



The YVAS Mission "Building on the tradition of special interest in birds, Yellowstone Valley Audubon Society is organized to promote enjoyment and protection of the natural environment through education, activism, and conservation of bird habitat."
PO Box 1075, Billings MT 59103 www.yvaudubon.org

MEMORANDUM

From: [3/19/21 Note: "From:" Yellowstone Valley Audubon Society and National Audubon Society representatives, names redacted]
Date: January 22, 2021
Subject: Osprey and other piscivorous bird management permits and exterminations
To: [3/19/21 Note "To:" MT Fish Wildlife and Parks and US Fish and Wildlife Service representatives, names redacted]

Yellowstone Valley Audubon Society/YVAS and National Audubon Society/NAS submit this follow-up to our ongoing discussions about killing of Osprey (and other piscivorous birds) by MT Fish Wildlife and Parks/MFWP Miles City fish hatchery. We are also expressing concerns about MFWP fish hatcheries depredation permits, and the US Fish and Wildlife Service/USFWS depredation permitting process.

YVAS sent an October 27, 2020 Memorandum to the group and received a couple short replies to that and more extensive but limited replies from [3/19/21 Note: Names redacted] on November 10 and November 18, 2020.

Some of the YVAS requests and points made in the 10/27/20 Memo have been addressed by [3/19/21 Note: Names redacted] correspondence. Some have not. Some of the information he sent, and a lack of closure of other important points in the Memo by the government representatives, prompts the following reiteration of points in that YVAS 10/27/20 Memo:

Specific Requests and Points (written responses please):

- *A copy of any recommendations from the USDA Wildlife Services about the MFWP application to the USFWS for the Federal Migratory Bird Depredation Permit issued to Miles City Fish Hatchery.*
- *Establish an appropriate team to seek mitigation ideas and current, successful procedures emphasizing but not limited to non-lethal methods to better address and resolve Osprey and other piscivorous bird management problems.*

The team to consist of members from MFWP Hatcheries and Non-Game and Wildlife staff and similarly from USFWS staff, together with academic and other experts, and at least provisionally to include YVAS and NAS representatives. Ideas and techniques to be evaluated and implemented by consensus of the group.

"Ideas" and techniques will not be summarily dismissed by MFWP Fish Hatchery/Fisheries Division alone and will not be primarily based on monetary matters nor on introduced fish valuation over piscivorous birds.

- *As "Permanent fixes at Miles City are unlikely to occur in 2021" (MFWP 8/20/20 document) then no killing of Osprey should occur at least until other mitigating measures are evaluated, tested and fully implemented.*

- *Re-vetting of the Federal Migratory Bird Depredation Permit issued to MFWP Fisheries Division and interaction of that process and finding with any MFWP Wildlife Division Scientific Collector's permit.*
- *Publication about this situation and outcomes be presented in scientific journals and in common literature (e.g. MFWP "Montana Outdoors Magazine").*

General Comments:

- *The Osprey killed by MFWP Fish Hatchery [3/15/21 insert: 8 Osprey shot by MFWP in 3 years] probably formed the total breeding population of Osprey at the eastern limit in Montana's Yellowstone River basin;*
- *Non-lethal methods to "minimize conflicts" with Osprey tried by the MFWP Fish Hatchery have not adequately demonstrated failure or success;*
- *Re-evaluation and strengthening of state and federal agency protections of migratory birds, specifically piscivorous bird species is certainly recommended;*
- *Policies for protections of piscivorous bird species with higher priority than that for introduced fish and monetary matters should be reevaluated and improved;*
- *Advanced and effective communication within and between MFWP and USFWS is desirable;*
- *Improved forthrightness by the MFWP Fisheries Division within and between MFWP and USFWS is desirable.*

Requests and Points additional to our YVAS 10/27/20 Memo:

- Managing Osprey and other piscivorous birds with minimal impact to the birds is the legitimate responsibility of USFWS and their permittee, as well as a responsibility of MFWP.
- Overseeing these permits, processes and responsibilities by non-governmental organizations and citizens is also legitimate. In the case of MFWP fish hatcheries killing of piscivorous birds, YVAS and NAS involvement in all this is seemingly critical to the birds and their ecology.
- Male Ospreys will forage 20 miles from their nest searching for fish for the incubating female and after the eggs hatch, to feed the young nestlings. If one Osprey is killed, the nestlings likely will die from lack of food and protection. If the nestlings have fledged, killing one or more adults can also result in the death of fledglings. Fledglings are dependent on adults for learning how to fish for themselves and for other parental assistance until they can fend for themselves.
- We have not received and hereby request a copy of the 2019 Depredation Permit issued to MFWP by USFWS.
- We request a copy of the 2020 Depredation Report to be filed by MFWP as soon as that is available.
- The Depredation Report for 2018 shows that 2 ospreys were taken. It has been reported previously by MFWP Hatchery Chief ([3/19/21 Note: Names redacted]) that only 1 osprey was taken in 2018. Moreover, the Depredation Report for 2018 shows that the 2 ospreys were taken in September. Wasn't bass rearing completed by then? Why was it necessary to take ospreys so late in the season?
- How is it that FWS continues to approve applications for lethal take when Depredation Permits are not meant to be long-term?
As noted in various citations within Appendices A and B and stated specifically in Section E, Part 7 in the application permits "Long-term deterrent measures. A

depredation permit is not considered a long-term solution for most situations. What long-term measures do you plan to take to eliminate or significantly reduce the continued need for killing or removal of birds, or destroying eggs/nests.”

- USFWS Permit Application Form 3-200-13 Item 9 states: “Your application for a depredation permits must (emphasis added) include a recommendation from the USDA, Animal and Plant Health Inspection Service, Wildlife Services for addressing your depredation problem.” Where is information that USDA Wildlife Services was approached for and/or provided advice? Where is information that MFWP Nongame Wildlife was approached for and/or provided advice?
MFWP Fisheries group applications state that Form 37 is attached. We never got these.
- The MFWP Hatchery Depredation Permit Application for 2019 (see last page, item #7.) states: “Due to our location this facility is not sure there is a long-term solution. Any advice would be welcomed.” How can USFWS approve this? Long-term non-lethal solutions are required to obtain permits. This verbiage is included in essentially each application that was provided to YVAS. This is unacceptable.
- YVAS has been monitoring Osprey along the Yellowstone River for years. This led us to the discovery and accumulation of issues and problems about depredation permitting and adverse effect on the Miles City Osprey population and ecology [3/15/21 insert: 8 Osprey shot by MFWP in 3 years]. As we delved into this we have discovered that many or all of the issues and problems about permitted depredation of Osprey are a reality as well for Great Blue Heron and Double Crested Cormorant and possibly Belted Kingfisher and other piscivorous birds. All of this supports the need to fully address our requests and points made herein and previously.
- Agency inadequacies must be corrected to legitimately regulate and balance depredation on nonnative species versus defending species native to Montana that are protected under Federal and State Law and international agreements.

Osprey and other migratory piscivorous birds will be returning to Montana shortly. The above points need to be adequately addressed by the agencies very soon and a detailed description, schedule and commitment for implementation of a new management paradigm by the agencies is necessary beginning in 2021. If that is not done we will pursue other options to intervene in ongoing agency killing of Osprey and other piscivorous birds.

Appendix A presents some statutory foundation and related information supporting our requests and points.

Appendix B presents results of brief Google and Google Scholar research about protections of farmed fish from predatory birds while greatly minimizing or eliminating lethal tactics in piscivorous bird management.

The information in Appendices A and B and related information certainly support the need for advancing sound science and data evaluation and for commitment to implementation of best (and decidedly better) methods in managing avian predation at the Miles City fish farm. Also clear is the rationale and commitment to marginalize killing of migratory birds as a management tool.

APPENDIX A

Statutes, Regulations and Permit Information

I) USFWS Depredation Permit Number MB31508B, Effective: 5/23/19 Expires: 12/31/19; issued to MFWP May 23, 2019 by USDI USFWS (DPRD -12/3/2011)

“Authority: Statutes and Regulations: 16 USC 703-712; 50 CFR Part 13, 50 CFR 21.41

Page 3 of 6:

Authorization and Conditions,

A. General conditions set out in Subpart B of 50 CFR Part 13, and specific conditions contained in Federal regulations cited above, are hereby made a part of this permit.” (See IV below).

.....

II) Federal Fish and Wildlife Permit Application Form, Migratory Bird Depredation, Form 3-200-13 (Rev. 04/2018), USDI.

Item 7 on Page 5 of 7 of Form 3-200-13 (Rev. 04/2018 USDI completed by MFWP (1/31/20) states: “A depredation permit is not considered a long-term solution for most situations. What long-term measures do you plan to take to eliminate or significantly reduce the continued need for killing or removal of birds, or destroying eggs/nests?”

YVAS Note: There is no information or plan submitted or suggested by MFWP per item 7 of Form 3-200-13 (signed by MFWP 1/31/20), and the USFWS issued the permit nevertheless. This permitting stipulation as well as others in the ESA and CFR must be met and such requirements are supportive of the YVAS points made in our 10/27/20 Memo.

Elsewhere within the MFWP depredation permit application dated 1/31/2020, MFWP repeatedly made the following statement:

“Due to our location this facility is not sure there is a long-term solution. Any advice would be welcomed.”

We have not received documentation that any such advice or other technical or legitimate guidance was given to MFWP by the relevant federal agencies.

It is likely that the same statement was made in other if not all MFWP depredation permit applications (e.g. 2018 - present).

We reasonably assume that MFWP intends to continue killing piscivorous birds as the default long term solution to protecting introduced non-native fish from federally protected migratory and other birds. We also reasonably assume **that approach is being sanctioned by the USFS, and we think that is inappropriate.**

.....

III) 16 USC 703-712 Migratory Bird Treaty Act

<https://www.fws.gov/le/USStatutes/MBTA.pdf>

- ♣ § 703. Taking, killing, or possessing migratory birds unlawful
- ♣ § 704. Determination as to when and how migratory birds may be taken, killed, or possessed
- ♣ § 705. Transportation or importation of migratory birds; when unlawful
- ♣ § 706. Arrests; search warrants

- ♣ § 707. Violations and penalties; forfeitures
- ♣ § 708. State or Territorial laws or regulations
- ♣ § 709. Omitted
- ♣ § 709a. Authorization of appropriations
- ♣ § 710. Partial invalidity; short title
- ♣ § 711. Breeding and sale for food supply
- ♣ § 712. Treaty and convention implementing regulations; seasonal taking of migratory birds for essential needs of indigenous Alaskans to preserve and maintain stocks of the birds; protection and conservation of the birds.

§ 703. Taking, killing, or possessing migratory birds unlawful

(a) In general

Unless and except as permitted by regulations made as hereinafter provided in this subchapter, it shall be unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, kill, attempt to take, capture, or kill, possess, offer for sale, sell, offer to barter, barter, offer to purchase, purchase, deliver for shipment, ship, export, import, cause to be shipped, exported, or imported, deliver for transportation, transport or cause to be transported, carry or cause to be carried, or receive for shipment, transportation, carriage, or export, any migratory bird, any part, nest, or eggs of any such bird, ...

§ 704. Determination as to when and how migratory birds may be taken, killed, or possessed

(a) Subject to the provisions and in order to carry out the purposes of the conventions, referred to in section 703 of this title, the Secretary of the Interior is authorized and directed, from time to time, having due regard to the zones of temperature and to the distribution, abundance, economic value, breeding habits, and times and lines of migratory flight of such birds, to determine when, to what extent, if at all, and by what means, it is compatible with the terms of the conventions to allow hunting, taking, capture, killing, possession, sale, purchase, shipment, transportation, carriage, or export of any such bird, or any part, nest, or egg thereof, and to adopt suitable regulations permitting and governing the same, in accordance with such determinations, which regulations shall become effective when approved by the President ...

§ 708. State or Territorial laws or regulations

Nothing in this subchapter shall be construed to prevent the several States and Territories from making or enforcing laws or regulations not inconsistent with the provisions of said conventions or of this subchapter, or from making or enforcing laws or regulations which shall give further protection to migratory birds, their nests, and eggs, if such laws or regulations do not extend the open seasons for such birds beyond the dates approved by the President in accordance with section 704 of this title.

§ 709a. Authorization of appropriations

There is hereby authorized to be appropriated, from time to time, out of any money in the Treasury not otherwise appropriated, such amounts as may be necessary to carry out the provisions and to accomplish the purposes of said conventions and of this subchapter and regulations made pursuant thereto, and the Secretary of the Interior is authorized out of such moneys to employ in the city of Washington and elsewhere such persons and means as he may deem necessary for such purpose and may cooperate with local authorities in the protection of migratory birds and make the necessary investigations connected therewith.

.....

IV) Code of Federal Regulations (CFR)

CFR Title 50

PART 13 (<https://ecfr.io/Title-50/Part-13>)

SUBPART B

50 CFR 13.12

§ 13.12 General information requirements on applications for permits.

(a) *General information required for all applications.* All applications must contain the following information: ...

(3) Reference to the part(s) and section(s) of this subchapter B as listed in paragraph (b) of this section under which the application is made for a permit or permits, together with any additional justification, including supporting documentation as required by the referenced part(s) and section(s); ...

(5) Certification in the following language:

I hereby certify that I have read and am familiar with the regulations contained in title 50, part 13, of the Code of Federal Regulations and the other applicable parts in subchapter B of chapter I of title 50, Code of Federal Regulations, and I further certify that the information submitted in this application for a permit is complete and accurate to the best of my knowledge and belief. I understand that any false statement herein may subject me to suspension or revocation of this permit and to the criminal penalties of 18 U.S.C. 1001. ...

(9) Such other information as the Director determines relevant to the processing of the application, including, but not limited to, information on the environmental effects of the activity consistent with 40 CFR 1506.5 and Departmental procedures at 516 DM 6, Appendix 1.3A.

(b) *Additional information required on permit applications.* As stated in paragraph (a)(3) of this section, certain additional information is required on all permit applications. For CITES permit applications, see part 23 of this subchapter. Additional information required on applications for other types of permits may be found by referring to the sections of this subchapter cited in the following table: ...

Type of permit	Depredation control	Section 21.41
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CFR Title 50

PART 13

SUBPART C - Permit Administration

50 CFR 13.21(b)(3)

§ 13.21 Issuance of permits.

(a) No permit may be issued prior to the receipt of a written application therefor, unless a written variation from the requirements, as authorized by § 13.4, is inserted into the official file of the Bureau. An oral or written representation of an employee or agent of the United States

Government, or an action of such employee or agent, shall not be construed as a permit unless it meets the requirements of a permit as defined in 50 CFR 10.12.

(b) Upon receipt of a properly executed application for a permit, the Director shall issue the appropriate permit unless:

(1) The applicant has been assessed a civil penalty or convicted of any criminal provision of any statute or regulation relating to the activity for which the application is filed, if such assessment or conviction evidences a lack of responsibility.

(2) The applicant has failed to disclose material information required, or has made false statements as to any material fact, in connection with his application;

(3) The applicant has failed to demonstrate a valid justification for the permit and a showing of responsibility;

(4) The authorization requested potentially threatens a wildlife or plant population, or

(5) The Director finds through further inquiry or investigation, or otherwise, that the applicant is not qualified.

(c) *Disqualifying factors.* Any one of the following will disqualify a person from receiving permits issued under this part. ...

(2) The revocation of a permit for reasons found in § 13.28 (a)(1) or (a)(2) disqualifies any such person from receiving or exercising the privileges of a similar permit for a period of five years from the date of the final agency decision on such revocation. ...

(4) The failure to submit timely, accurate, or valid reports as required may disqualify such person from receiving or exercising the privileges of a permit as long as the deficiency exists.

(d) *Use of supplemental information.* The issuing officer, in making a determination under this subsection, may use any information available that is relevant to the issue. This may include any prior conviction, or entry of a plea of guilty or nolo contendere, or assessment of civil or criminal penalty for a violation of any Federal or State law or regulation governing the permitted activity. It may also include any prior permit revocations or suspensions, or any reports of State or local officials. The issuing officer shall consider all relevant facts or information available, and may make independent inquiry or investigation to verify information or substantiate qualifications asserted by the applicant.

(e) *Conditions of issuance and acceptance - (1) Conditions of issuance and acceptance.* Any permit automatically incorporates within its terms the conditions and requirements of subpart D[*] of this part and of any part(s) or section(s) specifically authorizing or governing the activity for which the permit is issued, as well as any other conditions deemed appropriate and included on the face of the permit at the discretion of the Director.

(2) Any person accepting and holding a permit under this subchapter B acknowledges the necessity for close regulation and monitoring of the permitted activity by the Government. By accepting such permit, the permittee consents to and shall allow entry by agents or employees of the Service upon premises where the permitted activity is conducted at any reasonable hour. Service agents or employees may enter such premises to inspect the location; any books, records, or permits required to be kept by this subchapter B; and any wildlife or plants kept under authority of the permit.

(f) *Term of permit.* Unless otherwise modified, a permit is valid during the period specified on the face of the permit. Such period shall include the effective date and the date of expiration.

(g) *Denial*. The issuing officer may deny a permit to any applicant who fails to meet the issuance criteria set forth in this section or in the part(s) or section(s) specifically governing the activity for which the permit is requested.

[39 FR 1161, Jan. 4, 1974, as amended at 42 FR 32377, June 24, 1977; 47 FR 30785, July 15, 1982; 54 FR 38148, Sept. 14, 1989; 70 FR 18319, Apr. 11, 2005] ...

§ 13.28 Permit Revocation.

(a) *Criteria for revocation*. A permit may be revoked for any of the following reasons: ...

(3) The permittee becomes disqualified under § 13.21(c) of this part; or ...

(5) Except for permits issued under § 17.22(b) through (d) or § 17.32(b) through (d) of this subchapter, the population(s) of the wildlife or plant that is the subject of the permit declines to the extent that continuation of the permitted activity would be detrimental to maintenance or recovery of the affected population. ...

CFR Title 50,

PART 13

SUBPART D

SECTION 13.48 1(b)(3) ...

§ 13.48 Compliance with conditions of permit.

Any person holding a permit under subchapter B and any person acting under authority of such permit must comply with all conditions of the permit and with all applicable laws and regulations governing the permitted activity. ...

CFR Title 50,

PART 21

SUBPART D

SECTION 21.41 <https://ecfr.io/Title-50/Section-21.41>

§ 21.41 Depredation permits.

(a) *Permit requirement*. Except as provided in §§ 21.43, 21.44, and 21.46, a depredation permit is required before any person may take, possess, or transport migratory birds for depredation control purposes. No permit is required merely to scare or herd depredating migratory birds other than endangered or threatened species or bald or golden eagles. ...

(b) *Application procedures*. Submit application for depredation permits to the appropriate Regional Director (Attention: Migratory bird permit office). You can find addresses for the Regional Directors in 50 CFR 2.2. Each application must contain the general information and certification required in § 13.12(a) of this subchapter, and the following additional information:

- (1) A description of the area where depredations are occurring;
- (2) The nature of the crops or other interests being injured;
- (3) The extent of such injury; and
- (4) The particular species of migratory birds committing the injury.

(c) *Additional permit conditions.* In addition to the general conditions set forth in part 13 of this subchapter B, depredation permits shall be subject to requirements, in this section:

- (1) Permittees may not kill migratory birds unless specifically authorized on the permit.
- (2) Unless otherwise specifically authorized, when permittees are authorized to kill migratory birds they may do so only with a shotgun not larger than No. 10 gauge fired from the shoulder, and only on or over the threatened area or area described on the permit.
- (3) Permittees may not use blinds, pits, or other means of concealment, decoys, duck calls, or other devices to lure or entice birds within gun range.
- (4) All migratory birds killed shall be retrieved by the permittee and turned over to a Bureau representative or his designee for disposition to charitable or other worthy institutions for use as food, or otherwise disposed of as provided by law.
- (5) Only persons named on the permit are authorized to act as agents of the permittee under authority of the permit.

(d) *Tenure of permits.* The tenure of depredation permits shall be limited to the dates which appear on its face, but in no case shall be longer than one year.

CFR Title 40

PART 1506 <https://www.law.cornell.edu/cfr/text/40/1506.5>

40 CFR 1506.5

(YVAS Note - See 50 CFR 13.12 (9) (a) above)

§ 1506.5 Agency responsibility for environmental documents.

(a) Responsibility. The agency is responsible for the accuracy, scope (§ 1501.9(e) of this chapter), and content of environmental documents prepared by the agency or by an applicant or contractor under the supervision of the agency.

(b) Information. An agency may require an applicant to submit environmental information for possible use by the agency in preparing an environmental document. An agency also may direct an applicant or authorize a contractor to prepare an environmental document under the supervision of the agency.

(1) The agency should assist the applicant by outlining the types of information required or, for the preparation of environmental documents, shall provide guidance to the applicant or contractor and participate in their preparation.

(2) The agency shall independently evaluate the information submitted or the environmental document and shall be responsible for its accuracy, scope, and contents.

(3) The agency shall include in the environmental document the names and qualifications of the persons preparing environmental documents, and conducting the independent evaluation of any information submitted or environmental documents prepared by an applicant or contractor, such as in the list of preparers for environmental impact statements (§ 1502.18 of this chapter). It is the intent of this paragraph (b)(3) that acceptable work not be redone, but that it be verified by the agency.

(4) Contractors or applicants preparing environmental assessments or environmental impact statements shall submit a disclosure statement to the lead agency that specifies any financial or other interest in the outcome of the action. Such statement need not include privileged or confidential trade secrets or other confidential business information.

(5) Nothing in this section is intended to prohibit any agency from requesting any person, including the applicant, to submit information to it or to prohibit any person from submitting information to any agency for use in preparing environmental documents.

40 CFR 1506.6

§ 1506.6 Public involvement.

Agencies shall:

(a) Make diligent efforts to involve the public in preparing and implementing their NEPA procedures (§ 1507.3 of this chapter).

(b) Provide public notice of NEPA-related hearings, public meetings, and other opportunities for public involvement, and the availability of environmental documents so as to inform those persons and agencies who may be interested or affected by their proposed actions. When selecting appropriate methods for providing public notice, agencies shall consider the ability of affected persons and agencies to access electronic media.

(1) In all cases, the agency shall notify those who have requested notice on an individual action.

(2) In the case of an action with effects of national concern, notice shall include publication in the FEDERAL REGISTER. An agency may notify organizations that have requested regular notice.

(3) In the case of an action with effects primarily of local concern, the notice may include:

(i) Notice to State, Tribal, and local agencies that may be interested or affected by the proposed action.

(ii) Notice to interested or affected State, Tribal, and local governments.

(iii) Following the affected State or Tribe's public notice procedures for comparable actions.

(iv) Publication in local newspapers (in papers of general circulation rather than legal papers).

(v) Notice through other local media.

(vi) Notice to potentially interested community organizations including small business associations.

(vii) Publication in newsletters that may be expected to reach potentially interested persons.

(viii) Direct mailing to owners and occupants of nearby or affected property.

(ix) Posting of notice on and off site in the area where the action is to be located.

(x) Notice through electronic media (e.g., a project or agency website, email, or social media).

(c) Hold or sponsor public hearings, public meetings, or other opportunities for public involvement whenever appropriate or in accordance with statutory requirements applicable to the agency. Agencies may conduct public hearings and public meetings by means of electronic communication except where another format is required by law. When selecting appropriate methods for public involvement, agencies shall consider the ability of affected entities to access electronic media.

(d) Solicit appropriate information from the public.

(e) Explain in its procedures where interested persons can get information or status reports on **environmental impact statements** and other elements of the NEPA process.

(f) Make environmental impact statements, the comments received, and any underlying documents available to the public pursuant to the provisions of the **Freedom of Information Act**, as amended (5 U.S.C. 552).

.....

V) Endangered Species Act (ESA) of 1973, 50 CFR 13.21(b)(3), and 50 CFR 13.29 (Per pp.1 & 2 of Cover letter from USFWS 5/23/19) -

Applicable to Double-crested Cormorant and possibly to other species and depredation permit circumstances as determined by USFWS or YVAS legal counsel.

.....

VI) FREQUENTLY ASKED QUESTIONS ABOUT A FEDERAL DEPREDATION PERMIT

<https://www.fws.gov/migratorybirds/pdf/policies-and-regulations/3-200-13FAQ.pdf>

“A federal depredation permit authorizes you to capture or kill birds to reduce damage caused by birds or to protect other interests such as human health and safety or personal property. **A depredation permit is intended to provide short-term relief for bird damage until long-term, non-lethal measures can be implemented to eliminate or significantly reduce the problem.**”

.....

VII) By incorporation and included as attachment to the YVAS: NEPA-related 516 DM 6 Appendix 1 USWS. (YVAS Note: See 50 CFR 13.12 (9) (a) above)

<https://www.fws.gov/r9esnepa/FWSNEPAGuidance/516dm6.pdf>

APPENDIX B

Research and Development of Fish Pond Practices For Protection from Predatory Birds

Oregon Department of Fish and Game Information Report Number 92-1:

Report 92-1 is a singular reference sent to YVAS et.al. by [3/19/21 Note: MFWP, Names redacted] who requested our review and consideration of it.

The following excerpts are from Report 92-1 and emphasize the need for government agency follow through on requests and points in YVAS 10/27/20 memo.

“Frightening Devices: Every facility admitted that these devices are ineffective or of limited use. ...

Lethal Solution: ...killing these birds is not an acceptable solution at present. ...

Permits to take birds at aquaculture facilities are issued only after scare techniques, physical barriers, or both, have been used correctly and qualified U.S. Fish and Wildlife Service personnel certify that these methods have been ineffective. ...

Predator control is not a goal but a means to an end. Decisions related to the application of control measures should not be made independent of resource decisions or considerations of the laws, costs, or hazards of such measures. Better data of all sorts are needed to make decisions.”

Additional references and selected excerpts supporting the need for government agency follow through on our 10/27/20 Memo requests and points [YVAS Cursory Google and Google Scholar Search results]

1) Controlling Birds at Aquaculture Facilities (September 2005, Penn State College of Agricultural Sciences) -<https://extension.psu.edu/controlling-birds-at-aquaculture-facilities>

“Damage Control

Exclusion

Exclusion is the complete enclosure (caging) of ponds or raceways with screens or nets. It is effective for small facilities but impractical for most ponds larger than 5 acres.

Total exclusion is the only available method that provides complete, long-term control. Complete screening or netting is effective in excluding all problem birds. Some commercial producers have adopted complete facility enclosure or partial enclosure in combination with other management practices.

The Pennsylvania Fish and Boat Commission has an ongoing program of excluding birds from their fish hatcheries. Before initiating the bird control program, the commission estimated statewide losses of over half a million dollars per year due to bird depredation. Over a period of 7 years, the Fish and Boat Commission enclosed 11 hatcheries at a total

cost of nearly one million dollars. Although exclusion was costly at first, current losses are minimal and the economic savings have far exceeded the costs.

Summary

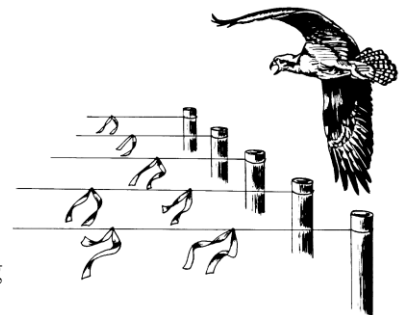
Birds can cause serious monetary damage to aquaculture facilities. Consequently, it is in the grower's best interest to take necessary precautions to minimize the likelihood that birds will become a problem. First, when selecting a site for an aquaculture facility, avoid areas near known concentrations of fish-eating birds. Second, when designing a facility, design it so that total exclusion is possible over at least most of the ponds and raceways. Third, if birds do become a problem, identify the species causing the damage and use control methods effective for that particular species. Consult USDA APHIS Wildlife Services personnel to determine which control techniques will work best. Finally, start control programs early, before birds are a major problem, use a variety of techniques, and be persistent. Lethal methods should only be used as a last resort, and permits are required before lethal methods are begun."

.....

2) When Fish-Eating Birds Become a Nuisance [1999, Information Circular WDL-15, Nova Scotia Department of Lands and Forestry] - <https://novascotia.ca/natr/wildlife/nuisance/fish-eating.asp>

"1. Exclusion

When fish depredation problems occur, use methods that physically exclude the birds. Problems vary with individual species, their abundance, the proximity to nearby nesting or roosting sites, the availability of alternate feeding sites, and the time of year. Consequently, control methods vary and a combination of methods is frequently required.



Ponds and raceways can be completely or partially enclosed using overhead wire, line, net, or screen secured to posts and frames. It should be constructed high enough for staff to move about within the enclosure. Netting should have a 3 to 5 cm mesh. Completely enclosing a facility in screening or netting is the most expensive method, but it effectively excludes all predatory birds. The cost may be justified over time by reducing loss and the need for active control measures. A partial enclosure is less expensive, but may not exclude all fish-eating birds. For example, overhead wires will deter gulls, ospreys, cormorants, mergansers, and possibly herons, but not smaller birds like the kingfisher.

It may be practical to enclose large ponds, but a degree of protection can be obtained by using overhead wires and lines, and wires and mesh on the sides. The wires may run in one direction or in a grid-mesh arrangement. Spacing of the wires depends on the bird species. Gulls and ospreys will be deterred with 125 cm spacing, mergansers with 65 cm spacing, herons with 30 cm spacing, and cormorants with 5 m spacing.

Losses to fish-eating birds can be reduced with preventive measures. If loss rates are significant, the cost of total exclusion may be realized within three or four years. However, before embarking on any bird control program, evaluate the cost-effectiveness of such actions. Costs may be greater than the value of fish lost to predators."

.....

3) **A Review of Methods to Reduce Bird Predation on Land-Based Fish Farms**

[October 1992, University of Guelph] -

<https://animalbiosciences.uoguelph.ca/aquacentre/information/articles/predation.html>

E.G.

“2.8.1 Complete enclosures

ADVANTAGES AND METHODS OF USE

Complete enclosures using screening mesh and/or netting on tanks, ponds and raceways is considered the most effective way to deter all fish-eating birds (EIFAC 1988; Salmon et al. 1985; Martin 1982; Cottam & Uhler 1936).”

.....

4) **Predator Control in Commercial Aquaculture in Canada**, [January 2002, David J.

Bevan et.al.] -

https://www.researchgate.net/publication/242175010_Predator_Control_in_Commercial_Aquaculture_in_Canada -

Download PDF:

file:///C:/Users/Test/Downloads/Predator_Control_in_Commercial_Aquaculture_in_Canada.pdf

E.G.

“1. Exclusion and Barrier Techniques

The separation of the cultured animal from its potential predators is the most effective solution for controlling the impacts of predation. Several techniques exist for relatively secure containment of aquatic livestock in farming systems that use cages, raceways and tanks. These containment methods include the use of separate nets, covers, building enclosures and other types of ‘barriers’, which can range in cost from relatively inexpensive to prohibitive, depending on the size of the enclosure required. ...

Further Reading

Hutchings, E., 1999. Predator damage control in cultured fish. Alberta Agriculture Food and Rural Development, AGDEX 485/685-1, 8 pages.

http://www.agric.gov.ab.ca/agdex/400/485_685-1.html

Kevan, S. D., 1992. A review of methods to reduce bird predation on land-based fish farms. Aquaculture Centre, University of Guelph, Guelph, Ontario. 23 pages.

<http://www.aps.uoguelph.ca/~aquacentre/aec/publications/control.html>

Kevan, S.D. and P.G. Kevan, 1993. Bird predators at Ontario fish farms. Ontario Ministry of Agriculture, Food and Rural Affairs, AGDEX 484, Order No. 93-049, 4 pages.

<http://www.aps.uoguelph.ca/~aquacentre/aec/publications/bird.html>

Littaurer, G., 1990. Avian predators: Frightening techniques for reducing bird damage at aquaculture facilities. SRAC Publication No. 401, 4 pages.

<http://agpublications.tamu.edu/pubs/efish/401fs.pdf>

Littaurer, G.A., J.F. Glahn, D.S. Reinhold and M.W. Brunson, 1997. Control of bird predation at aquaculture facilities: strategies and cost estimates. SRAC Publication No. 402 (revised), 4 pages. <http://agpublications.tamu.edu/pubs/efish/402fs.pdf>

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5) **Predator Damage Control in Cultured Fish** [December 1999, Alberta Agriculture, Food and Rural Development] - [https://www1.agric.gov.ab.ca/\\$department/deptdocs.nsf/ba3468a2a8681f69872569d60073fde1/880845e3c717417987256a48005bce54/\\$FILE/485_685-1.pdf](https://www1.agric.gov.ab.ca/$department/deptdocs.nsf/ba3468a2a8681f69872569d60073fde1/880845e3c717417987256a48005bce54/$FILE/485_685-1.pdf)

E.G.

"1. Barriers

Two types of physical barriers can be used for managing bird predation:

1. Complete enclosures that prevent predators from gaining access
2. Partially-covered systems that interfere with the feeding behaviour of predators

Complete enclosures – exclude all predators

Complete enclosure (caging) of ponds and/or raceways with screens or nets.

- all exclusion structures should be long-lasting and strong enough to withstand the weight of several large birds. They should keep the barrier from sagging to within the bird's striking distance to the water
- the barrier should be visible to birds to minimize accidental injury or entrapment

- exclusion structures should allow for facility maintenance, feeding, harvesting and other operations

- total exclusion is the only method that can provide long-term control against all bird predators

2. Frightening techniques Frightening devices and techniques discourage birds from feeding, roosting or gathering at a location. Frightening techniques rely on sight and/or sound stimuli to discourage birds from remaining at a site by making the birds believe the site is dangerous for them. Success in frightening birds away depends on the number of devices used, how and where they are administered and if their use precedes the establishment of the birds' feeding habits.

- frightening techniques are most applicable for short duration problems (1 to 3 days), as birds will quickly lose their initial fear Figure 2. Partially covered system using overhead line/wire and flagging 4

- start the frightening regime before the birds establish regular feeding patterns

- change the location of frightening devices often, particularly noise-making ones

- long term results may be achieved by using a combination of methods and by frequently alternating the devices used

.....

6) **International consensus principles for ethical wildlife control** [January 2017, Conservation Biology] <https://conbio.onlinelibrary.wiley.com/doi/full/10.1111/cobi.12896>

E.G.

“Abstract

Human–wildlife conflicts are commonly addressed by excluding, relocating, or lethally controlling animals with the goal of preserving public health and safety, protecting property, or

conserving other valued wildlife. However, declining wildlife populations, a lack of efficacy of control methods in achieving desired outcomes, and changes in how people value animals have triggered widespread acknowledgment of the need for ethical and evidence-based approaches to managing such conflicts. We explored international perspectives on and experiences with human-wildlife conflicts to develop principles for ethical wildlife control. A diverse panel of 20 experts convened at a 2-day workshop and developed the principles through a facilitated engagement process and discussion. They determined that efforts to control wildlife should begin wherever possible by altering the human practices that cause human-wildlife conflict and by developing a culture of coexistence; be justified by evidence that significant harms are being caused to people, property, livelihoods, ecosystems, and/or other animals; have measurable outcome-based objectives that are clear, achievable, monitored, and adaptive; predictably minimize animal welfare harms to the fewest number of animals; be informed by community values as well as scientific, technical, and practical information; be integrated into plans for systematic long-term management; and be based on the specifics of the situation rather than negative labels (pest, overabundant) applied to the target species. We recommend that these principles guide development of international, national, and local standards and control decisions and implementation. ...

Clear and Achievable Outcome-Based Objectives

The desired outcome of a wildlife control action should be clear, achievable, monitored, and adapted based on lessons learned.

Ethically defensible decisions to control wildlife require clear objectives and sound evidence that the proposed methods can achieve the objectives. Too often these requirements are not met. “

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7) Further Reading -

https://scholar.google.com/scholar?start=20&q=research+and+development+of+screening+large+fish+ponds+from+predatory+birds&hl=en&as_sdt=0,27

APPENDIX C

Mailing List, Affiliations and Contact Information [3/19/21 Note: Names redacted]

Audubon	US Fish and Wildlife Service	MT Fish Wildlife and Parks