## Hanford Reach Fall Chinook summarized fitness outcomes

MNSnyder 8/26/2019

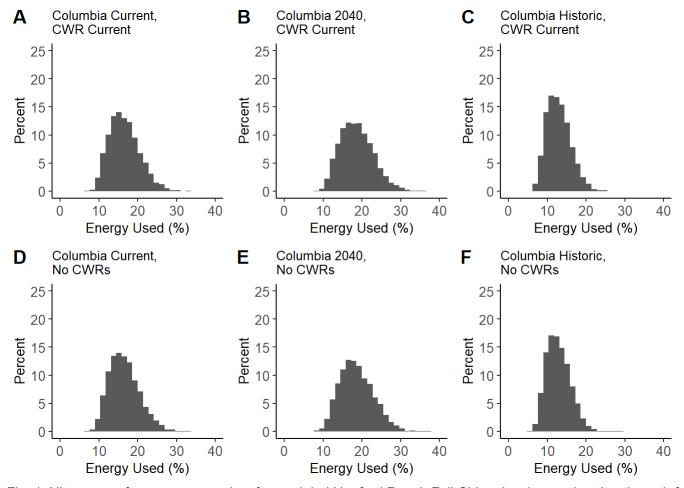


Fig. 1. Histogram of percent energy lost for modeled Hanford Reach Fall Chinook salmon migrating through four different modeled thermalscapes.

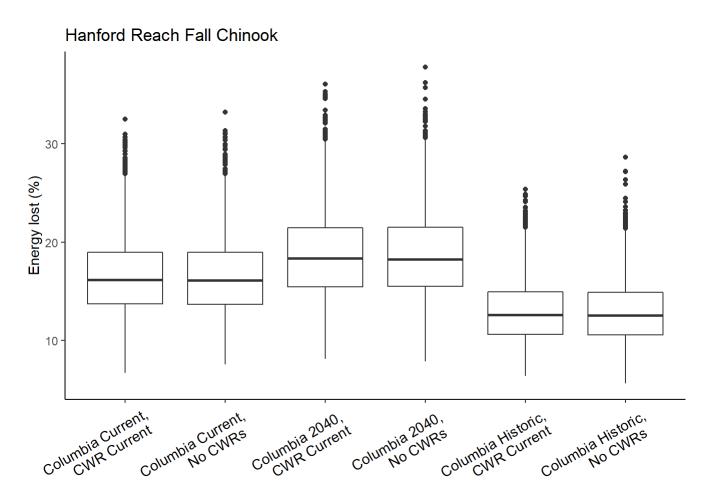


Fig. 2. Boxplot of percent energy lost for modeled Hanford Reach Fall Chinook migrating through four different modeled thermalscapes.

Table 1. Percent energy used across different HexSim thermalscapes summarized for Hanford Reach Fall Chinook.

Scenario	Minimum	25% quantile	Median	75% quantile	Maximum
Columbia 2040, CWR Current	8.1	15.4	18.4	21.5	36.1
Columbia Historic, CWR Current	6.4	10.6	12.6	15.0	25.4
Columbia Current, CWR Current	6.7	13.7	16.2	19.0	32.5
Columbia 2040, No CWRs	7.9	15.5	18.2	21.5	37.8
Columbia Historic, No CWRs	5.6	10.6	12.6	14.9	28.7
Columbia Current, No CWRs	7.6	13.7	16.1	19.0	33.3

Table 3. Model output for total hours residing in cold water refuges summarized for Hanford Reach Fall Chinook.

Scenario	Total CWR Residence (h)		
Columbia Current, CWR Current	48919		
Columbia Current, No CWRs	1		

Scenario	Total CWR Residence (h)		
Columbia 2040, Current	98438		
Columbia 2040, No CWRs	4		
Columbia Historic, Current	5827		
Columbia Historic, No CWRs	0		

Table 4. Model output for percent of individuals dying from acute temperature stress summarized for Hanford Reach Fall Chinook.

Scenario	Total mortality
Columbia Current, CWR Current	0
Columbia Current, No CWRs	0
Columbia 2040, Current	0
Columbia 2040, No CWRs	0.1
Columbia Historic, Current	0
Columbia Historic, No CWRs	0