



# Alternative smolt rearing - Net Pens

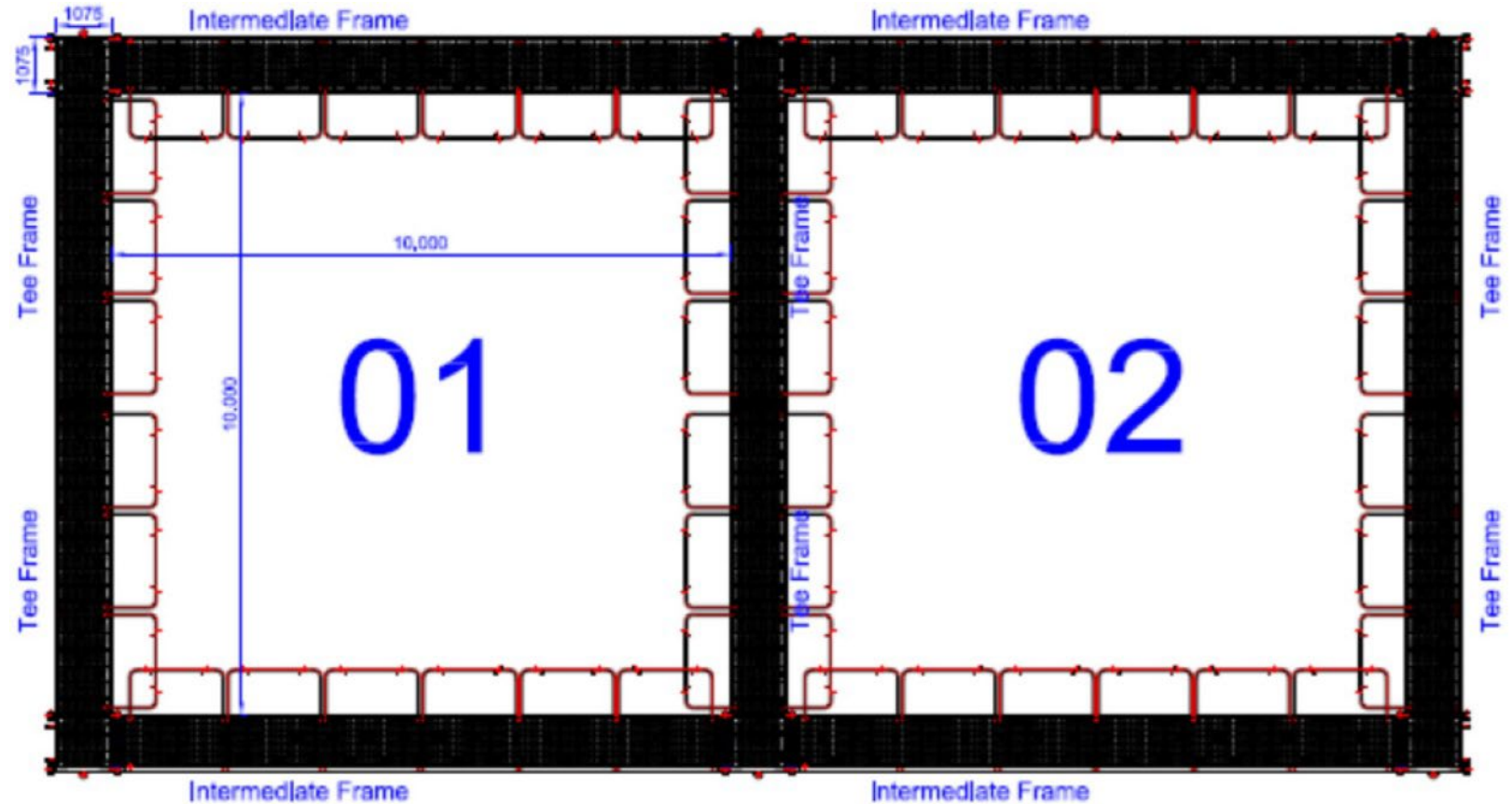
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Ben Gilles – Western Montana National  
Wildlife Refuge Complex Project Leader

# Some numbers...

## Dimensions

- 40' x 40' x 20'  
~27,000 cu ft
- 30' x 30' x 18'  
~13,500 cu ft





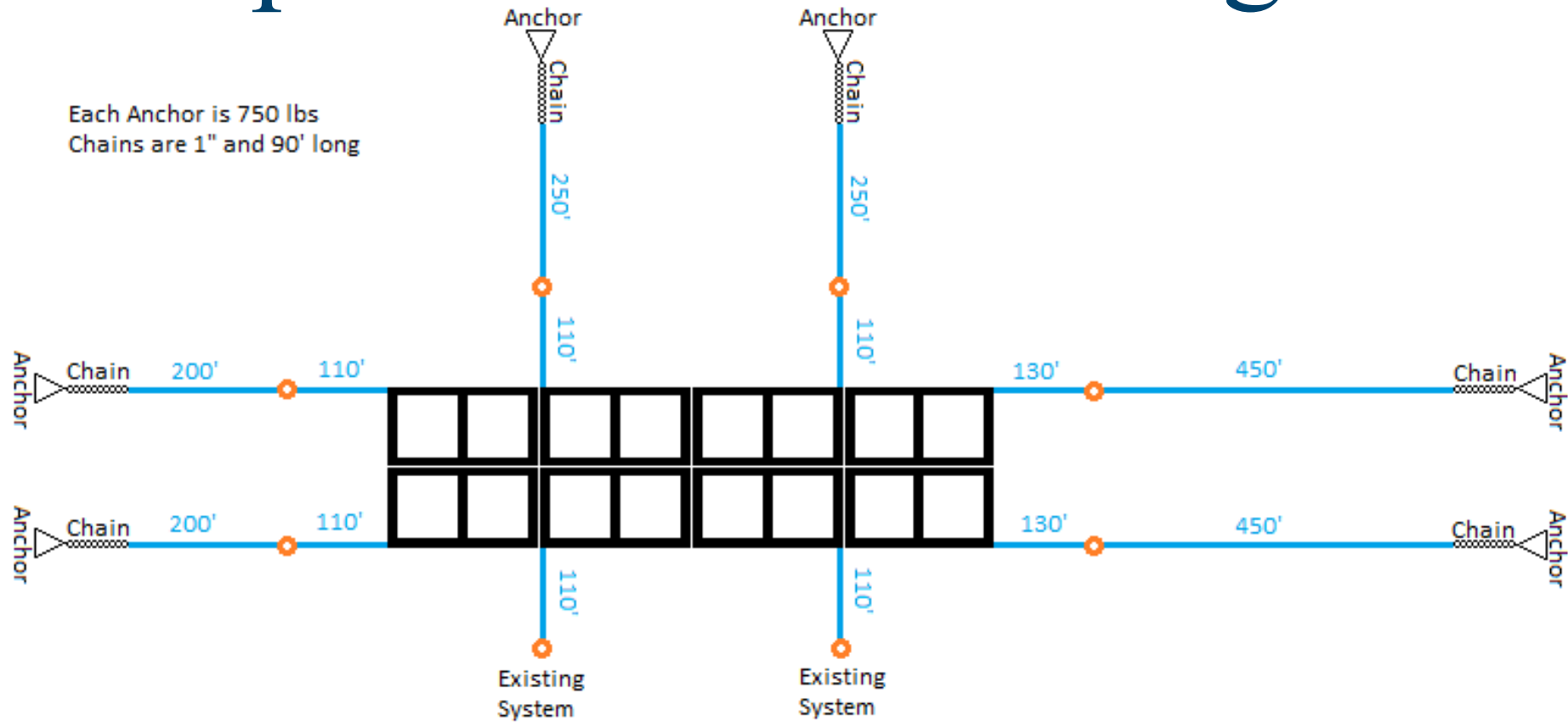








# Setup and Anchoring









Chinook - Per Pen

Date	Population	% Mortality	Size (g)	Size (fpp)	Length (mm)	Length (in)	Biomass (kg)	Biomass (lb.)	Volume (m³)	Volume (ft³)	DI	Density (Kg/M³)
October	250,000	0.11%	4.54	100	80	3.15	1,134	2,500	764.56	27,000	0.03	1.48
November	249,715	0.15%	5.67	80	83	3.26	1,416	3,121	764.56	27,000	0.04	1.85
December	249,330	0.03%	6.98	65	86	3.39	1,740	3,836	764.56	27,000	0.04	2.28
January	249,265	0.00%	9.07	50	90	3.55	2,261	4,985	764.56	27,000	0.05	2.96
February	249,256	0.06%	12.96	35	98	3.84	3,230	7,122	764.56	27,000	0.07	4.23
March	249,108	0.07%	18.14	25	114	4.47	4,520	9,964	764.56	27,000	0.08	5.91
April	248,933	0.07%	22.68	20	137	5.39	5,646	12,447	764.56	27,000	0.09	7.38





# Advantages and Challenges

## Advantages

- Low densities
- No flow, turnover, DO concerns
- Minimal infrastructure
- No cleaning

## Challenges

- Chemical Treatments
- Access
- Predation















# Potential Lower Snake Locations

**Dworshak**

**American Falls**

**Wallowa**

**Arrowrock**



# Question?

