Briefing Note: Watershed Conservation for Native Trout to Support Population and Species Recovery

Prepared for: Members of the Alberta Chapter of The Wildlife Society (hereafter ACTWS), Government Representatives, and The Public

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Preamble. This briefing note summarizes points that were made in an invited presentation to the inaugural *Species Reporting Panel* at the annual meeting of the ACTWS on March 1, 2026.

Status of populations and species Alberta has three native trout species (westslope cutthroat trout, bull trout, Athabasca rainbow trout) and two trout-like species that share a reliance on cold, clear streams (Arctic grayling, and mountain whitefish). In the Eastern Slopes watersheds, all have exhibited significant population declines in recent decades. Species at risk assessments have designated three species as *Threatened* (westslope cutthroat trout and bull trout) or *Endangered* (Athabasca rainbow trout). Arctic grayling are of *Special Concern*, and mountain whitefish require status assessments in virtually every watershed where they previously occurred.

Recovery plans have been completed and endorsed provincially and federally for westslope cutthroat trout, bull trout and Athabasca rainbow trout, but they have not been widely or consistently implemented.

Causes of decline

Issues related to the decline of these native species include:

- habitat losses (e.g., sediment, selenium, channel alterations, loss of large woody debris),
- hybridization with non-native species (e.g., non-native rainbow trout crosses with native cutthroat trout),
- hydrologic alterations to watersheds (e.g., roads, timber harvest), and
- fish harvest (e.g., enhanced mortality from angling including catch and release).

These issues are causing population decline partly because the scope and scale of land use changes (e.g., logging, oil and gas, roading, off-road vehicle use, mining) is expanding faster than recovery efforts can occur (e.g., stream bank stabilization, riparian restoration, physical habitat improvements). Over 20 cumulative effects assessments in the Eastern Slopes strongly suggest that further increases in land use will cause severe negative impacts on native trout populations and habitats.

Because timber harvest has the largest footprint in watersheds containing trout species at risk, the increase of 13% in annual allowable cuts (effective May 2021), which may reach 32% in

parts of the Crowsnest / Southern Alberta region increases risk of exceeding hydrological thresholds for fish, especially via spring flooding and reduced flows in late summer, fall, and overwinter, all of which cause fish mortality.

Recommendations

1. *Support populations*. In watersheds containing populations of trout species at risk, increase priority on habitat protection to support fish survival and potential recovery of populations. Recovery actions should emphasize habitat restoration, native trout population expansion, and hydrologic recovery of watersheds. Necessary funding should be long-term, and multi-agency with assistance from conservation and stewardship groups.

2. *Assess forest harvest policy*. Conduct a cumulative effects review of the 13% increase, and potentially even greater percentage increases in annual allowable cut in areas with trout species at risk.

3. *Assess efficacy of policy implementation*. Integrate research and monitoring to determine if and how effectively operating ground rules for timber harvest are protecting species and their critical habitats as outlined in the provisions of the *Fisheries Act* and the *Species at Risk Act.* Increase ecologically-based regulatory oversight to ensure policies are operating as intended.