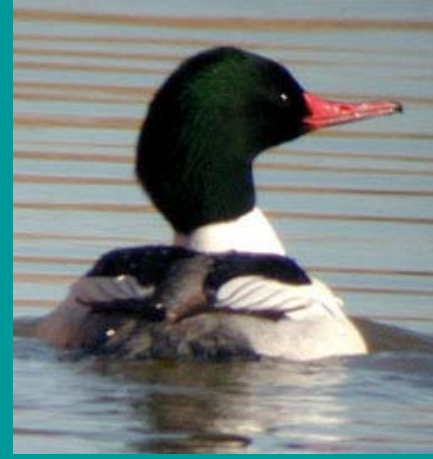
Recolonization of the Cedar River by anadromous fish: Build it and they will come!

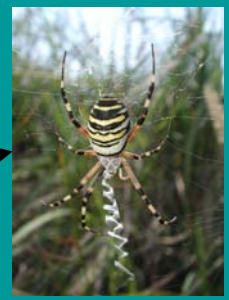
P. Kiffney, G. Pess, J. Cram, K. Kloehn, J. Anderson and T. Quinn

Wolf reintroduction

- no cottonwoods between 5-29 cm
- corresponded to extirpation of wolves
- wolves reintroduced in 1995

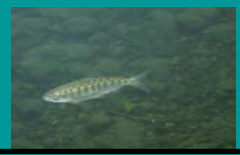
Recolonization











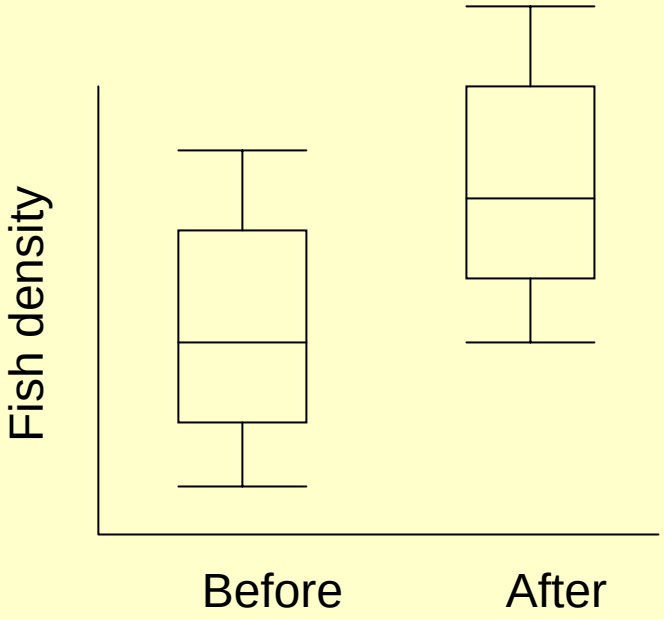


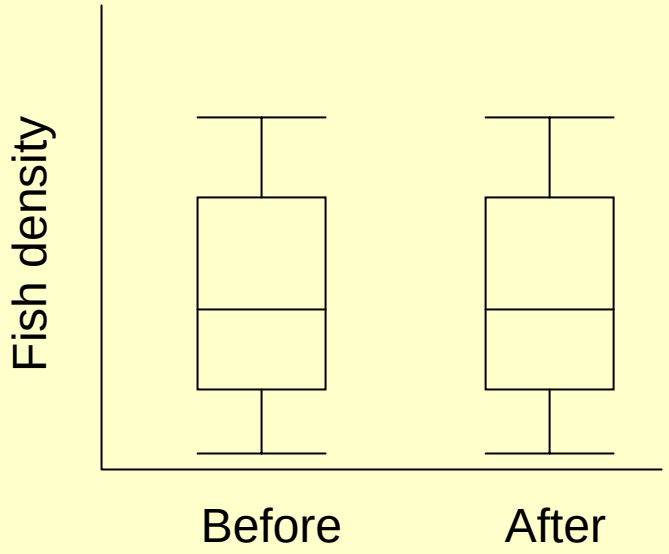


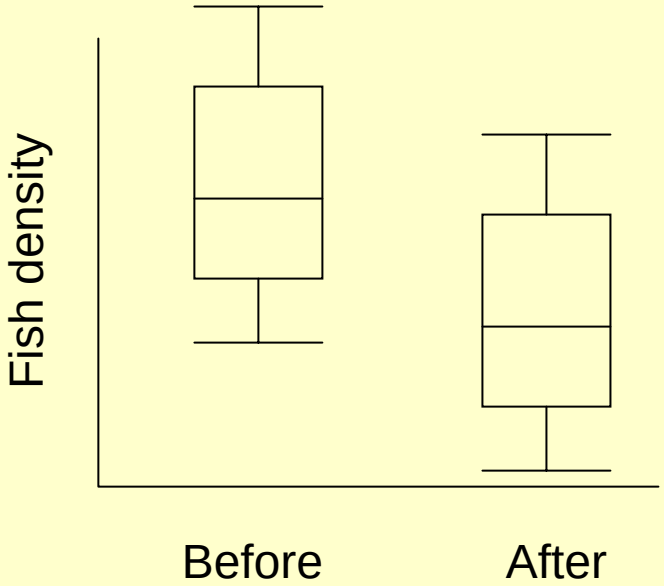

Questions

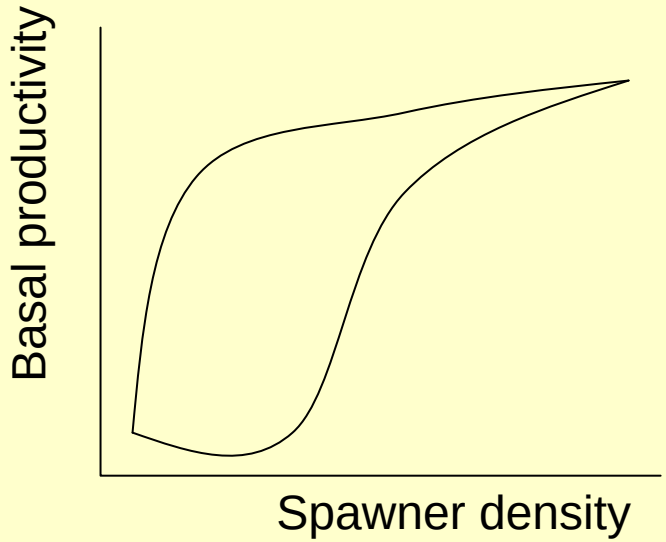
- What are the dispersal and colonization patterns, and reproductive success of anadromous fish in naïve habitat?
- What are the ecological effects of anadromous fish on populations, communities and ecosystems?
- Does providing fish passage establish a sustainable anadromous fish population in the Cedar River?

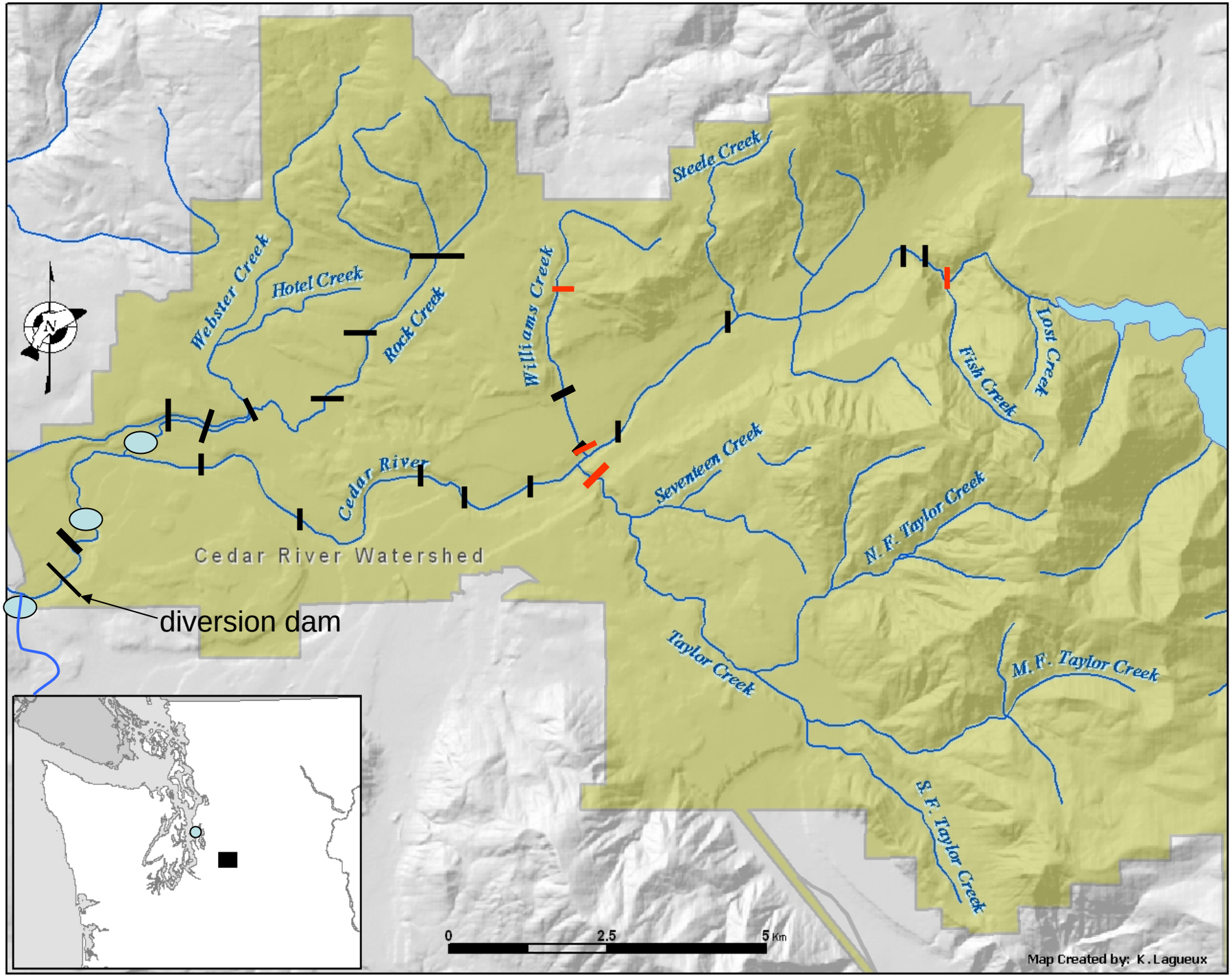
Predictions







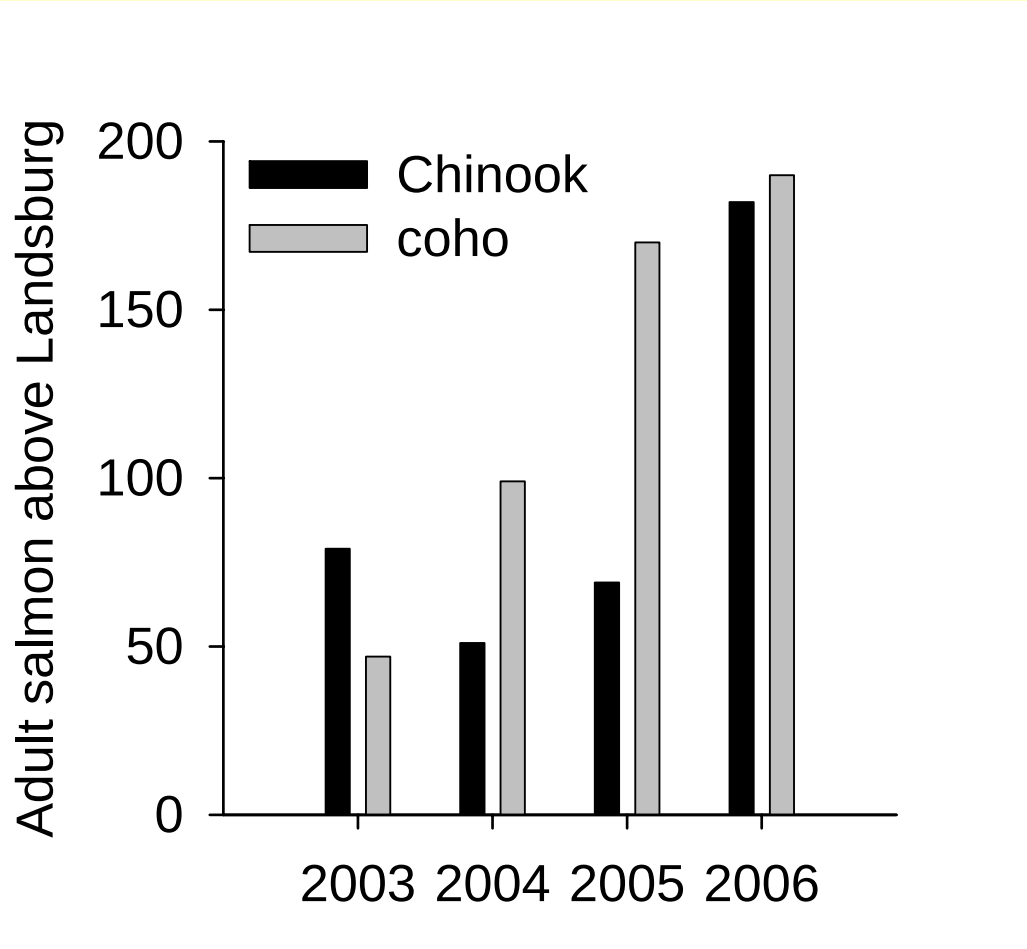



Webster Creek
Hotel Creek
Rock Creek
Williams Creek
Steele Creek
Fish Creek
Lost Creek
Cedar River
Seventeen Creek
N. F. Taylor Creek
Cedar River Watershed
diversion dam
Taylor Creek
M. F. Taylor Creek
S. F. Taylor Creek
0
2.5
5 Km
Map Created by: K. Lagueux

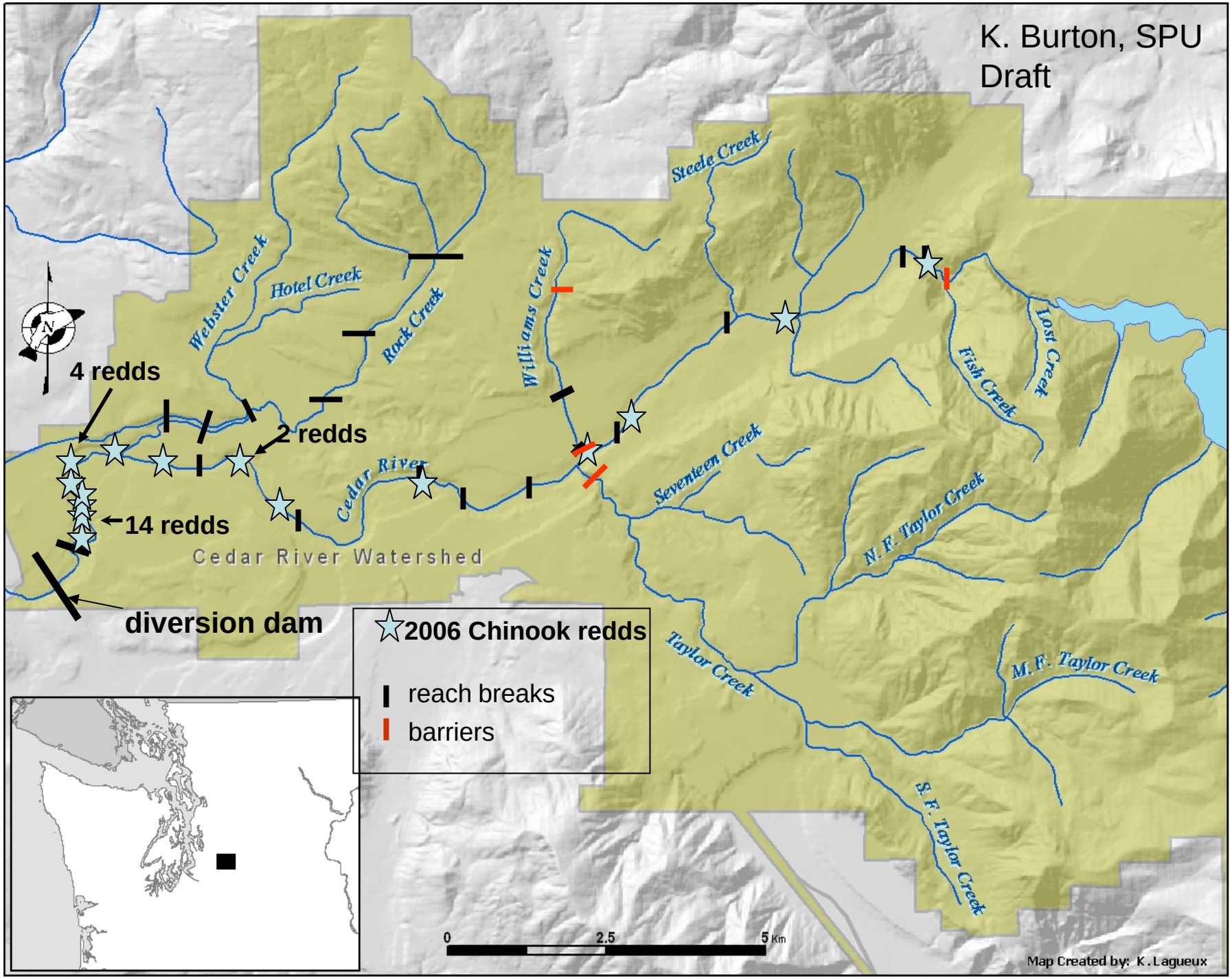
Methods

Results

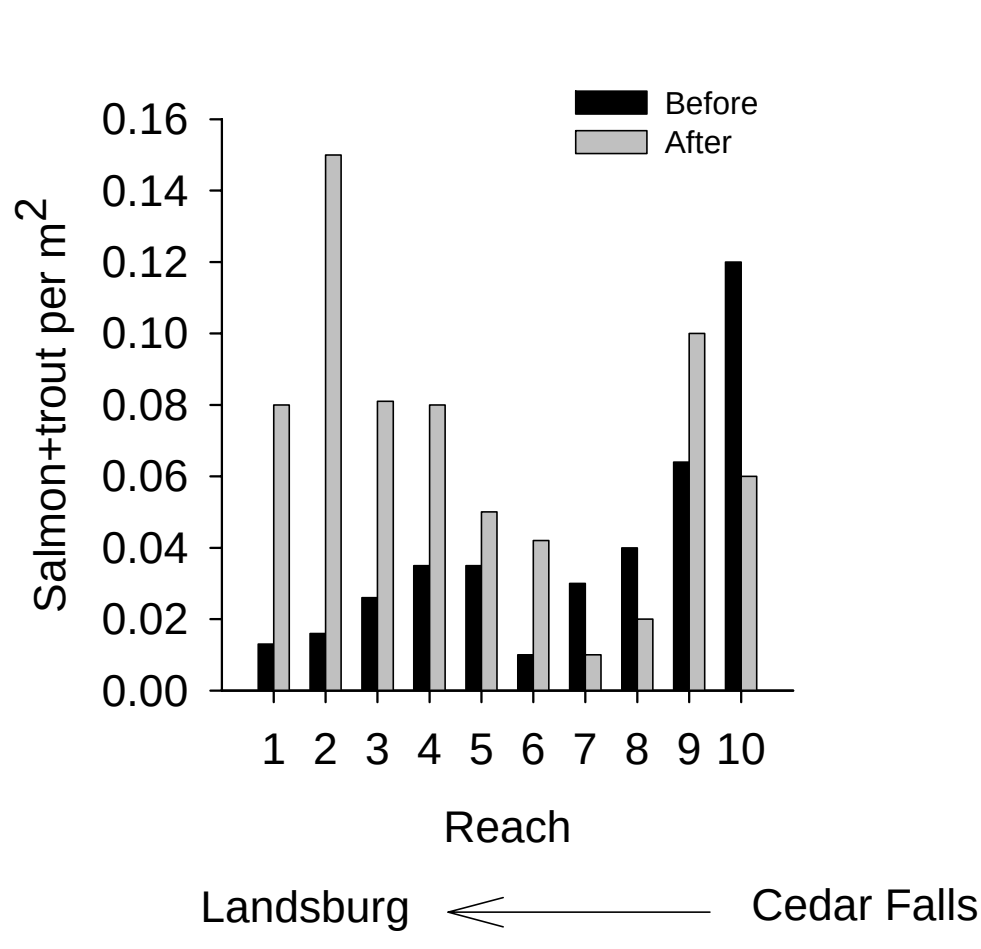
Adults



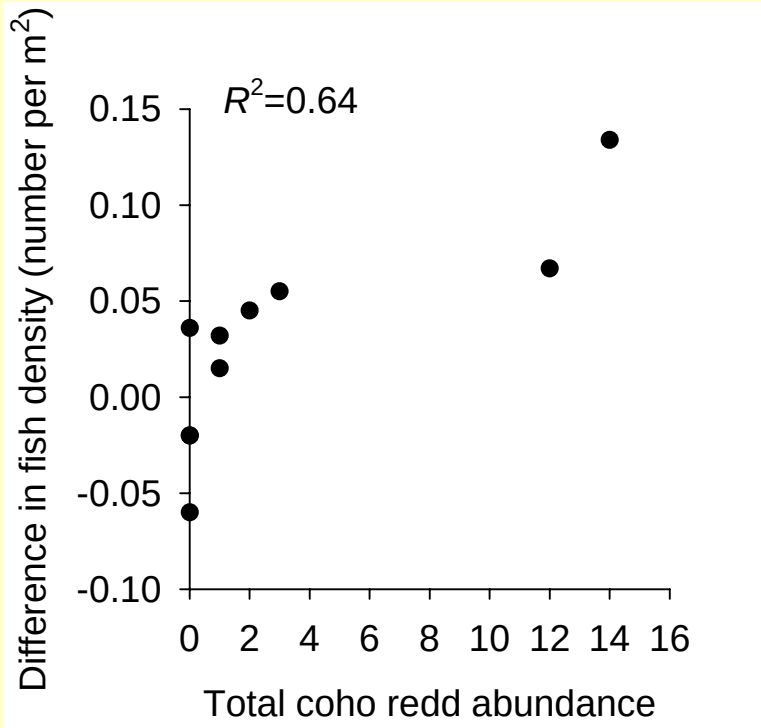
P. Faulds, SPU

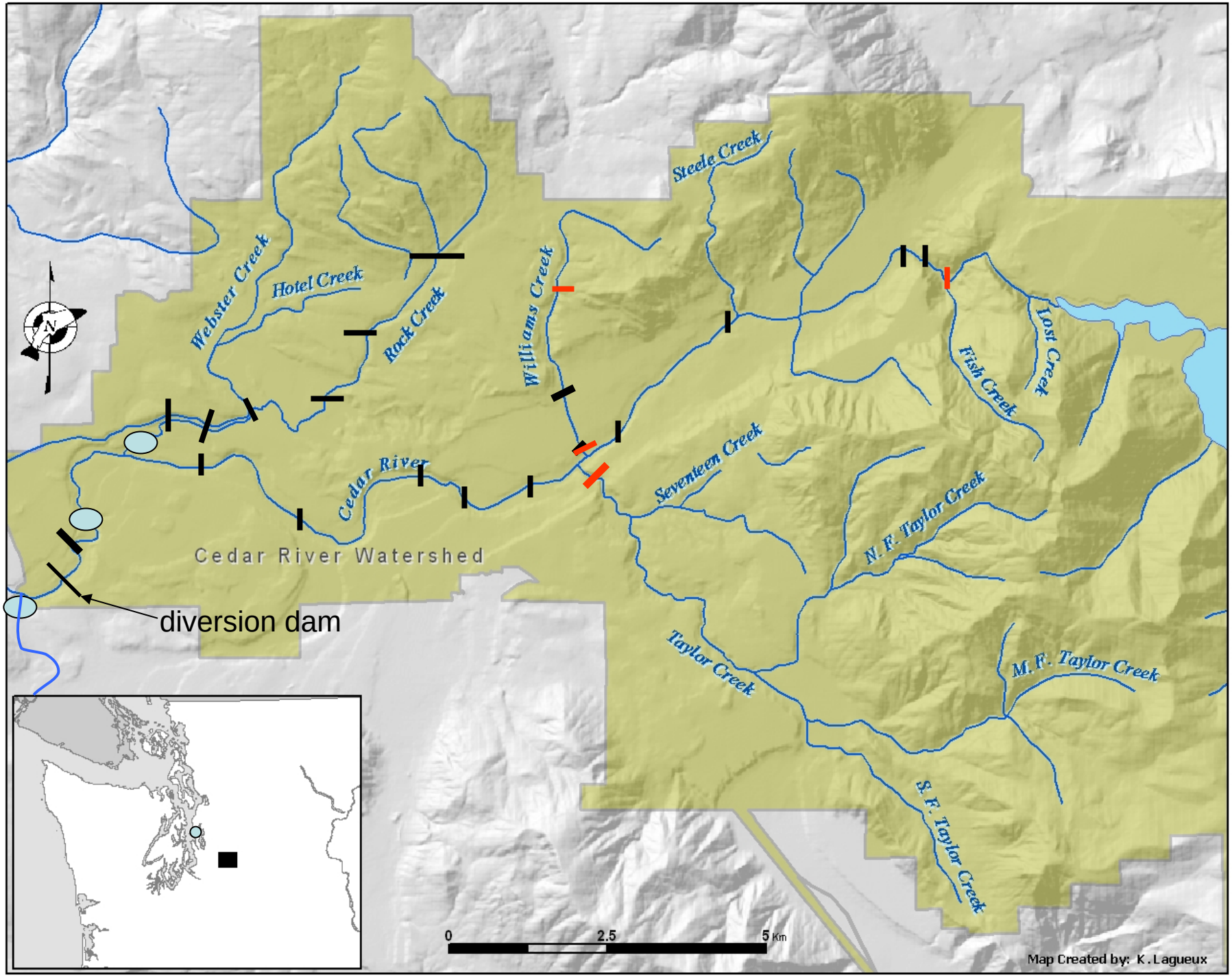

K. Burton, SPU
Draft
Webster Creek
Hotel Creek
Rock Creek
Williams Creek
Steele Creek
Lost Creek
Fish Creek
Seventeen Creek
N. F. Taylor Creek
M. F. Taylor Creek
S. F. Taylor Creek
Taylor Creek
Cedar River
Cedar River Watershed
4 redds
2 redds
14 redds
diversion dam
2006 Chinook redds
reach breaks
barriers
0
2.5
5 Km
Map Created by: K. Lagueux

Trout and salmon distributions



Adult-juvenile

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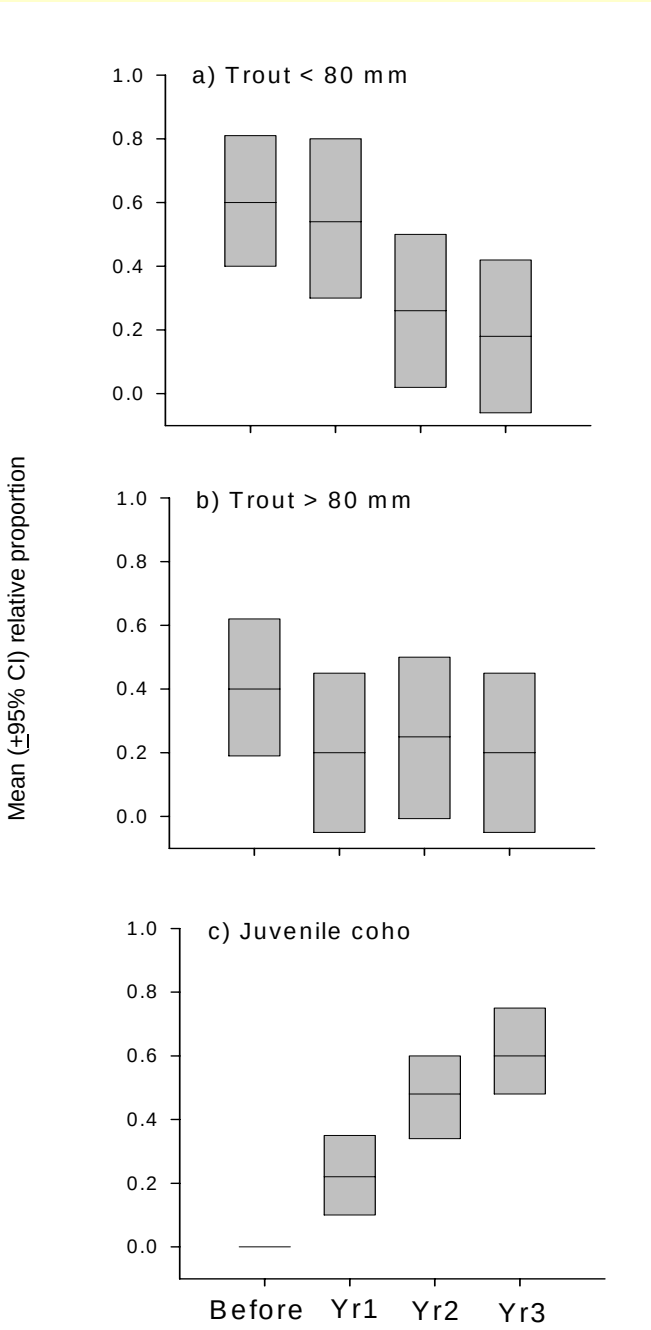
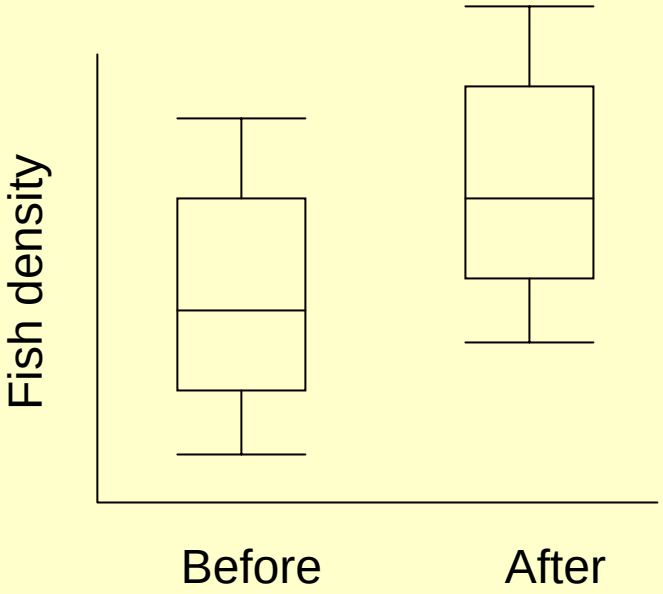
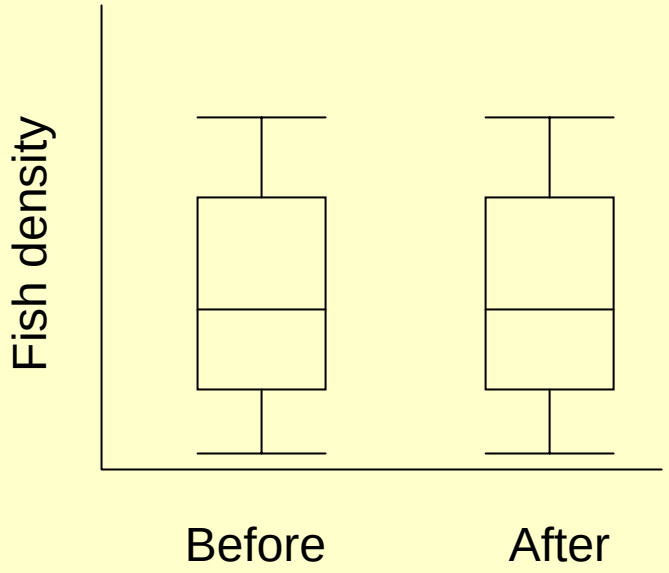
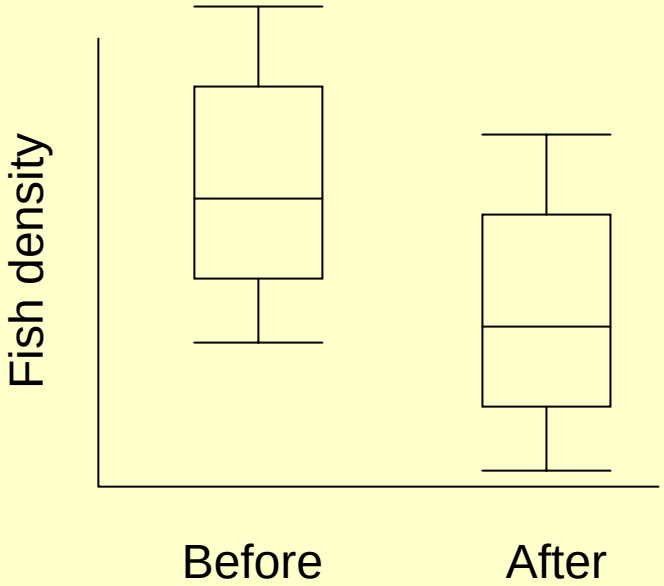
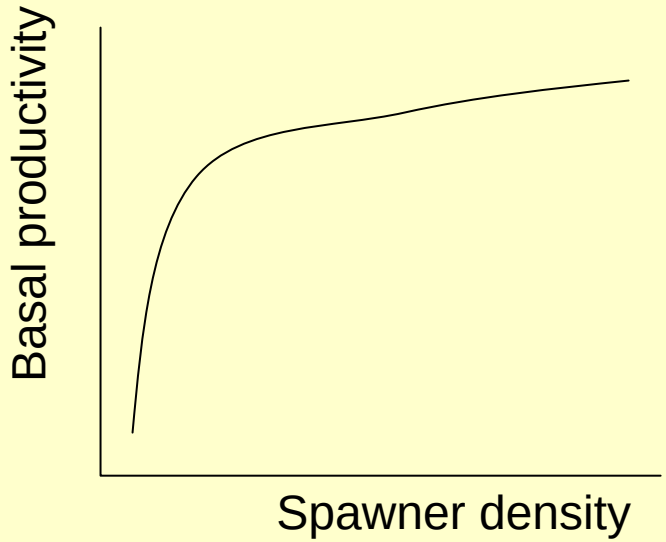

a) Trout < 80 mm
b) Trout > 80 mm
c) Juvenile coho
Mean (±95% CI) relative proportion
1.0
0.8
0.6
0.4
0.2
0.0
Before
Yr1
Yr2
Yr3

Summary


Fish density
Before
After


Fish density
Before
After


Fish density
Before
After


Basal productivity
Spawner density

Acknowledgements

- Seattle Public Utilities: H. Barnett, B. Bachen, K. Burton, D. Chapin, J. Erckmann, P. Faulds. J. McDowell and D. Paige
- T. Bennett, G. Brooks, K. Colpitts, S. Downing, K. Guilbault, O. Gunning R. Holland, B. Jonasson, R. Klett, M. Liermann, S. Morley, E. Prentice, D. Silver
- Anadromous Fish Commission, Earthwatch NWFSC Internal Grants, Seattle Public Utilities, Washington Sea Grant