

# Tools for Achieving Water Quality Standards

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VIRTUAL WQS ACADEMY

FEBRUARY 2026

# Disclaimers

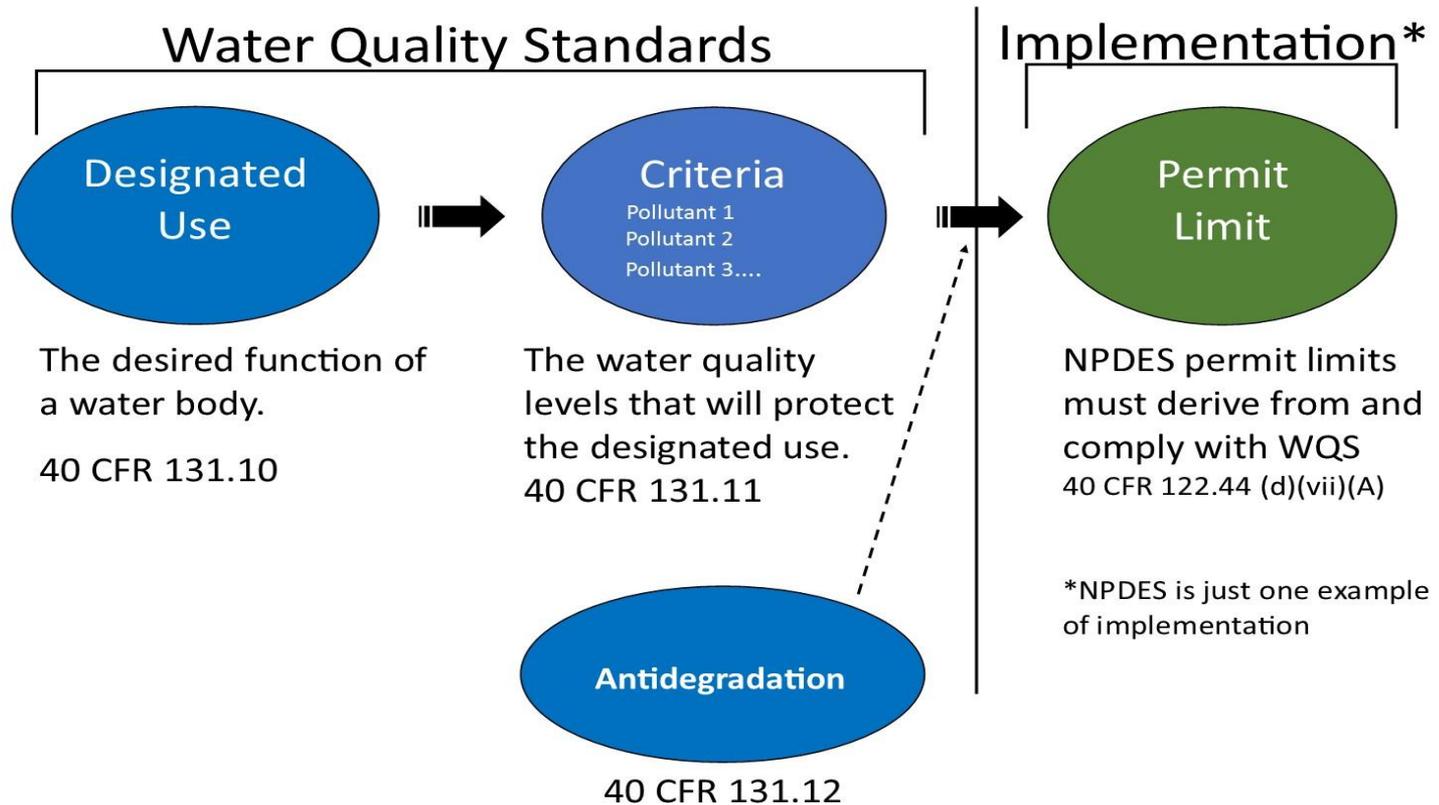
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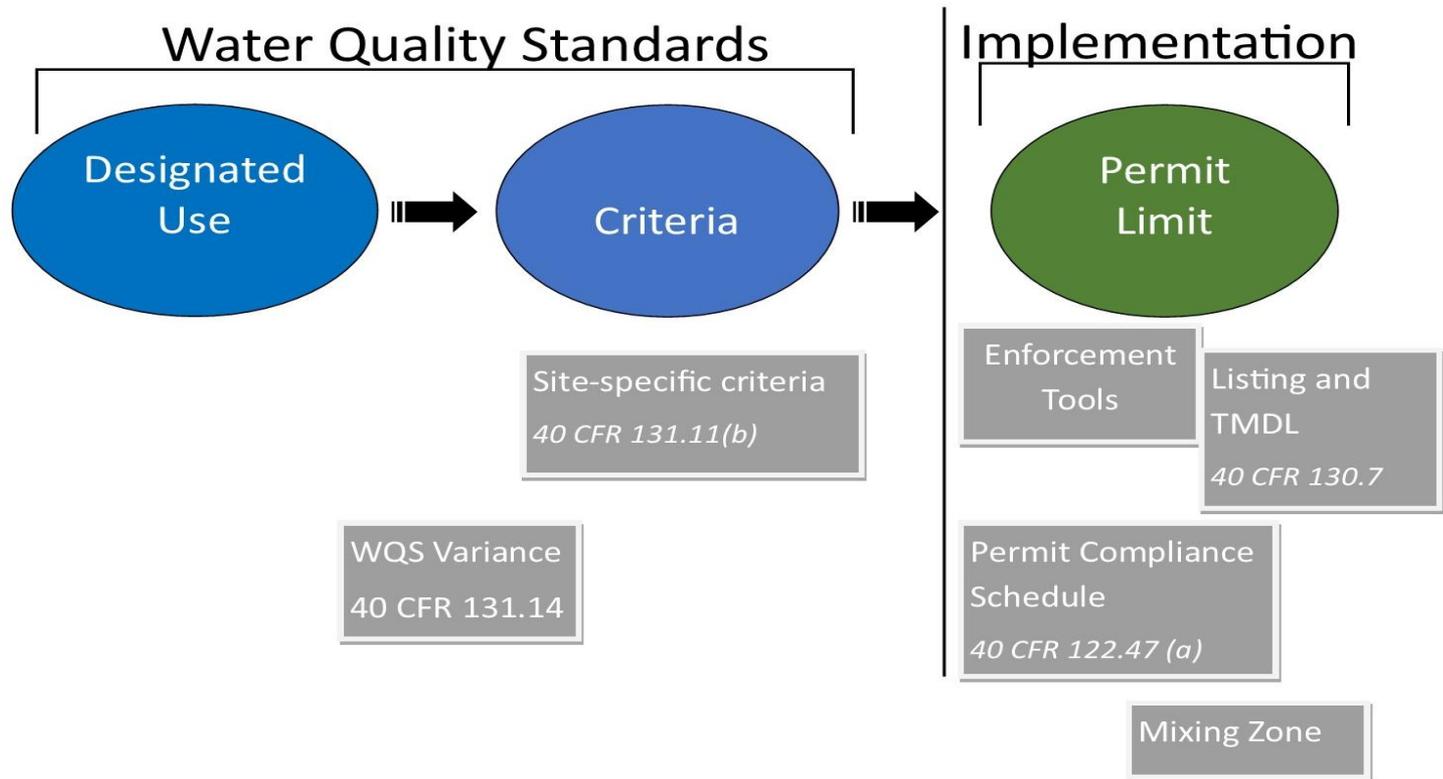
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- Change or substitute for any statutory provision or regulatory requirement.
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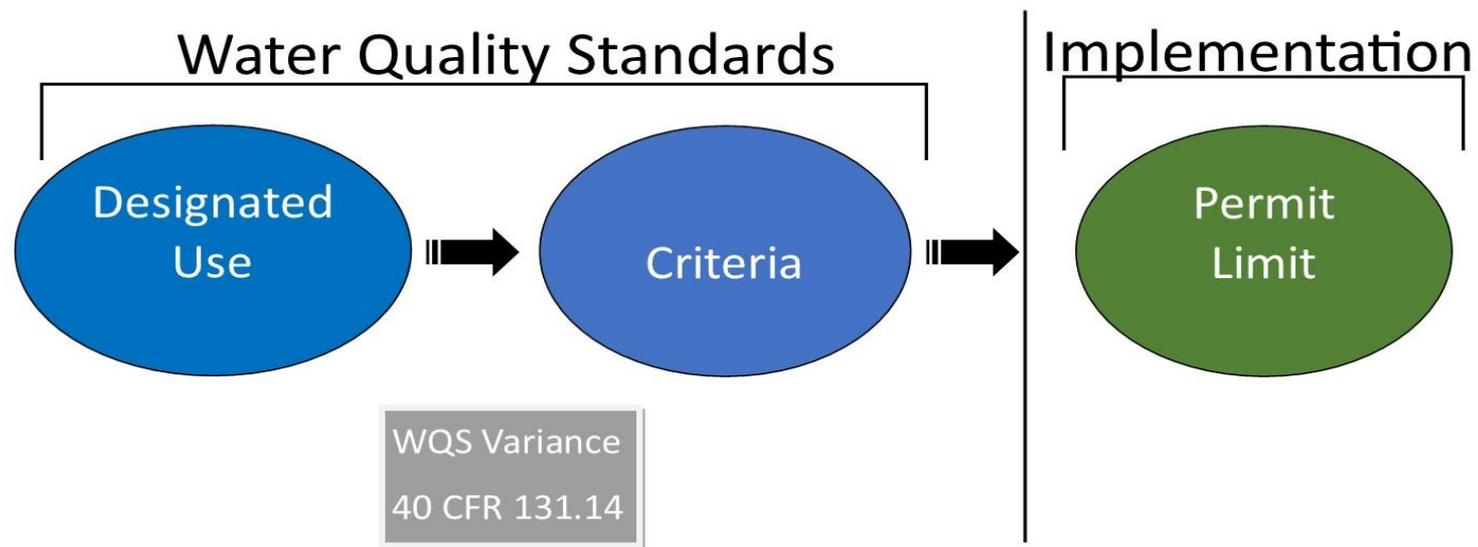
# Water Quality Standards Schematic



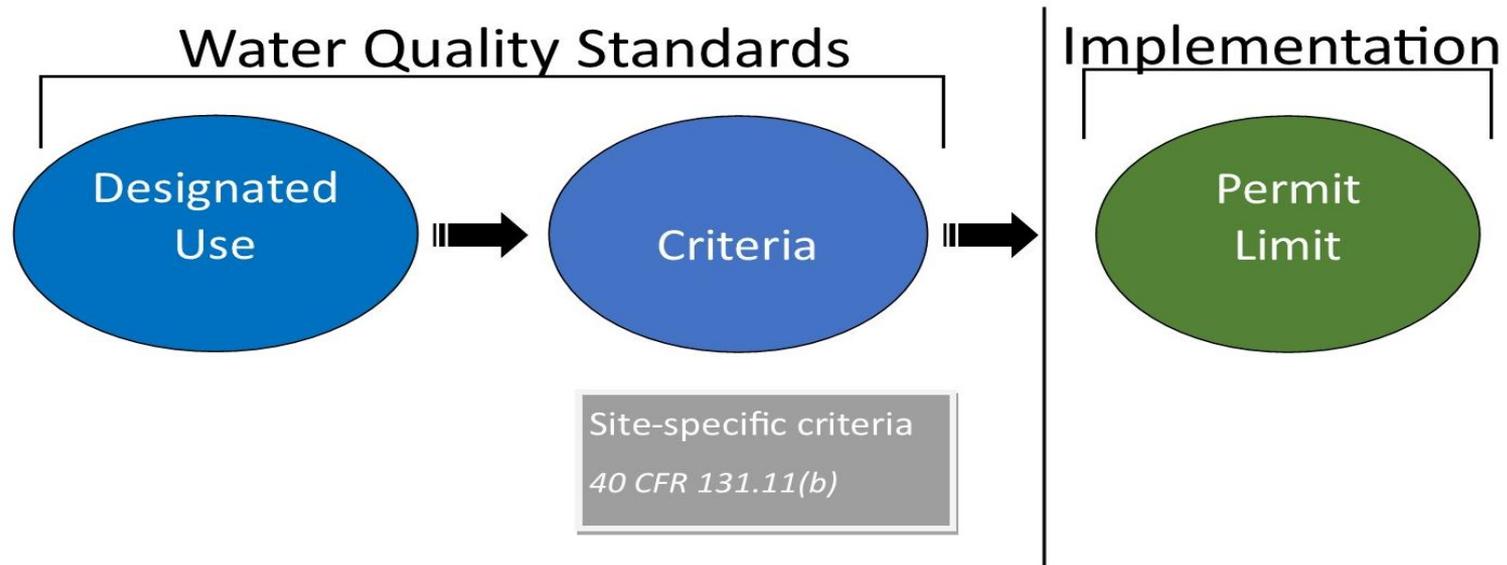
# A Variety of Tools To Help Meet WQS



WQS Variance: time-limited designated use and criterion for a specific pollutant(s) or water quality parameter(s) that reflects the highest attainable condition during the term of the WQS variance (131.14).

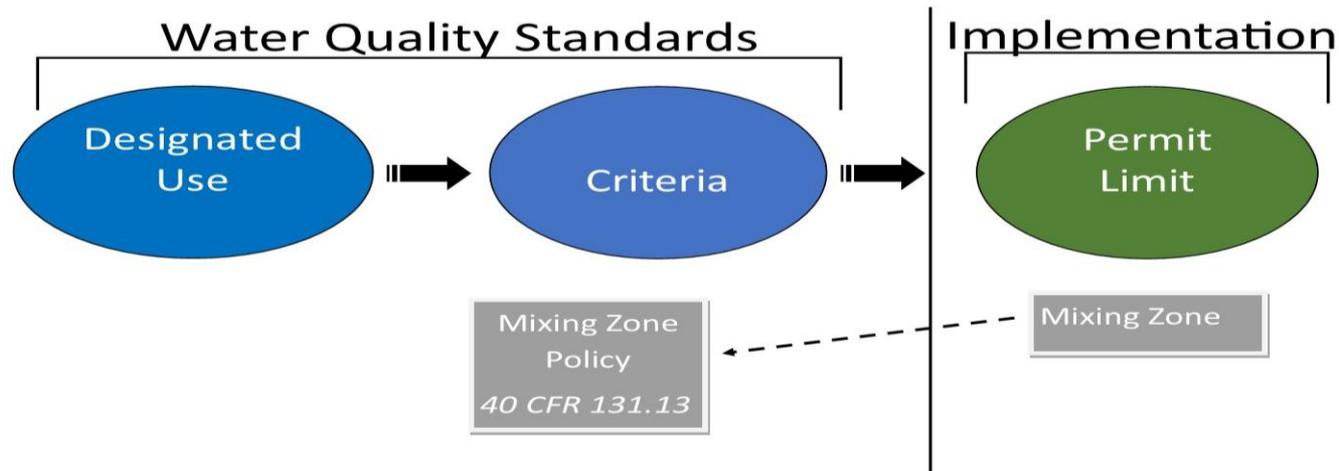


# Site-Specific Criteria: a tool to tailor criteria to local conditions/key species.



- Best used when you have additional scientific information that more accurately expresses a level/concentration for a water quality parameter to protect the designated use.
- Under Section 131.11(b)(1) of the regulations, States and Tribes may adopt numeric criteria based on:
  - Published CWA Section 304(a) guidance;
  - Section 304(a) guidance modified to reflect site-specific conditions; or
  - Other scientifically defensible methods.

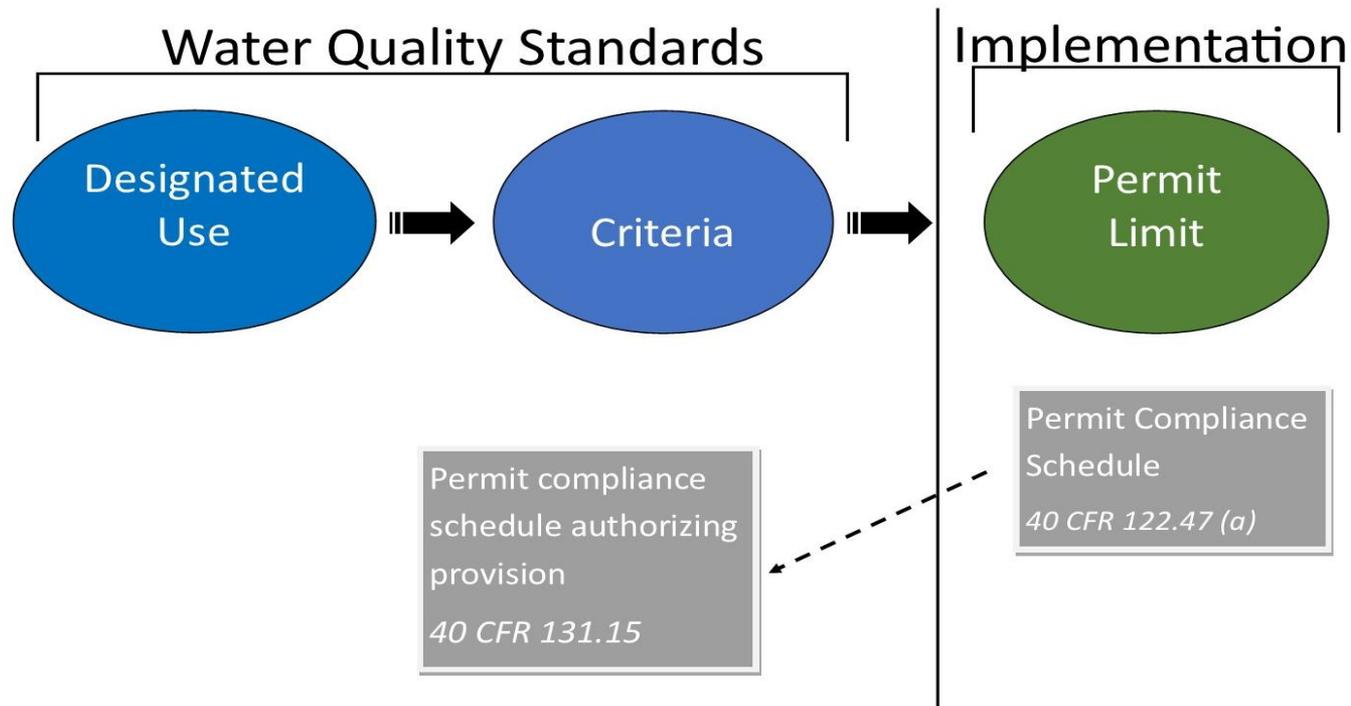
Mixing Zone: a tool that allows for dilution of a discharge before criteria must be met.



A **mixing zone** is a limited area or volume of water where initial dilution of a discharge takes place and where certain numeric water quality criteria may be exceeded.

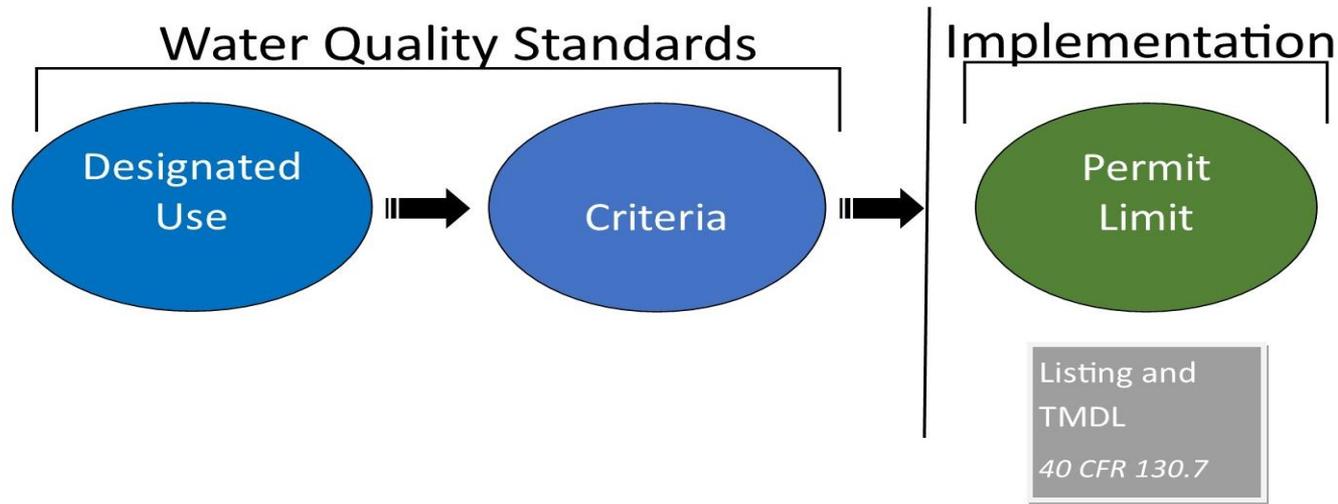
**Rationale:** Sometimes organisms can be exposed to pollutant concentrations above a criterion magnitude for a short duration without interfering with the designated use of a waterbody as a whole.

Permit Compliance Schedule: a tool that allows additional time to take specific actions to meet an NPDES WQBEL.



If a permittee cannot immediately comply with the permit WQBEL upon effective date of permit, the permit may include, where appropriate, a schedule of compliance granting time to a NPDES permittee to meet new or revised WQS “as soon as possible.”

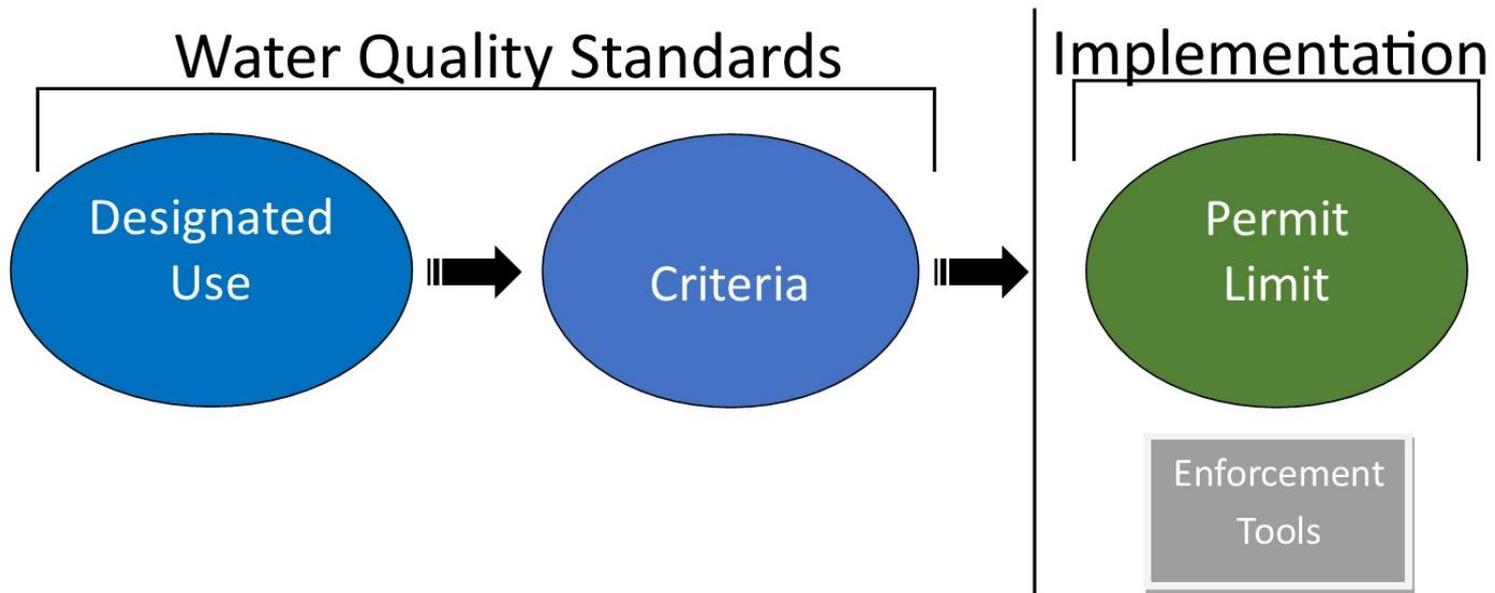
TMDL: a tool to calculate needed source reductions (PS & NPS) to meet WQS.



A TMDL is a calculation of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards, and an allocation of that amount to the pollutant's sources (waste load allocations for PS and load allocations for nonpoint sources).

- Every 2 years states/Tribes develop a list of waters that are not meeting applicable WQS and need a TMDL.

Enforcement Tools: enforceable corrective measures, outside of WQS, to return to compliance with CWA requirements.

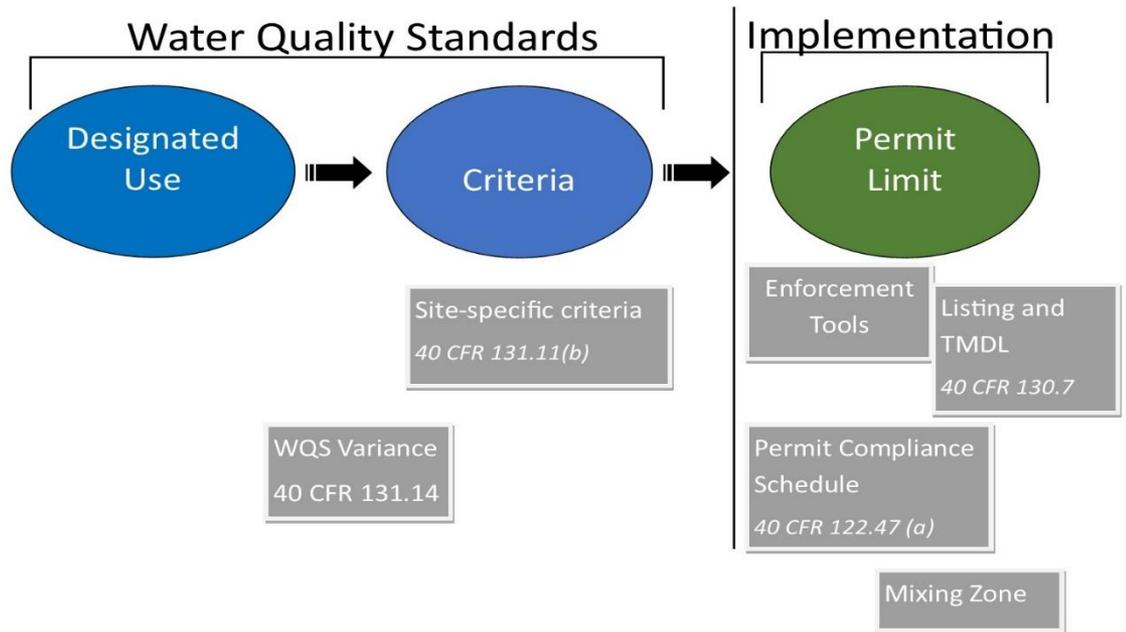


Enforcement tools support implementation of NPDES permit limits and the underlying WQS.

- For example, administrative orders and civil judicial consent decrees contain enforceable corrective actions and deadlines to return to compliance.

# Ways to Distinguish Tools

- Is the tool a WQS?
- Does the tool allow additional time to meet or does it change so the WQS can be met immediately?
- Does the tool require demonstration of need?
- Does the tool apply to a discharger or to a waterbody?
- Is the tool appropriate if you have more certainty or less certainty about the time or actions needed to meet WQS?



# Summary

WQS Variance: a tool that allows additional time to make incremental progress towards the designated use and criteria.

Mixing Zone: limited area or volume of water where initial dilution of a discharge takes place and where certain numeric water quality criteria may be exceeded.

Site-Specific Criteria: a tool to tailor criteria to local conditions / key species that still protect the designated use.

Permit Compliance Schedule: a tool that allows additional time to take specific, enforceable actions to meet an NPDES WQBEL.

Total Maximum Daily Load (TMDL): a tool to calculate needed source reductions (PS & NPS) to meet WQS.

Enforcement Tools: actions taken outside of WQS and NPDES permits development process resulting in enforceable corrective measures that support implementation of permit limits and the underlying WQS.