**Bison, Robert – BC Ministry of Forests, Lands and Natural Resource Operations**

**Presentation Title: British Columbia Steelhead Stock Status Review 2018**

Abstract for the 2018 Pacific Coast Steelhead Management Meeting

Robert Bison - BC Ministry of Forests, Lands and Natural Resource Operations

1259 Dalhousie Drive, Kamloops, BC V2C 5Z5 - (250) 851-1076 - Robert.Bison@gov.bc.ca

The vast majority of the estimated 423 steelhead populations in British Columbia belong to 3 major phylogenetic groups (MPG’s); groups defined according to ancestral lineages and post glacial recolonization origins. In addition to these 3 major phylogenetic groups are 2 transition groups that reflect post glacial genetic mixing between the 3 MPG’s.

Steelhead population status within the North Coast MPG, which spans an area over the northern half of the steelhead range contained within the province, is informed mainly by the status of Skeena steelhead which appears to be stable over a 50 year monitoring time frame fluctuating near or above Smsy. All of the major population aggregates within the North Coast MPG lack data regarding fishery losses due to salmon fisheries which limits an understanding of status. The status of steelhead aggregates in the watersheds that are transboundary between BC and southeast Alaska are among the least understood within the North Coast MPG and BC in general.

Steelhead population status within the Northern Transition group, located over a relatively small area along the mid latitudes of the BC coast, is informed mainly by Dean and Bella Coola steelhead. There is evidence that Dean steelhead may have undergone a decline to at least about the mid-2000’s while Bella Coola steelhead have clearly declined and remain in a state of relatively low abundance. As with the North Coast MPG stocks, data regarding fishery losses in salmon fisheries are lacking which limits an understanding of status.

Steelhead population status in southern BC, which contains the South Coast MPG, and South Interior MPG and the Southern Transition group, is in a state of decline. In the South Interior MPG, the group is assessed by COSEWIC as containing two Designatable Units (DU’s) named Thompson and Chilcotin. Both are currently classified by COSEWIC as Endangered and at imminent risk of extinction. The South Interior MPG shows a large and persistent decline in recruitment capacity, part of which is the result of a decline in per capita fecundity, but not exclusively. In the South Coast MPG, there is also evidence of wide spatial scale decline in recruitment capacity, most dramatically among winter run populations. Most recently, a decline in Gold River steelhead is particularly noteworthy given its history as a premier BC steelhead stream. The two major hatchery streams with the South Coast MPG are also exhibiting abundance declines within the last 6-8 years. Despite a few number of hatchery augmented streams in southern BC relative to the number streams that are not stocked, hatchery smolts appear to dominate the input of smolts into the Strait of Georgia and pinniped predation appears to account for a loss of the majority of the total smolt input. Within the South Coast MPG, pinniped predation, extreme climate events and climate trends, along with forestry related stream degradation are among the main conservation and management concerns. In the South Interior MPG and the Southern Transition, pinniped predation, offshore competition, and bycatch in salmon fisheries are among the main conservation and management concerns. Drought, forestry and agriculture related stream degradation, and hydroelectric operations are additional conservation and management concerns specific to parts of the South Interior MPG and Southern Transition.