



MEMORANDUM

TO: Art Nelson, Executive Director Board
of Fisheries, Anchorage

DATE: 2/29/24

THROUGH: Jason Dye, Regional
Supervisor, Sport Fish, Region II,
Anchorage

PHONE: 207-267-2153

FROM: Kristine Dunker, Fishery Biologist,
Sport Fish, Region II, Anchorage

SUBJECT: Consent to Use Rotenone

As per Alaska Statute (AS 16.35.200), the ADF&G Division of Sport Fish requests consent from the Alaska Board of Fisheries (board) to use rotenone to eradicate invasive northern pike from several locations in the Matanuska-Susitna Valley over the next three years. Recently, the Division of Sport Fish Southcentral Region Invasive Species Program was awarded a grant through the Alaska Sustainable Salmon Fund to help prevent new introductions of northern pike in Southcentral Alaska. As part of this, several road-accessible northern pike populations will be eradicated using rotenone between the fall of 2024 and the terminus of the grant in 2027. The lakes to be treated include Knik Lake, Memory Lake, Lalen Lake, Visnaw Lake, and Prator Lake. These treatments are intended to remove easily accessible northern pike populations that could serve as sources for illegal introductions elsewhere. Post-treatment, these lakes will be restocked with hatchery-produced rainbow trout or coho salmon. The Division is also attempting to expand treatment capabilities by investigating success with under-ice treatments. To test this, staff plan to try an under-ice treatment in a small, isolated water body called Baptist Pond. This treatment will take place late this winter, pending permit timing. If permits are delayed, this treatment will take place in the winter of 2025.

The Division also requests the use of rotenone as an additional tool in long-standing efforts to suppress the invasive northern pike population in Alexander Creek. Since 2011, staff have been annually removing as many northern pike as possible from side channel sloughs of Alexander Creek with gillnets. These efforts are planned to continue, but to increase effectiveness and efficiency, applying very small quantities of rotenone to select sloughs that do not currently support salmon, would drastically reduce the time needed to gillnet those sloughs, thus allowing staff to target additional sloughs and achieve greater northern pike mortality overall. Additionally, this will remove the smallest age classes of northern pike that are too small to be captured in our gillnets. The rotenone is anticipated to remove at least as many northern pike in a few hours as three days of gillnetting. Because of the very small quantity of rotenone used for these treatments, any product that flows out of the sloughs would be diluted once it mixes with the mainstem flows of the creek, rendering it inert for fishes residing in the mainstem. These treatments would not result in eradication of northern pike in the Alexander Creek drainage. Full treatments of the system are cost-prohibitive, could cause unintentional losses of the salmon downstream that the Division is trying to recover, and would not fully function as eradication because northern pike would eventually return to Alexander Creek from the mainstem Susitna River. Within the Alexander Creek system, any use of rotenone will be strategically targeted to sloughs where it could have the greatest suppression benefit while minimizing non-target fish

mortalities. At this time, there are 15 sloughs that harbor high concentrations of northern pike with few to no other fish species that the division would like approval to begin treating in tandem with annual gillnetting efforts. There are two additional sloughs where under-ice treatments may also be highly effective. As such, the division requests permission to use a small quantity of rotenone in up to 20 sloughs annually between the spring of 2024 and 2027, at which point the additional efforts to the suppression program will be reassessed for future planning.

Four fishery biologists in the Division of Sport Fish have received formal training in the application of rotenone from the National Conservation Training Center and the American Fisheries Society and are also certified to apply aquatic pesticides in Alaska. One technician with the division is also an aquatic-certified pesticide applicator. Use of rotenone for fish removal is widespread in the lower 48 and elsewhere and has been successfully used over 25 times since 2008 for invasive northern pike populations in Southcentral Alaska. Rotenone, for fisheries management, is not considered dangerous for organisms without gills and does not persist in the aquatic environment. Rotenone kills fish by inhibiting a biochemical process that allows fish to utilize waterborne oxygen during cellular respiration. The Division most commonly applies rotenone in the fall to prolong the effectiveness of rotenone as it persists longer in colder and darker conditions, but this request includes testing of rotenone applications in winter and in tandem with spring gillnetting, where it will quickly detoxify from dilution and exposure to long daylight hours.

All the rotenone treatments described above qualify for the Alaska Department of Environmental Conservation General Permit for Rotenone Use. The National Environmental Policy Act (NEPA) for this project will conclude with a categorical exclusion due to coverage by a programmatic environmental assessment (EA) for projects funded through the Alaska Sustainable Salmon Fund. Alaska Pollutant Discharge Elimination Permits (APDES) will be required for these treatments, but these are routine and anticipated to be granted. The final authorization required for these treatments is approval by the Board of Fisheries.

In 2022, the Division requested authorization through December 2024 to use rotenone for rapid response to any newly discovered northern pike populations that threaten uninvaded drainages and require immediate action. Thankfully, over the last three years, this rapid response authorization has not been needed. However, the need for rapid response to any new invasions remains. The Division requests to extend the rapid response authorization for rotenone use through 2027, or whichever timeframe the Board deems most appropriate.

We request that you inform the members of the Alaska Board of Fisheries about the current plans to use rotenone and that they reply by memo from the Chairman as to their consent to use rotenone in the aforementioned Mat-Su Valley waters and for rapid response to newly discovered northern pike populations through December 2027.

If members of the Alaska Board of Fisheries require additional information on these requests, please contact either Kristine Dunker (267-2889) or Parker Bradley (746-6328). Thank you very much for your assistance.