

GRAYLING REINTRODUCTION IN THE RUBY RIVER, MONTANA

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The Arctic Grayling Workgroup designated the Ruby River as a potential restoration site for fluvial arctic grayling (*Thymallus arcticus*) based on an assessment of historic grayling streams in Montana. The Ruby was chosen among candidate streams because of its long sections of unimpeded stream, suitable habitat conditions, and relatively low densities of non-native salmonids. Potential negative characteristics of the Ruby include access to Ruby reservoir, and the presence of non-natives. Reintroduction efforts began in the Ruby in 1997 following the 1995 Grayling Restoration Plan. Grayling derived from the Big Hole River were stocked as age-one and young-of-the-year. Natural reproduction of stocked grayling was documented two different years, indicating suitable habitat was available; however, high over-winter mortality rates illustrated the need for an alternative to stocking. Reintroduction efforts have evolved from stocking, to the use of Remote Site Incubators (RSIs) which emerge grayling fry reared under selective mechanisms of the stream. RSIs have been used since 2003 and have been very successful at introducing grayling to the system. Over-winter survival of grayling from RSIs has been documented 3 yrs in a row. Habitat enhancement projects to increase adult pool, spawning, and rearing habitat for grayling are now complimenting RSI efforts. Future direction of Ruby reintroductions will be determined by current revision and updating of the Grayling Restoration Plan. This plan will revisit restoration goals, provide genetic and brood stock management direction, and create short and long-term goals that address connectivity, habitat, and population goals for grayling in Montana.