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U.S.A.

and

U.S. Fish and Wildlife Service
Ludington Biological Station
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and

Fisheries and Oceans Canada
Sea Lamprey Control Centre
1219 Queen Street East
Sault Ste. Marie, Ontario P6A 2E5
Canada

TECHNICAL OPERATING PROCEDURE

PROCEDURE TITLE:

Federal Endangered Species Act Consultations

APPLICABILITY:

Protocol applies to lampricide treatment and assessment of Great Lakes basin waters with known populations of federally listed, proposed, and candidate species, and designated and proposed critical habitats.

PRINCIPLE:

Federal agencies have a responsibility to ensure that their activities do not jeopardize the existence of any listed species under the authority of Section 7. Federally listed, proposed, and candidate species, and designated and proposed critical habitats have been identified in areas of proposed lampricide applications (treatments and assessments). The SLCP takes steps to protect and avoid disturbance to these species and habitats.

Since 1992, the SLCP has consulted with USFWS Ecological Services (ES) offices in states bordering the Great Lakes where lampricide applications occur. The SLCP conducts annual informal consultation to identify the species and habitats in proposed action areas and evaluate whether the planned actions would adversely affect listed, proposed, and candidate species, and proposed or designated critical habitats. The SLCP submits the analysis in writing, and ES reviews the information and sends a written response.

When ES responds with a “*may affect, not likely to adversely affect*” listed species or designated critical habitat, or a “*no effect*” determination, consultation is complete. When ES responds with a “*may affect and*

likely to adversely affect" determination for listed species or designated critical habitat, formal intra-service consultation is required.

SAMPLE COLLECTION AND PRESERVATION:

Not applicable

EQUIPMENT REQUIRED:

Not applicable

POTENTIAL INTERFERENCES:

Not applicable

SAFETY:

Not applicable

DISPOSAL:

Not applicable

REAGENTS:

Not applicable

INFORMAL CONSULTATION PROCEDURES:

Informal intra-Service consultation is a process between the USFWS SLCP and ES programs to determine whether a proposed action may affect listed species or critical habitat. This process uses USFWS expertise to evaluate the potential effects of an action and to suggest possible modifications to avoid adverse effects.

- I. The Larval Assessment Team (Ludington and Marquette) provides lampricide application details for the year to the Risk Management Team:
 - A. Proposed lampricide treatment and assessment streams and sites categorized by lampricide applied:
 1. TFM
 2. TFM-Niclosamide
 3. Granular Bayluscide
 - B. Proposed treatment dates
 - C. Maps of treatment and assessment applications (ArcGIS shapefiles) including:
 1. Sections of streams to be treated
 2. Treatment and assessment plot polygons

II. Minnesota, Wisconsin, Indiana, Ohio, and New York review process

The USFWS Ecological Services Field Offices provide a streamlined, step-by-step electronic consultation process (IPaC) to determine whether federally listed, proposed, and candidate species, and designated critical habitat, occur in proposed project areas. The review process should start early and includes the following steps:

- A. Open the IPaC website (<https://ipac.ecosphere.fws.gov>)
 1. Log in with your email address and password or create new account
 2. Select GET STARTED
 3. Select FIND PROJECT LOCATION
 - a. Upload shape file (recommended), or Define Area
 - b. Confirm by selecting CONTINUE
 4. Define project to evaluate potential impacts, get an official species list, and make species determinations
 - a. Select DEFINE PROJECT
 - (1) You will be prompted to log (if not logged in)
 - (2) Provide Project Name
 - (3) Provide Project Description
 - (4) Select SAVE
 5. Review project's effects on listed species
 - a. Select START REVIEW and then CONTINUE
 - (1) Select YES, REQUEST A SPECIES LIST (Step 1)
 - (2) Answer questions asked (radio buttons and drop-down menus)
 - (3) Provide contact information
 - (4) Select project type (Invasive Animal control)
 - (5) Select SUBMIT OFFICIAL SPECIES REQUEST
 6. File a copy of the official species list.
- B. Initiate informal consultation by providing the following to the appropriate ES Field Office (ESFO) Supervisor:
 1. Memo to request annual review of federally listed, proposed, and candidate species, and designated and proposed critical habitats within proposed action areas, and concurrence of effects determination.
 2. Intra-Service Section 7 Biological Evaluation Form
 3. Proposed application schedules (including contingencies)
 - a. Treatments
 - (1) TFM
 - (2) TFM-Niclosamide
 - (3) Granular Bayluscide
 - b. Assessments with granular Bayluscide
 4. Conservation measures and effects determinations document
 - a. Species information
 - b. How to avoid and protect each species and critical habitat
 - c. Effects determination
 - d. Rationale to support effects determination

5. Maps of applications
 6. An amendment containing the above information will be emailed to the appropriate ESFO when a species or habitat is found to be missing or additional streams are added after the review is submitted.
- C. The SLCP receives written response from ES that may include some or all of the following:
1. Concurrence that SLCP actions have “no effect” or are “not likely to adversely affect” any listed species or critical habitat. If so, consultation is complete.
 2. Concurrence that SLCP actions are “likely to adversely affect” or non-concurrence of “no effect” or “not likely to adversely affect” a listed species or critical habitat. If so, the following will occur:
 - a. Change application date to avoid period when a species is present
 - b. Change extent or location of application to avoid species and critical habitat
 - c. Defer application and initiate formal consultation (see Formal Consultation Procedures).

III. Michigan Review Process

- A. Because of the large number of action areas, locations (counties), and dates (April – October), a review packet rather than the standard Intra-Service Section 7 Biological Evaluation Form is submitted.
- B. To determine protected species and critical habitat within ½ mile of proposed lampricide applications, treatment shapefiles (U:Projects/Larval/MOA/yearMOA/MDNR Finaldate) are overlain with Michigan Natural Features Inventory (MNFI) shapefiles (R:MNFI/MNFI_Biotics_20xx.gdb).
- C. Informal consultation is initiated by providing the following to the Michigan ES Field Office (MFO) Supervisor:
1. Memo to request annual review of federally listed, proposed, and candidate species, and designated and proposed critical habitats within proposed action areas, and concurrence of effects determination.
 2. Proposed application schedules (including contingencies)
 - a. Treatments
 - (1) TFM
 - (2) TFM-Niclosamide
 - (3) Granular Bayluscide
 - b. Assessments with Granular Bayluscide
 3. Stream-species-critical habitat table
 - a. Dates of proposed applications
 - b. Lake, stream, and county(s) of application
 - c. Water (lotic or lentic)
 - d. Lampricide(s) applied
 - e. Listed/proposed/candidate species present

- f. Species location (township/section/range) and distance from treatment when known
 4. Conservation measures and effects determination document
 - a. Species information
 - b. How to avoid and protect each species and critical habitat
 - c. Effects determination
 - d. Rationale to support effects determination
 5. ESRI shapefiles
 - a. Line file for stream treatments
 - b. Point file for gB plots (assessment and treatments)
 6. An amendment containing the above information will be emailed when a species or habitat is found to be missing or additional streams are added after the review is submitted.
- D. Receive written response from ES that may include some or all of the following:
1. Concurrence that SLCP actions have “no effect” or are “not likely to adversely affect” any listed species or critical habitat. If so, consultation is complete.
 2. Concurrence that SLCP actions are “likely to adversely affect” or non-concurrence of “no effect” or “not likely to adversely affect” a listed species or critical habitat. If so, the following will occur:
 - a. Change application date to avoid period when a species is present
 - b. Change extent or location of application to avoid species and critical habitat
 - c. Defer application and initiate formal consultation (see Formal Consultation Procedures)

III. Pennsylvania Review Process

The USFWS Pennsylvania Ecological Services Field Office (PFO) website directs project reviews to the Conservation Explorer on the Pennsylvania Natural Heritage Program’s (PNHP) website. The PNHP contains an online review, which allows project proponents to screen projects for potential impacts to species of special concern, including federally listed and proposed species. The Pennsylvania Natural Diversity Inventory (PNDI) is accessed via username and password login and the review includes the following steps:

- A. Conduct online review:
1. Open the PNHP website (<http://www.naturalheritage.state.pa.us>)
 2. Select CONSERVATION EXPLORER – PNDI ENVIRONMENTAL REVIEW
 3. Login with your E-mail address and password or CREATE NEW ACCOUNT
 4. Select MY PROJECTS
 5. Previous projects will be listed or the table will be blank. Select the MAP tab and CREATE PROJECT
 6. Select PROJECT TYPE

- a. Select PEST CONTROL
 - b. Select LAMPREY CONTROL - USE OF LAMPRICIDE
7. Use the tools on the map to locate the stream(s) and draw the project footprint.
- a. Upload a zipped ESRI shapefile (preferred), or
 - b. select LINE on the drop-down menu of the draw shape tool
8. Select SHOW PREVIEW BUFFER button to see the project footprint (10 m buffer for Sea Lamprey Control)
9. Select ACCEPT to validate the project
10. Enter a project title and description
11. Verify that the project and contact information is correct
12. Select SUBMIT FOR PRE-ANALYSIS
13. Answer any further questions
14. The SLCP is exempt from the fee
- a. Apply for exemption prior to submittal: <https://conservationexplorer.dcnr.pa.gov/content/exemption-guidance>
- B. Receive online response
1. When the PNDI analysis is complete, an email message will be sent prompting you to visit “My Projects” to view the receipt.
 2. When the receipt under Search Results indicates Agency: U.S. Fish and Wildlife Service, Results: No Known Impact, Response: No Further Review Required, the FEDERAL review is complete. File an electronic and hard copy of the receipt. All other species of concern listed will be handled through the state permitting process.
 3. If the receipt indicates, under Search Results, that federally protected species or critical habitat are present, SLCP initiates informal consultation by providing the following to the PFO Field Supervisor:
 - a. Memo to request annual review of federally listed, proposed, and candidate species, and designated and proposed critical habitats within proposed action areas, and concurrence of effects determination.
 - b. Intra-Service Section 7 Biological Evaluation Form
 - c. Conservation measures and effects determination document
 - (1) Species information
 - (2) How to avoid and protect each species and critical habitat
 - (3) Effects determination
 - (4) Rationale to support effects determination
 - d. GIS coordinates
 - (1) Line file for stream treatments

- (2) Point file for gB plots (assessment and treatments)
4. An amendment containing the above information will be emailed to the PFO when a species or habitat is found to be missing or additional streams are added after the review is submitted.
5. The SLCP will receive written response from ES that may include some or all of the following:
 - a. Concurrence that SLCP actions have “no effect” or are “not likely to adversely affect” any listed species or critical habitat. If so, consultation is complete.
 - b. Concurrence that SLCP actions are “likely to adversely affect” or non-concurrence of “no effect” or “not likely to adversely affect” a listed species or critical habitat. If so, the following will occur:
 - (1) Change application date to avoid period when a species is present
 - (2) Change extent or location of application to avoid species and critical habitat
 - (3) Defer application and initiate formal consultation (see Formal Consultation Procedures)

PROTOCOLS TO PROTECT AND AVOID DISTURBANCE

Electronic protocols are provided to field personnel involved in lampricide applications. A map of the application area, species location, and procedures to protect and avoid each species and critical habitat is included for all scheduled applications. Species fact sheets include a picture or drawing, species description, biology, distribution, and federal/state status.

- I. Protocol to Protect and Avoid Disturbance to Federal- and State-Listed Endangered, Threatened, Candidate, Proposed, or Special Concern Species and Critical or Proposed Critical habitats in or near Great Lakes Streams Scheduled for *Lampricide Treatments* in the United States
- II. Protocol to Protect and Avoid Disturbance to Federal- and State-Listed Endangered, Threatened, Candidate, Proposed, or Special Concern Species and Critical or Proposed Critical habitats in or near Great Lakes Streams Scheduled for *Granular Bayluscide Assessments* in the United States

FORMAL CONSULTATION PROCEDURES:

Formal intra-Service consultation is initiated when the response from ES is that SLCP actions are “likely to adversely affect” candidate, proposed or listed species, or critical habitat. The SLCP works with ES to determine whether a proposed action is likely to (1) adversely affect candidate, proposed, or listed species, (2) jeopardize the continued existence of candidate, proposed, or listed species, and (3) destroy or adversely modify proposed or listed critical habitat.

- I. Contact appropriate ES office to set up meeting or call to exchange information regarding:
 - A. Listed species of concern
 1. Knowledge and existing literature of
 - a. Biology
 - b. Location
 - c. Critical habitat

- B. Lampricide application
 - 1. Application date(s)
 - 2. Lampricide(s) used
 - 3. Procedures
 - a. Stream length or polygon of gB plot
 - b. Application site(s)
 - c. Concentration of lampricide to be applied
 - C. Existing literature
 - 1. Toxicity of lampricide(s) to listed species
 - 2. Toxicity of lampricide(s) to similar (surrogate) species
 - 3. How to interpret and apply existing data
 - D. How to assess risk to species
 - 1. What information/dates will satisfy ES that SLCP actions would not jeopardize the existence of the species
 - 2. Determine the potential take of the listed species
 - E. Data needs
 - 1. Surveys
 - a. Pre-treatment
 - (1) To determine presence/absence and range of listed species
 - (2) To avoid certain areas where listed species is extant
 - (3) Estimate population
 - b. During treatment
 - c. Post treatment population estimate to determine effect of treatment
 - 2. Data that is lacking but necessary
 - 3. Tests to determine toxicity to the listed species or a surrogate
- II. The SLCP compiles information and drafts a BA (written formal consultation) to include:
- A. Introduction
 - 1. SLCP overview
 - 2. Listed species status
 - 3. Purpose
 - B. Background
 - 1. Consultation with ES
 - 2. Previous risk assessments

- C. Action area and description of proposed action
 - 1. Extent of lampricide application
 - 2. Proximity of listed species
 - D. Literature review
 - 1. Lampricide(s) toxicity to listed species
 - 2. Lampricide(s) toxicity to similar species (surrogate)
 - E. Summary of work conducted to determine risk
 - 1. Tests to determine toxicity of lampricide(s) to:
 - a. Surrogate species agreed to by ES
 - b. Life stages of listed species, surrogate(s), or both
 - 2. Surveys conducted
 - 3. Observations conducted
 - F. Analysis of potential impacts on threatened and endangered species
 - G. Effects determination to species and critical habitat
 - 1. No effect
 - 2. May affect but not likely to adversely affect
 - 3. May affect and likely to adversely affect
 - H. Proposed conservation measures
 - 1. Treatment schedule modification
 - 2. Treatment concentration modification
 - 3. Avoidance of areas where listed species is extant
 - I. Status of species within the action area summary
 - J. Cumulative effects determination
 - K. Conclusion
 - L. Literature cited
- III. Receive biological opinion from ES

The biological opinion (BO) is a document prepared by ES in response to the SLCP's BA. Based on the information provided, ES determines whether the proposed action is likely to jeopardize the continued existence of listed or candidate/proposed species and destroy or adversely modify designated critical habitat. ES strives to issue all biological opinions within the 90-day period but may use an additional 45 days when circumstances warrant (Endangered Species Act Consultation Handbook, 1998). The BO typically includes:

- A. A detailed discussion of the effects of the action on listed species and designated critical habitat.
- B. Whether an action is likely to jeopardize the continued existence of candidate, proposed, or listed species or result in the destruction or adverse modification of proposed or listed critical habitat.
- C. Reasonable and prudent actions for the SLCP to take to protect and avoid the species and critical habitat.
- D. Incidental take, if granted, which is the calculated number of a listed species that can be sacrificed as a result of, but not the purpose of, carrying out an otherwise lawful activity conducted by a federal agency or applicant. Incidental take is not expected to jeopardize the continued existence of the listed species.
- E. Concurrence on the specifics of the lampricide application (timing, concentration, location) and other actions that have been agreed on (surveys, avoidance, removal of species, return of species).

REFERENCES:

Endangered Species Act Consultation Handbook: Procedures for Conducting Consultation and Conference Activities Under Section 7 of the Endangered Species Act. 1998. <https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf>

Pennsylvania Natural Heritage Program website - <http://www.naturalheritage.state.pa.us/>

USFWS Information for Planning and Conservation (IPaC) - <https://ecos.fws.gov/ipac/>

This procedure has been reviewed and approved by the undersigned representatives of the U.S. Fish and Wildlife Service and Fisheries and Oceans Canada.

REVIEWED/APPROVED _____ DATE _____
Field Supervisor (U.S.)