4.0 DISCHARGE STANDARDS

Most of the Snoqualmie Valley is designated as a critical aquifer recharge area and recognized as such in several documents, including the County's Comprehensive Plan.[122,123,124] The area is environmentally sensitive, with stretches of the Snoqualmie River serving as habitat for salmonids, other fish, and other aquatic life. The Discharge Alternatives TM[125] details the water quality criteria categories mandated by the State of Washington and the EPA for various discharge methods. In addition, the River Outfall TM[126] evaluation provides detailed discussions on the water quality goals required to meet the anticipated discharge limits. The following section discusses the analyses and findings of these two TMs. It is anticipated that the CWWTF design will allow the highly treated water to meet the water quality requirements for the selected discharge alternative as summarized in Table 4.1.

4.1 Discharge Alternatives

Five discharge alternatives were originally evaluated for the CWWTF based on current[127] and previous[128] work: 1) direct discharge to the Snoqualmie River, 2) wetlands creation or enhancement, 3) upland discharge, 4) conveyance to existing County force mains, and 5) water reuse. During the initial phase of the project, three discharge alternatives were recommended for further study: 1) direct discharge to the Snoqualmie River, 2) wetlands enhancement, and 3) upland discharge.[129] These three alternatives were further refined in the EIS as 1) Snoqualmie River discharge at the Bridge, 2) wetland discharge at SWA, and 3) upland discharge in area southeast of the City.[130]

In general, "disposal" discharge alternatives are subject to Washington State's anti-degradation policy, which dictates that the receiving water quality must maintain any existing beneficial uses and that its quality cannot be degraded from current conditions.[131,132] The applicable water quality standards will depend on the discharge alternative selected, as follows:

- Disposal via an outfall to the Snoqualmie River must meet surface water[133] and total maximum daily load (TMDL) standards[134] to ensure that the water quality and uses of the river are protected.

- Discharge to create and/or enhance wetlands must meet reclaimed water standards.[135] Enhancement of natural wetlands or construction of wetlands hydraulically contiguous with surface waters must also meet surface water[136] and TMDL standards.[137]

Table 4.1 Estimated Maximum Allowable Discharge Limits (Months of August, September, and October) Carnation Wastewater Treatment Facility King County Department of Natural Resources and Parks

Parameter	Discharge Alternatives			Water Reuse Class A
	River Outfall Snoqualmie River	Upland Reclamation/Disposal Surface Percolation[a]	Natural Wetlands Beneficial Use	
BOD_5, mg/L	8.2[b]	30	20[c]	30
BOD_5, kg/ha/d	NR	NR	5[c]	NR
TOC, mg/L	NR	NR	NR	NR
TSS, mg/L	30	30	20[c]	30
TSS, kg/ha/d	NR	NR	9[c]	NR
Fecal coliform, cfu/100 mL				
Geometric mean – 50th percentile	50	NR	50	NR
Geometric mean – 90th percentile	100	NR	100	NR
Total coliform, CFU/100 mL				
7-day average	NR	$\leq$ 1	$\leq$ 2.2	$\leq$ 2.2
Sample maximum	NR	$\leq$ 5	$\leq$ 23	$\leq$ 23
pH	6.5 - 8.5[d]	6.5 - 8.5	6 - 9	6 - 9
DO, mg/L	$\geq$ 9.5[e]	present	present	present
Turbidity, ntu				
Average monthly	NR	$\leq$ 2	$\leq$ 2	$\leq$ 2
Maximum	5+background	5	5	5
Total N, mg/L	NR	NR	NR	NR
Total N, kg/ha/d	NR	NR	1.2[c]	NR
TKN, mg/L	NR	NR	3[c]	NR
NH_3-N, mg/L	2.7[b]	1.5	1.5[f]	NR
NO_3-N, mg/L	NR	< 10	R	R
SRP, mg/L	0.58[g]	NR	NR	NR
Total P, mg/L	NR	NR	1[c]	R
Total P, kg/ha/d	NR	NR	0.2[c]	NR
Residual Cl_2, mg/L	< 0.5	> 0.5[h]	> 0.5[h]	> 0.5[h]
Metals	SWQ[i]	WQGW/DWS	SWQ[f]	D
Temperature, ^0C	16.0[j]	NR	SWQ[f]	NR
Maximum total dissolved gas, percent of saturation	$\leq$ 110	NR	NR	NR

Table 4.1 Estimated Maximum Allowable Discharge Limits (Months of August, September, and October) Carnation Wastewater Treatment Facility King County Department of Natural Resources and Parks

BOD_5 = five-day biochemical oxygen demand
C = Celsius
CFU = colony forming unit
Cl_2 = chlorine
D = dependent on likelihood of exposure to humans and habitats
DO = dissolved oxygen
DWS = Drinking Water Standards
GW = groundwater
kg/ha/d = kilograms per hectare per day
mg/L = milligrams per liter
mL = milliliter
N = nitrogen
NH_3-N = ammonia-nitrogen
NO_3-N =nitrate-nitrogen
NR = not regulated
ntu = nephelometric turbidity unit
P = phosphorus
R = reserved by Ecology (depends on fate of water)
SRP = soluble reactive phosphorus
SWQ = based on Surface Water Quality Standards
TMDL = total maximum daily load
TOC = total organic carbon
TSS = total suspended solids
WQGW = Water Quality for Groundwater Standards

a. Groundwater beneath the infiltration site will be required to meet the Drinking Water Standards (WAC 246-290-310) unless a lesser standard is specifically authorized by Ecology or the Washington Department of Public Health.
b. Based on the 1994 TMDL study[138] for mass discharge loading and projected average annual flow of 0.37 mgd. (May be required for other discharge options based on continuity with the river.)
c. Average annual basis.
d. Human-caused variation within acceptable range, less than 0.2 unit.
e. Lowest 1-day minimum, no DO decrease greater than 0.2 mg/L when the receiving water body is lower than the criteria due to natural conditions.
f. Compliance at point of discharge to beneficial-use wetland.
g. Guidelines established in the 1994 TMDL study[139] during low-flow conditions with the recommendation that additional SRP monitoring continue. The TMDL states, "If guideline is exceeded, discharger would need to demonstrate the increased SRP load has no deleterious effect on the river."
h. Maintained in water during conveyance from reclamation facility to use area.
i. Compliance at dilution zone boundary.
j. Cannot exceed 16.0°C on a 7-day average of the daily maximum temperatures; no temperature increase can raise the receiving water temperature by greater than 0.3°C if natural temperature exceeds criteria. Incremental water temperature increases resulting from point source activities cannot exceed t=28/(T+7), where t = maximum permissible temperature increase at mixing zone boundary and T = highest ambient temperature in vicinity of discharge outside of mixing zone (WAC 173-201A).

Sources: Cosmopolitan Engineering Group, *Technical Memorandum No. 12 - River Outfall*, 2004.;
Water quality standards for surface waters of the state of Washington, *WAC 173-201A* (2003).;
Joy, J., *Snoqualmie River Total Maximum Daily Load Study*, Ecology Report #94-71, 1994.;
Water quality standards for ground waters of the state of Washington, WAC 173-200 (1990).;
Maximum Contaminant Levels (MCLs) and Maximum Residual Disinfectant Levels (MRDLs), Chapter 246-290-310 WAC, (2004).;
Washington Department of Ecology, *Washington Reclamation and Reuse Standards*, 1997.

- Disposal via upland infiltration must meet groundwater quality standards.[140] If the high quality water is reclaimed for demonstrated beneficial use purposes, the water must be treated according to the Class A reclaimed water standards,[141] with an additional step to reduce nitrogen prior to discharge. Groundwater beneath the infiltration site would be required to meet the drinking water standards[142] unless a lesser standard is specifically authorized by the Washington Department of Health (DOH) and Ecology.

In 2003, the County made a commitment to the City that the flexibility of the CWWTF design would allow the highly treated water to meet the water quality requirement for the selected discharge alternative. This commitment will allow the facility to be capable of meeting the Class A reclaimed water standards[143] should either the County or the City desire to reuse the water fore beneficial purposes in the future. Class A reclaimed water would allow for unrestricted, non-potable contact applications as well as be required for the restoration or enhancement of sensitive natural wetlands. The following subsections summarize the discharge standards associated with each of the three discharge alternatives.

4.1.1 Direct Discharge to the Snoqualmie River

Ecology is required per Section 303(d) of the Clean Water Act (CWA)[144] to recommend pollutant-loading limits for each river system identified as water quality impaired. As such, Ecology has conducted several investigations on the lower Snoqualmie River basin to identify existing and potential water quality problems during the summer low-flow season. The TMDL for the Snoqualmie River was approved in 1994.[145] TMDL parameters include biochemical oxygen demand (BOD_5), ammonia-N (NH_3-N), and fecal coliform bacteria; guidelines for soluble reactive phosphorus (SRP) were also established. Temperature, which violates the surface water quality standards, is also included on the Section 303(d) list for impairment.[146] An Ecology monitoring study is underway to determine to what degree the Snoqualmie River meets water quality standards and what the potential capacity of the river would be for the waste load allocations of the new CWWTF.[147]

The 1994 TMDL study[148] conducted by Ecology on the Snoqualmie River dictates stringent discharge standards for the protection of both wildlife and human health. Highly treated water discharged to the evaluated Snoqualmie River must meet the Surface Water Quality Standards for designated use ("Salmon and Trout Spawning, Core Rearing, and Migration" [previously known as Class A])[149] as well as the seasonal NPDES discharge permit requirements.[150] The recently approved redefinition of the surface water "class" distinctions (to use-based classifications) and criteria modifications are designed to provide protection of threatened and endangered species.[151]

Municipal effluent discharges from wastewater treatment facilities to surface waters must receive a National Pollutant Discharge Elimination System (NPDES) permit. Ecology bases the NPDES permit on technology, water quality, and TMDL considerations. Technology-

based limitations are based on the Code of Federal Regulations Section 40, Part 133 (40 CFR Part 133), and WAC 173-221,[152] which dictate maximum discharge limits for secondary treatment. Water quality-based limitations are determined by the State of Washington and based on ambient river water quality. The regulations also establish criteria for toxic substances that may degrade the receiving water, both in terms of aquatic life and human health. In particular, municipal discharges to surface waters must comply with "All Known Available and Reasonable methods of prevention, control, and Treatment" (AKART), which means that all pollutant discharges must be minimized according to the best practical methods available.[153,154] TMDL-based limitations were calculated by Ecology using the QUAL2E numerical model to establish maximum pollutant load discharges from point and non-point sources based on the 1994 TMDL study. The 1994 TMDL study determined the recommended maximum loading capacity for BOD_5, NH_3-N, fecal coliform bacteria, and SRP to the Snoqualmie River.[155]

WAC 173-201A states that a mixing zone will only be allowed if its presence is not expected to significantly impact the sensitive habitat, damage the local ecosystem, or adversely affect public health.[156] Based on initial discussions, it is anticipated that a dilution credit will be allowed within the Snoqualmie River outfall location by Ecology.[157] Cosmopolitan Engineering (Cosmopolitan) calculated the most stringent anticipated dilution factors based on the allowable mixing zones, dilution were performed by using the 1) maximum monthly and maximum daily flows of 0.62 mgd and 0.93 mgd, respectively [initially developed flows during preliminary design of the CWWTF[158]], 2) river depth, 3) river velocity, 4) river width, and 5) the 7-day critical low flow, 10-year recurrence interval (7Q10) condition. The 1994 TMDL study[159] had reported the 7Q10 flow as 443 cfs. The lowest flows in the mainstem Snoqualmie River occur in the months of August, September, and October.[160] Limiting acute and chronic dilution factors for discharge to the Snoqualmie River were calculated to be 8.7 and 116, respectively. Acute conditions are defined as "the changes in the physical, chemical, or biological environment which are expected or demonstrated to result in injury or death to an organism as a result of short-term exposure to the substance or detrimental environmental condition."[161] Chronic conditions are defined as "changes in the physical, chemical, or biologic environment which are expected or demonstrated to result in injury or death to an organism as a result of repeated or constant exposure over an extended period of time to a substance or detrimental environmental condition."[162] Using current design flows, the acute and chronic dilution factors would be 10.4 and 153, respectively. Table 4.2 summarizes the resulting potential NPDES permit limitations for the highly treated water discharged to the Snoqualmie River during critical-flow months based on the preliminary planning and design calculations.[163] Using the current dilution factors, the second set of allowable water quality concentrations such as ammonia, copper, and lead (Constituents B) would likely exceed the values provided in the table. The NPDES permit limitations will be developed and set by Ecology.

Table 4.2 Potential NPDES Permit for the Snoqualmie River Carnation Wastewater Treatment Facility King County Department of Natural Resources and Parks

	Non-TMDL Season Limitations (Nov - July)		TMDL Season Limitations (Aug - Oct)	
Constituents A	**Average Monthly[a]**	**Average Weekly[a]**	**Average Monthly[a]**	**Average Weekly[a]**
BOD_5[b]	30 mg/L, 155 lb/day	45 mg/L, 233 lb/day	30 mg/L, 25 lb/day[c]	45 mg/L
TSS[b]	30 mg/L, 155 lb/day	45 mg/L, 233 lb/day	30 mg/L, 155 lb/day	45 mg/L, 233 lb/day
Fecal coliform bacteria	200 colonies/ 100 mL	400 colonies/ 100 mL	200 colonies/ 100 mL	400 colonies/ 100 mL
pH	Daily minimum $\geq$ 6 standard units, daily maximum $\leq$ 9 standard units		Daily minimum $\geq$ 6 standard units, daily maximum $\leq$ 9 standard units	
Constituents B[d]	**Average Monthly (mg/L)**	**Maximum Daily (mg/L)**	**Average Monthly (mg/L)**	**Maximum Daily (mg/L)**
Ammonia-N	40.1	95.6	40.1 8.4 lb/day[c]	95.6
Total residual chlorine	0.063	0.165	0.063	0.165
Arsenic	2.14	3.13	2.14	3.13
Copper[e]	0.025	0.036	0.025	0.036
Cyanide	0.131	0.191	0.131	0.191
Cadmium[e]	0.005	0.007	0.005	0.007
Chromium (Hex)	0.90	0.131	0.90	0.131
Chromium (Tri)	1.05	1.53	1.05	1.53
Lead[e]	0.050	0.073	0.050	0.073
Mercury	0.001	0.002	0.001	0.002
Nickel[e]	2.61	3.81	2.61	3.81
Silver[e]	0.002	0.003	0.002	0.003
Zinc[e]	0.204	0.297	0.204	0.297
SRP	NONE	NONE	3 lb/day[c]	NONE

BOD_5 = 5-day biochemical oxygen demand
lb/day = pounds per day
mg/L = milligrams per liter
SRP = soluble reactive phosphorus
TSS = total suspended solids

a. The average monthly and weekly effluent limitations are based on the arithmetic mean of the samples taken with the exception of fecal coliform bacteria, which is based on the geometric mean.

b. The average monthly effluent concentration for BOD_5 and total suspended solids cannot exceed 30 mg/L or 15 percent of the respective monthly average influent concentrations, whichever is more stringent.

c. Daily maximum.

d. Calculated assuming a CWWTF maximum daily flow of 0.93 mgd developed during preliminary design.

e. Assumes Snoqualmie River natural hardness of 25 mg/L as calcium carbonate ($CaCO_3$).

Source: Cosmopolitan Engineering Group, *Technical Memorandum No. 12 - River Outfall*, 2004.

Ecology has permitted six wastewater discharges within the lower Snoqualmie River. Three NPDES permits regulate municipal wastewater treatment plant discharges from the cities of North Bend, Snoqualmie, and Duvall. One state permit regulates process and stormwater discharges to and from the Weyerhaeuser mill pond in Snoqualmie. The Weyerhaeuser mill has been closed since November 2004.[164] Another state permit covers the WDFW hatchery at Tokul Creek. Domestic wastewater and dairy manure from Carnation Research Farms are spray-applied to fields after treatment under discharge limitations established by the State of Washington.

4.1.2 Wetland Discharge

The State of Washington requires the treatment of wastewater effluent to reclaimed standards before discharge to constructed or natural wetlands for beneficial use. Considerations for reclaimed water discharges to wetlands are detailed in the Revised Code of Washington (90.46 RCW)[165] and the Water Reclamation and Reuse Standards.[166] These regulations require Class A reclaimed standards for natural, mitigated, and any wetlands that may be subject to human contact. In addition, natural and beneficial use wetlands are considered as "waters of the state." Various classes of natural wetlands allow annual average hydraulic loadings of two to five centimeters of depth per day (cm/day). Higher hydraulic loadings may be approved by Ecology if net ecological benefits can be demonstrated.[167]

Several wetlands are located downstream of the Tolt Delta Reach (TDR) in the Snoqualmie River. The TDR has been identified in previous studies as being heavily used for spawning by Chinook and other salmonids.[168] Reclaimed water discharged to one of the smaller wetland areas could provide a measurable addition to the base flow for fish species. The elevated wastewater temperature will decrease through exchanging heat with the surrounding ground as the reclaimed water travels to the discharge point.[169] Discharge to wetlands would also decrease the incremental risk because exposure to the highly treated water would mainly be limited to areas used by rearing coho salmon and cutthroat trout. The flows from the wetlands north of the City would ultimately discharge into the Snoqualmie River below almost all mainstem spawning habitats.[170]

Reclaimed water quality compliance is regulated prior to entering a beneficial use wetland. Therefore, reclaimed water either discharging to natural wetlands or constructed wetlands hydraulically contiguous with surface waters must meet stringent NPDES water quality standards without the allowance of a mixing zone. Such standards may be of potential concern with regard to concentrations of metals such as copper and zinc, which may be slightly elevated because of the corrosiveness of the City's potable water on water transmission pipes and plumbing fixtures.

To further understand the environmental effects of using Class A reclaimed water to create wetlands in the SWA, the County undertook the collection and analysis of water quality samples collected in the SWA and from the City's potable water system. Samples were

collected August 10, 2004, by King County Environmental Services staff to provide some indication of the quality of the receiving water (the sampling point was the oxbow pond in the northwest quadrant of the SWA) and the source water that would be conveyed to the CWWTF (sampling points were the City potable water source and a faucet in the Carnation City Hall kitchen).[171]

The water samples were analyzed for total and dissolved copper and zinc, hardness, and pH. The results showed that dissolved and total metals concentrations for the source well water and the oxbow pond were low, either at or below detection limits and well below water quality standards. However, the copper concentration in the sample taken from City Hall was measured as 32.6 micrograms per liter (µg/L). Calculating the acute and chronic water quality criteria using the hardness data collected from the oxbow pond, results in copper concentrations of 5.1 µg/L and 3.8 µg/L, respectively. The total and dissolved copper concentrations measured in the City Hall sample may stem from the corrosivity of the source water on plumbing fixtures between the well source and the faucet.[172]

Wastewater plants in Washington traditionally meet their metals discharge limits to rivers through a mixing zone. Although wetlands are not allowed the use of a mixing zone, the State also has successful projects that utilize effluent to enhance wetlands for beneficial use or promote further wastewater treatment through wetlands. The City of Yelm, Washington, produces Class A reclaimed water using sequencing batch reactors, continuous backwash upflow sand media filtration, chlorine disinfection, and a constructed wetland. The wetland polishes the flow and recharges the groundwater. Discussions with the City of Yelm staff have indicated that they had faced a similar metals concentration problem stemming from their drinking water. To solve the problem, the City of Yelm proceeded to treat its drinking water with caustic prior to distribution to raise the pH and decrease the corrosivity. Treatment was successful, and the Yelm reclaimed water facility currently meets all metals standards.

4.1.3 Upland Discharge

Presently, the shallow groundwater regime beneath the City receives leachate from onsite septic systems. Likewise, the highly treated water would provide some recharge capacity to the shallow groundwater regime via surface percolation. Based on hydraulic head relationships between the shallow groundwater regime and the deeper confined aquifer, it appears much of the water from the shallower groundwater regime infiltrates downward to the lower aquifer. A review of Ecology's well logs within a 2,000 foot-radius of the sites indicates a total of nine recorded wells, which produce water from the confined aquifer (or other aquifers at approximately the same depth). TM No. 5A[173] details the geologic and hydrologic review of the identified upland discharge sites as well as the potential impacts of the upland discharge alternative. Dependent on whether the discharge is classified as a disposal or demonstrated beneficial use purpose, the highly treated water is subject to differing water quality standards.

Disposal via upland infiltration must meet groundwater quality standards.[174] The regulation dictates the maximum contaminant concentrations for a wide range of groundwater quality parameters and includes an anti-degradation policy that prohibits groundwater contamination. Upland discharge from the proposed CWWTF can be regulated either at monitoring wells down gradient of the discharge site or at the bottom of the infiltration basin.

If the highly treated water is reclaimed for demonstrated beneficial use purposes, the water must be treated according to the Class A reclaimed water standards,[175] with an additional step to reduce nitrogen prior to discharge. No specific nitrogen limit is presently set by Ecology at the point of discharge. The reclaimed water will percolate through the soil and become part of the base flow for the shallow groundwater regime. Groundwater beneath the infiltration site will be required to meet the drinking water standards,[176] unless a lesser standard is specifically authorized by DOH and Ecology.

4.1.4 Water Reuse

Reclaimed water regulations in 90.46 RCW[177] and the Water Reclamation and Reuse Standards[178] require Class A treatment for non-potable waters that may potentially come into direct contact with humans. A minimum of Class C treatment is required for the irrigation of commercial non-crop vegetation, with requirements that irrigation occur during times during which there is the least potential for human contact. Health and safety procedures, including normal hygiene and procedures for emergencies such as accidental ingestion, must be followed.

Implementation of water reuse will require the County to study the resulting impairment potential on existing downstream water rights, including in-stream impairments. The point of compliance for reclaimed water discharge is anticipated to be immediately prior to usage. Reuse for non-potable commercial purposes such as toilet flushing requires a minimum setback distance of 50 feet between the reclaimed water pipeline and any potable water supply well. Reuse of reclaimed water for the irrigation of commercial non-food crops with potential contact by humans requires minimum setback distances of 100 feet, and 100 feet between any potable water supply well and any reclaimed water pipeline and irrigated perimeter. Any hydraulic and nutrient loading considerations must be addressed by balancing the crop uptake and evapotranspiration rates.

4.2 Influent and Effluent Quality

Since there is currently no centralized wastewater treatment in the City, the quality of wastewater entering the proposed CWWTF (influent) cannot be accurately characterized at this time. There are no combined flows that can be sampled or monitored to provide an indication of the chemical characteristics of the waste stream to be treated. Concentrations of substances in the highly treated water discharged from the CWWTF also cannot be precisely characterized. However, given the capabilities of the treatment technology chosen for the facility, the concentrations of many substances in the highly treated water can be

confidently predicted to be at or better than regulatory standards. The temperature of the highly treated water is also an unknown but can be approximated based on the temperatures of effluent from existing wastewater treatment facilities in the area. Although the precise levels of various parameters cannot be predicted, several factors will act to ensure that the levels will be at or better than regulatory standards:

- The MBR technology is one of the best available technologies for treating municipal wastewater and therefore provides the best opportunity for treating most types of pollutants that will be discharged by the CWWTF. MBR provides better and more consistent overall treatment than conventional activated sludge secondary treatment or tertiary treatment methods such as sand filtration.

- When the CWWTF begins operation, businesses discharging to the City's sewer system will be subject to regulatory restrictions on the types and amounts of potentially harmful substances, such as metals or solvents that could be discharged into the system. These restrictions apply to all dischargers in the County's wastewater service area. The King County Industrial Waste Program works with industrial dischargers in the service area to help them comply with these restrictions.

- The County's policy for treating wastewater is to comply with or exceed all applicable standards and regulations. The County would continue to take any necessary action(s) to ensure that the applicable discharge limits are met whether 1) more stringent discharge limits are regulated, 2) influent characteristics to the CWWTF are different than originally those expected or change, or 3) any other reason the County's ability to meet the regulatory limits may be jeopardized.

4.3 Emerging Pollutants of Concern

Endocrine disrupting compounds (EDC) are molecules that interfere with or mimic natural hormones responsible for reproduction, growth, and development in humans, wildlife, fish, and birds. These compounds enter into the environment through a variety of pathways, including wastewater treatment plant effluent, onsite septic system discharge, and agricultural runoff. However, EDCs also enter the environment through many of the products and conveniences that have become part of our everyday lives. Scientists around the world are studying this emerging area of environmental concern.

The County, like all municipalities throughout the United States, treats and discharges wastewater according to the applicable water quality standards described above. These permits place limits on the quantity and concentration of pollutants that may be discharged into surface or groundwaters. Currently, there are no federal or state regulatory standards for surface water or groundwater discharges of EDCs.

King County is closely following the research on EDCs as well as other emerging compounds of potential concern, such as pharmaceutically active compounds and personal care products. The County will respond appropriately to amended regulations as more is known about these issues.

Notes

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[151] *Water quality standards for surface waters of the state of Washington*, *WAC 173-201A* (2003).
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