

Lahontan Cutthroat Trout in the Upper Truckee River:

Restoration of a Threatened Species in a Fluvial Headwater Environment



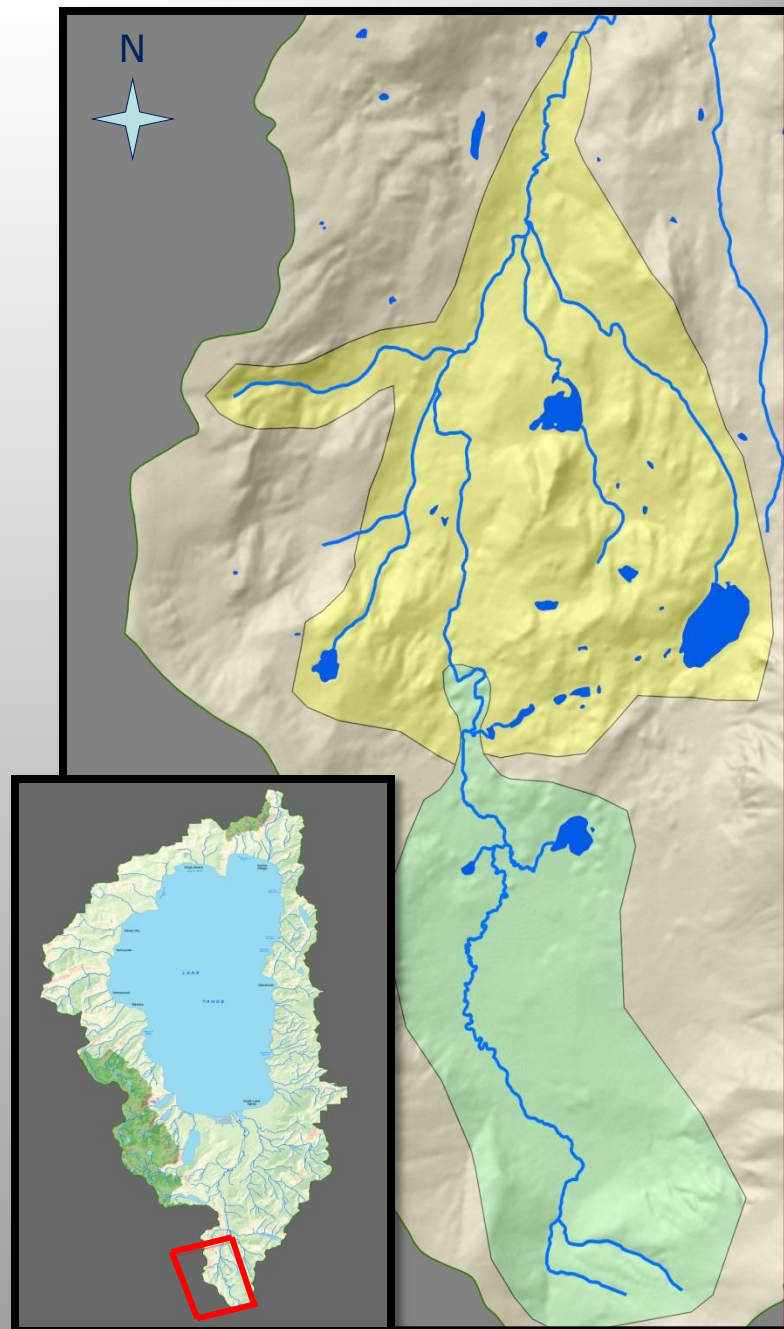
Project Area

Expansion Area

- 2008 -2011: beginning of manual removal of brook trout in additional 10 miles stream
- Future - 2023: continue implementation in streams and begin removal of brook trout in 85 acres of lake

Meiss Meadows

- 1988-1990: rotenone to remove brook trout
- early 1990s: LCT re-introduced & brook trout found
- mid 1990s: manual removal of brook trout in upper 5 miles stream & 8 acres lake
- 2007-2009: no brook trout found, resting treatment
- one of the only high meadow LCT populations in Sierra Nevada

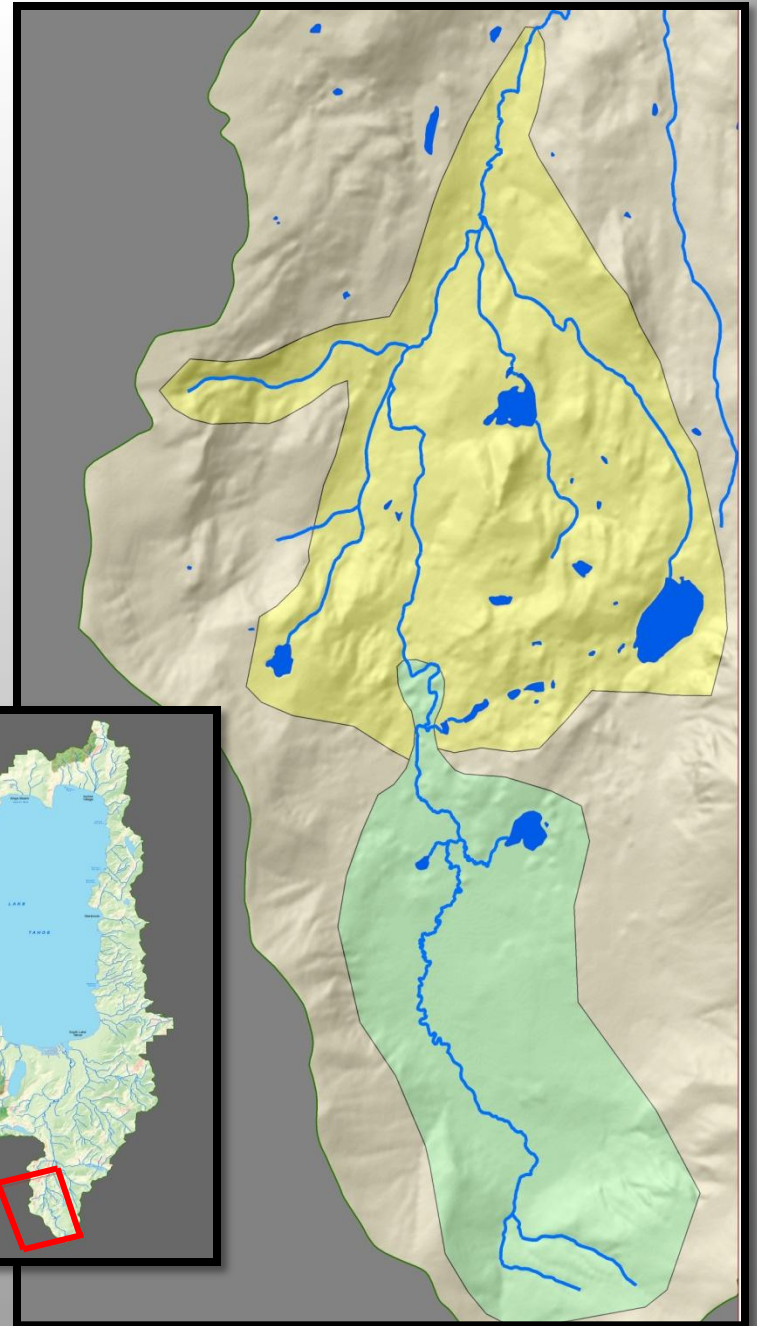


Project Area

 Expansion Area

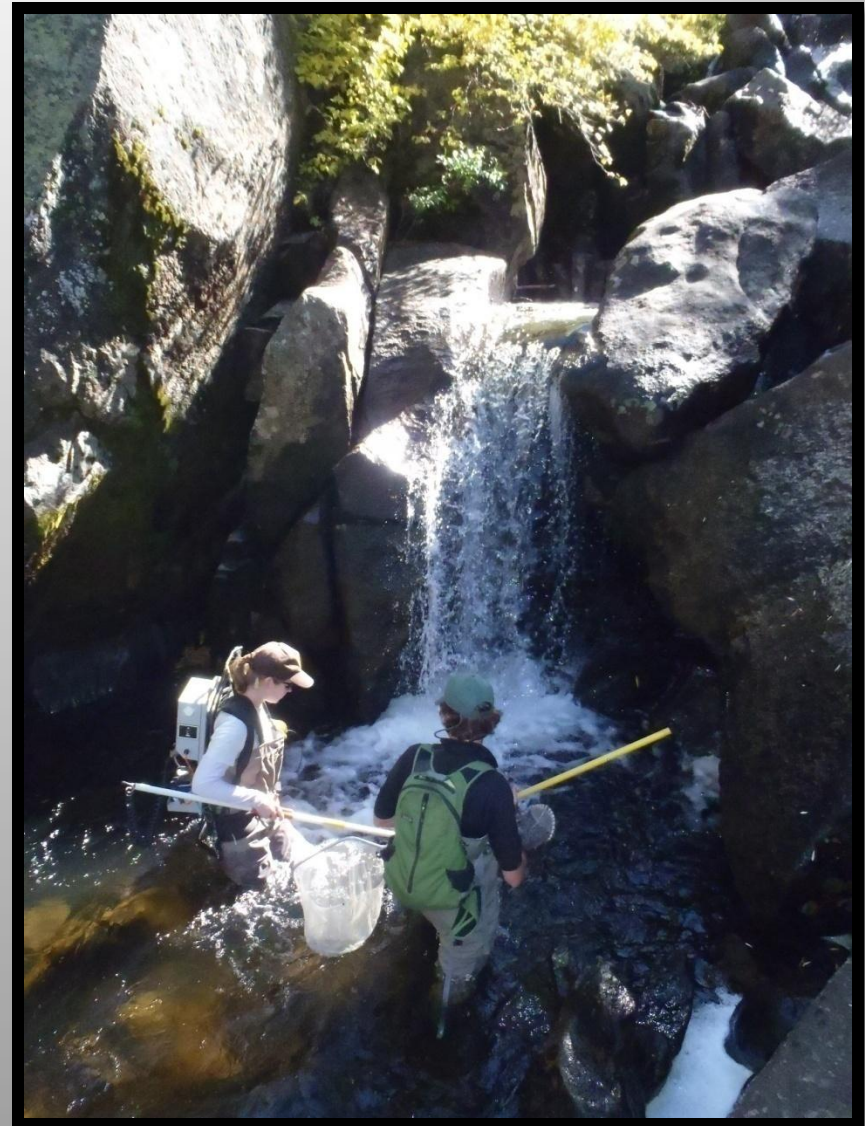


 Meiss Meadows



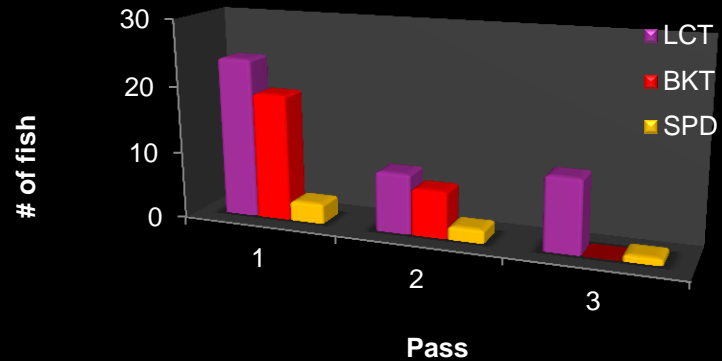
Manual Removal Methods

- Late August thru October
- Delineated reaches by natural barriers (low water barriers, falls, and beaver dams)
- 3-pass depletion, on varying reach length
- Species identified and measured to size class
- Brook and Rainbow trout sacrificed
- Speckled dace returned to upstream reach
- LCT returned upstream of Barrier T1BA4 in RL trib and 36B in UTR; sacrificed below due to hybridization threats

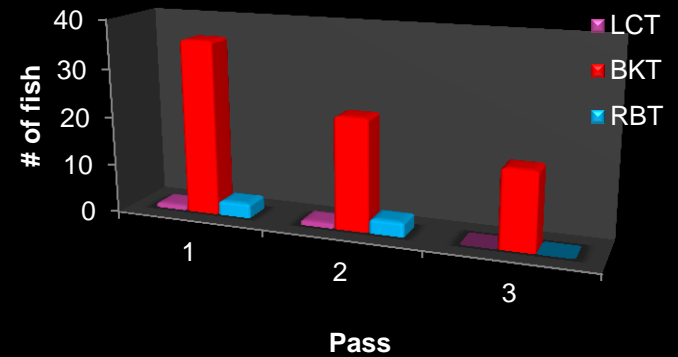


3 Pass Depletion

Depletion B37-B36A (307 m)



Depletion B34-B33 (254 m)

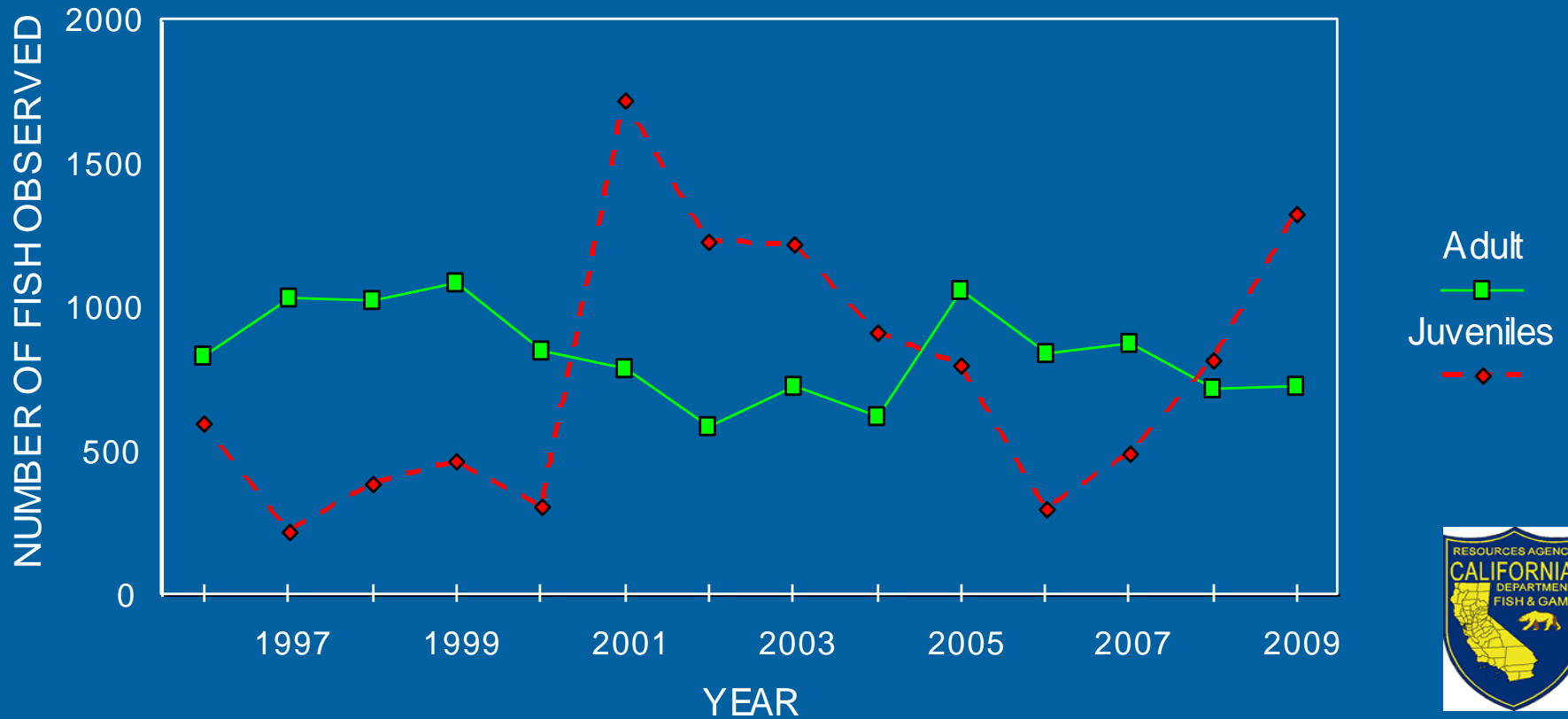


Meiss Meadows

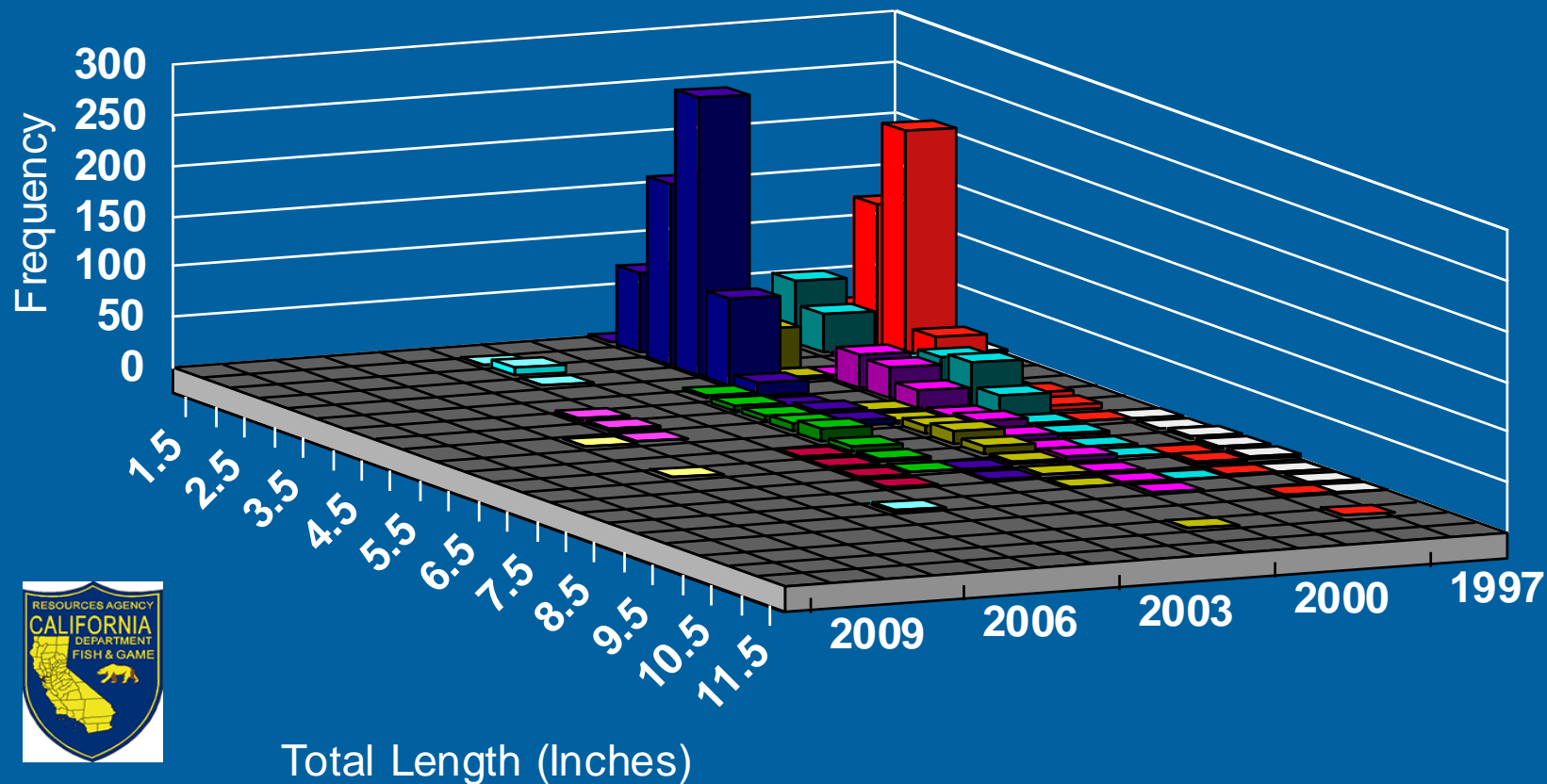


LCT in Meiss Meadows

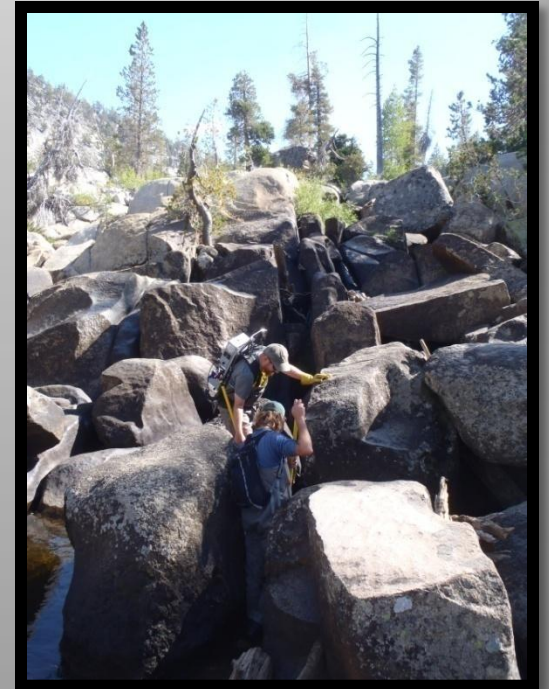
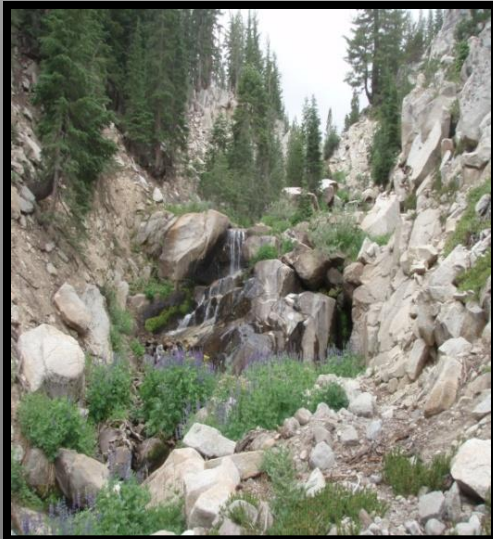
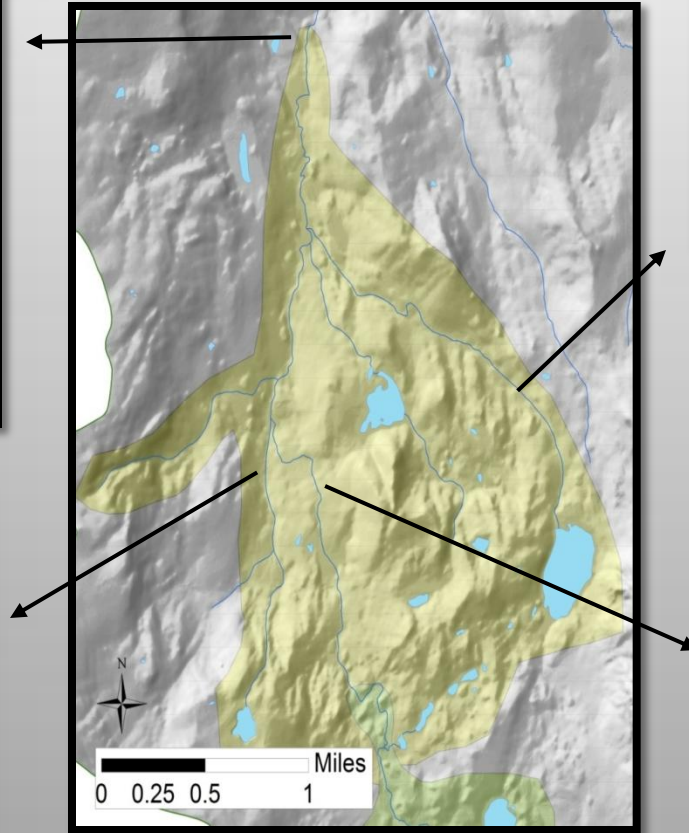
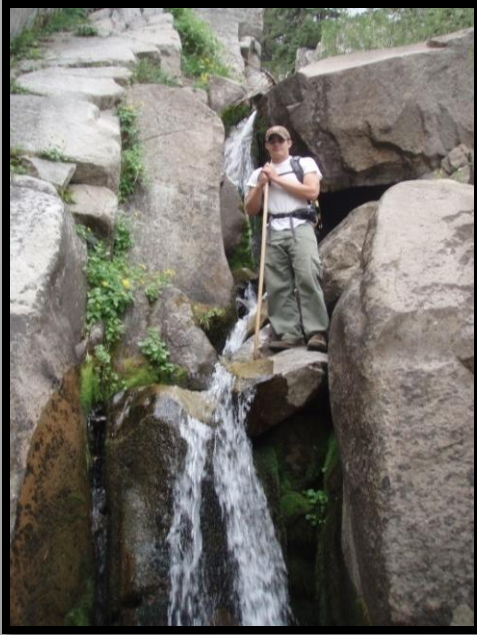
1996-2009



Brook Trout Catch in Meiss Meadows 1996-2009



Expansion Area



Accomplishment Summary

- **2008**

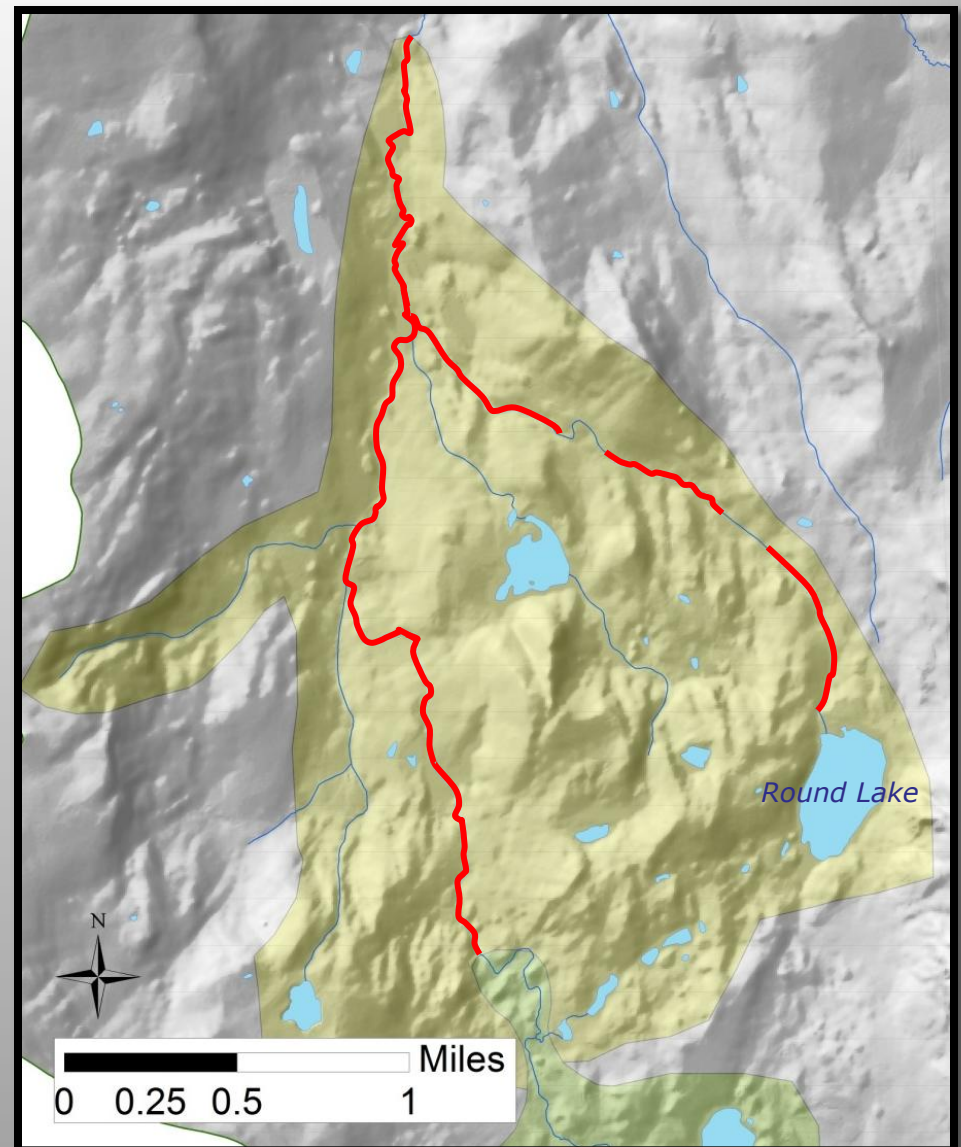
- 0.8 miles treated
- 3 passes completed
- 230 brook trout removed
- 213 speckled dace sampled
- 194 LCT sampled

- **2009**

- 1.1 miles treated
- 2-3 passes completed
- 100 brook trout removed
- 353 speckled dace sampled
- 369 LCT sampled

- **2010**

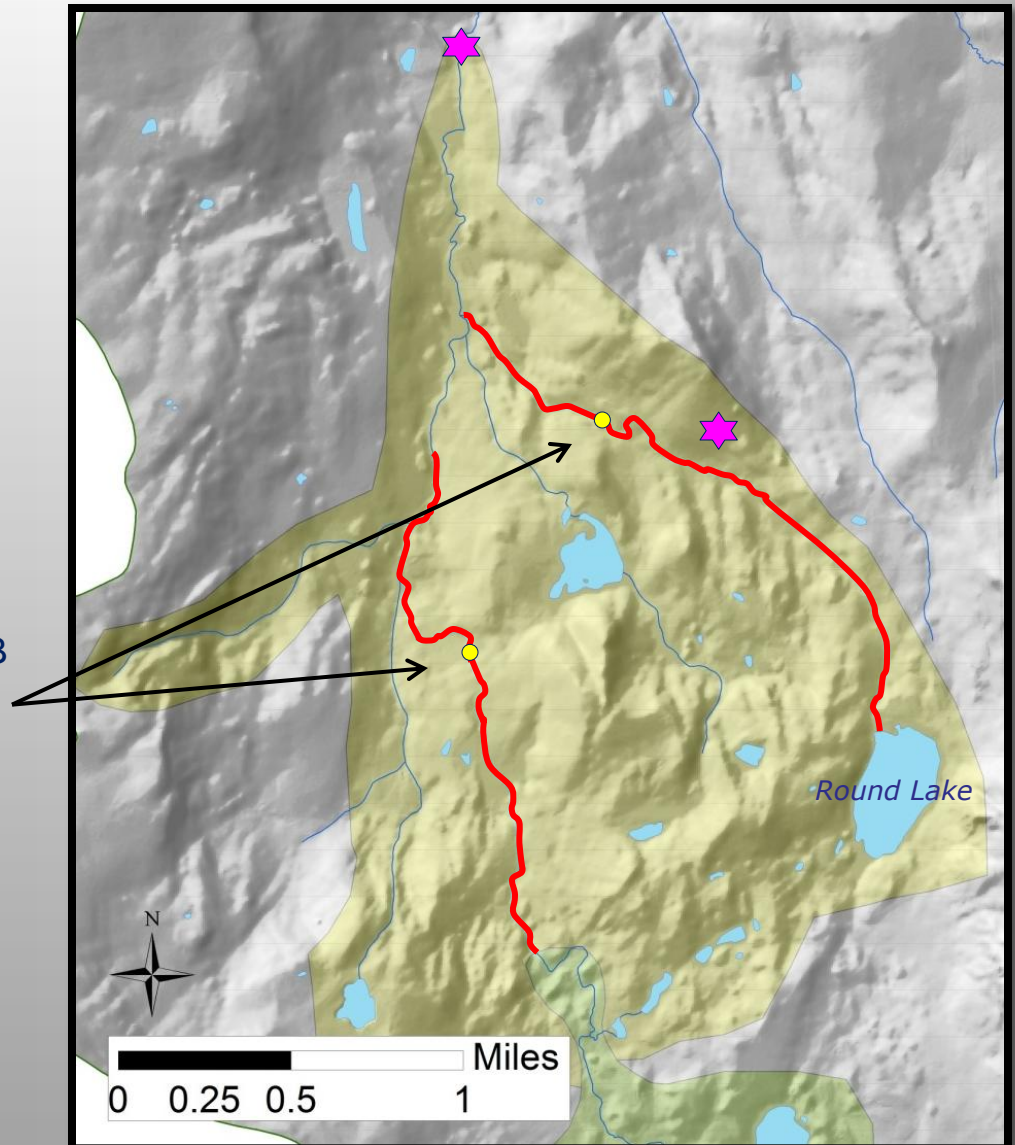
- 5.8 miles treated
- 1-3 pass completed
- 9,252 brook trout removed
- 82 rainbow trout removed
- 211 speckled dace sampled
- 509 LCT sampled



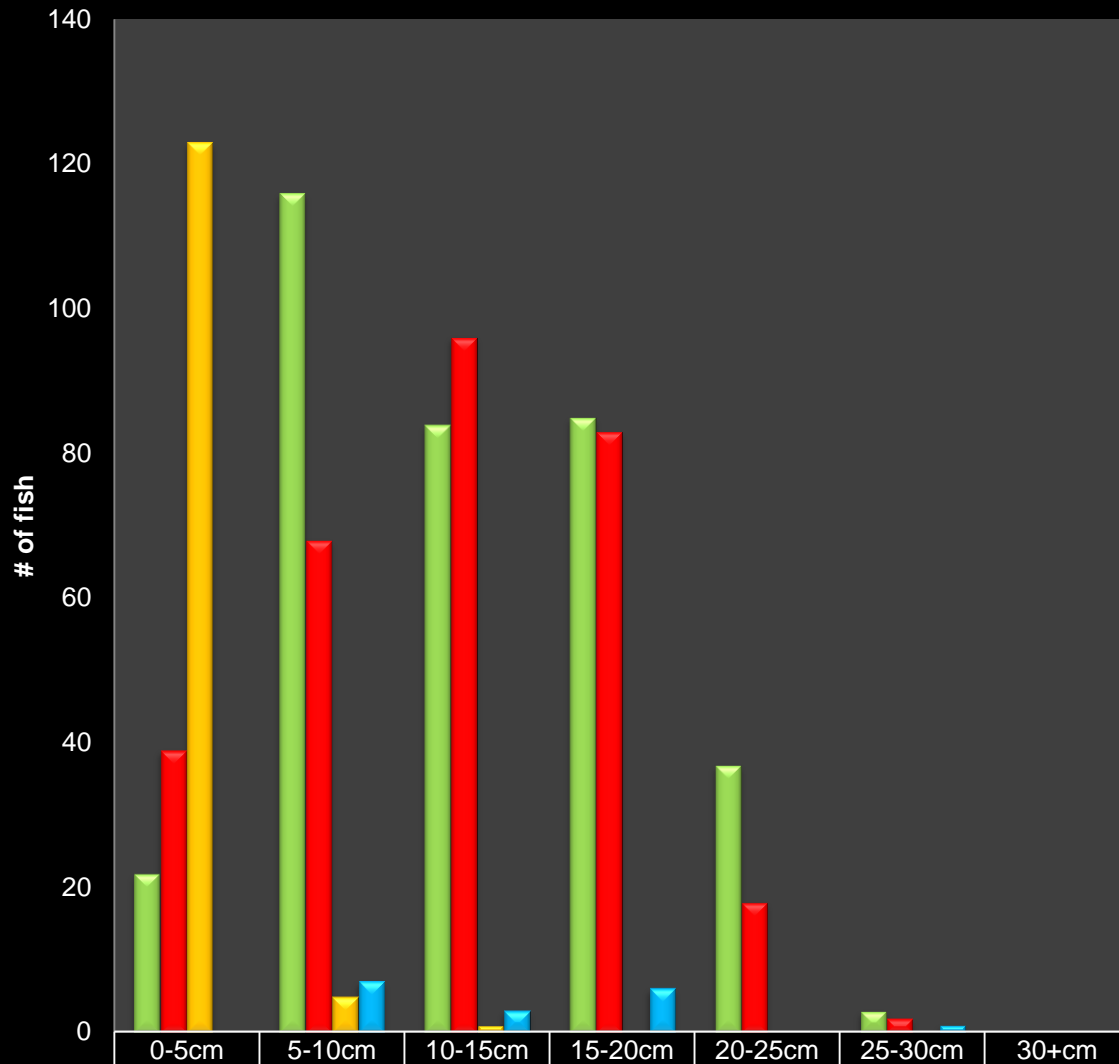
2011

- 3.6 miles treated
- 1-3 passes completed
- 729 brook trout removed
- 27 rainbow trout removed
- 337 speckled dace sampled
- 820 LCT sampled
 - 734 returned upstream of T1BA4 and 36B
 - 86 removed below T1BA4 and 36B

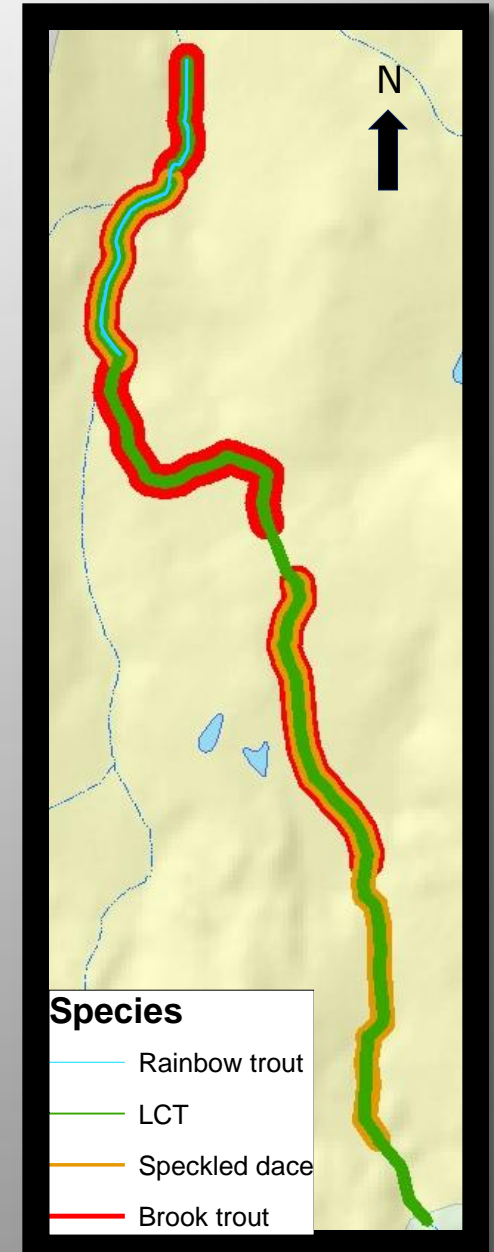
★ Hybrids sampled in 2010
(thanks USFWS & M. Peacock!)



Upper Truckee River

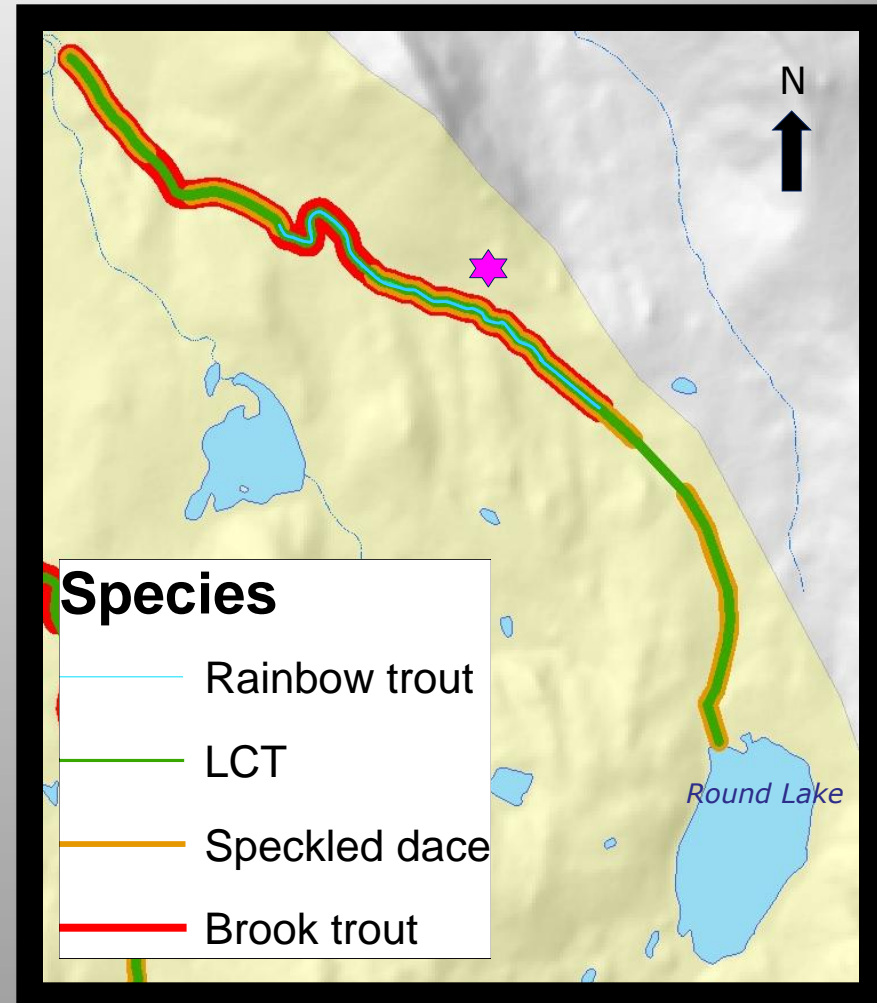
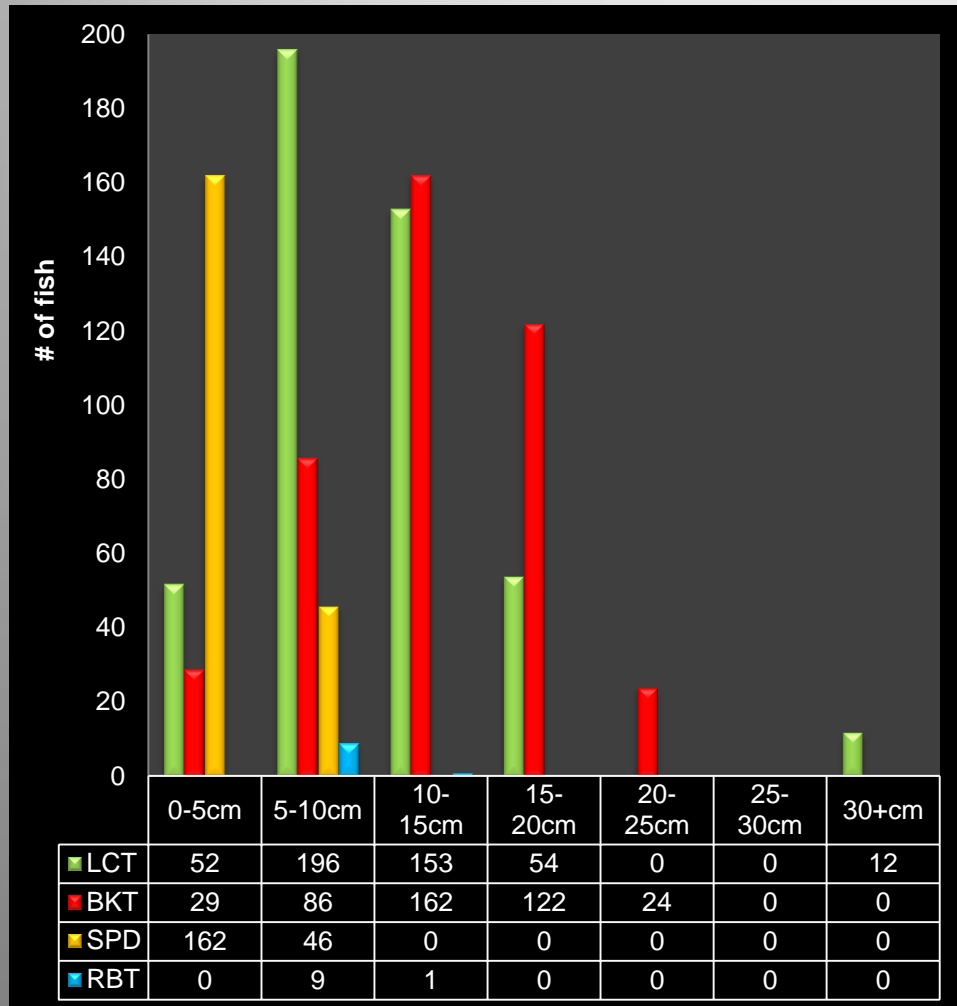


	0-5cm	5-10cm	10-15cm	15-20cm	20-25cm	25-30cm	30+cm
LCT	22	116	84	85	37	3	0
BKT	39	68	96	83	18	2	0
SPD	123	5	1	0	0	0	0
RBT	0	7	3	6	0	1	0



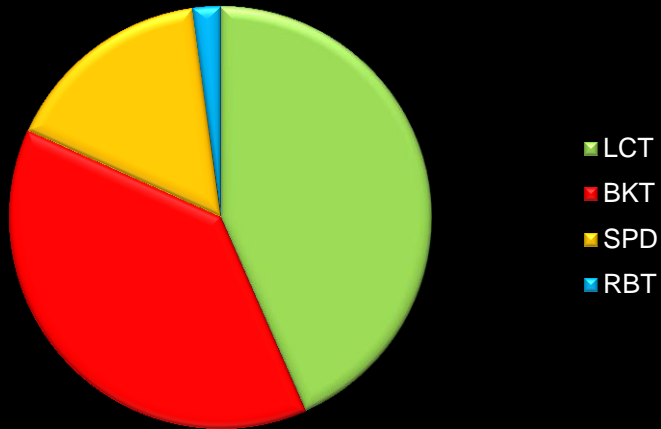
Round Lake tributary

- LCT had last been planted in Round Lake in 2008
- CDFG surveyed Round Lake in summer 2010, and found only LCT and dace

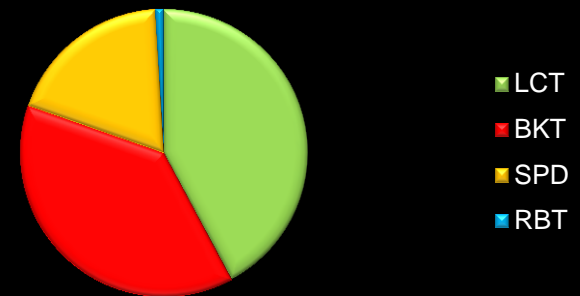


2011: TOTAL FISH = 1,193

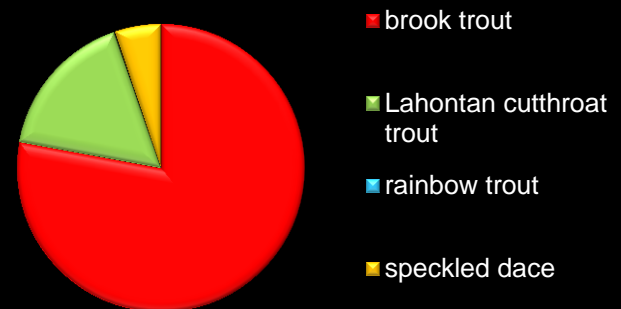
2011 UTR mainstem



2011 Round Lake tributary



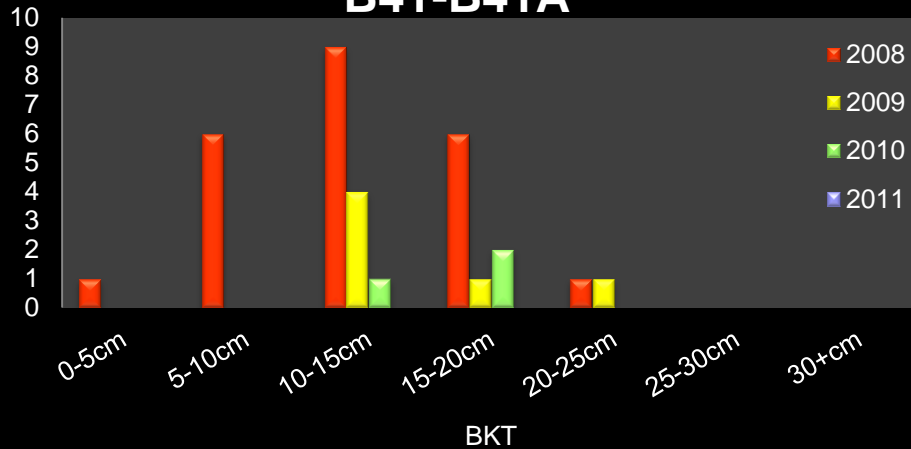
2010 Round Lake tributary



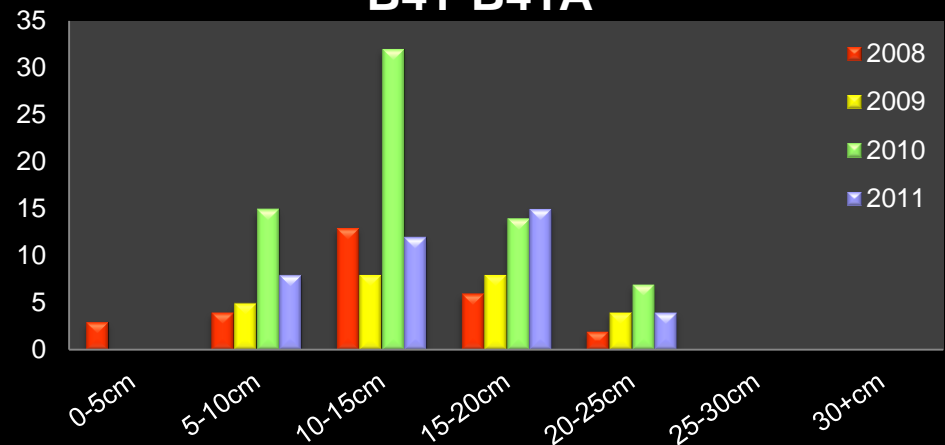
Progress

Reach B41-B41A = the most upstream reach in the Expansion Area

**Brook Trout
B41-B41A**

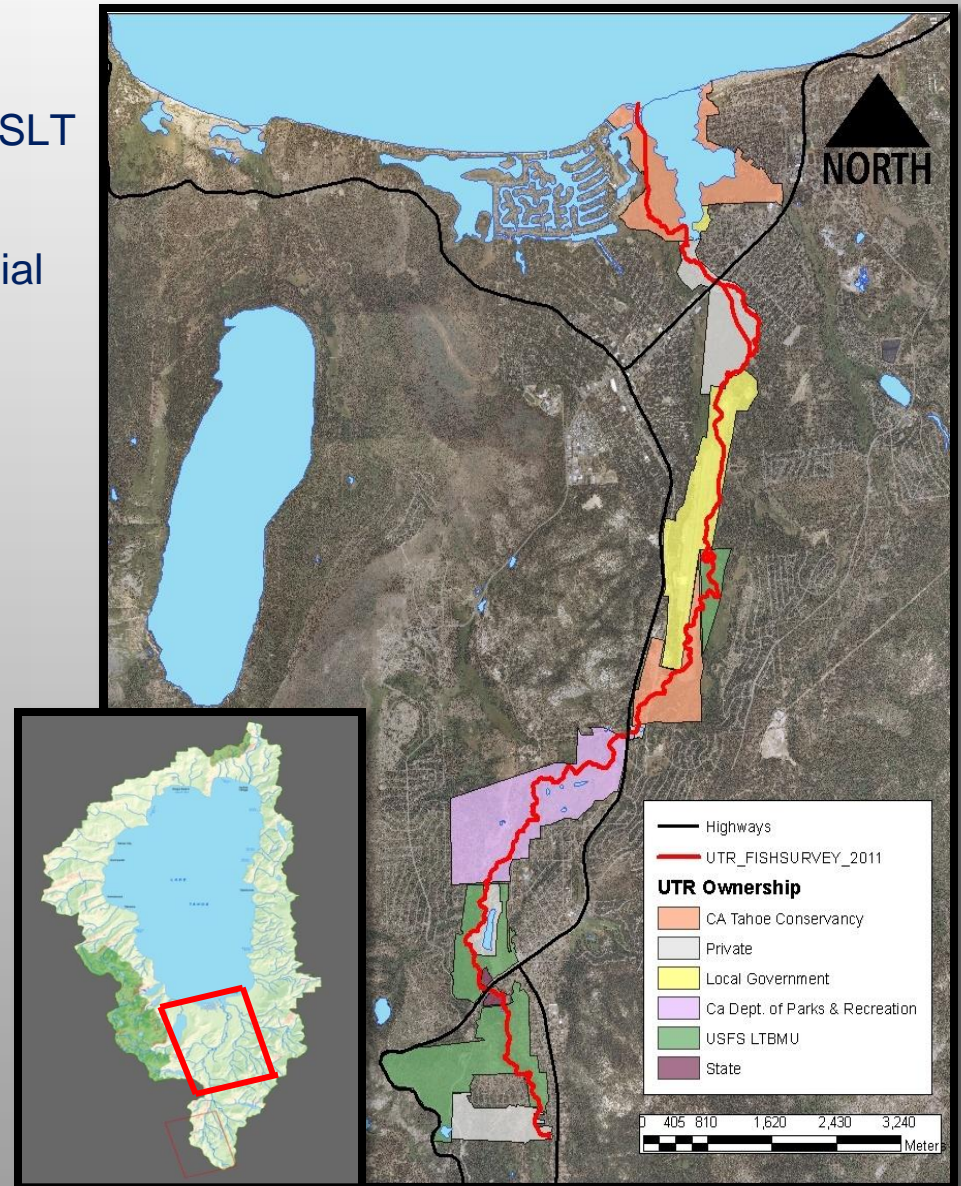


**LCT
B41-B41A**

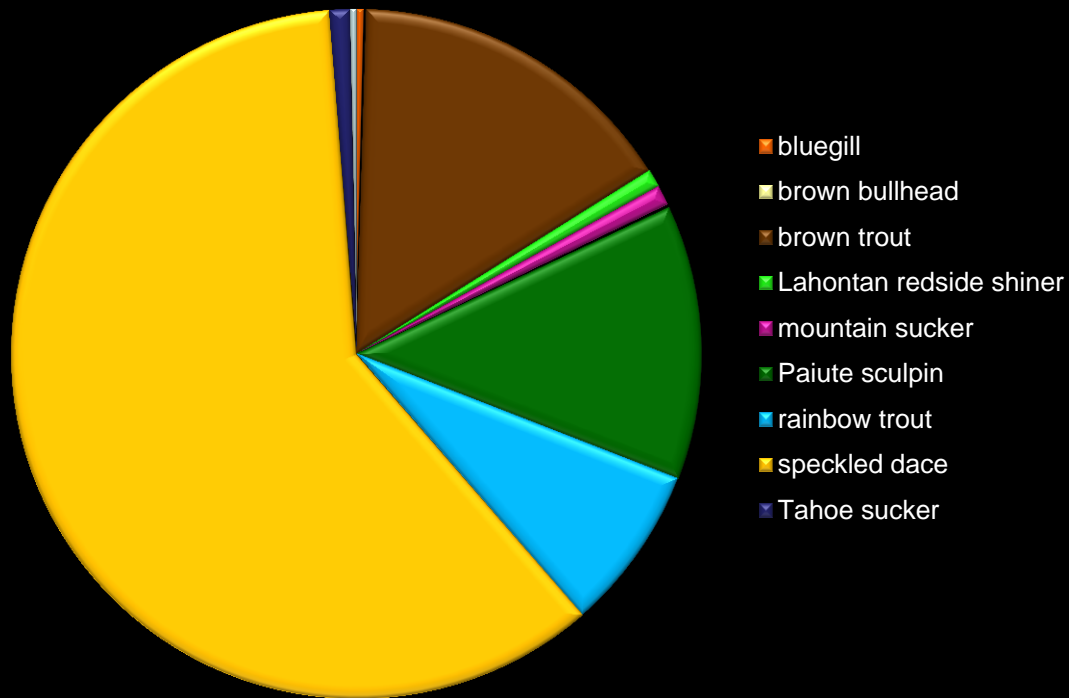


UTR Fish Assessment

- CTC, CalTrout, CDFG, UC Davis, City SLT
- Late July and August
- Survey mouth to headwaters of perennial streams (where possible)
- 1 pass electro-shocking
- 100 meter reaches where possible
- Record species and size class



UTR Fish Assessment



Species	Total
bluegill	44
brook trout	6
brown bullhead	9
brown trout	1954
Lahontan cutthroat trout	2
Lahontan redbside shiner	108
mountain sucker	119
mountain whitefish	12
Paiute sculpin	1613
rainbow trout	971
speckled dace	7528
Tahoe sucker	118
unknown sucker	37

UTR Fish Assessment

