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U.S. FISH AND WILDLIFE SERVICE
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FINDING OF NO SIGNIFICANT IMPACT

Environmental Assessment for Tote Road Pike Lakes Restoration Project: Proposed Removal of Invasive Northern Pike *Esox lucius* from the Tote Road Pike Lakes near Soldotna, Alaska

SUMMARY

Northern Pike are an invasive species in Southcentral Alaska and are implicated in the decline of native fisheries throughout the region. Northern Pike were first documented on the Kenai Peninsula in the Soldotna Creek drainage in the 1970's. Subsequent dispersal and more illegal introductions resulted in Northern Pike establishing populations in 23 Kenai Peninsula waterbodies.

The Alaska Department of Fish and Game (Department) initiated a program in 2008 to eradicate Northern Pike from the Kenai Peninsula. Initial work began by removing Northern Pike from landlocked lakes and progressed to removing Northern Pike from more complex open waterbodies within the Swanson River and Soldotna Creek drainages. To date, the only known Northern Pike populations remaining on the Kenai Peninsula are found in a group of eight small lakes located about five miles south of Soldotna and collectively referred to as the Tote Road Pike Lakes (TRPL). The Department first documented Northern Pike in one lake within the TRPL during a 1983 survey and subsequent surveys have confirmed the presence of Northern Pike in eight area lakes.

The Department has prepared and accepted public comment on an Environmental Assessment (EA) developed to analyze alternatives to completely eradicate the illegally introduced TRPL Northern Pike population. Three alternatives were considered in this EA:

1. No action
2. Long-term control and possible eradication with gillnetting
3. Use of rotenone to remove all Northern Pike (*preferred alternative*)

The “no action” alternative was rejected since there would be continued risk that Northern Pike in the TRPL could be transported to nearby wild fisheries. The control netting alternative was also rejected because it is unlikely long-term gillnetting could eradicate Northern Pike from the TRPL as most of the lakes are interconnected and the total surface area and volume is far greater than areas where gillnetting has been successful at eradication. The preferred alternative involves removing all invasive Northern Pike from the TRPL using rotenone. The Department selected the preferred alternative as it has been determined to be the most effective means of removing Northern Pike. The selected action remains consistent with U. S. Fish and Wildlife Service (Service) policies and legal

directives while minimizing potential risks to the environment, non-target organisms, and human safety and health. This Finding of No Significant Impact (FONSI) documents the conclusion that the selected action will not have significant impacts on the quality of the human environment.

ACTION PURPOSE & NEED

The EA provides a compelling case for the need and purpose of this action, including the removal of the last known population of invasive Northern Pike on the Kenai Peninsula. Removing Northern Pike from the TRPL would serve to: restore native wild Threespine Stickleback *Gasterosteus aculeatus* populations and aquatic habitat, allow for an alternative sport fishery in the lakes, reduce the likelihood that Northern Pike expand elsewhere on the Kenai Peninsula, and support the Service's and Department's long-term goal of eradicating Northern Pike from the entire Kenai Peninsula. It is the Department's legal responsibility to remove the threat imposed by Northern Pike when feasible. The TRPL contains the last known Northern Pike population on the Kenai Peninsula following years of eradication efforts by the Department, with full support of the Service. Not removing the TRPL Northern Pike population unnecessarily jeopardizes Kenai Peninsula wild native and stocked fisheries.

SUMMARY OF PROPOSED ACTION

Currently, the Department has identified eight lakes in this area with Northern Pike including small ephemeral streams that connect seven of the lakes and a 1.6 km outlet stream that drains westward from the lake complex. The eight known pike lakes currently comprising the TRPL lakes cover approximately 37.1 ha including all lake-connected ephemeral streams (totaling~ 1.6 km in length). All waters would be treated with CFT Legumine™ containing 5% rotenone and would be primarily applied by applicators using an outboard-powered motorboat. Applicators would also utilize backpack sprayers to apply rotenone to heavily vegetated nearshore areas and adjacent inundated wetlands. The entire treatment is anticipated to take about four days to complete and ideally would occur just prior to ice-up during October 2018. This timing is preferred because the relatively cold water available that time of year will prolong the rotenone persistence (i.e., 3-7 months) ensuring a long exposure period for Northern Pike while minimizing impact to recreationists. After the rotenone completely deactivates, an evaluation of the treatment's success would be done by conducting gillnet and environmental DNA (eDNA) surveys. Water quality and macroinvertebrates would be sampled periodically before and after the treatment to document any major changes in species diversity or water quality.

If the TRPL treatment successfully eradicates the Northern Pike population (as determined by post-treatment evaluations) the lake would be restocked with wild Threespine Stickleback collected from southcentral Alaska and with wild salmonids (Rainbow Trout *Oncorhynchus mykiss* and/or Coho Salmon *O. kisutch*) collected from the Kenai River drainage. If live Northern Pike are detected in the TRPL posttreatment, affected waters may be retreated with rotenone as soon as feasible.

EFFECTS AND FINDINGS

The Department evaluated the human health and ecological effects associated with the use of rotenone and concluded that, in recommended concentrations and in accordance with

label requirements and the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), rotenone would not pose any unreasonable adverse ecological or human health risks. As required by state regulation, the Department would submit a pesticide use permit application to the Alaska Department of Environmental Conservation (ADEC) which must be approved prior to treating the TRPL area. Similarly, this project would be conducted in compliance with Section 402 of the federal Clean Water Act, where permitting authority in Alaska has been transferred to the ADEC through the Alaska Pollution Discharge Elimination System program.

The treatment would be designed so that the peak rotenone concentration would be <40 ppb, a level below which the EPA considers safe for drinking and far below the 90 ppb concentration considered safe for swimming. To further minimize risk, the Department would advise against contacting treated waters until the rotenone fully degrades. This would be accomplished with signage, landowner notices and media releases. The timing of the treatment (late fall) would reduce impacts to water recreationists as ice cover would be present shortly after the treatment. The only tangible human health risks associated with the rotenone treatment would be to the applicators because they would be working with the undiluted rotenone product. However, that risk would be minimized by proper use of personal protective equipment and by following best management practices. Several Department biologists have been formally trained in the use of rotenone through the National Conservation Training Center or American Fisheries Society. In addition, several Department personnel are also State of Alaska-certified aquatic pesticide applicators. Emergency protocols would be established prior to the treatment activities in the event of an accident.

The ecological impacts from a rotenone treatment in TRPL would be short in duration and pose less of a risk to wildlife than the second alternative. As described in detail in the EA, rotenone naturally breaks down, ultimately into carbon dioxide and water, and does not impact most organisms without gills when used in fisheries management concentrations. Rotenone has been used on ten other Northern Pike eradication projects in southcentral Alaska since 2008. In seven of these treatments, rotenone was applied late in the fall prior to ice-up so as not to interrupt open water recreation for the public and to maximize the duration that rotenone would remain toxic to fish. In some cases, the rotenone persisted for eight months (mainly while the lakes were frozen).

Even with eight months of rotenone persistence, invertebrate populations were found to quickly rebound, and other species such as wood frogs and waterfowl also returned immediately after ice out. Based on the vast literature available on rotenone projects and the Department's previous experience with the piscicide, the Department does not expect long-term negative ecological impacts from treating the TRPL with rotenone. Therefore, the rotenone treatment alternative was identified by the Department as the preferred alternative to accomplish the goal of eradicating Northern Pike from TRPL and preventing this Northern Pike population from being used for illegal introductions elsewhere.

PUBLIC INVOLVEMENT

The Department initiated a public scoping process in 2017 to gather input to guide the response to Northern Pike in the TRPL area. Two public scoping meetings were held at

the Kenai National Wildlife Refuge Visitor Center in Soldotna, a location easily accessible to TRPL area property owners, interested citizens, and organizations. An effort was made to enable broader participation by hosting two separate meetings at varied times:

- Scoping Meeting #1, Dec 11, 2017 - 6:00 pm to 7:30 pm
- Scoping Meeting #2, February 8, 2018 - 5:30 pm to 7:30 pm

Prior to meetings, the Department contacted 84 waterfront property owners in the TRPL area that owned land adjacent to waters containing Northern Pike. Each property owner was mailed letters notifying them of the public meetings and encouraging them to participate in the scoping process. In December of 2017, the Department went door-to-door to hand deliver courtesy notices to all residences adjacent to known pike waters in the TRPL area. In addition to mailings and notifications to waterfront property owners, notices of the meetings were placed at local retail establishments. Email notices were sent to addresses representing about twenty individual, governmental, and non-governmental organizations that were identified as having potential interest in general fishery issues or pike fishing, specifically. Prior to each scoping meeting, a news release was issued by the Department announcing the scoping meeting details and inviting the public to participate. The news release was made available on the Department website and was utilized by local media both in newspaper and radio messaging. Thirty-three individuals attended the first meeting and 10 individuals attended the second meeting.

Beginning April 16, 2018, the Department ran a public notice in a local newspaper (*Peninsula Clarion*) announcing a public commenting period through May 18, 2018, for the TRPL EA. A media release was also issued by the Department announcing the public commenting periods for both this EA and for a related Pesticide Use Permit application required by the ADEC. Waterfront TRPL landowners were also mailed courtesy notices about the opportunity to provide comments for the EA. Seven individuals provided written comments on the proposed treatment during the EA public commenting period.

Input gathered during the public scoping process and comments received on the Draft EA represented a spectrum of public views and concerns and ranged from adamant support for the project to strong disapproval. Those comments received in opposition to the preferred alternative cited various reasons including concern about the potential of rotenone to affect non-target organisms and human health, the potential of rotenone to impact potable water sources including nearby wells, and the timing of treatment because of rotenone's persistence in cold water. Other comments and concerns expressed during the scoping and public comment periods were that a rotenone treatment might be unneeded because the lakes are landlocked, might violate private property rights, could fail because of potential illegal restocking of Northern Pike, would cause wanton waste of rotenone-killed Northern Pike, and would be more expensive than enlisting the public to remove Northern Pike using gillnets. All of the concerns expressed during public scoping were considered in the Department's analysis of the alternative actions.

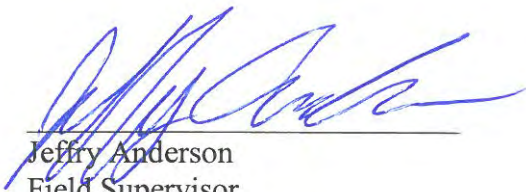
FINDING OF NO SIGNIFICANT IMPACT

I find that all reasonable alternatives were considered in the evaluation of this project. I also find that this project complies with the meaning of Executive Order 11990 and 11988.

Therefore, based on a review and evaluation contained in the EA and the level of response from stakeholders and the public during the EA review period, I have determined the proposed removal of invasive Northern Pike as described in the project entitled, "*Tote Road Lakes Restoration Project*" is not a major federal action which would significantly affect the quality of the human environment within the meaning of Section 102 (2) (c) of the National Environmental Policy Act of 1969. This determination is made after full consideration of the context and intensity of the proposed activities. There are no known irreversible or irretrievable commitments of resources. The analysis of the EA indicated that there will not be significant impacts, individually or cumulatively, on the quality of the human environment. The proposed action will not jeopardize any federally-listed threatened or endangered species or their habitats. Aquatic invasive species management using conservative and judicious use of pesticides is consistent with Department of Interior and Fish and Wildlife Service policies, and other applicable laws. The proposed action will not establish a precedent for any future action with significant effects. Therefore, I find that an EIS does not need to be prepared for the proposed action.

The Environmental Assessment, prepared by the Alaska Department of Fish and Game has been adopted by the U.S. Fish and Wildlife Service according to rules contained in 40 CFR 1506.3. Copies of the EA are available upon request from the Kenai Fish and Wildlife Conservation Office, 43655 Kalifornsky Beach Road, Soldotna, Alaska 99669, or at the Alaska Department of Fish and Game website at:

http://www.adfg.alaska.gov/static/species/nonnative/invasive/rotenone/pdfs/ToteRdEA_4-11-18.pdf



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8/1/2018
Date