

# TMDL 101 - What is a Total Maximum Daily Load (TMDL)?



# Presentation Overview

1. What are TMDLs?
2. Designated Management Agencies (DMAs).
3. How is Grants Pass addressing TMDL requirements?

# TMDL Background - Clean Water Act

- Goal is to make all waters fishable and swimmable.
- Numerous Programs to achieve this goal including:
  - Total Maximum Daily Loads – Section 303(d)
  - Stormwater Management (NPDES Phase II) – Section 402
  - Removal/Fill Permits – Section 404

# TMDLs – Total Maximum Daily Loads

- TMDLs evaluate pollutants/pollution in rivers and streams.
- Every water body can contain low levels of pollutants (natural levels) and maintain beneficial uses (e.g., swimming, fishing, irrigation).
- If beneficial uses are impaired, streams are put onto a list (303d), and TMDLs must be developed.

# TMDLs – Total Maximum Daily Loads

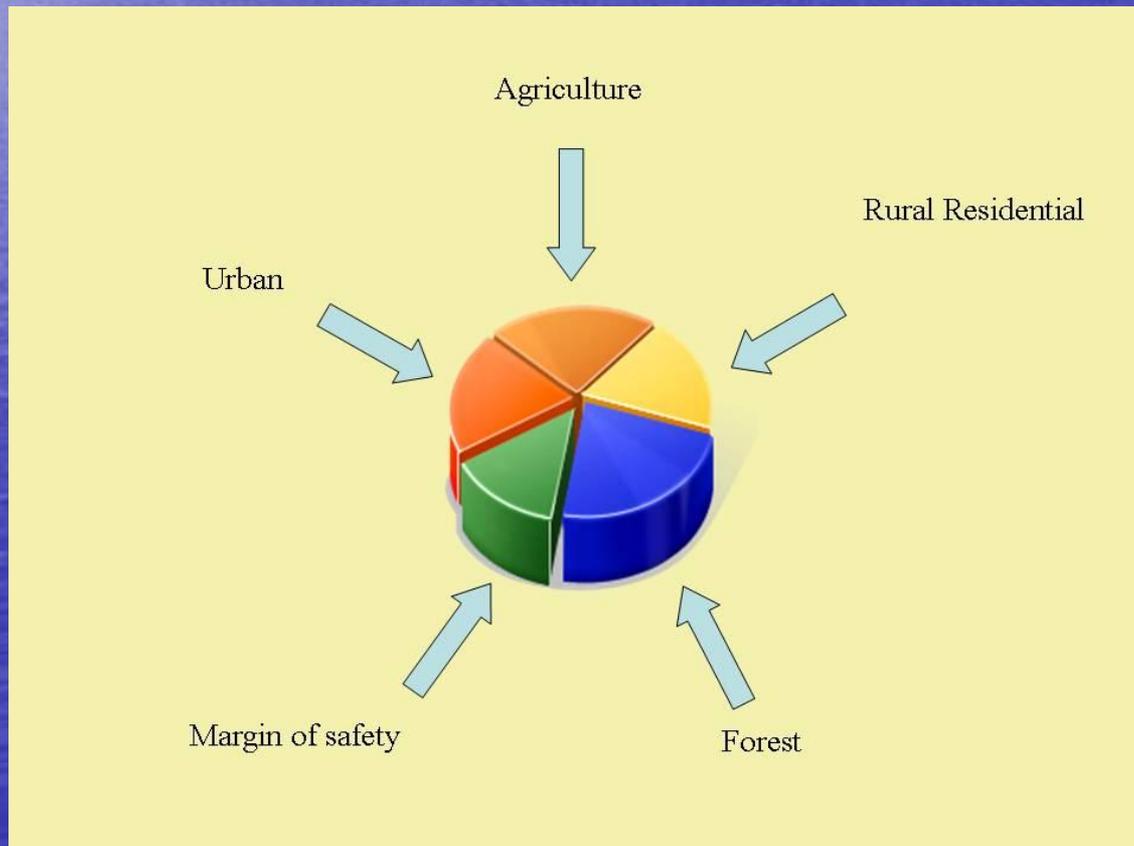
- TMDLs calculate the amount of a given pollutant can be present in the water body while still maintaining all beneficial uses.
- The difference between the amount calculated and the amount measured in streams is the amount that needs to be reduced.

# Examples

- TMDL calculation for safe instream levels of "Pollutant A" = 5 p.p.m.
- Measured levels of "Pollutant A" = 50 p.p.m.
- Amount to be reduced = 45 p.p.m.

# TMDLs continued

- Amounts divided up among users including the City, County, Agriculture, and Forestry.



# Urban - Rogue Basin

- Rogue River is impaired for bacteria (contact recreation) and temperature (salmon)
- Designated Management Agencies - (DMAs) are entities with the legal authority to ensure that the water quality targets set in the TMDL are met for those areas under their jurisdiction (OAR 340-042-0030 (2)).

# Rogue Basin Designated Management Agencies

- Urban **DMAs** (local cities and Counties)
- Oregon Dept. of Agriculture (ODA)
- Oregon Dept. of Forestry (ODF)
- Irrigation Districts
- Oregon Department of Transportation (ODOT)
- U.S. Bureau of Reclamation (USBR)
- U.S. Forest Service (USFS)
- NPDES Permitted Operations

# How does the City meet TMDL Regulations?

- Develop an Implementation Plan – Completed and approved in 2010
- Implement the plan (5-year cycles)
  - Round 1 July 1<sup>st</sup> 2010 through June 30<sup>th</sup> 2015.
  - Plans need to be revised and/or updated for next 5-year cycle

# Implementation Plan Summary

- Outlines steps Grants Pass will take to meet the TMDL for bacteria and temperature
- Considers all sources (including land uses) that are responsibilities of the urban DMAs
- Annual Reporting
- Takes advantage of existing programs and resources
- Uses adaptive management – changes can be made (timelines, substitutions)

# Bacteria -Potential Sources

- Failing septic systems
- Urban stormwater
- Agriculture
- Wild animals
- Pets
- Illegal dumping (RV's)



# Temperature - Potential Sources

- Solar radiation
- Water Use
- Heated Return flows



# Responsibilities of Urban DMAs

- All nonagricultural, nonforestry-related land uses including transportation (maintenance and construction practices)
- Sewer and septic systems
- Designing and siting of housing/home, commercial, and industrial sites in urban and rural areas
- Golf courses and parks

# Responsibilities continued

- Land use planning/permitting
- Maintenance, construction and operation city-owned facilities and infrastructure
- Construction, operation and maintenance of city roads and storm sewer system
- Riparian area management

# Management Strategies in the Plan



# What the implementation plan includes:

- For **temperature**
  - riparian restoration (planting for stream shading)
  - protection of open spaces and riparian areas
  - working with existing riparian planting programs
  - water use/water conservation
  - riparian ordinance
  - invasive species management



# What the implementation plan includes:

- For **bacteria**
  - managing stormwater
  - managing pet waste
  - installation of best management practices (BMPs) as needed
  - illicit discharge detection and elimination program



# What the implementation plan includes:

- For **both** parameters (general program elements)
  - continued participation in the TMDL program
  - education and outreach
  - staff training
  - partnerships
  - Monitoring (implementation and effectiveness)
  - annual reporting

# Questions...?

