

# Workshop & Listening Session

## NPDES General Permit for Wastewater Discharges from Water Treatment Plants

July 10, 2018



Purpose of meeting:

Workshop: Review what this permit is and why we're talking about it.  
Summarize two of Ecology's data review efforts in past few years.  
Summarize near-term Ecology intentions.

Listening Session: ECY Hear from the public, including Permittees

- \* What's working?
- \* What's not working?
- \* Whatever suggestions you have

## Permit History

- First Issued                      Dec 1997      EIA done
- Re-Issued                         July 2003      30 Permittees  
     Lower: Cl<sub>2</sub> Limit  
     Drop: D.O., Temp, THM, Discharge Rate, Volume  
     Add: SWPPP
- Re-Issued (eff date)      Sept 2009      31 Permittees
- Re-Issued (eff date)      Sept 2014      31 Permittees  
     Add: Total Daily Discharge Volume & # of Events/Day  
     Arsenic monitoring for 1 Year
- To Be Re-Issued (eff date)      Sept 2019



1. N-P-D-E-S- set up by USEPA  
 WA State opted to comply with it & implement its provisions,  
 including: require people who discharge poll to waters of the US to get permit  
     Were 3 options: Individual, Group, or General  
 Early 1990s, ECY opted to provide a GP for the DW production industry  
     So WTPGP is now required for certain large WTPs. Permits have a 5-year term.  
 So every 5 years, we look at it, update, it, revise it, and reissue it  
     based on new law and regs, court cases, new tech, new scientific data  
     re environment in general & industry-specific monitoring results
2. EIA = Economic Impact Analysis
- 3 “Number of permittees” are as of the end of the permit cycle.  
     So far, all have been public utilities. (so no EIA required)  
     2003 Permit provided a 2-year compliance period for lower Cl<sub>2</sub> limit.
4. Current permit had new req’t for ongoing reporting of WW discharge volumes,  
     and, for 1 year only (9/2016 – 8/2017) T&D Arsenic in treated backwash effluent.
5. Continue to require monitoring settleable solids, pH, chlorine, turbidity,  
     tot daily discharge volumes, & tot daily # of discharge events.

**Permit Compliance (1 of 2)**  
**(Sept 2014 thru May 2018)**

	<u>Delivered</u>	<u>Absent</u>
Four Plans	21 (70%)	9
	<u>Total</u>	<u># of WTPs</u>
Late DMRs	86 (6%)	23
Missed Arsenic (months)	8 (2%)	7
Missed Flow/# Events (mos)	20 (6%)	11
Ecology Inspections	23	16



1. For 30 Permittees: Percentages of what we expected for full compliance.
2. What's your preference?
  - a. Submit up-to-date plans electronically. (bullets below)
  - b. Complete a new on-line form.
3. Those %s look really good, but for As & Flow data,  
 Data for 21% of the months were reported late or not at all.
  - Operations & Maintenance Plan
  - Solid Waste Control Plan
  - Stormwater Pollution Prevention Plan
  - Other Spill Contingency Plan

**Permit Compliance (2 of 2)**  
**(Sept 2014 thru May 2018)**

	<b>Missed</b>		<b>Exceeded Limit</b>	
	<b><u>Total</u></b>	<b><u># of WTPs</u></b>	<b><u>Total</u></b>	<b><u># of WTPs</u></b>
Tot Res Cl <sub>2</sub>	18	5	17	10
pH	6	3	5	3
Sett Solids	9	5	7	5
Turbidity	7	4	NA	NA



This slide summarizes the totals for:

missed reporting of monitoring, and exceedances of discharge limits.

These numbers show that:

For the four routine monitoring parameters, that you've been testing for years, Permittees failed to meet the required limit or did not report anything for only 2% of the expected results.

## **“Arsenic Assessment” (1 of 2)**

Why? Arsenic in filter backwash from several WTPs

Purpose: Collect sufficient data to support decisions:

- Need for new Limits.
- Need for additional monitoring
- Need for focus on specific WT processes

Actions: Required permittees to provide more data:

- T&D Arsenic monthly Sept 2016 thru Aug 2017
- Daily volume, # of discharges, Sept 2015 forward



## **“Arsenic Assessment” (2 of 2)**

Results: Total Arsenic average monthly: ND to 3.48 ug/L

Average Vol discharged/event: 321 to 250,000 gal

Average # of discharge events/day: 0.1 to 54.

Range of dilution factors: 18 to 345,000

WTP-18      WTP-161      WQC

Concs.: No reasonable potential to exceed WQ criteria

No need for ongoing arsenic monitoring



1. “average” = all results for a given facility.
2. Based on available Receiving Water flows and discharge volumes, . . .
3. More dilution → Smaller [ ] → More protective of WQ
4. All the calculated DFs were greater than the lowest DF protective of WQ, in this case the . . .

DF for Chronic WQC = 26 EXCEPT for one WTP:

WTP-18. However, all arsenic [ ]s = ND

WTP-161 (next largest). 95th %ile As = 0.60 ug/L  
[As]/DF = 0.004 ug/L (<WQC of 0.018 ug/L)

## “WTP Re-Evaluation” (1 of 2)

- Why? 11 Years since last review of facts & assumptions
- Population increased; # of permitted WTPs ~constant
  - Arsenic in filter backwash from several WTPs

Purpose: Compare discharges of GP WTPs with the others to validate old assumptions (Volume & Concentration).

- Actions:
- Obtained data from Dept of Health. (904 other WTPs)
  - Calculate the approximate rate of discharge of treated filter backwash wastewater for each WTP.



## “WTP Re-Evaluation” (2 of 2)

### Results:

- 162 WTPs probably discharged to surface water.  
(~80 may need WTP GP, unless otherwise permitted)
- 268 WTPs probably discharged to ground.  
Since 1997: # of WTPs with >100 Conns that did: ↑ 5X.  
Volume discharged to ground ↑ up to 11X.
- 474 WTPs discharged to location unknown.

- C & R:
- More WTPs discharged larger volumes to ground than we assumed 11 years ago.
    - Permittees provide info; Ecology assesses impact.
  - ~45 Additional WTPs may need WTP GP coverage.
    - Ecology will contact them directly.





## **Ecology's Intent for Sept 2019 General Permit**

- Stay the course.
- Complete survey questions by 8/30/2020.
  - May eliminate need to submit complete planning documents.
  - Ensure Ecology has best up-to-date info for assessing potential impact of WT industry on environment (e.g., groundwater).
- Expand upon or Add new permit conditions to address:
  - Proper cleaning to avoid short-circuits.
  - Proper handling of settling pond solids.
- Use most up-to-date language for self-reporting, monitoring, general conditions, Tribal & Federal lands.



## **Ecology's Intent for after Sept 1, 2019**

- Improve our re-evaluation of risk from WTPs to waters of the State. Consider:
  - Site geography.
  - Physical details of settling ponds and infiltration areas.
  - Raw water sources, %age blends, and temporal variations.
  - Treatment details to better inform nature of wastewater.
  - Any readily available chemistry data held by WTPs for Fe, Mn, Cl, and TDS in raw, finished, and wastewater.
  - Retrieval and disposal methods for accumulated solids.
- Identify any “missing” WTPs that have no coverage, but should.



## Plan for Re-Issuance

7/10/2018	Workshop & Listening Session
Early Sept 2018	Send reminder letters to Permittees
2/28/2019	Notice of Intent Due Date
Mid-Feb 2019	Issue Draft Permit: 41-day comment period
3/26/2019	Workshop & Public Hearing
Mid-July 2019	Issue Final Permit & Responses to Comments 30-day appeal period
Sept 1, 2019	Effective Date of Revised Permit



**Your Ideas ?**



Questions regarding this info?

Listening Session: What has worked during the past 5 years?  
What needs improvement?