Workshop & Listening Session

State Waste Discharge and NPDES General Permit for Wastewater and Stormwater Discharges from Boatyards

July 27 and 28, 2015

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Purpose of meeting:

Workshop: Brief review of what this permit is and why we're talking about it

Listening Session: ECY Hear from the public, including Permittees

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

Permit History (1 of 3)

- First Issued 1992 72 Permittees
- Second Term March 1998 73 Permittees

  Monitor Stormwater:

	Avg	Max
Copper (ug/L)	690	8,600
O & G (mg/L)	7.7	58.6
TSS (mg/L)	46.	4,200

  Require Best Management Practices (BMPs)

- Third Term 12/2/2005 73 Permittees

  Increase monitoring frequency; Employ BMs and Limits
  Require coverage for in-water hull cleaners
  Prohibit pressure washwater discharge to State waters
  No WQ-based limits / No mixing zone

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1. N-P-D-E-S- set up by USEPA
   WA opted to comply with it & implement its provisions,
   including: require people who discharge poll to Waters of the US to get permit
   3 options at that time: Individual, Group, or General

   Early 1990s, ECY opted to provide a GP for the Boatyard (BY) industry
   BYs are part of SIC Code 37xx (ISWGP). (NAICS 336611, 2)

   So BY-GP is now req'd for certain smaller BYs. Permits have a 5-year term.
   So every 5 years, we look at it, update, it, revise it, and reissue it.
   based on new laws and regs, court cases, new tech, & new scientific data
   re environment in general & industry-specific act's & monitoring results.

2. ECY must conduct an Economic Impact Analysis
   to help minimize the monetary hit on small businesses.

3. "Number of permittees" are as of the end of the permit cycle.

4. Second Term: Mon Params change over time, though Cu still req'd today.
   You'll see later that Cu 690 is much larger than recent results.
   ECY started requiring BMPs for compliance with technology-based Limits.

5. Third Term: Changes incl: X, X, X, and
   a technical spec re WQ-based Lims & Mixing Zones

Permit History (2 of 3)

- Third Term, Mod 1 5/20/2006 74 Permittees
  - Decrease Copper Benchmark for discharges to lakes
- Third Term, Mod 2 1/19/2008 74 Permittees
  - Decrease Copper Benchmark for discharges to lakes
  - Specify Benchmarks and Limits for Lake WA Ship Canal
    - (Add a Limit for Lead)
  - Use GW Quality Std as Limit for Copper discharged to ground
- Fourth Term 6/1/2011 67 Permittees
  - Adjust Lead Limit based on Hardness
  - Add Benchmark and Limit for Zinc
  - Decrease Benchmark for Copper discharged to surface water
  - Reduce the Dilution Factor for Lakes (not the Ship Canal)

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That permit was appealed by several parties, and multiple times.

Consequently, we: Reduced the Cu BM for dischs to FW lakes
Specified BMs & Lims for the Lk WA Ship Canal
Added a Lim for Pb dischs to the Ship Canal &
Cu dischs to the ground

Fourth Term: Based on Mon data and court-required studies of
Receiving Waters [Oct 2009] &
Treatment Technologies, [June 2008]
we: Adjusted Lead Lim based on typical Hardness
(conc. of primarily naturally-occurring Ca & Mg);
Added BM & Lims for Zinc;
Decreased, again, BM for Cu discharged to surf water;
Reduced the dilution factor assumed for lakes

Permit History (3 of 3)

Number of Boatyards in the State

Year	Total	Covered by General Permit
2002	143 (a)	73 (b)
2005	138 (c)	73 (b)
2006	---	74 (b)
2007	172 (d)	---
2008	---	74 (b)
	---	88 (d)
2012	141 (a)	---
2013	138 (e)	---
2014	≤ 128 (f)	---
2015	---	67 (b)

References are identified in the Notes.

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(a) U.S. Census.

(b) Ecology PARIS database.

(c) Northwest Marine Trade Association,
"Northwest Washington Marine Industry Cluster Study," June 20, 2007.

(d) Ecology Small Business Economic Impact Assessment, April 2010.
(74-88 discrepancy suggest that not all BYs have obtained coverage)
Number of Permittees versus
Est'd # of WA BYs that fit description of BYs that require coverage

(e) Ecology extraction from federal database.

(f) Washington Employment Security Department.

The Fourth Term - Factoids

Current Permit

~ 65 % of Permittees discharge stormwater to salt water.
~ 30 % of Permittees discharge stormwater to fresh water.
~ 10 % of Permittees discharge stormwater to the ground.

~ 70 % of Permittees are known to pressure wash.
~ 10 % of Permittees are known not to pressure wash.

Only four Permittees have reported PWW pH values > 9.0 S.U.
(for a total of 15 % of the available pH data)

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We are now in the 4th iteration of the BY GP.

Based on partially unverified data – therefore these are only rough estimates.

1. Not sum to 100% b/c some BYs disch stormwater runoff to both SurfWa & Grd

2. Info that has accumulated in the PARIS dB is still somewhat incomplete.
   We'll have better numbers by early December after all NOIs are in.

3. Since discharge of PressureWash WW is allowed only to POTWs,
   acceptable range of pH is from 5.0 to 11.0
   Normally for discharges to SurfWa, the acceptable range is 5.0 to 9.0.
   Almost all Permittees have discharges within this narrower range.

The Fourth Term - Violations

Year	Total Violations	Number of Violating Facilities
2011	71	49
2012	255	43
2013	244	48
2014	204	40

Types of Violations:

Spills of paint chips, fuel, oil, etc. onto the ground; inadequate tarping.
Chemical or battery storage not covered or in secondary containment.
Failure to sample and analyze discharges.
Inadequate or missing Storm Water Pollution Prevention Plan (SWPPP).
Failure to provide Levels 1, 2, or 3 Reports.
Discharge of PWW or other WW to the ground or surface water.
Failure to conduct or record inspections.
Failure to employ vacuum sanders as required.

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Be careful with the top part of this slide because

ECY's input into the PARIS dB has been inconsistent.

However,

based on the query upon which these numbers are based & a different query,

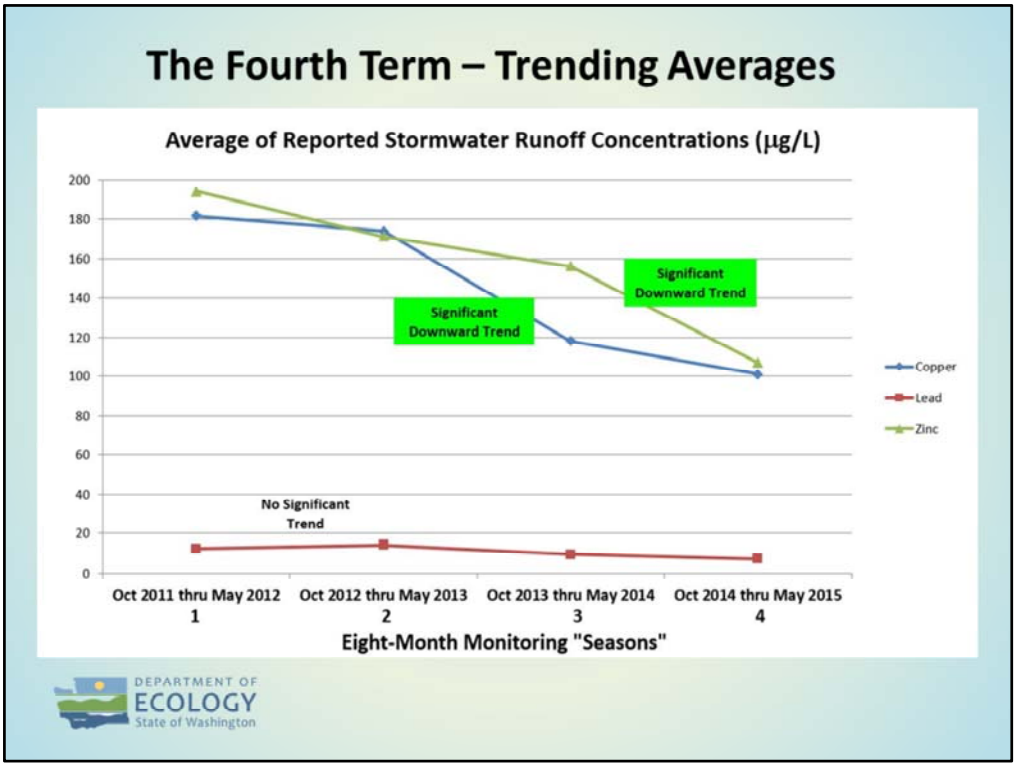
At least 2/3 of BYs seem to have problems complying with permit conditions.

The main types of Violations that I found in our records:

1. 21% [one out of five Permittees]
2. 18%

3. 14% [about 15 percent of the Permittees]
4. 13%
5. 14%

6. 9% [between 5 and 10 percent of the Permittees]
7. 6%
8. 7%



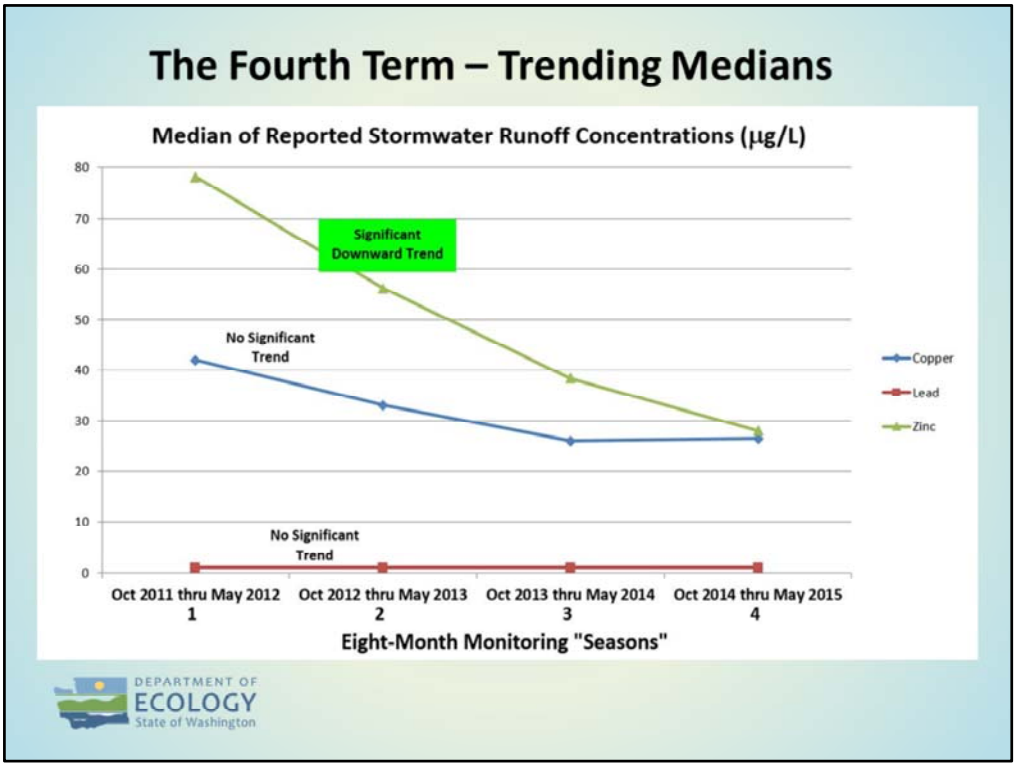
This and next slide: Be cautious with your interpretations.

First: Only about 2/3 of the Permittees submitted <u>any</u> data.

Second: "Significant" means there is ≤5% chance that, for example,
the sentence "From 2012-2015, the avg reported [Zn] decreased"
is not true.
In other words, a significant finding is one that is
at least 95% of the time likely to be true.

Third: A small number of outliers can often greatly influence the Average.
For example, a couple of large [Cu]s made the averages of Seasons 1 and 2
greater than they would have been.

That's why we also need to look at . . .



. . . The Medians.

Median == The middle value in a group of values.

For example, given the five data: 1, 2, 3, 4, 20 [Sum is 30]
The average is 6.
The median is 3.

Note: That which is significant here is the overall 4-point trend.
In the next slide, I'll point out the results of 3rd & 4th statistical tests,
comparing 1:1 to each other the monitoring season medians,
and the entire seasonal populations of data.

So, I think the reported [Zn]s have decreased so far during this permit term.
But I'm not so sure about copper.

The Fourth Term – Summary Data

(stormwater)	Year 1	Year 2	Year 3	Year 4
Percent of Permittees Who Submitted DMRs [total=70]	61%	71%	67%	66%
No. of "No Discharge" Months	12	2	2	0
Average Copper (ug/L) [BM=147]	**182**	174	**118**	**101**
Median Copper (ug/L)	42	33	26	26
Average Lead (ug/L) [Lim=185]	12	14	9.6	7.2
Median Lead (ug/L)	1.0	1.0	1.0	1.0
Average Zinc (ug/L) [BM=90]	**194**	172	**156**	**107**
Median Zinc (ug/L)	78	56	38	28
Percent of Reporting Permittees Who Exceeded Any BM or Limit	70%	73%	64%	42%
Percent of Reporting Permittees Who Correctly Reported their Seasonal Averages	15%	18%	12%	19%

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Row 1: About a third of the Permittees have **not** submitted DMRs.

Row 2: More of those who are submitting, are now collecting samples.

Rows 3-8: See the large diffs between Average and Median, esp for the earlier years.

Avg/Median = Cu: ~4 to 5
Pb: 7 to 12
Zn: only 2.5 to 4

The 2 earlier plots compared the averages and medians among themselves.
Here I show the results of comparing the medians for each year
with each other year,
and comparing entire populations of data for each year with each other.
Significant differences are shown by the blue underline: 1 vs 3 and 1 vs 4.

Row 9: Achieving BMs for Cu & Zn is still problematic for about 2/3 of the Permittees.

Row 10: While meeting Seasonal Average BMs is required,
few Permittees have even been reporting them,
and many others have incorrectly reported them.

Ecology's Intent for June 2016 General Permit

- Stay the course: No major substantive changes
- Reorganize all GPs to make them more consistent and less confusing
  - Define terms consistently
  - Clarify goals of and methods for monitoring
  - State universal requirements consistently (e.g., Chapter 173-226 WAC)
  - Correct errors and clarify ambiguities

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Reorganize the Special & General Conditions

Special Conditions	General Conditions
S-1 Permit Coverage	G-1 Operation & Maintenance
S-2 Limits and Standards	G-2 Other Duties & Responsibilities
S-3 Planning Requirements	G-3 Enforcement and Penalties
S-4 Operational Requirements	G-4 Permit Management and Coordination
S-5 Monitoring Requirements	
S-6 Reporting & Recordkeeping Requirements	
S-7 Permit Administration	

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Numbering should stay the same from term to term,
and eventually, I hope, permit to permit.

Specific Tweaks

New Requirement:

- Electronic reporting of monitoring (eDMR)
  [55% of permittees already have registered SAW accounts]
- Electronic submission of SWPPP by October 1, 2016
- Electronic applications (eNOI)

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SAW = Secure Access Washington

Specific Tweaks

Clarifications:

S1 – Call out coverage of discharge to ground

S1.B – Clarify "marine surveys"
– Clarify "25% of the vessel surface to the vessel superstructure"

S3.C – Clarify "25% of the vessel surface to the vessel superstructure"

S4.A – Remove language; Add explanation to Fact Sheet

S6.B – No monitoring required for BOD, NO_2+NO_3, or Total Phosphorus

multi – "stormwater potentially contaminated by industrial activities"

multi – Clarify that permittee is responsible for third parties on site

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S1.B: "for marine surveys" == "for inspections by marine surveyors"

[What does 25% of . . . mean?]

S4.A: Explanation of "mixing allowance"
No action required of Permittees, so this will move to the Fact Sheet.

Multi1: "Stormwater" has been used at several points in the permit where it's unclear whether it refers to **all** or **some** stormwater.
So, similar to the ISWGP, we'll make the meaning clear.

Multi2: Too many violations due to DIYs or boat owners.

Plan for Reissuance

Late July 2015	Workshop and Listening Sessions
Early Oct 2015	Send reminder letters to Permittees (Duty to Reapply) eNOI becomes available for Permittee use
Mid Nov 2015	Complete Small Business Economic Impact Analysis
12/2/2015	Application renewal due (for uninterrupted coverage)
Mid Dec 2015	Issue Draft Permit and Fact Sheet (begin 45-day comment period)
Mid Jan 2016	Workshop and Public Hearings
Mid April 2016	Issue Final Permit and Responses to Comments (begin 30-day appeal period)
June 1, 2016	Effective date of reissued permit

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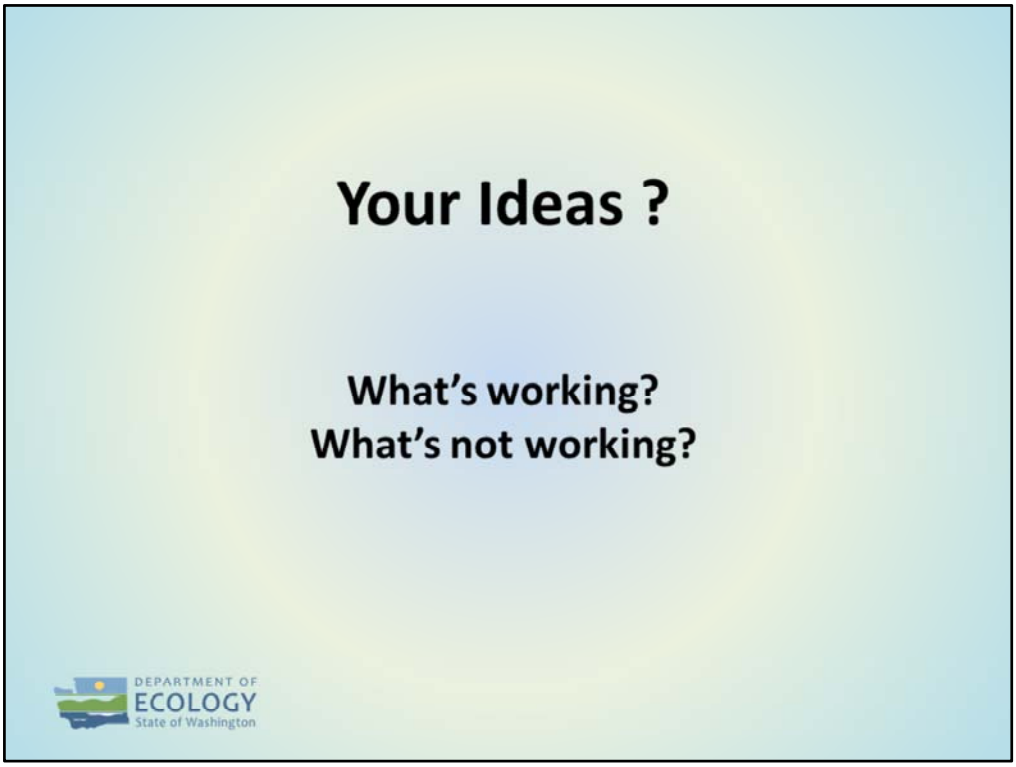

Questions?

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

Boatyard General Permit Website:

http://www.ecy.wa.gov/programs/wq/permits/boatyard/index.html

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If you have questions re on-site issues:
Call local ECY rep via contact info on the Web.

If you have questions, comments, or suggestions re the new permit,
Call me.