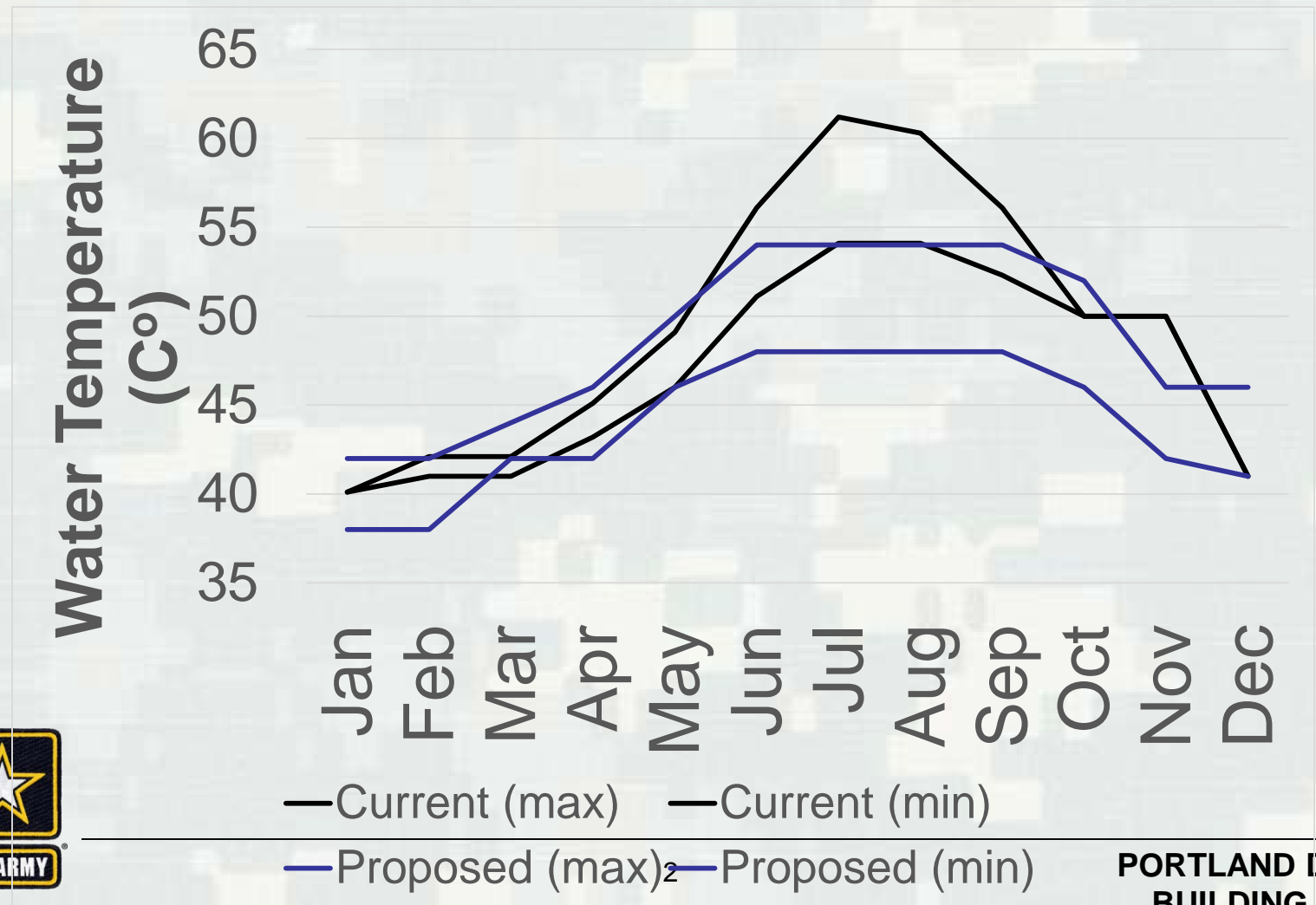


North Santiam Temperature Task Group W-FPOM

October 26, 2016

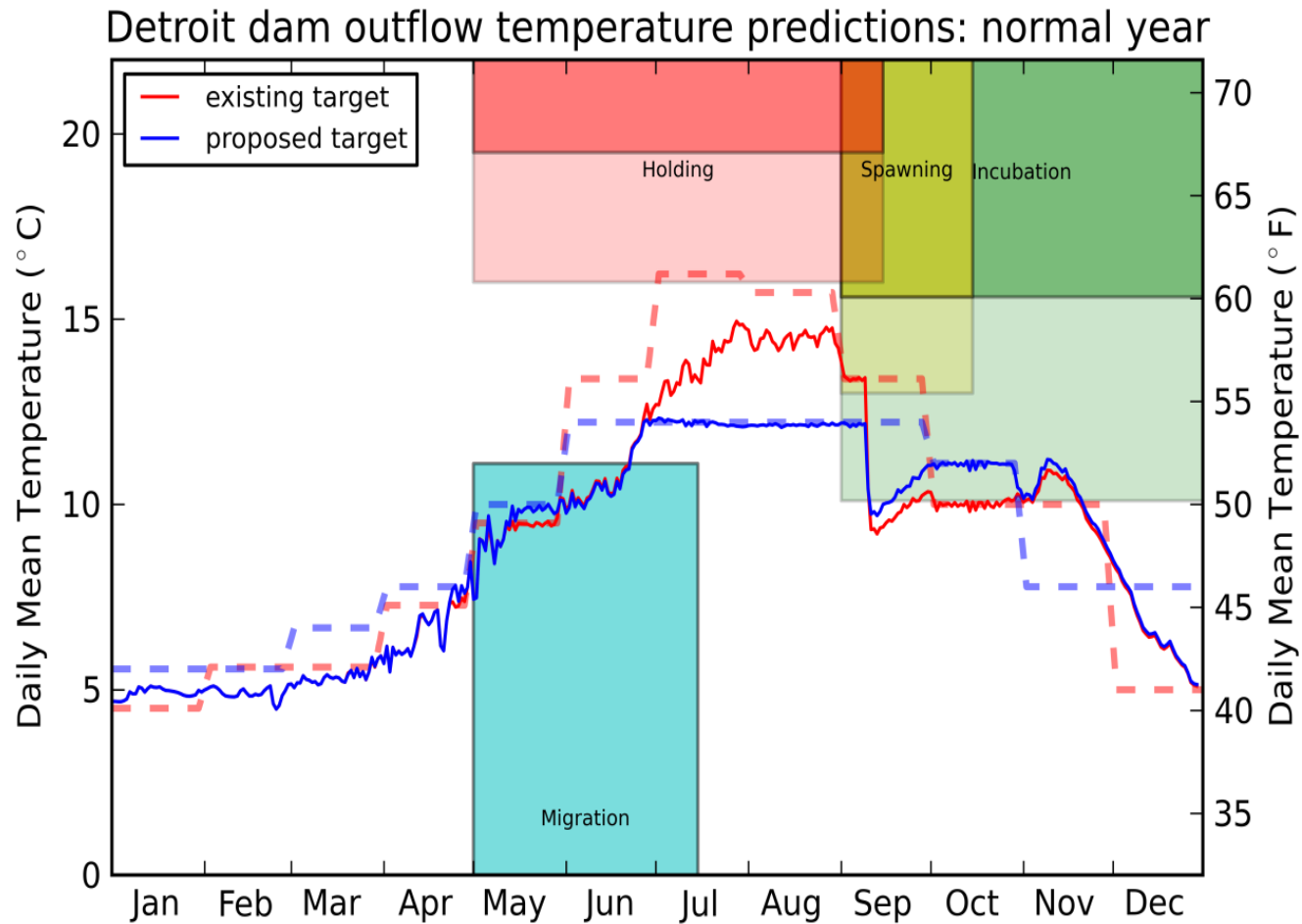


North Santiam Temperature Targets Current vs. Proposed

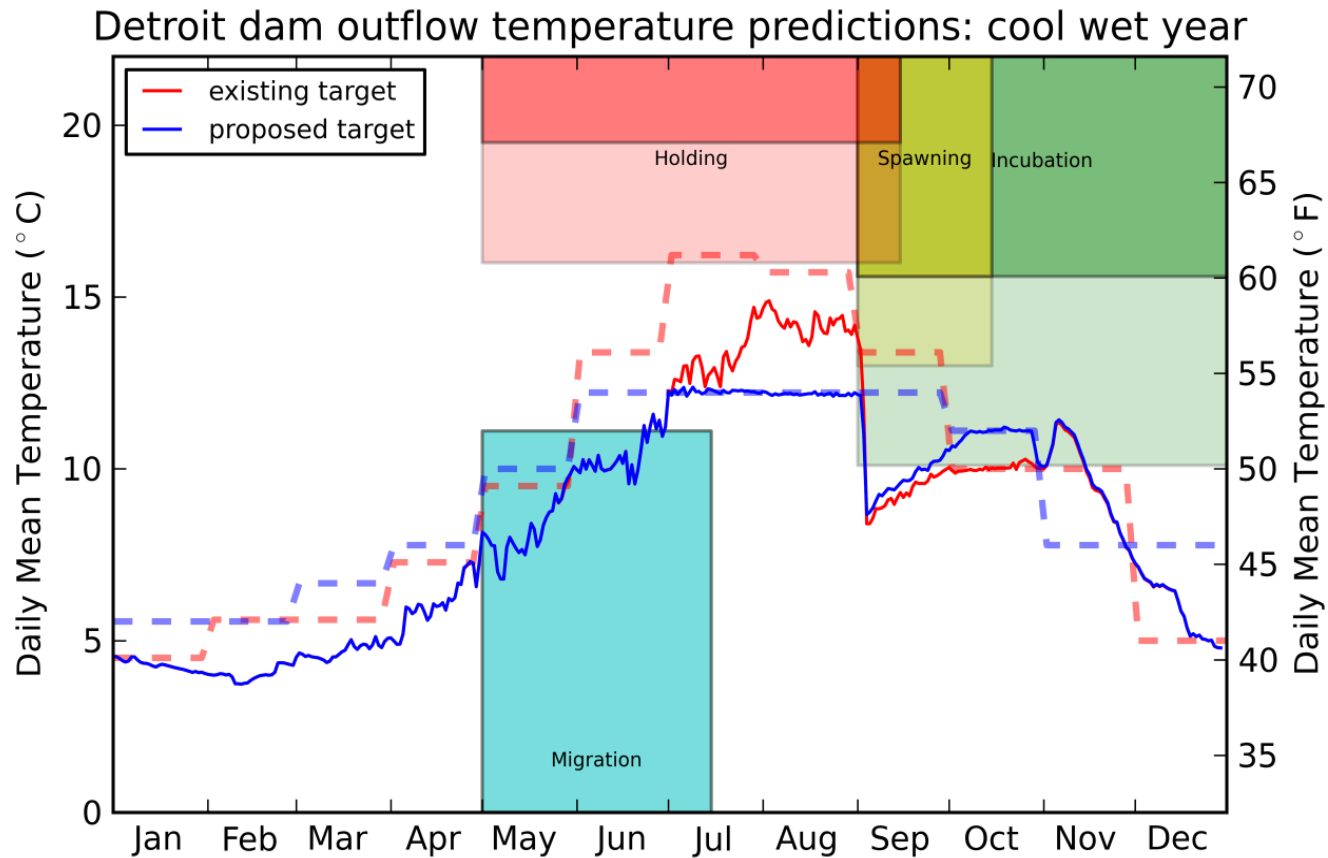


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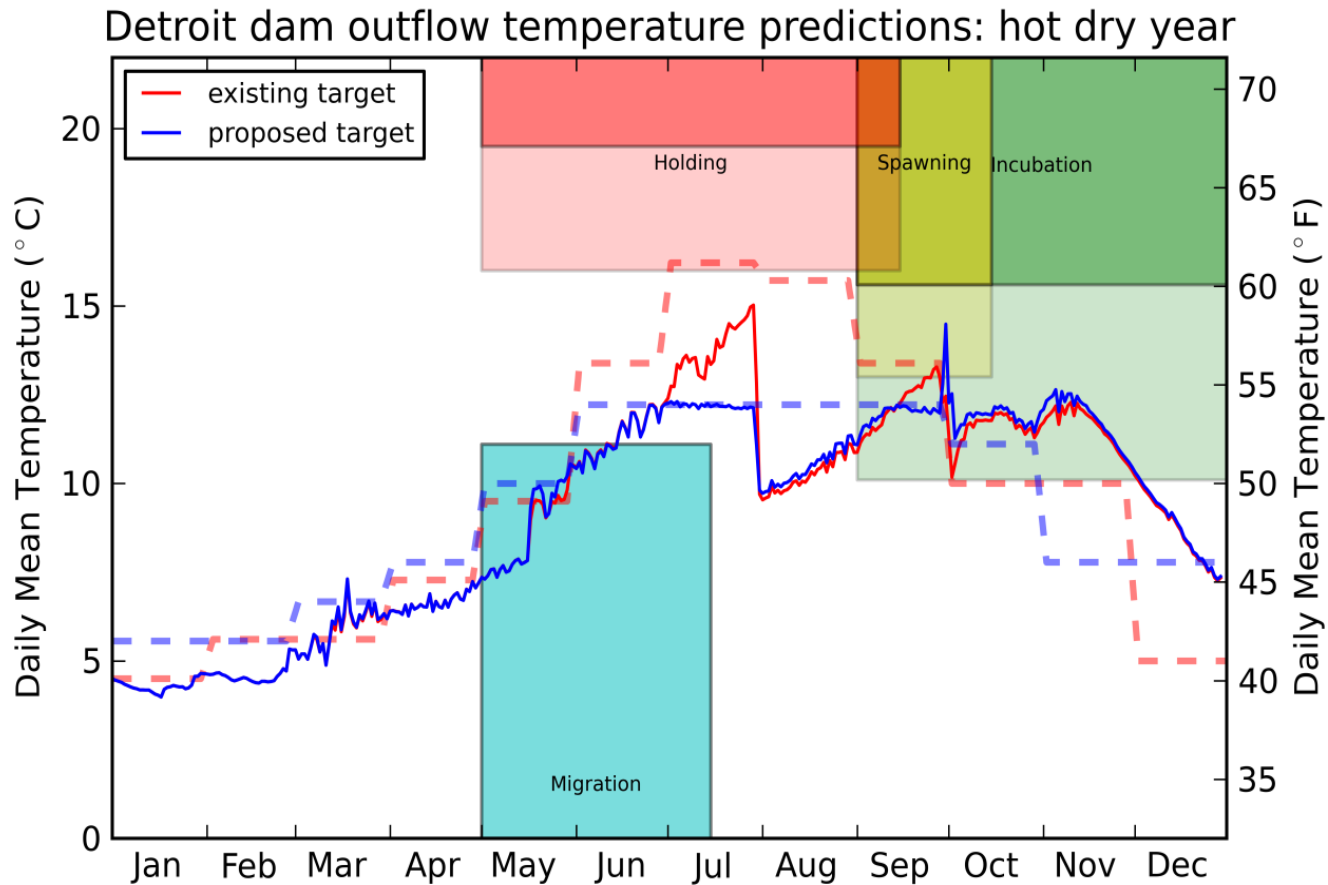
Normal Year



Cool Wet Year



Hot Dry Year



Spring Chinook Evaluation

Alternative Evaluation	Date Range	Impact Type	criteria (deg. C)	criteria (deg. F)	Exiting Target			Proposed Target		
					cool wet	hot dry	normal	cool wet	hot dry	normal
					percent of days not achieving criteria					
Migration	May-01 to Jul-15	delay	< 11.1	< 52.0	72	58	70	72	59	70
Holding	May-01 to Sep-15	extreme	> 19.5	> 67.1	0	0	0	0	0	0
Holding	May-01 to Sep-15	sub-optimal	> 16.0	> 60.8	0	0	0	0	0	0
Spawning	Sep-01 to Oct-15	extreme	> 15.6	> 60.1	0	0	0	0	0	0
Spawning	Sep-01 to Oct-15	sub-optimal	> 13.0	> 55.4	4	7	20	0	2	0
Incubation	Sep-01 to Dec-31	extreme	> 15.6	> 60.1	0	0	0	0	0	0
Incubation	Sep-01 to Dec-31	sub-optimal	> 10.1	> 50.2	18	78	31	43	78	61
					emergence date					
Emergence	Sep-20 plus 1750 ATUs	early	--	--	1/19	12/15	1/11	1/11	12/13	1/2

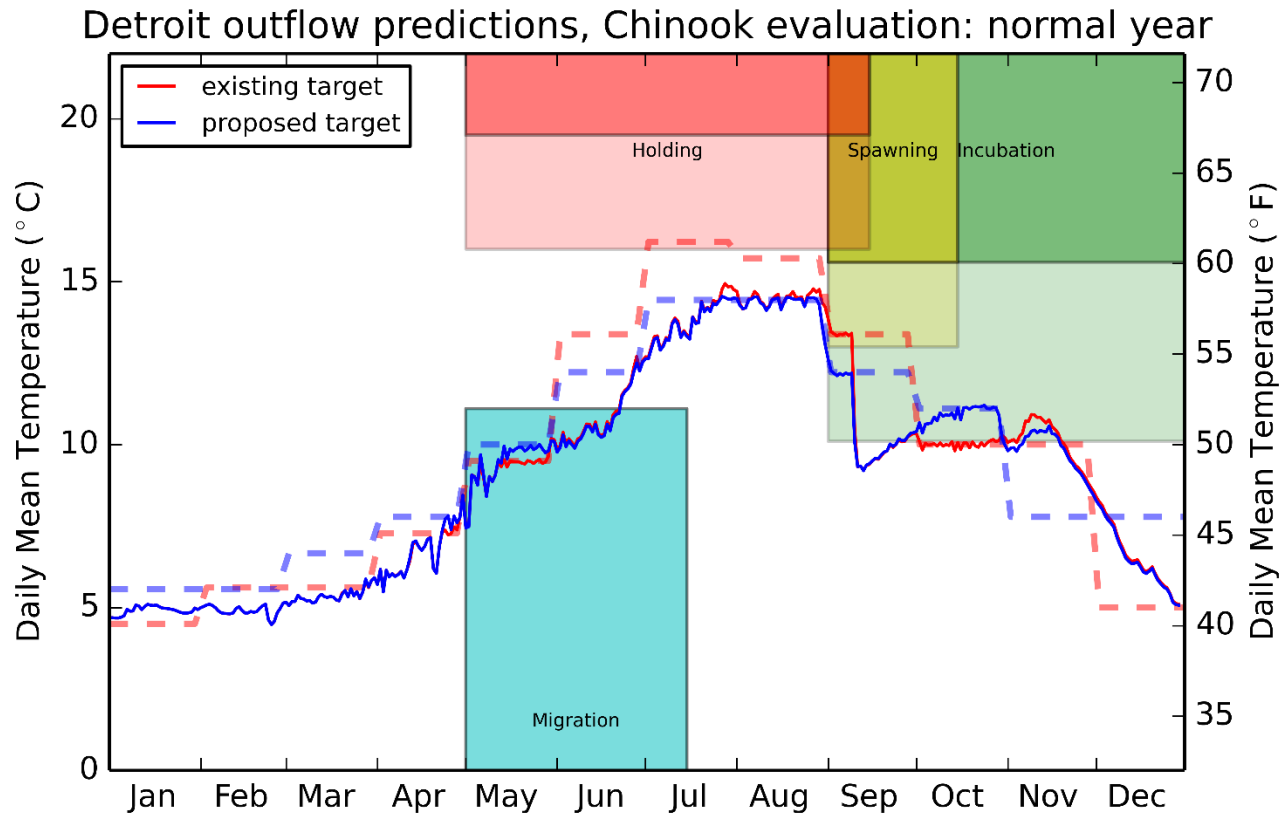


Winter Steelhead Evaluation

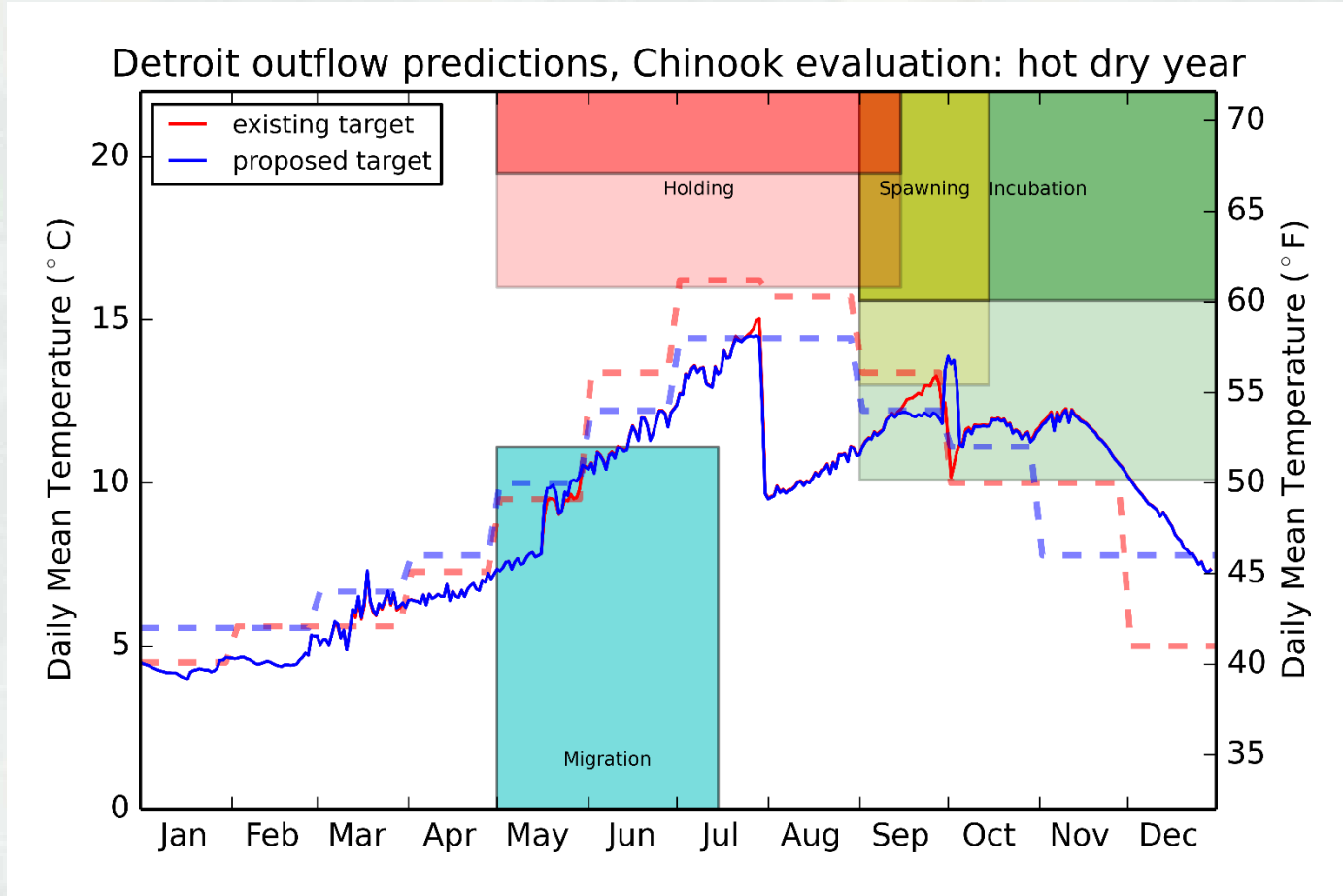
Alternative Evaluation	Date Range	Impact Type	criteria (deg. C)	criteria (deg. F)	Existing			Proposed		
					cool wet	hot Dry	normal	cool wet	hot Dry	normal
Incubation	Mar-01 to Sub-Jun-30	opitimal	> 10.0	> 50.0	<u>percent of days not achieving criteria</u>					
					17	26	24	17	30	23



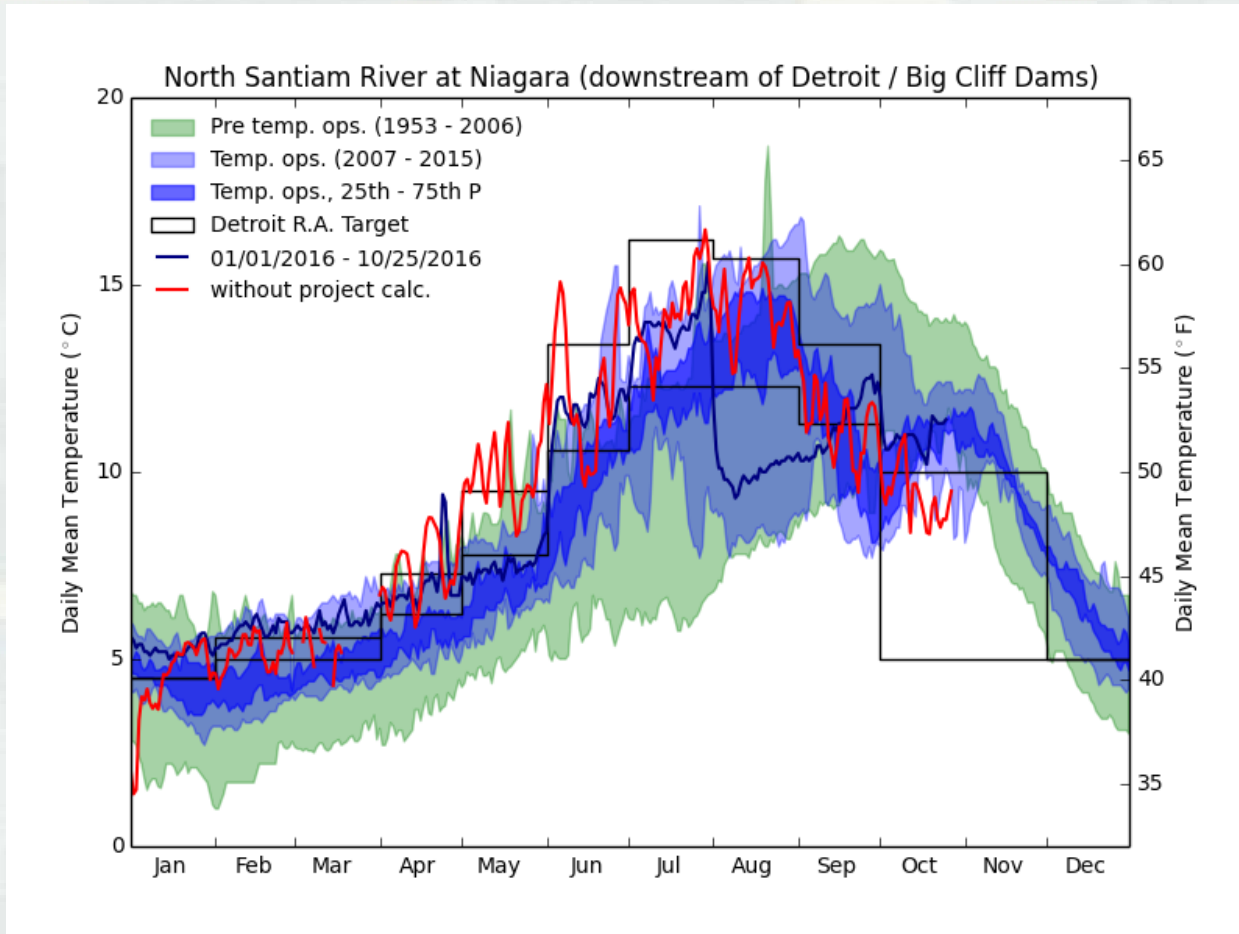
July and August Max Target (58°F) Normal Year



July and August Max Target (58°F) Hot Dry Year



2016 Water Temperatures



Summary and Discussion

- Proposed targets appear a little better for spawning, a little worse for incubation (ChS), differences are minimal compared to current
- Proposed minimum target a concern Jun-Sep (potential migration delay, ChS)
- Cooler temps better for fish health at Minto FF and in the river
- Impacts between Current vs Proposed were essentially Equal for StW (very similar emergence timing)
- Next Steps/Thoughts:
 - ▶ Vary approach depending on water year
 - ▶ Maybe set max target Jul-Aug 58°F during warmer years
 - ▶ Use 54°F as max target Jul-Aug (normal & cooler years)
 - ▶ Maybe set min target Jul-Aug between 50-52°F (minimize potential delay)
 - ▶ Engage DET Temperature PDT
 - ▶ Bennett and Willamette counts
 - ▶ Meet again ???, or brief at W-FPOM

