Proposed Methodology for Assessing Aquatic Habitat Loss Due to FCRPS

Prepared by the
CBFWA
Resident Fish Advisory Committee

Why Assess Habitat Losses?

- **To illustrate amount of resident fish habitat lost due to hydro-construction and subsequent inundation**

MFWP's Habitat Loss Assessment

- Identify stream orders inundated
- Measure length of mainstem inundated
- Measure length of tributary inundated
- Measure length of tributary blocked

RFAC Proposed Habitat Loss Assessment

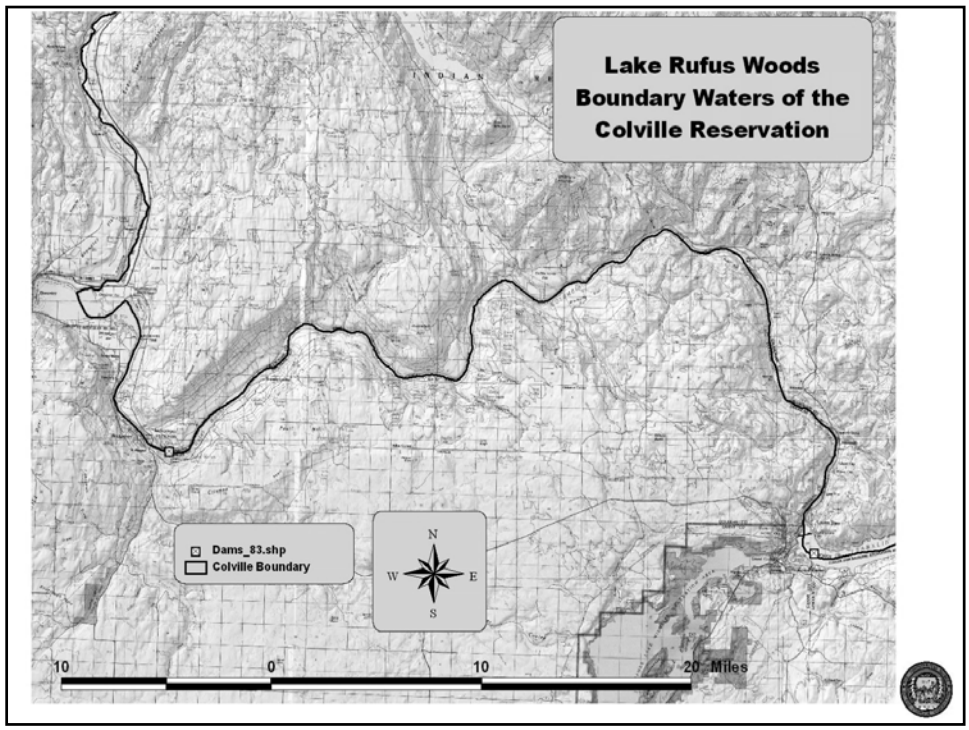
- How many acres of mainstem river were lost to inundation?
- How many acres of aquatic habitat in tributaries was lost?
- How many acres of aquatic habitat blocked by roads?

Benefits of Using Area of Habitat

- No need to determine stream order/type
- Provides automatic accounting of channel width
- No need to find similar habitat for acquisition
- Provides for mitigation even when no similar habitat available

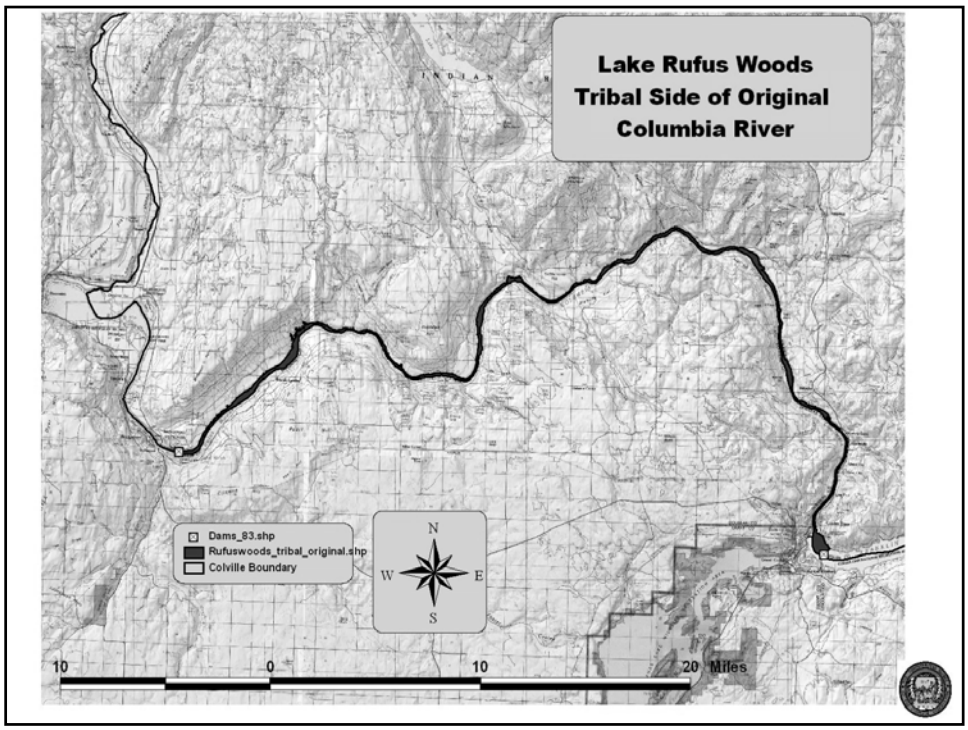
Calculating the Area of Lost Habitat

- Select area to assess (Lake Rufus Woods)



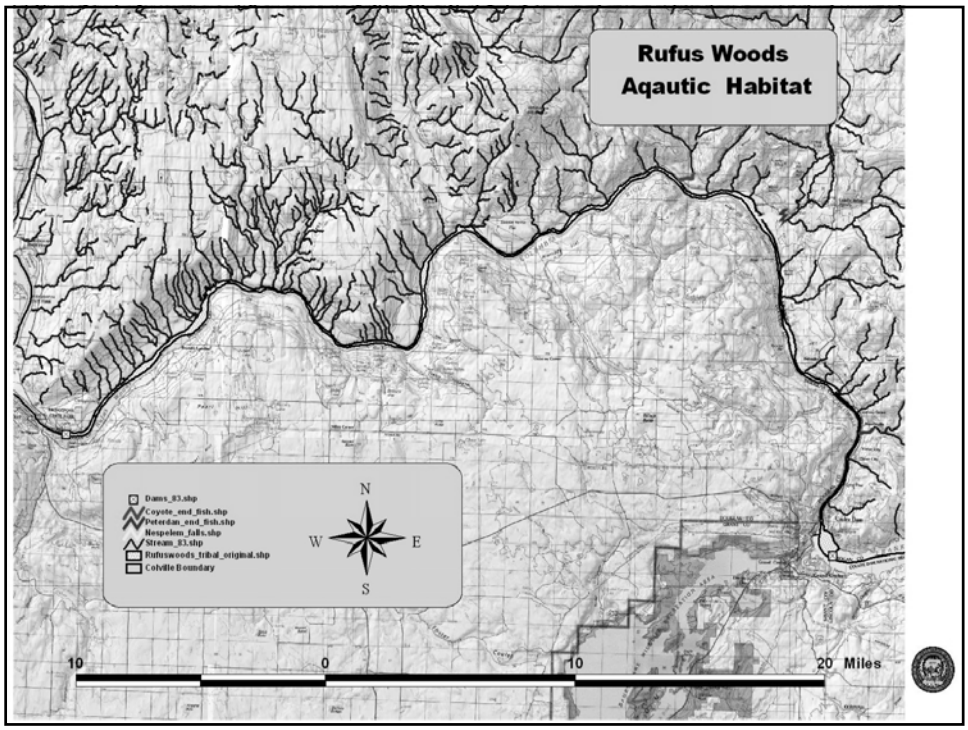
Calculating the Area of Lost Mainstem Habitat

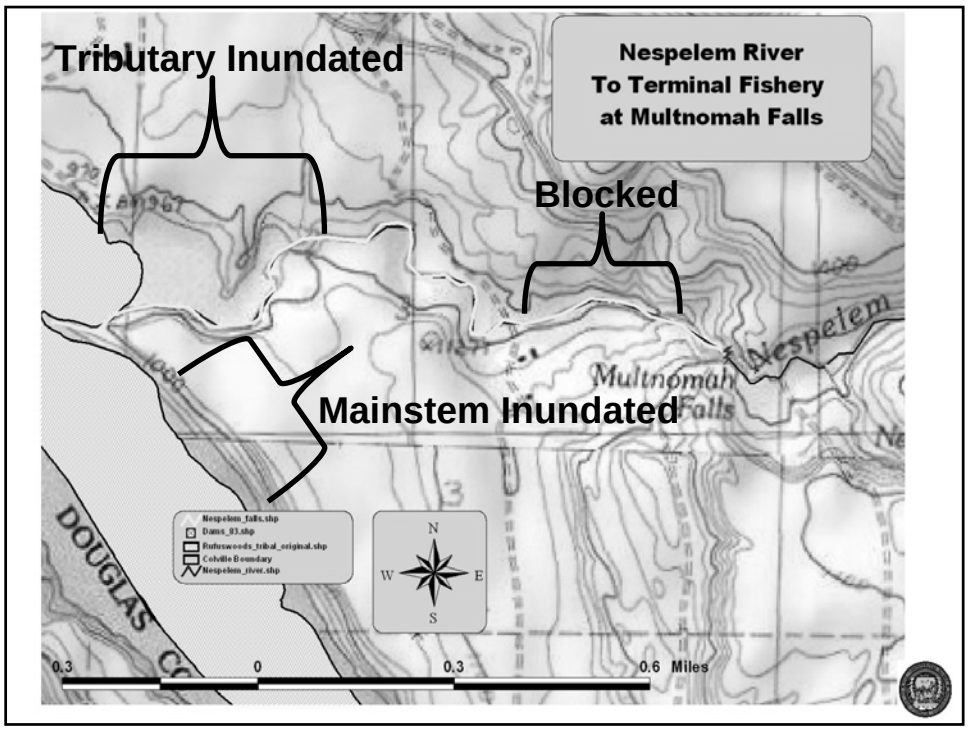
- Select area to assess (Lake Rufus Woods)
- Created GIS shapefile of original river and clipped to Reservation boundary
- Clip to high water line of original river



Determine Tributaries Impacted by Inundation

- Three tributaries used for this test
  - Nespelem River
  - Peter Dan Creek
  - Coyote Creek


Rufus Woods
Aqautic Habitat
Dams_83.shp
Coyote_end_fish.shp
Peterdan_end_fish.shp
Nespelem_falls.shp
Stream_83.shp
Rufuswoods_tribal_original.shp
Colville Boundary
N
W
E
S
10
0
10
20 Miles


Tributary Inundated
Nespelem River
To Terminal Fishery
at Multnomah Falls
Blocked
Mainstem Inundated
Nespelem
Multnomah
Falls
DOUGLAS
Nespelem_falls.shp
Dams_83.shp
Rufuswoods_tribal_original.shp
Colville Boundary
Nespelem_river.shp
N
W
E
S
0.3
0
0.3
0.6 Miles

Results

Stream Name	Acres	Miles
Columbia River Mainstem	4017.38	50.86
Nespelem River	165.44	1.34
Coyote Creek	1.07	0.85
Peter Dan Creek	0.99	0.56
Total	4184.88	53.61