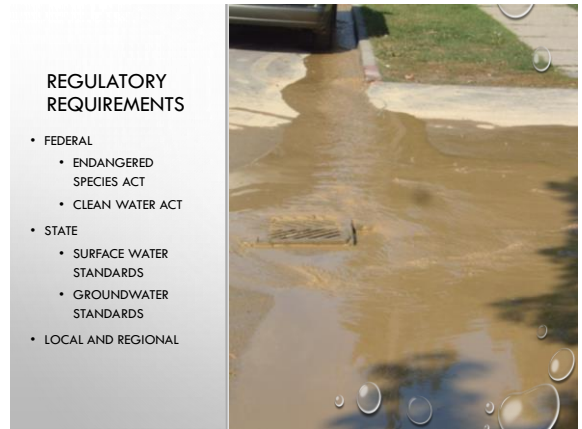




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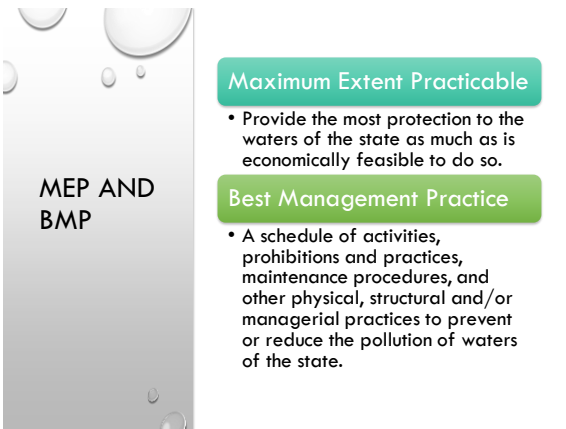
**STORMWATER ACRONYMS**

|        |   |
|--------|---|
| NPDES  | National Pollution Discharge Elimination System                                 |
| AKART  | All known available and reasonable methods of prevention, control and treatment |
| MEP    | Maximum Extent Practicable  |
| BMP    | Best Management Practices   |
| CESCL  | Certified Erosion and Sediment Control Lead                                     |
| 303(d) | Section 303d of the Clean Water Act   |
| TMDL   | Total Maximum Daily Load  |
| LID    | Low Impact Development  |

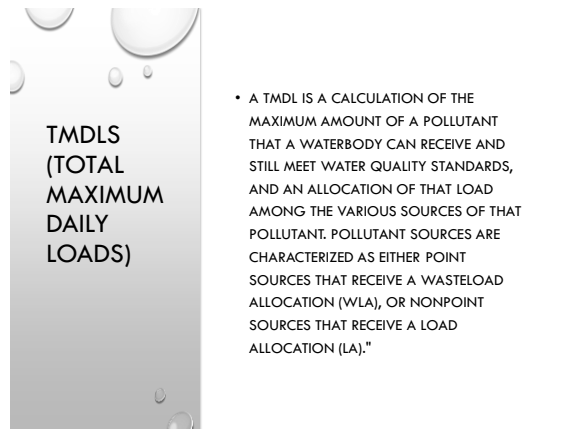
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4



5



6

# LID PRINCIPLE VS. BMP

**LID Principles** – means land use management strategies that emphasize conservation, use of onsite natural features, and site planning to minimize impervious surfaces, native vegetation loss, and stormwater runoff.

**LID BMPs** – means distributed stormwater management practices, integrated into a project design, that emphasize pre-disturbance hydrologic processes of infiltration, filtration, storage, evaporation and transpiration

7

# LOW IMPACT DEVELOPMENT

- SOIL AMENDMENT
- "PRECISION GRADING"
- PERMEABLE HARDSURFACE

8



9

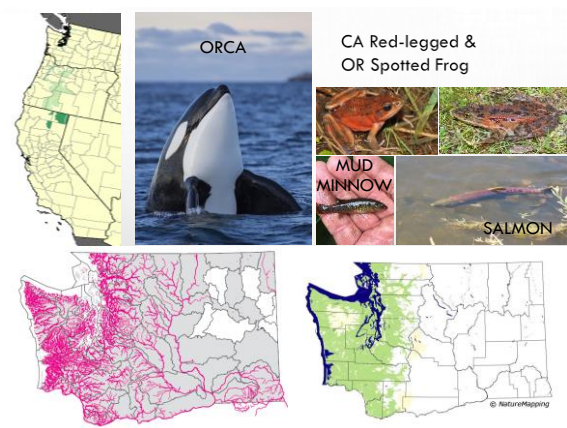
# ENDANGERED SPECIES ACT

Enacted to prevent the extinction of animals and plants, prohibits "taking" of listed species.

"Taking" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect or the intent to engage in such activities.

Harm includes indirect harm to listed species by harming habitat. *Including seasonal tributaries, or intermittent streams.*

10



11

# ESA AND CWA LINK

## NEPA - NATIONAL ENVIRONMENTAL POLICY ACT

- Establishes national environmental policy and goals for the protection, maintenance and enhancement of the environment.
- Requires federal agencies to integrate environmental values into their decision making processes by considering the environmental impacts of their proposed actions and reasonable alternatives to those actions.

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## CLEAN WATER ACT (CWA)

- ENACTED IN 1972 TO RESTORE AND MAINTAIN THE CHEMICAL, PHYSICAL AND BIOLOGICAL INTEGRITY OF THE NATION'S WATERS.
- EVOLVING SINCE THE RIVERS AND HARBORS ACT OF 1899



"Fishable" & "Swimmable" in Perpetuity

13

## NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

- CONTROLS WATER POLLUTION BY REGULATING POINT AND NONPOINT SOURCES THAT DISCHARGE POLLUTANTS INTO WATERS OF THE UNITED STATES.
- PROVIDES PERMITTING AUTHORITY GUIDELINES TO CONTROL AND MONITOR MUNICIPAL, INDUSTRIAL AND CONSTRUCTION RUNOFF CONTRIBUTIONS TO THE WATERS OF THE UNITED STATES.



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## CATEGORIES OF NPDES PERMITS

### Municipal – Phase I & II

- Stormwater Management Program
  - Maintenance
  - Education
  - Enforcement
  - LID

### Industrial – Classification influenced by SIC/NAICS code

- Point sources as a result of industrial practice, zinc for example
- Samples

### Construction – Phase I & II

- Turbidity and pH

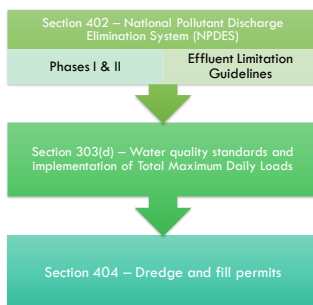
15

## MUNICIPAL PERMIT DISTURBED AREA THRESHOLDS

- **ALL NEW DEVELOPMENT AND REDEVELOPMENT PROJECTS** ARE RESPONSIBLE FOR PREVENTING EROSION AND DISCHARGE OF SEDIMENT AND OTHER POLLUTANTS INTO RECEIVING WATERS. **PERMITTEES MUST REQUIRE A CONSTRUCTION STORMWATER POLLUTION PREVENTION PLAN (SWPPP) FOR ALL PROJECTS WHICH RESULT IN 2,000 SQ. FT. OR MORE OF NEW PLUS REPLACED HARD SURFACE AREA, OR WHICH DISTURB 7,000 SQ. FT. OR MORE OF LAND.**
- PROJECTS BELOW THOSE THRESHOLDS ARE NOT REQUIRED TO PREPARE A CONSTRUCTION SWPPP, BUT MUST CONSIDER ALL OF THE ELEMENTS LISTED BELOW FOR CONSTRUCTION SWPPPS AND DEVELOP CONTROLS FOR ALL ELEMENTS THAT PERTAIN TO THE PROJECT SITE. THE PERMITTEE MAY DEVELOP AN ABBREVIATED SWPPP FORMAT TO MEET THE SWPPP REQUIREMENT UNDER THIS PERMIT FOR PROJECT SITES THAT WILL DISTURB LESS THAN 1 ACRE.

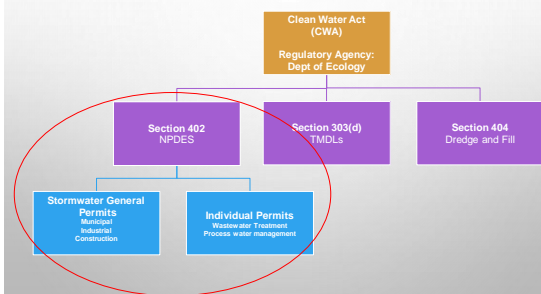
16

## CWA PERTAINING TO CONSTRUCTION

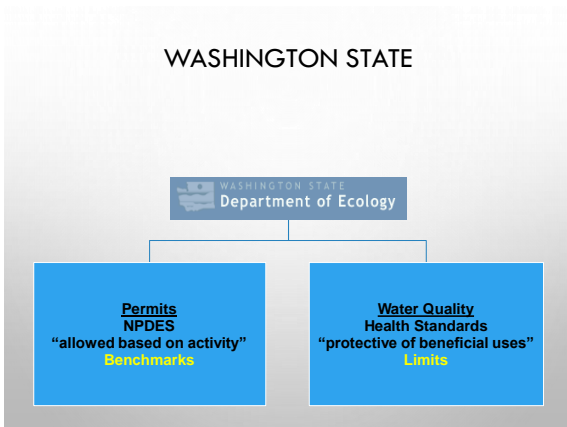


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## FEDERAL REGULATIONS FLOW CHART



18



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## NPDES BENCHMARKS

- 25 NTU
  - RESPOND WITH ADAPTIVE MANAGEMENT
- 250 NTU
  - CALL ECOLOGY

MORE TO COME...

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## THE PERMIT REQUIREMENTS IN LIGHT OF WATER QUALITY STANDARDS

**53.** Discharges must not cause or contribute to a violation of surface water quality standards (Chapter 173-201A WAC), ground water quality standards (Chapter 173-200 WAC), sediment management standards (Chapter 173-204 WAC), and human health-based criteria in the National Toxics Rule (40 CFR Part 131.36). Discharges not in compliance with these standards are not authorized.

Ecology **presumes** that a Permittee complies with water quality standards **unless discharge monitoring data** or other site-specific information **demonstrates** that a discharge causes or contributes to a violation of water quality standards, when the Permittee complies with the following conditions.

Where construction sites also discharge to ground water, the **ground water discharges must also meet the terms and conditions of this CSWGP.**

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## STATE OF WASHINGTON REQUIREMENTS

- Surface Water Quality Standards
  - Washington Administrative Code (WAC) 173-201A
  - 401 Water Quality Standards
- Groundwater Standards
- State Environmental Policy Act (SEPA)

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## 173-201A WAC

- Describes designated water uses and criteria for WA
- Specifies levels of pollutants allowed in receiving waters
- Limits concentrations of toxic, radioactive or other harmful materials that may adversely affect the characteristic water uses both for humans and aquatic and other organisms.
- Designed to protect health
- 173-201A WAC can create a more strict water quality level than NPDES

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## 173-201A WAC

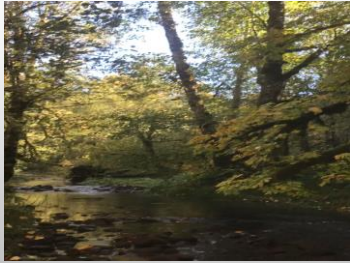
**"Numerical" water quality** criteria are numerical values set forth in the state of Washington's Water Quality Standards for Surface Waters (Chapter 173-201A WAC). They specify the levels of pollutants allowed in a receiving water that are protective of aquatic life.

Pollutants that might be expected in the discharge from construction sites are **turbidity, pH, and petroleum products**. The surface water quality standards for turbidity and pH for waters designated for the salmon and trout spawning, core rearing, and migration use are:

|  |   |
|--|---|
| Turbidity: shall not exceed 5 NTU over background turbidity when the background turbidity is 50 NTU or less, or have more than a 10 percent increase in turbidity when the background turbidity is more than 50 NTU. | pH: shall be within the range of 6.5 to 8.5 (freshwater) or 7.0 to 8.5 (marine water) |
|--|---|

24

## VIOLATION OF WATER QUALITY LIMIT



25

## 173-201A WAC

Stormwater discharges associated with construction activity are subject to applicable state water quality standards. The Construction Stormwater General Permit does not authorize the violation of those standards. Ecology expects that the selection and implementation of appropriate BMPs outlined in this volume of the SWMM or equivalent manuals will result in compliance with water quality standards. Proper implementation and maintenance of appropriate BMPs is critical to adequately control any adverse water quality impacts from construction activity.

Stormwater discharges from construction sites must not cause or contribute to violations of Washington State's surface water quality standards (Chapter 173-201A WAC), sediment management standards (Chapter 173-204 WAC), ground water quality standards (Chapter 173-200 WAC), and human health based criteria in the National Toxics Rule (Federal Register, Vol. 57, No. 246, Dec. 22, 1992, pages 60848-60923).

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## GROUND WATER STANDARDS

- GOAL: MAINTAIN THE HIGHEST QUALITY OF THE STATE'S GROUND WATERS AND PROTECT EXISTING AND FUTURE BENEFICIAL USES THROUGH THE REDUCTION OR ELIMINATION OF THE DISCHARGE OF CONTAMINANTS TO THE STATE'S GROUND WATERS.
- PROTECT ALL GROUND WATER IN THE SATURATED ZONE, STATEWIDE.
- APPLY TO ANY ACTIVITY WHICH HAS A POTENTIAL TO CONTAMINATE GROUND WATER QUALITY (BOTH POINT AND NON-POINT SOURCES).

LID? UIC?



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## STATE ENVIRONMENTAL POLICY ACT (SEPA)

Requires state and local agencies to consider environmental consequences of a proposal before approving or denying it.

No work is authorized until NPDES permit coverage has been granted.

SEPA Checklist

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## LIFE OF A PERMIT



APPLY FOR COVERAGE –  
NOTICE OF INTENT (NOI)



MAINTAIN AND MANAGE  
COVERAGE – SWPPP  
AND REPORTING



TERMINATE COVERAGE –  
NOTICE OF TERMINATION  
(NOT)

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## NPDES PERMIT APPLICATION PROCESS

1

Apply for  
permit  
coverage

Submit a Notice of  
Intent (NOI)  
Application

2

Stormwater  
Pollution  
Prevention  
Plan  
(SWPPP)

Must be completed  
prior to construction  
activity commencing

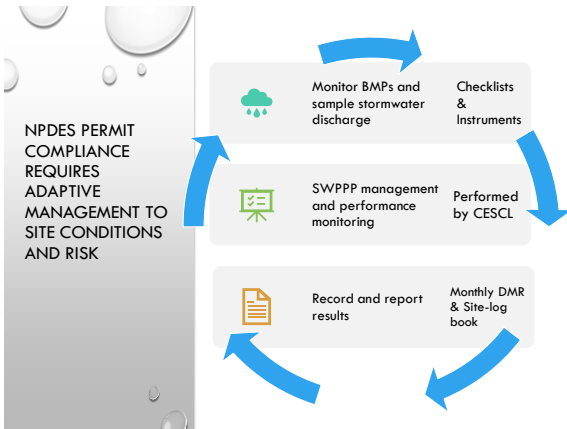
3

Pay permit  
fees

Annual Fees base don  
size of project

30



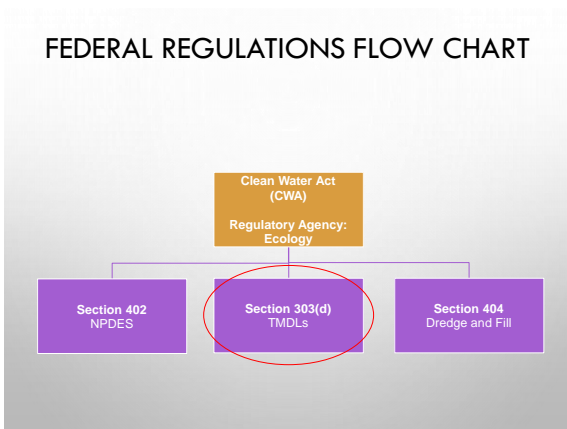


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## NPDES PERMIT TERMINATION

- STABILIZE ALL SOILS
- ELIMINATE ALL CONSTRUCTION-RELATED STORMWATER DISCHARGES
- REMOVE ALL TEMPORARY BMPS
- SUBMIT A NOTICE OF TERMINATION APPLICATION

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## SECTION 303(D)

STATES, TERRITORIES AND AUTHORIZED TRIBES ARE REQUIRED TO DEVELOP A LIST OF WATERS THAT DO NOT MEET WATER QUALITY STANDARDS.

- ESTABLISH PRIORITY RANKINGS AND DEVELOP ACTION PLANS TO IMPROVE WATER QUALITY, CALLED TOTAL MAXIMUM DAILY LOADS (TMDL).
- CONSTRUCTION SITES DISCHARGING TO LISTED WATERBODIES ARE REQUIRED TO VERIFY THAT DISCHARGES ARE NOT CAUSING OR CONTRIBUTING TO VIOLATIONS OF WATER QUALITY STANDARDS.

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## TMDLS AND CONSTRUCTION SITES

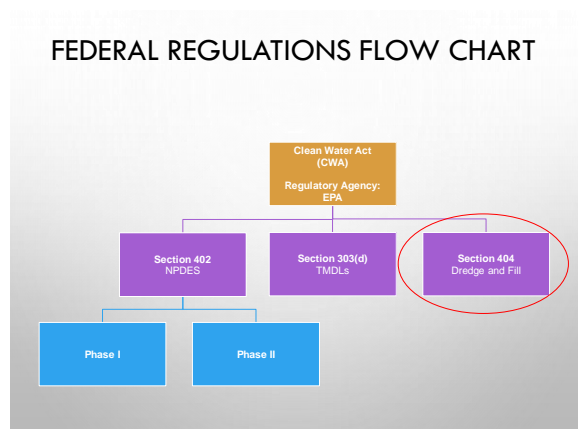
**Special requirements in the Notice of Intent (NOI) for each 303d listed stream**

- Must provide excerpt in SWPPP in advance of permit issuance to prove that site will not "cause or contribute"

**WA WebDMR**

- Approach is: Ecology receives the NOI; we determine the site will discharge to a 303(d); we send the applicant the impaired water body form and ask for the explanation of how they will avoid causing/contributing to impairment (typically the SWPPP excerpts). Ecology reviews this information and determine if this requirement is satisfied, and issues or denies the permit.

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## SECTION 404

- PROHIBITS DISCHARGE OF DREDGE OR FILL MATERIAL INTO THE WATERS OF THE UNITED STATES WITHOUT PERMIT FROM **U.S. ARMY CORPS OF ENGINEERS**.
- AS DEFINED IN THE CWA: "WATERS OF THE UNITED STATES" APPLIES ONLY TO SURFACE WATERS, RIVERS, LAKES, ESTUARIES, COASTAL WATERS, AND WETLANDS OR DRAINAGE PATHS TO THESE WATERBODIES.

<http://www2.epa.gov/cleanwaterrule/documents-related-proposed-definition-waters-united-states-under-clean-water-act>

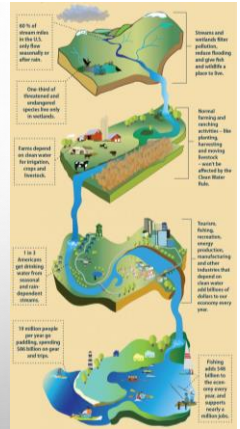
<https://www.youtube.com/embed/svi9mN4v5lQ>

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## CLEAN WATER RULE

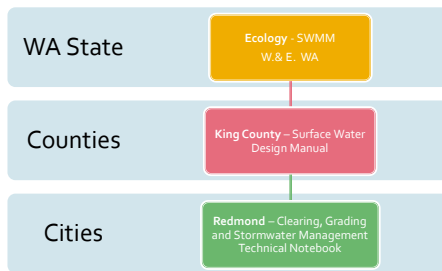
- EPA AND THE U.S. ARMY CORPS OF ENGINEERS (CORPS) ARE COLLABORATING TO DEVELOP A WEBSITE WHERE APPROVED JURISDICTIONAL DETERMINATIONS (JD) MADE UNDER THE CLEAN WATER RULE ARE AVAILABLE FOR INTERESTED PARTIES.

<http://www2.epa.gov/cleanwaterrule>

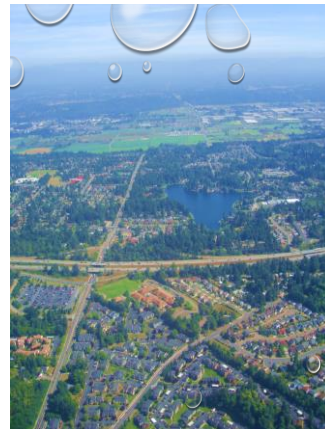


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## Stormwater Enforcement Layers



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KNOW  
WHERE  
YOUR WATER  
GOES...

40