



THE STATE
of **ALASKA**
GOVERNOR MICHAEL J. DUNLEAVY

Department of Fish and Game

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MEMORANDUM

TO: Glenn Haight, Executive Director
Board of Fisheries, Juneau

DATE: 3/28/22

THROUGH: Tom Vania, Regional
Supervisor, Sport Fish, Region II,
Anchorage

PHONE: 207-267-2131

SUBJECT: Consent to Use Rotenone

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

As per Alaska Statute (AS 16.35.200), we request consent from the Alaska Board of Fisheries (board) to use rotenone to eradicate nonindigenous northern pike from the Fire Creek Drainage in Eagle River. Lower Fire Lake is an approximately 67-acre lake with an outlet creek (Fire Creek) that flows 6.2 miles to Knik Arm. Recently, ADF&G, along with research partners from UAF, confirmed that northern pike can colonize new drainages via estuaries of Cook Inlet and Knik Arm. The Department believes this is how northern pike were introduced to the Miller Creek Drainage (Kenai Peninsula) that was successfully treated with rotenone in October 2021. This new knowledge about northern pike migrations through salt water now necessitates urgency for treating the Fire Creek system to prevent northern pike from spreading to currently uninvaded, but vulnerable, Knik Arm drainages like Jim Creek.

The rotenone treatment in the Fire Creek Drainage qualifies for the Alaska Department of Environmental Conservation General Permit for Rotenone Use (19-GP-FISH). 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, such as this, funded through the Alaska Sustainable Salmon Fund. An Alaska Department of Natural Resources Land Use Permit will not be required for this project; however, an Alaska Pollutant Discharge Elimination Permit (APDES) will be. The final authorization required to treat the Fire Creek Drainage with rotenone and prevent northern pike from spreading is approval by the board. If approval is granted, the treatment is planned for October 2022.

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. Last year, two technicians and another biologist were also certified as State of Alaska aquatic pesticide applicators. Use of rotenone for fish removal is widespread in the lower 48 and elsewhere and has been successfully used over 20 times in recent years for invasive northern pike populations in Southcentral Alaska. Rotenone, for fisheries management, is not considered dangerous for nongill-breathing organisms 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 Department most commonly applies rotenone in the fall to prolong the effectiveness of rotenone as it persists longer in colder and darker conditions. Fall treatments are also less disruptive to lake

recreationists and minimize impacts to non-target species like fish-eating migratory waterfowl and aquatic macroinvertebrates.

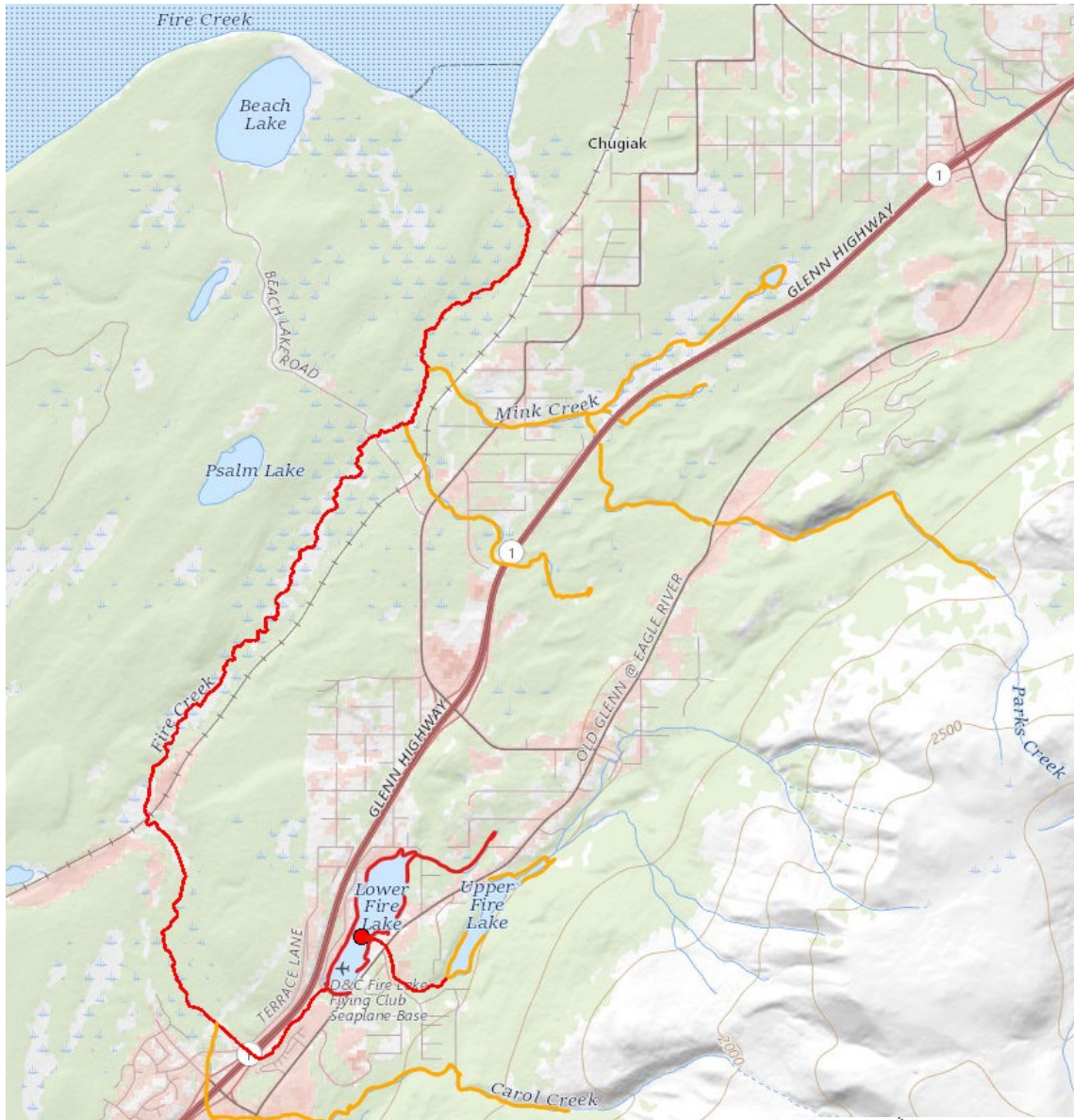
Following rotenone application, the treatment area will be monitored over the winter and spring to ensure no live northern pike remain and to determine when the rotenone is fully degraded. Once degraded, Lower Fire Lake will be stocked with hatchery fish. Native fish rescue for juvenile salmonids will take place in Fire Creek prior to treatment. These fish will be temporarily held in enclosures in an offsite lake and returned once the creek is rotenone-free. Natural recolonization will also help restore native fish populations post-treatment.

In addition to this request for treatment of the Fire Creek Drainage, the Division also requests 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. In recent years, the Division has increased monitoring efforts for invasive northern pike throughout the Mat-Su, and capacity for addressing new invasions can be increased with prior approval from the board to use rotenone in these rapid response scenarios. If rapid response authorization is granted, the Division will update the board annually, during miscellaneous business at the March Statewide meetings, on any rotenone treatments for rapid response that occurs within that timeframe. For major projects, such as Fire Creek, the Division will continue to request permission on a case-by-case basis, unless the board prefers to pre-authorize all rotenone treatments for invasive fish within the proposed timeframe.

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 Fire Creek Drainage and for rapid response to newly discovered northern pike populations through December 2024.

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.

Fire Creek Drainage Treatment Area



Fire Creek Drainage

- Proposed Treatment Area
- Connected waters to be re-surveyed prior to treatment

