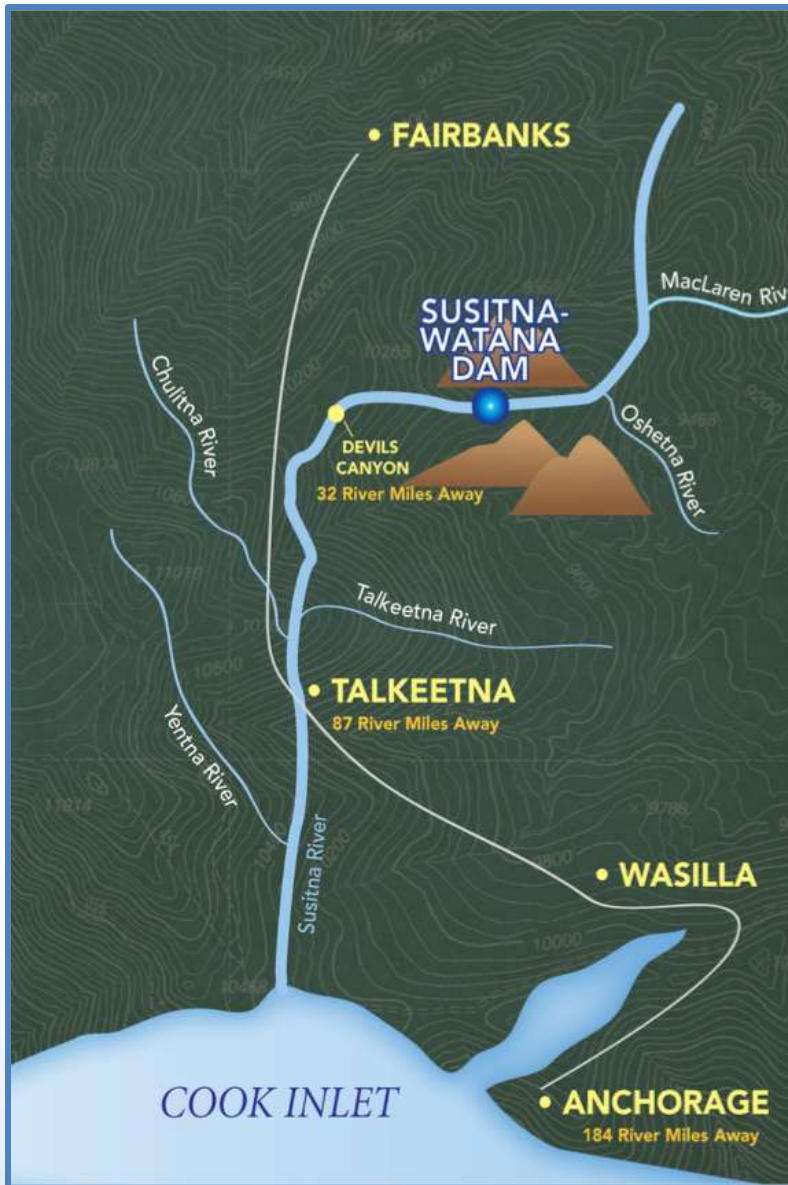


Technical WorkGroup Meeting

Fish Distribution and Abundance Sampling – Middle River

8 February 2013

Prepared by R2 Resource Consultants



Middle River Sampling

- Using HDR habitat mapping
- Probability sample by habitat type
 - Within Geomorphic Reach targets:
 - Focus Areas: 3 samples for abundance
 - Outside of Focus Areas: 3 distribution, 1 abundance

Middle River Sampling

- Mapped linear habitat types:
 - Single Main Channel
 - Split Main Channel
 - Braided Main Channel
 - Side Channel
 - Upland Slough with Beaver Complex
 - Upland Slough without Beaver Complex
 - Side Slough with Beaver Complex
 - Side Slough without Beaver Complex
 - Tributaries



Middle River Sampling

- Linear habitat types split into 40 m sampling units with spatial locations
- GRTS sampler used to select spatially-balanced random sample
 - Missing samples do not compromise coverage

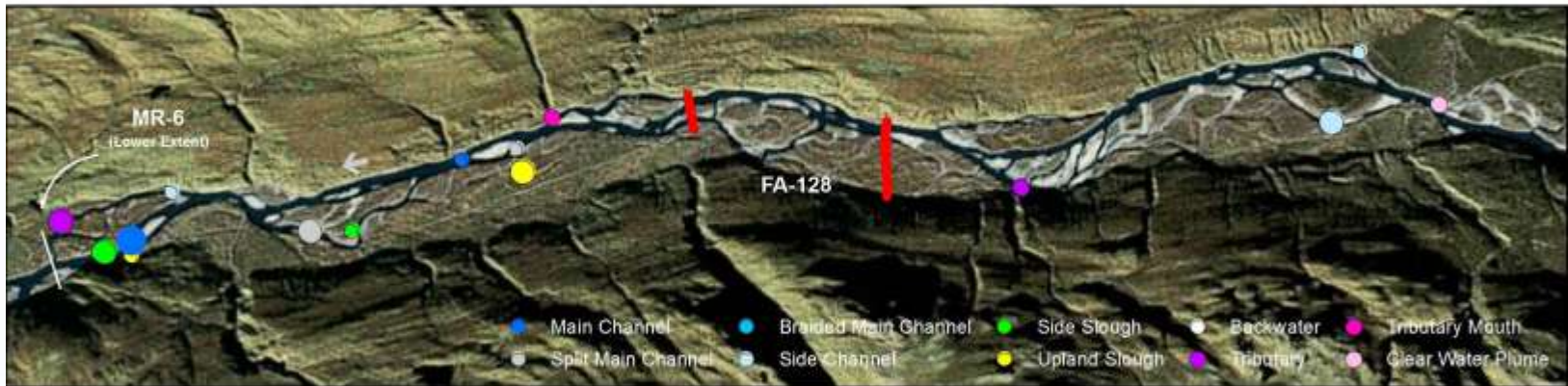


Middle River Sampling

- Point or Polygon habitat types:
 - Backwaters
 - Tributary mouths
 - Clear water plumes
- If ≤ 3 , sample all of them
- If > 3 , GRTS sample



Middle River Sampling



Legend

- █ Instream Flow Focus Area (Upper and Lower Extent)
- ← Flow Arrow

Note: Larger symbols indicate sites sampled for abundance.

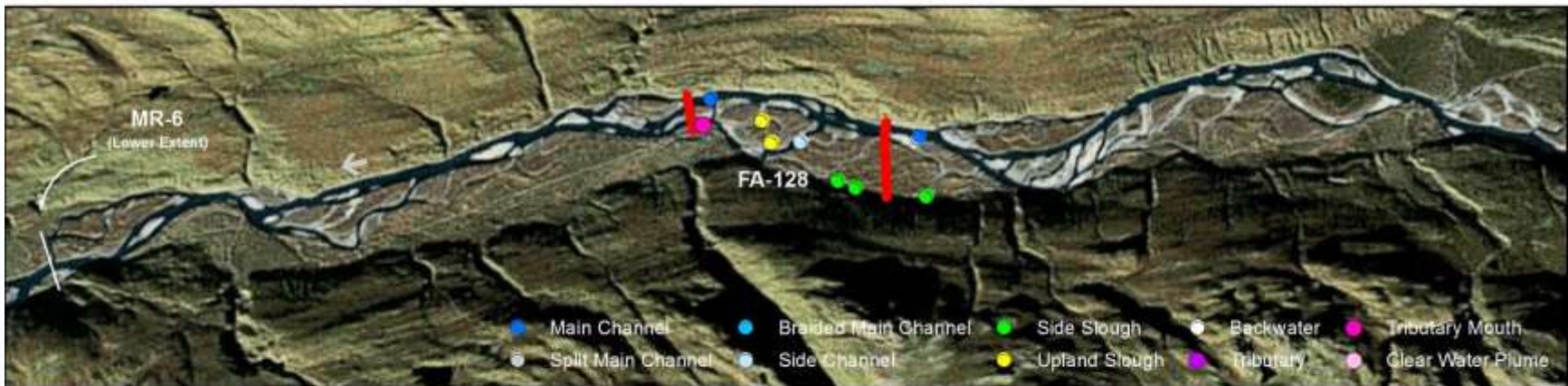
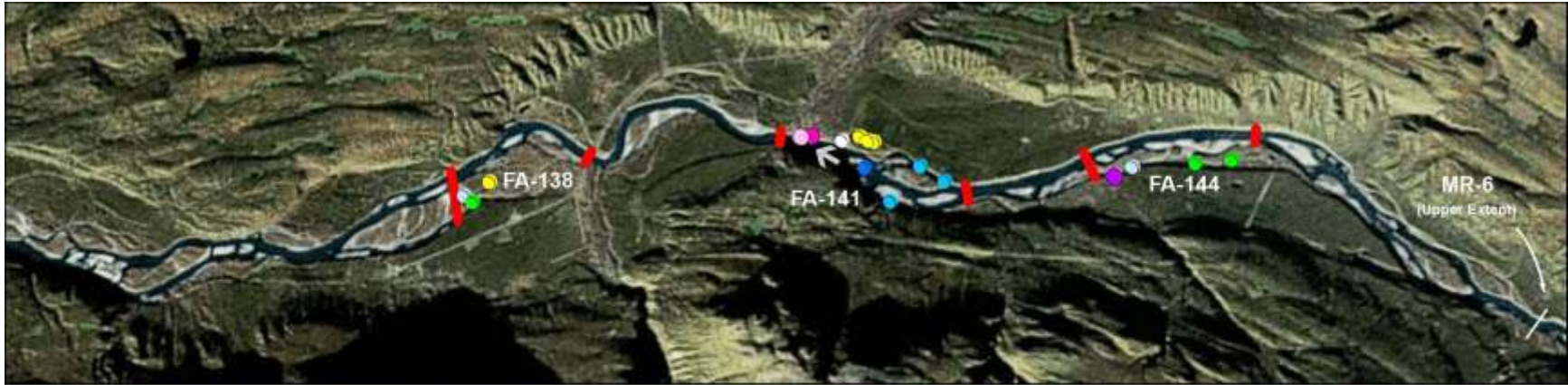
Data Sources: See Map References
 Orthophoto Source: 2010 MDA Information Systems Inc. NaturalVue Satellite Imagery



Projection: Alaska Albers NAD 1983
 Date Created: 1/30/2013
 Map Author: R2 - Joetta Zabolney
 File: Map_IP_FA_DistAbundGIRTS_MR6.mxd



Middle River Sampling



- Main Channel
- Braided Main Channel
- Side Slough
- Backwater
- Tributary Mouth
- Split Main Channel
- Side Channel
- Upland Slough
- Tributary
- Clear Water Plume

Legend

- █ Instream Flow Focus Area (Upper and Lower Extent)
- ← Flow Arrow



Projection: Alaska Albers NAD 1983
 Date Created: 1/30/2013
 Map Author: R2 - Joetta Zabolney
 File: Map_IP_FA_DistAbundGIRTS_MR6x.mxd



Map Key

Data Sources: See Map References
 Orthophoto Source: 2010 MDA Information Systems Inc. NaturalVue Satellite Imagery