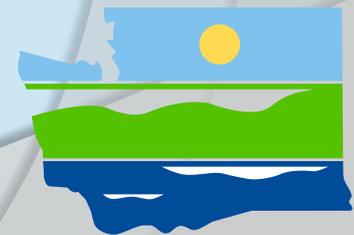


BOATYARD GENERAL PERMIT 2011



DEPARTMENT OF
ECOLOGY
State of Washington

BOATYARD GENERAL PERMIT



- Individual wastewater discharge permits and general permits
- Limits and benchmarks
- Short history of this renewal
- Requirements of this permit – What's changed
- Questions



WASTEWATER DISCHARGE PERMITS

- All wastewater discharges are required to have a permit
- All wastewater discharge permits are required to meet the requirements of the CWA and Chapter 90.48 RCW
- 1987 amendments to the CWA – stormwater is wastewater



WASTEWATER DISCHARGE PERMITS

- Install all treatment that is economically achievable (technology-based)
- Meet water quality standards (water quality – based)
- Other requirements (monitoring, record-keeping, etc.)



GENERAL PERMITS

- A general permit is developed to cover many facilities instead of only one facility (individual permit).
- This general permit covers about 70 boatyards.
- Technology-based and water quality-based requirements (previous slide) are applicable to general permits.



LIMITS AND BENCHMARKS

Technology-Based Limits Require:

- Effluent characterization and engineering design or
- Performance from properly operated treatment

Water Quality-Based Limits Require:

- Background concentration
- Effluent concentration
- Effluent variability
- Receiving water hardness (metals in fresh water)
- Discharge characteristics (mixing)

LIMITS AND BENCHMARKS

In General Permits:

- Technology-based limitations may = prevention (best management plans or BMP's)
 - Documented in a facility – specific plan (Stormwater Pollution Prevention Plan –SWPPP)
 - Plan is modified as required to control pollutants
- Technology – based limitations may be effluent limits – based on treatment technology or on demonstrated performance



LIMITS AND BENCHMARKS

Benchmarks

- Benchmarks as used in this general permit means limits based on treatment technology or water quality with an allowable period of time to meet those limits with source control methods.
- This permit contains both effluent limits and benchmarks depending on the discharge situation.



HISTORY

- Boatyards were made a priority for pollutant control in the Ecology Urban Bay program (Puget Sound Water Quality Authority Action Plan)
- This permit was first issued in 1992 and was reissued in 1997
- Expired 12/02 and was administratively extended



HISTORY

- The 3rd permit was issued December 2005.
- The permit contained benchmarks and limits for copper based on WQ criteria (criteria x dilution factor x translator x water effects ratio) and type of receiving water.
- The permit retained the mandatory BMPs and added a vacuum grinding requirement as a mandatory BMP.
- It required 5 stormwater monitoring events/winter season (Sept, Oct, Jan, April, May).



HISTORY

- This 3rd Permit (2005) was appealed by Puget Soundkeeper Alliance (PSA) and Northwest Marine Trade Association (NMTA).
- The appeal was heard by the PCHB in July 2006.
- The PCHB issued a decision in January 2007.
- The decision contained eight orders for revision of the permit.
- The decision was appealed to Superior Court by PSA and NMTA in February 2007.



HISTORY

- The Superior Court appeal was conditionally settled by PSA and NMTA. A settlement agreement was signed by PSA, NMTA and Ecology in July 2007. The settlement agreement required:
 - A permit modification to incorporate PCHB orders 2, 3, 7, and 8 to be issued 75 days from the time of the settlement signing.
 - The conduct of a pilot test of boatyard stormwater treatment during the winter of 07/08 with a completion report on March 15, 2008. Ecology contributed \$20,000 to the pilot test.
 - Another permit modification at the conclusion of the pilot study in order to incorporate the results of the pilot study.
- A draft permit modification was published in September 2007 and issued final December 2007. This modification was appealed by PSA in January 2008 over receiving water study requirement.

HISTORY

- The pilot test was conducted for six storm events and an economic analysis was conducted to estimate the cost of installing treatment in a typical boatyard.
- **April, May, June 2008** – Meetings of three parties to discuss pilot test and next steps.
- **June/July 2008** – A second settlement agreement was signed by the three parties. This incorporated time frames to produce an acceptable draft permit for reissuance. The parties agreed on multiple principles to be used in crafting the conditions of the draft permit. Agreement to postpone level 3 reports.
- **July 14, 2008** – A draft permit prepared by Ecology (Ecology 2008 draft) and incorporating the agreed principles was conveyed to NMTA and PSA on July 14.



HISTORY

- **July 21, 2008** – Meeting of three parties. Many issues were still not settled. The technical consultants (Horner and Kellems) were directed to work with Ecology to provide more information.
- **August 12, 2008** – NMTA and PSA conveyed a draft (NMTA/PSA 2008 draft) permit to Ecology which, according to the transmittal email, contained conditions acceptable to those two parties. Ecology begins SBA/AKART economic report.
- **November 19, 2008** – The NMTA/PSA 2008 draft was released for public comment.
- **Spring 2009** – Three Seattle area boatyards install multimedia filtration, Pacific Fishermen Shipyard conducts pilot test of two stormwater treatment devices.



HISTORY

- **March 2009** – NMTA, CSR Boatyards, and Port of Edmonds met with Ecology management – The message was that boatyards are in economic distress and can't meet agreed conditions of the draft permit.
- **June 2009** – Ecology purchased economic report on shipyards/boatyards profit. Review engineering and pilot test data for Pacific Fishermen on stormwater treatment.
- **August 2009** – NMTA and PSA meet with Ecology management.



HISTORY

- **October 8, 2009** - letter to all boatyards requesting comment on Ecology SBA/AKART economic impact report.
- **December 2009** – finalized economic impact report – to be released with the draft permit.
- **April 21, 2010** – release draft permit for comment. Release final economic impact report.
- **March 2, 2011** – Issue final permit



WASTEWATER FROM BOATYARDS

Two Main Wastewater Sources:

1. Pressure wash wastewater
2. Stormwater runoff

Primary wastewater pollutants:

1. Metals (copper, zinc, lead) $\mu\text{g/L}$
2. Total settleable solids (TSS) mg/L
3. Oil/grease mg/l



WASTEWATER FROM BOATYARDS

Copper – Toxic Pollutant

- Freshwater criteria = 7 $\mu\text{g/L}$ (ppb) dissolved (40 mg/L hardness)
- Marine criteria = 5 $\mu\text{g/L}$ (ppb) dissolved

Zinc – Toxic Pollutant

- Freshwater criteria = 53 $\mu\text{g/L}$ (ppb) dissolved (40 mg/L hardness)
- Marine criteria = 90 $\mu\text{g/L}$ (ppb) dissolved

WASTEWATER FROM BOATYARDS

Lead – Toxic Pollutant

- Freshwater criteria = 24 $\mu\text{g/L}$ (ppb) dissolved (40 mg/L hardness)
- Marine criteria = 210 $\mu\text{g/L}$ (ppb) dissolved

1 milligram/liter (mg/L) = one part per million (ppm) =
1000 micrograms/liter ($\mu\text{g/L}$) = 1000 parts per billion (ppb)

TSS and oil / grease – no water quality criteria



BEST MANAGEMENT PRACTICES (BMP'S)

- All BMP'S are carried over from the 2005 permit (yard management, chemical handling, etc.)
- Vacuum sanding and grinding is continued as mandatory BMP (Alternative allowed)
- A stormwater pollution prevention plan or SWPPP is required
- BMP'S and compliance activities are placed in the SWPPP



PRESSURE WASH WATER

No discharge to surface or ground water – for discharges of pressure wash effluent to non-delegated municipal wastewater treatment system:

- **Limit for copper = 2.4 mg/L**
- **Limit for zinc = 3.3 mg/L**
- **Limit for lead = 1.2 mg/L**
- **Limit for pH = Within the range of 5 to 11**

Other restrictions based on federal pretreatment regulations.

Most boatyards use total recycle for the pressure wash water.

Based on new information the solids from the recycle system must now be tested as hazardous waste.



STORMWATER

For discharges to lake union and ship canal –listed 303(d) for lead

- Effluent limit for Lead - 185 $\mu\text{g/L}$ as total lead (dissolved criteria/0.12)

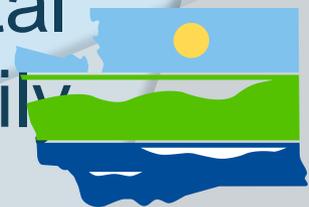
For discharges to marine and surface waters (based on performance of multimedia filtration)

- Effluent benchmark for copper – 50 $\mu\text{g/L}$ as Total copper (seasonal average), 147 $\mu\text{g/L}$ (daily average maximum)
- Effluent benchmark for zinc – 85 $\mu\text{g/L}$ as Total zinc (seasonal average), 90 $\mu\text{g/L}$ (daily average maximum) $\mu\text{g/L}$

STORMWATER

For discharges to ground (based on drinking water standards)

- Effluent limit for copper – 1000 $\mu\text{g/L}$ as total copper (seasonal average), 1000 $\mu\text{g/L}$ (daily average maximum before infiltration to compost-lined basin)
- Effluent limit for zinc – 1020 $\mu\text{g/L}$ as total zinc (seasonal average), 1020 $\mu\text{g/L}$ (daily average maximum) $\mu\text{g/L}$



LIMITS AND BENCHMARKS IN THE NEW PERMIT

Prepare, maintain, and follow a stormwater pollution prevention plan (SWPPP)

- SWPPP contents:
 - Facility assessment
 - Monitoring plan
 - Best management practices
- Other requirements:
 - Publicly accessible
 - Updated as necessary



MONITORING IN THE NEW PERMIT

Monitoring – pressure wash wastewater:

- Monitoring June, July, August, and September each year and
- Submit monitoring report for months sampled by the 28th of the following month

Monitoring – stormwater:

- One sample/month in October, November, January, April, and May
- Submit monitoring report for months sampled by the 28th of the following month



MONITORING IN THE NEW PERMIT

One time sampling winter 2012 for:

- BOD, Nitrate, (marine)
- BOD, Phosphorus, (fresh water)



VALUES ABOVE BENCHMARK

The response to ANY monitoring result above a benchmark value for each DMR:

Level One Response:

- Inspection to evaluate possible sources
- Identify source /operational control methods
- Evaluate whether any improvements or changes to the stormwater pollution prevention plan are required
- Summarize the inspection results, including remedial actions taken, if any, and place them in the SWPPP and DMR

VALUES ABOVE BENCHMARK

The response to FOUR monitoring results for a parameter above benchmark values:

Level Two Response:

- complete the requirements for level I response.
- evaluate treatment practices or structures
- submit a level 2 report to Ecology within three months



VALUES ABOVE BENCHMARK

The response to SIX monitoring results for a parameter above benchmark values:

Level Three Response:

- Prepare an engineering report (WAC 173-240, guidance, contact Ecology).
- Submit within 3 months.
- Implement treatment or treatment BMP within 12 months.

Any facility that is required to produce a level 2 or level 3 report in the current permit retains that obligation (number of exceedances) in this permit.

FINANCIAL CERTIFICATION

A boatyard may submit with the engineering report a certification that the facility cannot afford the treatment necessary to meet the technology – based limitations and request a period of time (compliance schedule) to finance the treatment.



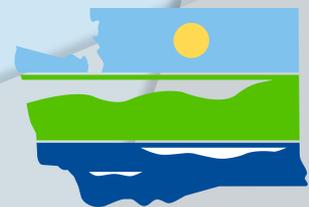
ENGINEERING REPORT REQUIREMENTS (See Handout)



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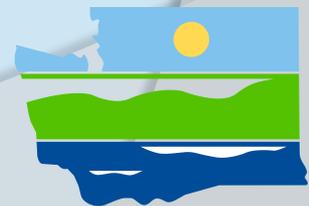
OTHER CHANGES

- Definitions – note error CFS, CFM page 7 and page 12
- S1 – no change
- S2.A. shorten general prohibitions by reference
- S2.B. add conditions for discharge to POTW
- S2. Lake Union lead limit raised from 55.6 to 185 $\mu\text{g}/\text{L}$



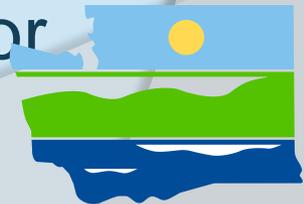
OTHER CHANGES

- S2. Remove oil/grease, TSS limitations numeric limitations
- S2. New benchmarks for copper and zinc – based on performance of multi-media filtration – Seasonal and daily benchmarks – Cu 50/147, Zn 85/90
- New language on listed waters



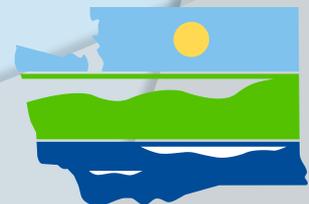
CHANGES

- S3.E. Solids Management – specified distance from high water line
- S4. (new) Compliance with water quality standards – mixing zone allowance
- S5. (new) Miscellaneous discharges – no monitoring except by order
- S6. Stormwater monitoring – Oct. instead of Sept.
- S6. Add one time sample for BOD and N or P



OTHER CHANGES

- S6.C. Analytical procedures – requires 200.8 except if not required
- S6.D. Visual Inspection – more detail on requirement - results on site. Note error in S6.D.4. – replace “S7.B” with “(1- 3 above)”
- S9.A. Send DMR report to POTW



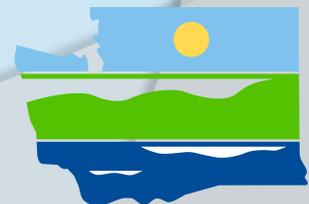


QUESTIONS?

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