Compatibility Determination

Use: The Stocking and Rearing of Walleye in Waterfowl Production Area (WPA) Wetlands and Shallow Lakes

Refuge Name: Big Stone Wetland Management District (WMD)

Establishing and Acquisition Authority:
Waterfowl Production Areas (WPAs) - The Migratory Bird Hunting and Conservation Stamp Act, March 16, 1934, (16 U.S.C. Sec. 718-718h, 48 Stat. 452) as amended August 1, 1958, (P.L. 85-585; 72 Stat. 486) for acquisition of "Waterfowl Production Areas"; the Wetlands Loan Act, October 4, 1961, as amended (16 U.S.C. 715k-3 - 715k-5, Stat. 813), funds appropriated under the Wetlands Loan Act are merged with duck stamp receipts in the fund and appropriated to the Secretary for the acquisition of migratory bird refuges under provisions of the Migratory Bird Conservation Act, February 18, 1929, (16 U.S.C. Sec. 715, 715d - 715r), as amended.

FmHA fee title transfer properties - Consolidated Farm and Rural Development Act 7 U.S.C. 2002.

Fish and Wildlife Act of 1956 (16 U.S.C. § 742(a)(4)) and (16 U.S.C. § 742(b)(1)); Emergency Wetlands Resources Act of 1986 (16 U.S.C. § 3901(b), 100 Stat. 3583).

Refuge Purposes:
Waterfowl Production Areas (WPAs) - "...as Waterfowl Production Areas" subject to "...all of the provisions of such Act [Migratory Bird Conservation Act]....except the inviolate sanctuary provisions..." and "...for any other management purpose, for migratory birds."

FmHA fee title transfer properties - "…for conservation purposes..."

National Wildlife Refuge System (NWRS) Mission:
The Mission of the NWRS 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.

Description of Use:
The use of selected WPA wetland basins by the Minnesota Department of Natural Resources (MNDNR) for the purpose of rearing walleye fry. No other species or size class of walleye will be stocked in WMD wetlands and shallow lakes. Walleye fry are stocked into "closed" wetland basins for the purpose of raising these fish to an adequate size for stocking into area waters as part of the MNDNR mission.

Is the use a proposed new use or an existing use?
This is not a current use on the Big Stone WMD.

Is the use a priority public use?
No, the stocking and/or rearing of walleye fry is not a priority public use of the NWRS.

Where would the use be conducted?
Wetlands will be selected based on whether or not they are "closed" sites that have poor water quality due to an abundance of fathead minnows.

When would the use be conducted?
This use most often occurs from April through ice freeze up in October or November each year. Care will be taken so this use does not conflict with priority refuge uses.

How would the use be conducted?
Walleye fry are reared at MNDNR Fisheries facilities. Fry are stocked into rearing ponds from late April through early May at the rate of approximately 5,000 fry per acre of wetland. Stocking rates can vary from as few as 2,000 fry per acre up to 10,000 fry per acre, depending on specific objectives and rearing pond conditions. Most often, stocking rates are in the 4,000 to 5,000 fry per acre range.

Access to the wetlands for stocking of fry may be by highway vehicles (pickup truck), ATVs, and/or foot depending on local conditions at the time of stocking. Fry grow through the summer in the rearing pond and are collected for stocking into area lakes beginning in mid-September and continuing until freeze-up. Fall fish collection is by trap net and boat access to the rearing pond is required. Boats required for this activity are of sufficient size to require being trailered and towed by a highway vehicle (pickup truck).

Why is this use being proposed?
To provide MNDNR sites for raising walleye fry while improving water quality on WMD wetlands. The sites with poor water quality and high minnow populations are desirable to the MNDNR as the walleye grow very fast. This use is also desirable to the WMD as the water quality generally improves after the minnow population is reduced. This leads to the potential for better food resource availability for waterfowl and other migratory birds. This is a valuable tool for improving wildlife habitat that WMD resources alone cannot accomplish.

Availability of Resources:

What resources are needed to properly and safely administer use?
A small quantity of staff time seldom exceeding a couple days of work for a staff member is involved in compiling our list of wetlands that meet the poor water quality criteria and meeting with MNDNR annually about their plans for the coming year and results from the previous year. Time is also invested in the development and monitoring of the Special Use Permit (SUP) for this use.

Are existing resources adequate to properly and safely administer the use?
Yes, existing resources are adequate. A small amount of time is necessary to implement this use but no additional fiscal resources are needed to administer this use. The needed staff time is already committed and available. Most of the needed work to prepare for this use would be done as part of routine management duties.

Anticipated Impacts of the Use:

How does the stocking and rearing of walleye in WPA wetlands and shallow lakes affect WMD purposes and the NWRS mission?
The stocking and rearing of walleye in WPA wetlands has an overall positive effect on the purposes of the WMD and the NWRS mission by improving water quality and in turn improving habitat for waterfowl and other migratory species.

How does the stocking and rearing of walleye in WPA wetlands and shallow lakes affect fish, wildlife, plants, and their habitats; and the biological integrity, diversity, and environmental health of the WMD?
The use of walleye stocking and rearing will only be used as a management tool that allows the WMD staff to meet habitat goals and objectives for wetland and shallow lake water quality. The use should not be permitted if benefits to water quality and habitat are not expected or research is not being completed. Research on this technique continues, so in instances where the appropriate scientific process and monitoring are being used to evaluate this technique, it may be permitted where it will do no harm to existing resources.

Direct impacts as a result of this activity could include displacement of birds and other wildlife from localized areas due to disturbance, matting or destruction of vegetation due to access, and the capture of non-target aquatic species during the fall collection period.

During stocking and collecting phases of the activity, the human presence will likely temporarily disturb and displace various species of birds and other wildlife that are using the immediate vicinity at the time of activity. These impacts will be short in duration, infrequent, and confined to a limited geographic area.

Access for the purpose of stocking fry or collecting fingerlings for stocking could impact vegetation by rutting soils, matting vegetation, creating weed seed beds, and increasing sedimentation due to runoff in nearby wetlands. These impacts can be largely avoided by using appropriate means of access and carefully selecting access points with sensitivity to soils and plant communities. Temporary matting of vegetation due to compression by wheeled-vehicles will be limited in scope and temporary in nature.

During the collection period, trap nets are used to catch the walleye fingerlings. This activity will result in the capture of non-target fish and possibly other species (i.e. turtles). The impacts of catching non-target species are easily mitigated and the capture of many non-target fish species will, in fact, be beneficial.

Indirect impacts resulting from this activity may occur as a result of the effects on aquatic invertebrate populations brought about by the walleye fry. In their early life stage, fry will feed on aquatic invertebrates and may directly compete with duck broods for food sources. This impact is temporary as fry quickly become virtually entirely piscivorous. At this stage, impacts to the invertebrate populations can be positive, as young walleye reduce the populations of fathead minnows and other undesirable fish species, resulting in increases in populations of

aquatic invertebrates, water clarity, and aquatic plants, thus providing habitat and food for waterfowl and other migratory birds.

Public Review and Comment:
This compatibility determination is part of the 10-year review for Compatibility Determinations in the Big Stone WMD Comprehensive Conservation Plan. Public notification and review will include a comment period from 13 February 2014 through 7 March 2014. Comments received and agency responses will be included in the final version of this Compatibility Determination.

Determination:

____ Use is Not Compatible

__X__ Use is Compatible with the Following Stipulations

Stipulations Necessary to Ensure Compatibility:

1. A Special Use Permit (SUP) must be obtained annually from the Project Leader and the permittee must comply with all stipulations therein.

2. The stocking of walleye fry at adequate rates ~ 5,000 fry per acre is necessary to implement this technique successfully. To minimize collateral predation on invertebrates by walleye fingerlings, as many walleye fingerlings as possible should be removed during fall collection. Walleye fry should not be stocked in wetlands with intermittent surface water connections or in closed basins with high water quality and good plant and invertebrate resources. Efforts should be made to select sites that are isolated from other surface waters to ensure longevity of the treatment is not compromised by flooding or reintroduction of fish during flooding conditions.

3. This determination applies only to the stocking and rearing of walleye fry (*Sander vitreus*). No other species or size classes of fish are authorized, except for research purposes.

4. Vehicle access for the purpose of launching/retrieving boats must be located to minimize soil disturbance. Location of access points must be coordinated with WMD staff.

Justification:
All impacts are expected to be temporary and limited in scope to the specific sites where the activity is taking place. Research has shown that walleye fry can reduce the number of fathead minnows in a basin, thus this use provides us with a tool to help reduce fathead numbers and improve water quality. Research shows that walleye fry stocking may be useful to suppress fathead minnow populations and improve habitat quality in Minnesota wetlands, at least over short time periods. It is not a one size fits all solution to the problem of invasive fish in wetlands, but it is another tool to help us improve habitat. It is a tool that we don't have at our discretion, so working in partnership with MNDNR is compatible with the purposes of our WMD and the NWRS.

Signature: Project Leader _____
(Signature and Date)

Concurrence: Regional Chief _____
(Signature and Date)

Mandatory 10- or 15-year Re-Evaluation Date: 2024