Exhibit A

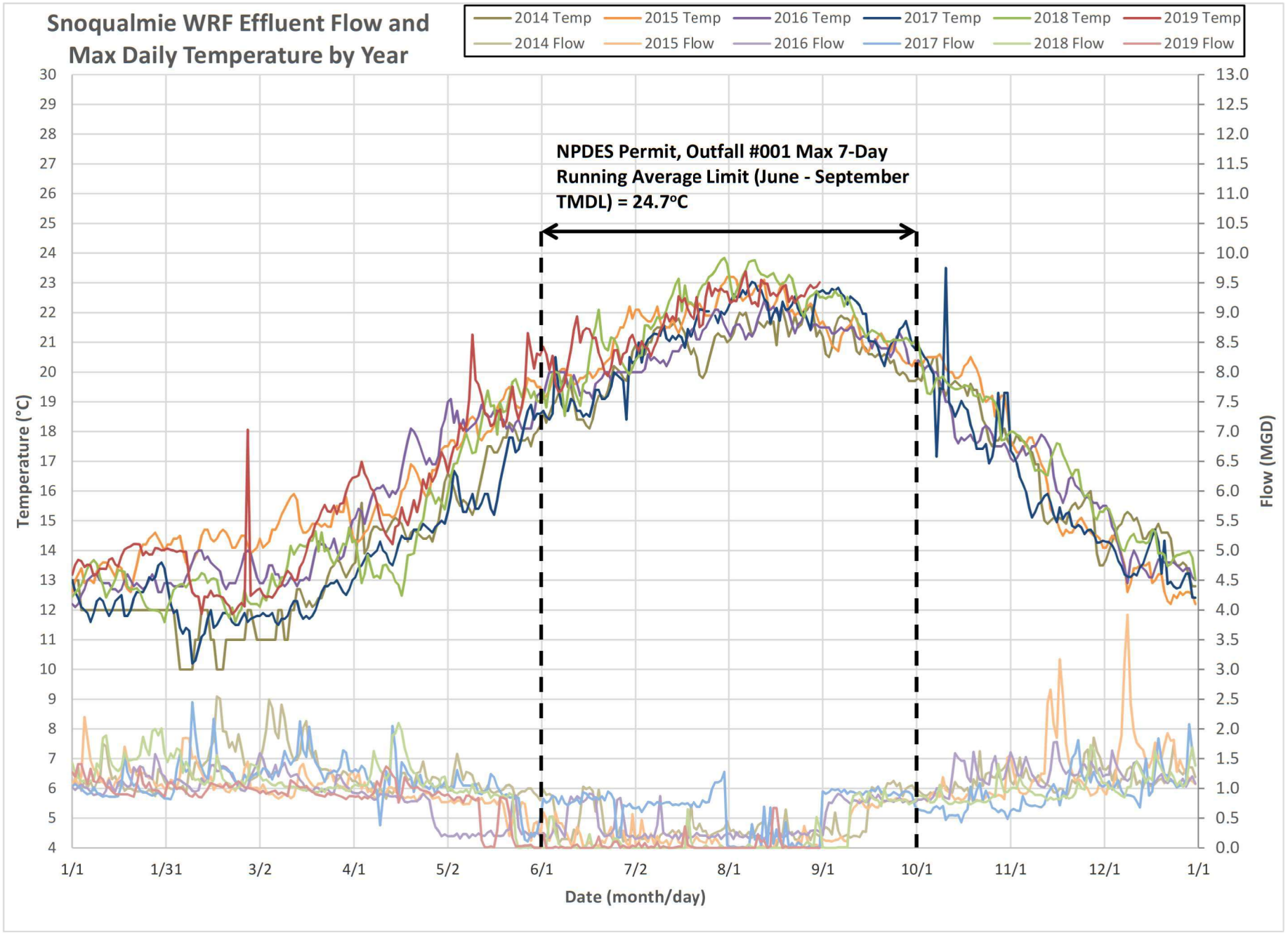
Snoqualmie WRF Effluent Flow and Max Daily Temperature by Year
2014 Temp
2015 Temp
2016 Temp
2017 Temp
2018 Temp
2019 Temp
2014 Flow
2015 Flow
2016 Flow
2017 Flow
2018 Flow
2019 Flow
NPDES Permit, Outfall #001 Max 7-Day Running Average Limit (June - September TMDL) = 24.7°C
Temperature (°C)
Flow (MGD)
Date (month/day)
1/1
1/31
3/2
4/1
5/2
6/1
7/2
8/1
9/1
10/1
11/1
12/1
1/1

Table 28. Wasteload allocations for effluent temperature for design condition discharge.

This table generates conservative effluent temperatures that are protective of temperature on a year-round basis.

NPDES facility (permit #)	River Flow		Effluent Flow (cfs)			Chronic dilution factors (cfs)			T_{NPDES} (ºC)		
	Nearest USGS gage	7Q10 Annual (cfs)	Current[3]	Design	Water Quality Criteria (time of year)	Chronic dilution factor in current permit	Using annual 7Q10 (25% rule) and current effluent flow	Chronic dilution factor at approved design capacity	Using factor in current permit	At current flow	At design flow
North Bend WWTP (WA-002935-1)	12144000	78	1.01 (0.65 mgd[5])	3.7 (2.4 mgd)	16	18.7	20.3	6.25	21.3	21.8	17.6
Snoqualmie WWTP (WA-002240-3)	12144500	386	1.92 (1.24 mgd)	3.3 (2.15 mgd)	16	73.7	51.3	30.0	33	31.1	24.7
Tokul Hatchery (General Fin Fish)	12145000 (old data from 1907-1945)	12.8 est.	3.56 (2.3 mgd)	Not Available (*assume = current*)	16 (June 16-Sept 14)	1.0	1.9	1.9	16	16.3	16.3
					13 (Sept 15-June 15)				13	13.3	13.3
Carnation WWTP (WA-003218-2)	12149000	442	0.74 (0.48 mgd)	0.74 (0.48 mgd)	16 (May 16-Sept 14)	150.0	150.3	150.3	33	33.0	33
					13 (Sept 15-May 15)				33	33	33
Duvall WWTP (WA-002951-3)	12149000 (Carnation)	442	2.01 (1.3 mgd)	2.7 (1.75 mgd)	17.5	71.2 (64.2 wet season)	55.9	41.8	33.0	33.0	29.7
Boxley Creek Hatchery (General Fin Fish)	12143900 (Boxley Creek)	21[6]	10.8 (7 mgd)	Not Available (assume = current)	16	1.0	1.5	1.5	16	16.3	16.3

[1] T_{NPDES} = [Water Quality Criterion, ºC - 0.3ºC] + [chronic dilution factor] x 0.3ºC

[2] Reported in Table 13 of this report and as reported on 7/29/2008 at http://wa.water.usgs.gov/data/

[3] Current effluent flow can be reported in the permit as a design condition or as a typical operating condition from Discharge Monitoring Reports (DMRs) or other monitoring data. See main text for conditions used for each facility.

[4] cfs = cubic feet per second.

[5] mgd = Million gallons per day.

[6] mean monthly discharge 1981-2010 for September = 21 cfs. The 7Q10 flow will be lower, but because the dilution factor is near 1.0, it will not change the effluent limit from 16.3.