

## McIntyre River Population Study 2008 to 2012

### Population Study

An annual steelhead population estimate on the McIntyre River would compliment the cooperative angler program. We would then be able to estimate the size of the adult population, the number of repeat spawners and the number of fish in each age class on an annual basis. This would compliment the work conducted on Portage Creek.

### Peterson Estimate

The recommended method of estimating population size in this situation would be the “Mark/Recapture” or “Peterson Estimate”. It is based on the number of fish marked in year one times the number of repeat spawners in year two divided by the recaps in year two. This would be conducted for at least five years or one generation. This is the method used on Portage Creek and can easily be conducted by a group of skilled anglers.

Then essential components to the success of this study are random sampling of the entire migration and obtaining a large enough sample size. Ideally we would need to capture, biologically sample and fin clip at least one hundred individuals per year and recapture at least 10 to 20 % the following year. Six to ten anglers could accomplish this as long as they all follow an established sampling routine (see table 1).

### Fin Clip Protocol

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year	Fin Clip	Sampling		POP
2008	Adipose	fork length, sex, scale, clip		
2009	R. Ventral	fork length, sex, scales, clip	Check and record Adipose Clip	2008
2010	L. Pectoral	fork length, sex, scales, clip	Check and record R. Ventral clip	2009
2011	Dorsal	fork length, sex, scales, clip	Check and record L. Pectoral clip	2010
2012	None	fork length, sex, scales, no clip	Check and record F. Dorsal clip	2011

Table 1: Sampling Protocol