow for beneficial water management in floodplain wetlands by allowing for simulating the natural hydrology. While this may have negative impacts to aquatic mammals, optimal management is anticipated to enhance habitat quality for both migratory waterbirds and larval razorback sucker that rely on floodplain wetlands for nursery habitat. Visitor Services would be enhanced through enhanced opportunities to observe endangered fish propagation at the hatchery and enhance wetland conditions for observation and hunting. The potential increase in visitation would be an expected boost to the local economy along with costs associated with constructing the project.

This alternative meets the purpose and needs of the Service as described above because it would enhance opportunities for endangered fish propagation and recovery while enhancing floodplain wetland habitat through restoration of the natural hydrology.

Alternative B – No Action Alternative

As described above, operations would continue as they are at present. There would be no additional capacity for endangered fish propagation and hatchery discharge would continue to flow into the refuges Leota Unit at a rate of 1.5 cfs continuous flow. Habitat in the Leota unit would remain late successional and opportunities for management actions to set back vegetative succession would remain limited. Visitation would remain at the current level (approximately 10, visitors annually) because no new opportunities for visitors to observe endangered fish recovery actions would be provided.

List of Sources, Agencies and Persons Consulted

Ute Tribal Business Committee

Utah Division of Wildlife Resources

Uinta County Commission

U.S. Bureau of Reclamation

Ut Department of Water Quality

List of Preparers

Zane Olsen – Project Leader – Ouray Randlett and Jones Hole NFH

Rob Bundy – Project Leader – Lower Green River NWR Complex

State Coordination

A copy of this EA was sent to the UT Division of Wildlife Resources for comment on 5/17/2024.

Nicole Neilson: nicolenielson@utah.gov

Tom Platero: tdplaters@utah.gov

Tribal Consultation

A copy of this EA was sent to the Ute Tribe Business Committee for comment on 5/17/2024.

Bruce Pageets: bpargeets@utetribe.com

Public Outreach

This draft EA was available for public review at the Ouray NWR office, Ouray NFH office, and on the Ouray NWR Ouray NFH website. The review started on May 20th, 2024, and commenced for 30 days.

Determination

This section will be filled out upon completion of the public comment period and at the time of finalization of the Environmental Assessment.

- The Service’s action will not result in a significant impact on the quality of the human environment. See the attached “**Finding of No Significant Impact**”.
- The Service’s action **may significantly affect** the quality of the human environment and the Service will prepare an Environmental Impact Statement.

Signatures

Submitted By: Zane Olsen

Project Leader Signature: *Zane C Olsen*

Date: 5/9/2024

Hatchery Supervisor Signature: *Zane C Olsen*

Date: 5/9/2024

Approved:

Acting Deputy Assistant Regional Director

U.S. Fish and Wildlife Service

Fish and Aquatic Conservation

Mountain Prairie Region

Date: 5/17/2024

References

- Caudill, James and Erin Carver. 2019. Banking on Nature 2017: The Economic Contributions of National Wildlife Refuge Recreational Visitation to Local Communities. U.S. Fish and Wildlife Service, Falls Church, Virginia.
- United States Department of Agriculture, Natural Resource Conservation Center (USDA-NRCS). 2003. Soil Survey of Uinta Area, Utah – Parts of Daggett, Grand, and Uintah Counties. (USDA-NRCS 2014)
- United States Fish and Wildlife Service (USFWS). 1979. Classification of Wetlands and Deepwater Habitats of the United States, FWS/OBS-79/31. Authored by L.M. Cowardin, V. Carter, F.C. Golet, E.T. LaRoe. pp. 131.
- _____. 2000. Ouray National Wildlife Refuge Comprehensive Conservation Plan. Prepared by U.S. Fish and Wildlife Service, Ouray National Wildlife Refuge, Randlett, Utah. July 2000. pp. 125.
- _____. 2013a. Status Memorandum from Kevin McAbee to Chris Dippel regarding Thurston Energy’s Proposed Development of Four Oil and Gas Wells at Ouray National Wildlife Refuge (Ouray NWR). U.S. Department of the Interior, Fish and Wildlife Service. Denver, Colorado. June 13, 2013.
- _____. 2013b. FY 2012 Annual Project Report, Colorado River Recovery Program, Project Number: 29B. Operation and Maintenance of Ouray National Fish Hatchery. Principal Investigators: Karl “Dave” Schnoor, Project Leader and Matt Fry, Fish Biologist. U.S. Department of the Interior, Fish and Wildlife Service. Vernal, Utah. August.
- _____. 2015 as amended 2019. Final Environmental Assessment & Biological Assessment for Thurston Energy, LLC Proposed Ouray National Wildlife Refuge 2-Well Development Program in Uintah County, Utah. 207 pp. & appendices.
- _____. 2021. Lower Green River National Wildlife Complex – Habitat Management Plan. 34pp

Appendix A

This Appendix lists all applicable statutes, regulations, and executive orders not otherwise addressed in this EA.

Cultural Resources

American Indian Religious Freedom Act, as amended, 42 U.S.C. 1996 - 1996a; 43 CFR Part 7

Antiquities Act of 1906, 16 U.S.C. 431-433; 43 CFR Part 3

Archaeological Resources Protection Act of 1979, 16 U.S.C. 470aa-470mm; 18 CFR Part 1312; 32 CFR Part 229; 36 CFR Part 296; 43 CFR Part 7

National Historic Preservation Act of 1966, as amended, 16 U.S.C. 470-470x-6; 36 CFR Parts 60, 63, 78, 79, 800, 801, and 810

Paleontological Resources Protection Act, 16 U.S.C. 470aaa-470aaa-11

Native American Graves Protection and Repatriation Act, 25 U.S.C. 3001-3013; 43 CFR Part 10

Executive Order 11593 – Protection and Enhancement of the Cultural Environment, 36 Fed. Reg. 8921 (1971)

Executive Order 13007 – Indian Sacred Sites, 61 Fed. Reg. 26771 (1996)

Fish and Wildlife

Bald and Golden Eagle Protection Act, as amended, 16 U.S.C. 668-668c, 50 CFR 22

Endangered Species Act of 1973, as amended, 16 U.S.C. 1531-1544; 36 CFR Part 13; 50 CFR Parts 10, 17, 23, 81, 217, 222, 225, 402, 450

Fish and Wildlife Act of 1956, 16 U.S.C. 742a-m

Lacey Act, as amended, 16 U.S.C. 3371 et seq.; 15 CFR Parts 10, 11, 12, 14, 300, and 904

Migratory Bird Treaty Act, as amended, 16 U.S.C. 703-712; 50 CFR Parts 10, 12, 20, and 21

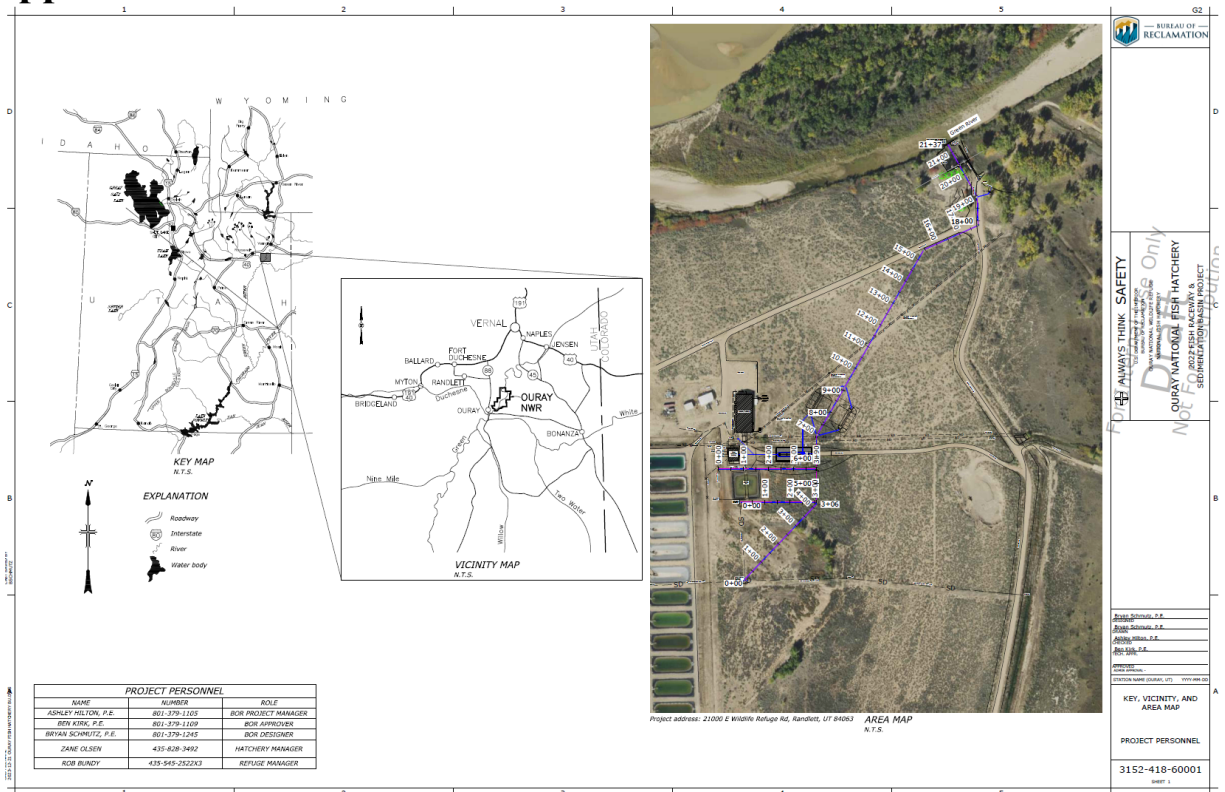
Executive Order 13186 – Responsibilities of Federal Agencies to Protect Migratory Birds, 66 Fed. Reg. 3853 (2001)

Natural Resources

Clean Air Act, as amended, 42 U.S.C. 7401-7671q; 40 CFR Parts 23, 50, 51, 52, 58, 60, 61, 82, and 93; 48 CFR Part 23

Wild and Scenic Rivers Act, 16 U.S.C. 1271 et seq.

Appendix B



Appendix C

Engineering Drawings for Raceway and Settling Pond Improvements

- 65% Drawings Included as Attachments

Appendix D

Biological Assessment for Section 7 Consultation

- Final Section 7 Consultation Included as Attachments