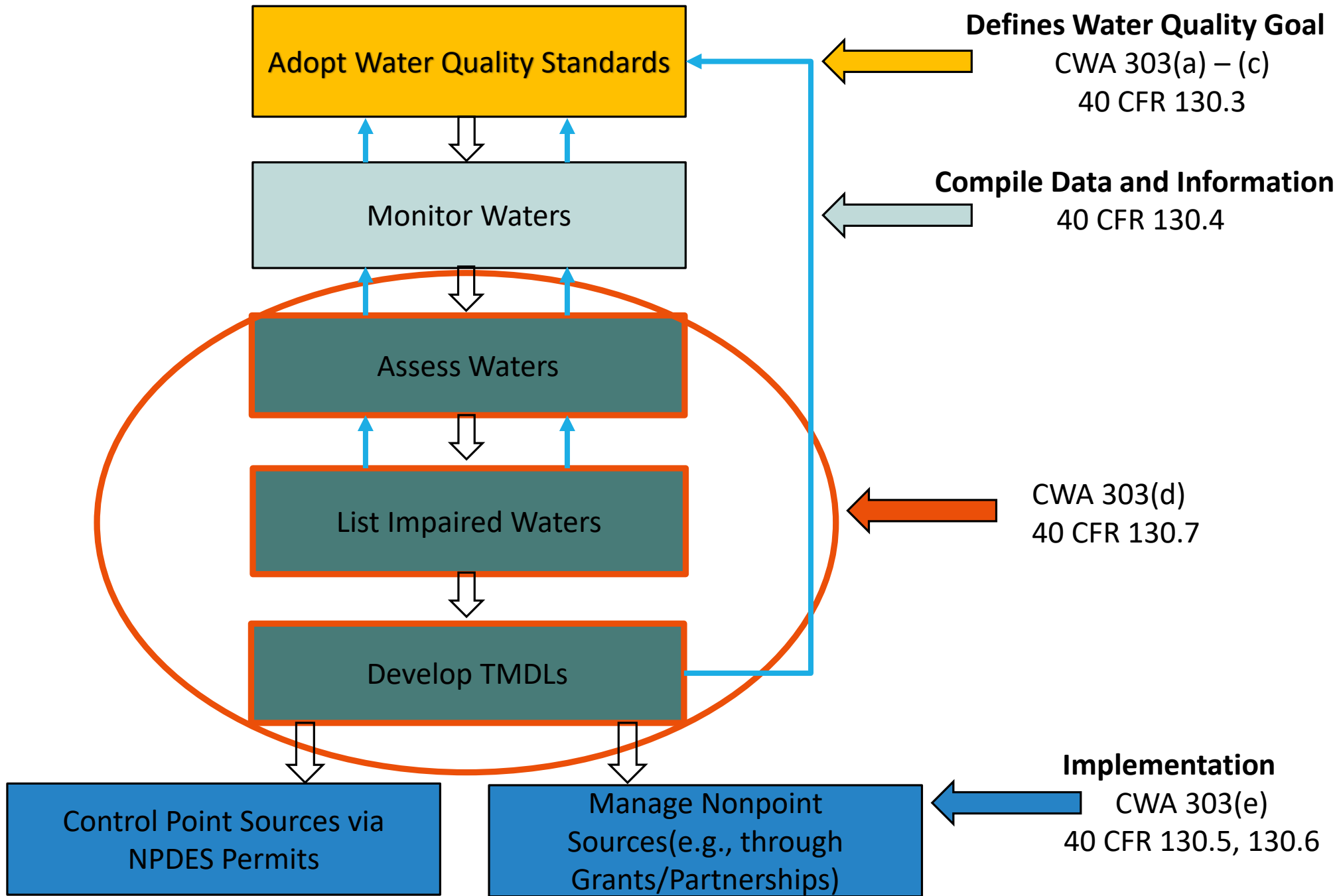


CLEAN WATER ACT SECTION 303(D) LISTINGS AND TOTAL MAXIMUM DAILY LOADS (TMDLs) OVERVIEW

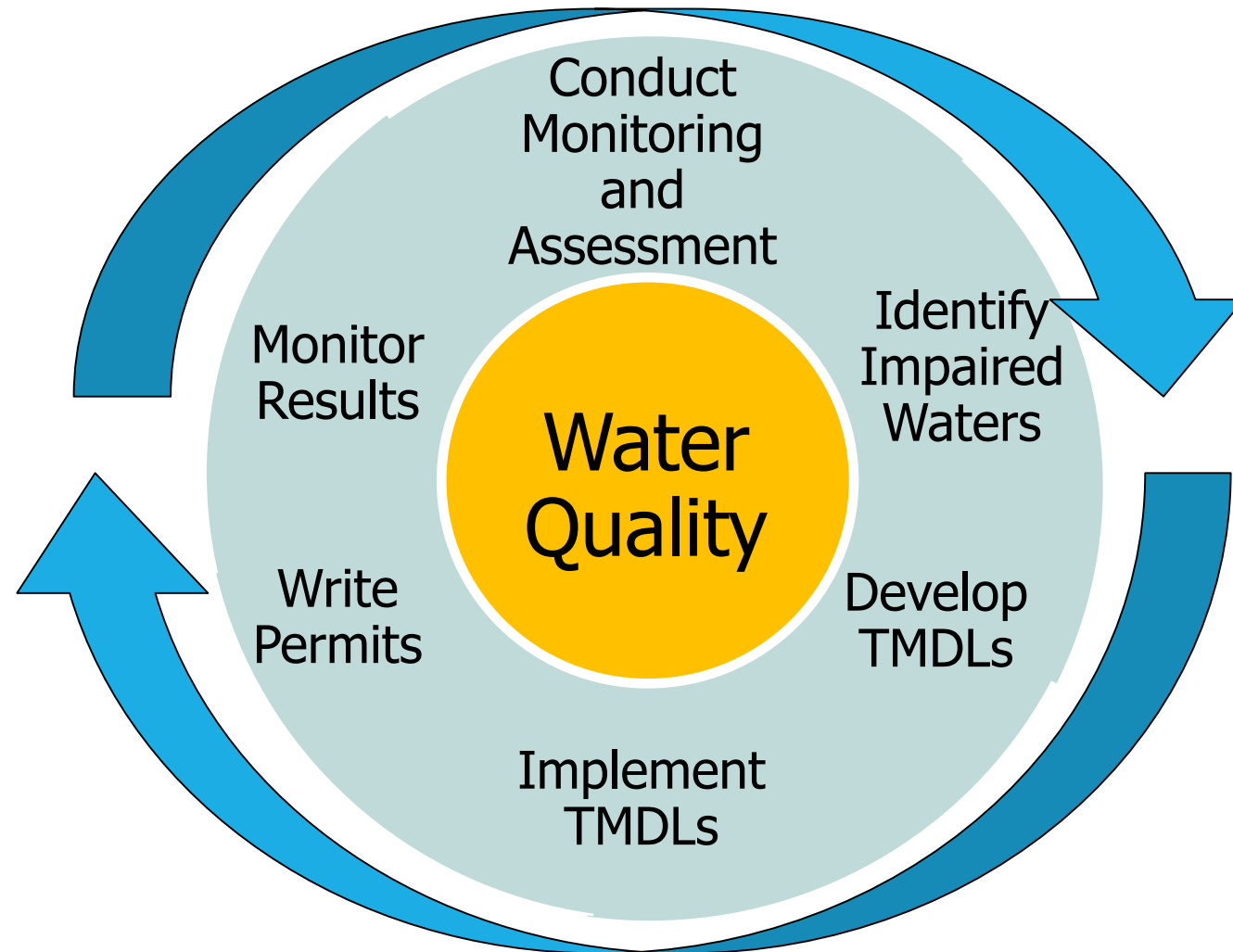
AMY FEINGOLD
US EPA, REGION IV
NOVEMBER 7, 2018

CWA Framework



Water Quality Cycle

CWA Activities



Water Quality Standards (WQS)

- Describes **designated uses** (i.e. growth and propagation of fish, shellfish, other aquatic life, and wildlife)
- Provides the **criteria** for their protection of these uses
- Includes **anti-degradation provisions**

WHAT IS THE CLEAN WATER ACT 303(D) LIST?

Consists of waters that:

- Do not meet WQS even after the implementation of technology-based limitations through NPDES or other pollution control requirements; often referred to as “impaired waters.”
- Require development of TMDL.

Applicable Regulations: 40 CFR 130.7

HOW ARE WATERS PLACED ON A 303(D) LIST?

Monitoring

- Collect and evaluate monitoring data to determine condition of the waterbody.
- Assemble all readily available data and information.

Assessment

- Use assessment methodologies and procedures, consistent with state WQS, to determine whether waters are impaired.

Listing

- Develop a list of those impaired waters every two years, with public participation, and submit to EPA.

WHAT ARE THE 303(D) ROLES?

States (and Tribes and Territories with “Treatment as a State” Status):

- **Identify waters** not meeting WQS based on “*all existing and readily available information.*”
- **Establish priorities** for TMDL development.
- **Develop schedule** of TMDLs to be developed within 2 years.
- **Request and Respond** to public comments on their draft 303(d) list.
- **Submit** the final 303(d) to EPA on April 1st of each even year for review and action.

EPA Region: has 30 days to approve or disapprove the 303(d) list.

- If EPA disapproves a list, EPA has 30 days to develop list.

WHAT IS REPORTED IN THE 303(D) LIST TO EPA?

303(d) list* (impaired waters)

+ **305(b) report** (overall health of waters)

314 report (health of lakes/reservoirs)

= Integrated Report (IR)

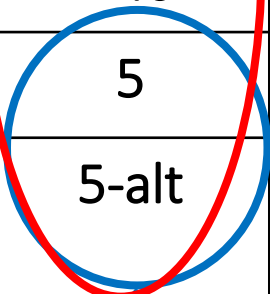
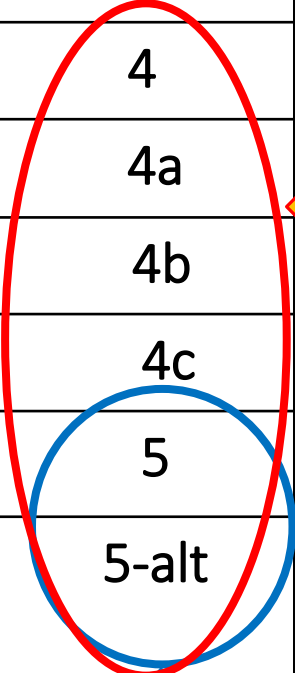
The 303(d) list and 305(b) report are both due April 1st of every even-numbered year. EPA has recommended an Integrated Report since the 2002 reporting cycle.

*Requires EPA Regional approval

FIVE INTEGRATED REPORT CATEGORIES

Category	Description
1	All designated uses (DU) met
2	Some, but not all, DUs met
3	Can not determine if any DUs met
4	<i>Impaired</i> —TMDL not needed
4a	TMDL completed
4b	TMDL alternative
4c	Non-pollutant causes
5	<i>Impaired</i> by pollutant —TMDL needed
5-alt	<i>Impaired</i> —TMDL needed but lower priority while alternative restoration approach is pursued

TN List of Threatened and Impaired Waters



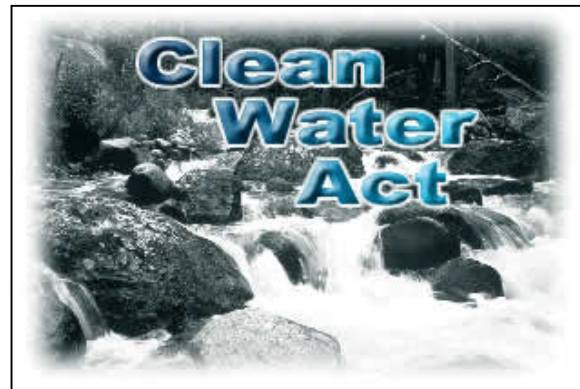
Section 303(d) List



WHEN TMDLS ARE REQUIRED

The Clean Water Act requires that states:

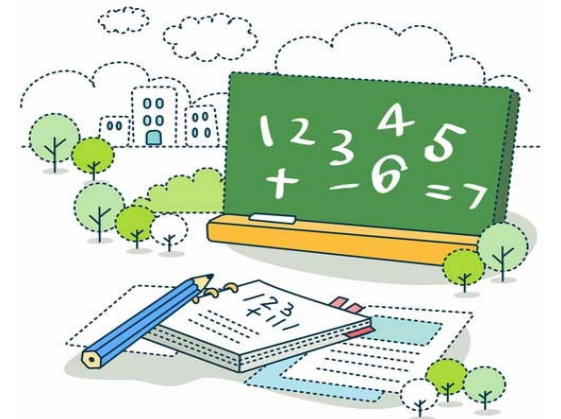
- Identify waters not meeting Water Quality Standards
 - 303(d) list of impaired waters
- Develop a TMDL for each water on the list



WHAT IS A TMDL?

The calculation of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards (WQS) and allocations of specific amounts to each of the pollutant's sources. Includes margin of safety and consideration of seasonal variation and critical conditions.

The TMDL document provides
the math and the path
for waterbody restoration



TMDL CALCULATION

$$\text{TMDL} = \sum \text{WLA}_i + \sum \text{LA}_i + \text{MOS}$$

$\sum \text{WLA}_i$: Sum of waste load allocations (point sources)

$\sum \text{LA}_i$: Sum of load allocations (nonpoint sources)

MOS: Margin of Safety

Completed for each waterbody/pollutant combination

WASTE LOAD ALLOCATIONS FOR POINT SOURCES

Point Sources



Ditch/Conveyance



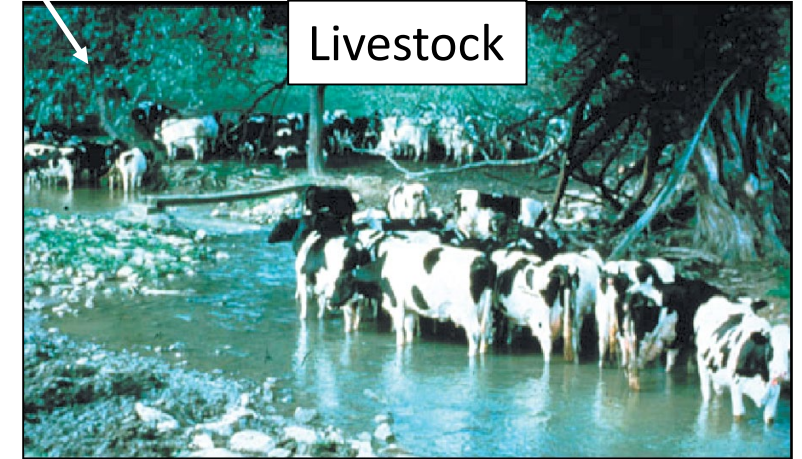
Concentrated Animal Feeding Operation (CAFO)

Note: EPA regulations require that a TMDL include WLAs, which identify the portion of the loading capacity allocated to individual existing and future point source(s) (40 C.F.R. §130.2(h) and (i)). In some cases, WLAs may cover more than one discharger, e.g., if the source is contained within a general permit.



Pipe

LOAD ALLOCATIONS FOR NONPOINT SOURCES



Nonpoint sources are diffuse sources that do not require NPDES permits.



MARGIN OF SAFETY

The margin of safety:

- Takes into account **lack of knowledge** concerning the relationship between effluent limitations and water quality (CWA §303(d)(1)(C), 40 CFR. 130.7(c)(1)).
- Can be **explicit** (e.g., 10%) or **implicit** (conservative assumptions in modeling, etc.)

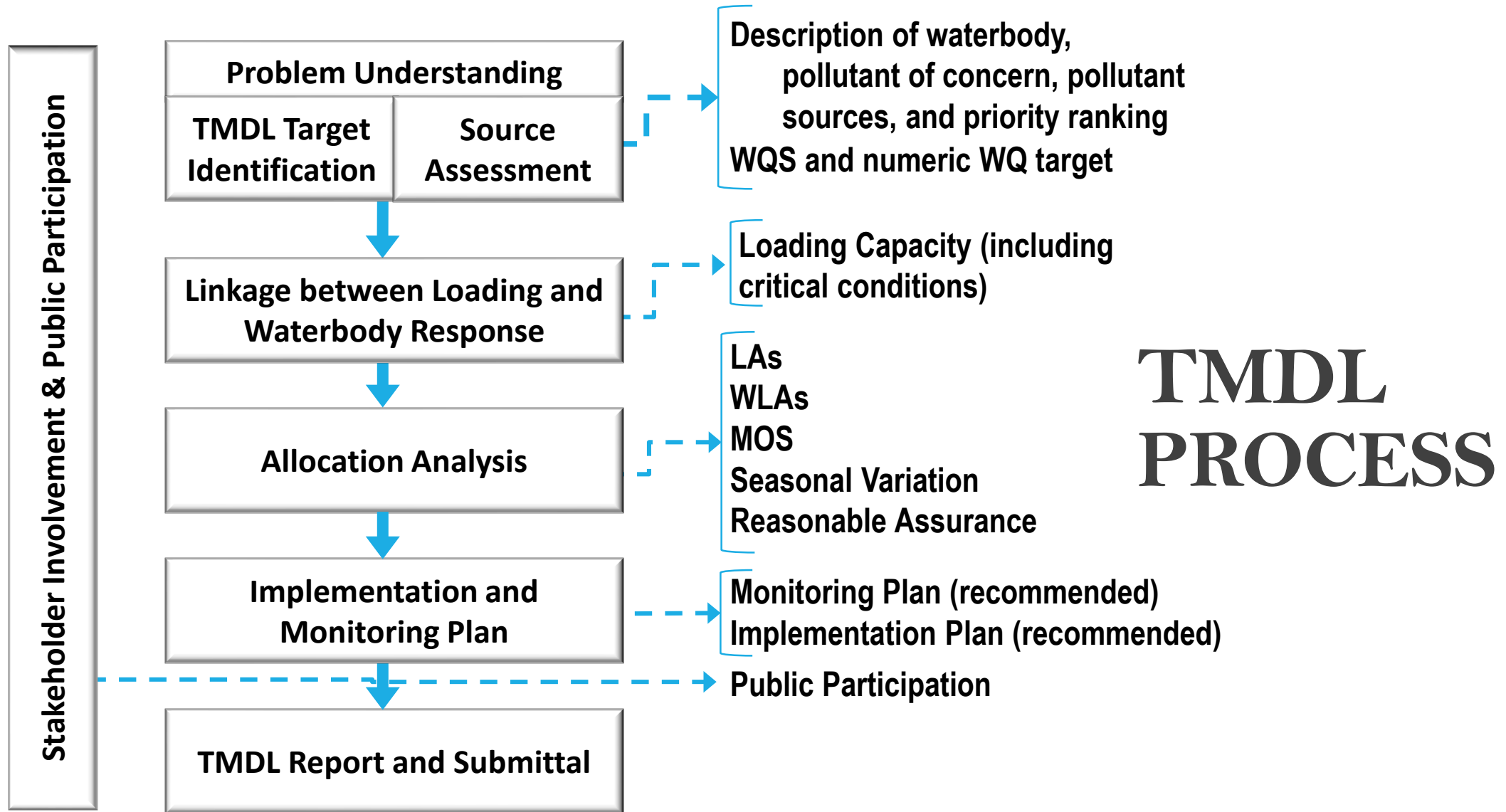
TMDLS ARE DEVELOPED WITH READILY AVAILABLE DATA AND...

- can be revised if new or missed sources need allocations;
- can be revised if new data or information shows that underlying TMDL assumptions are no longer valid; or
- can be revised if water quality standards have changed.

BENEFITS OF TMDL DEVELOPMENT

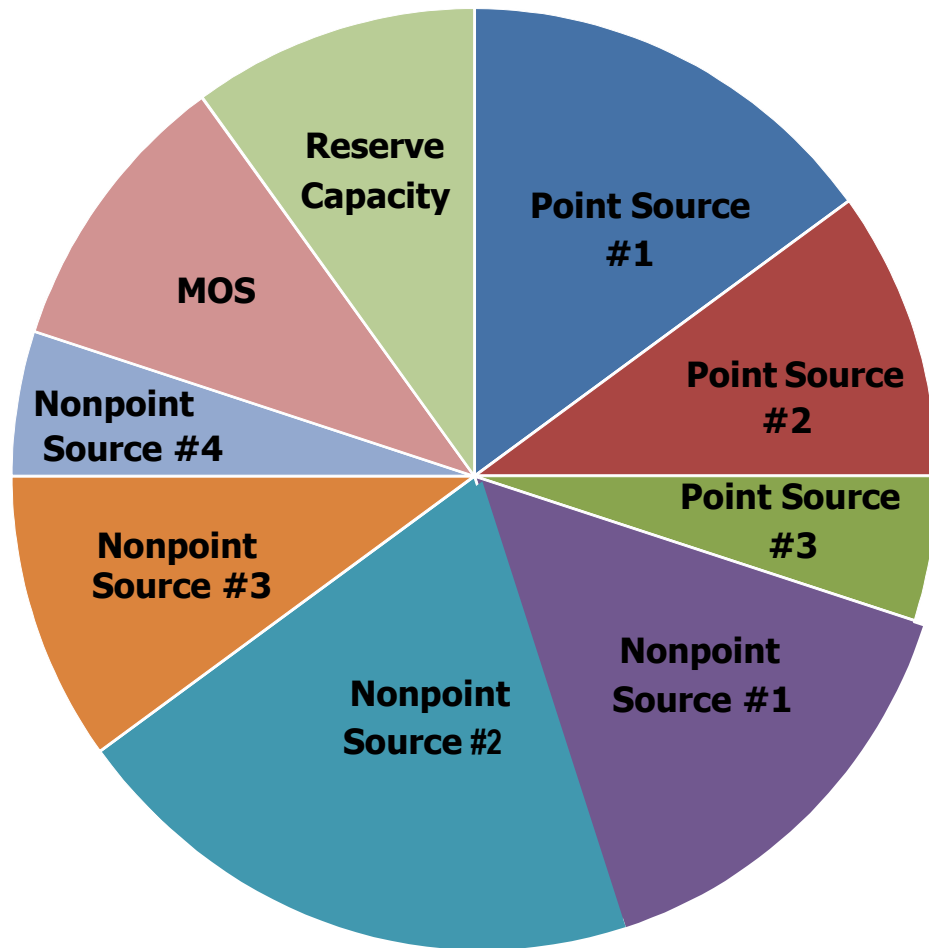
- Serves as a planning tool and potential starting point for restoration or protection activities or a comprehensive restoration plan.
- Integrates water quality information and pollutant sources.
- Presents opportunities for stakeholder involvement and innovative problem solving.
- Some funding sources include TMDLs or a similar analysis or plan as one of the criteria.

Elements in a TMDL Submittal



From *Guidelines for Reviewing TMDLs under Existing Regulations issued in 1992* (May 20, 2002)
[see Student Manual for website]

TOTAL MAXIMUM DAILY LOADS IN SECTIONS



The entire pie represents the water's **total Loading Capacity (LC)**.

Wasteload allocations (WLAs) set loading caps for point sources/permitted discharges.

Load allocations (LAs) set loading caps for nonpoint sources.

Reserve capacity sets aside allocation for future development/growth.

Margin of Safety (MOS) allocation accounts for uncertainty.

TMDL PROCESS OVERVIEW

- State develops **draft TMDL** which includes an assessment of the water.
- EPA informally discusses the TMDL with nearby tribes to decide whether to pursue **formal tribal consultation**.
- State provides a **public notice** with an opportunity to provide comments.
- State makes **revisions** to the draft TMDL, as appropriate, and develops a **response to comments** document.
- State submits **final TMDL** document to EPA for approval.
- After **EPA approval**, then the **TMDL is implemented** through (NPDES) permits for point sources and usually through voluntary actions for nonpoint sources.

WHAT HAPPENS AFTER THE TMDL IS COMPLETED?

TMDLs are not self implementing under CWA 303(d)

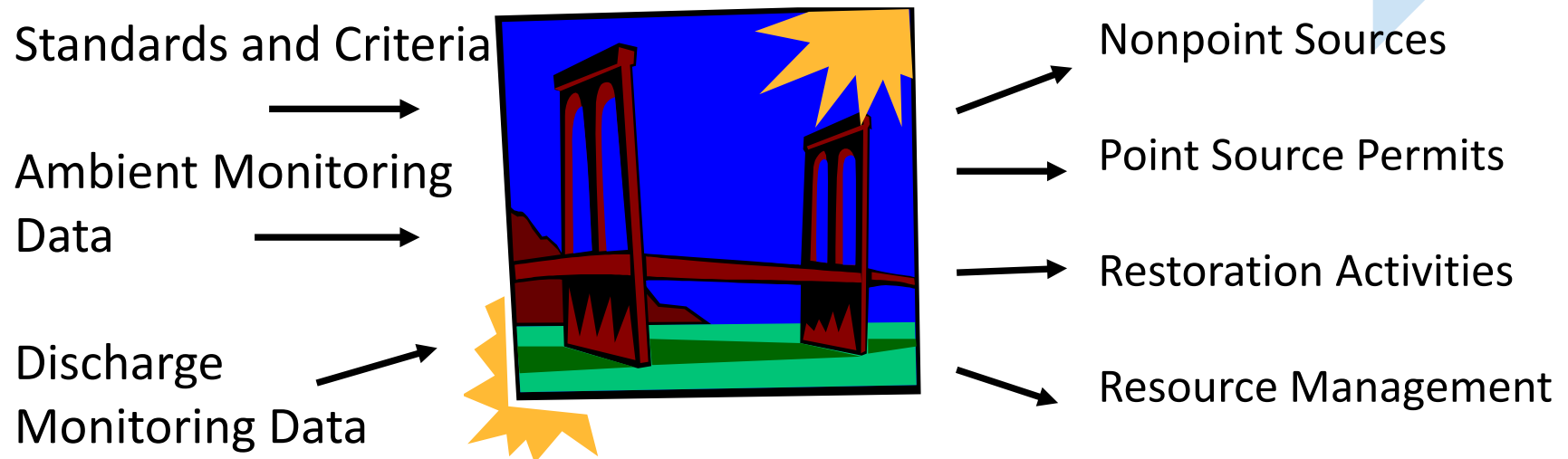
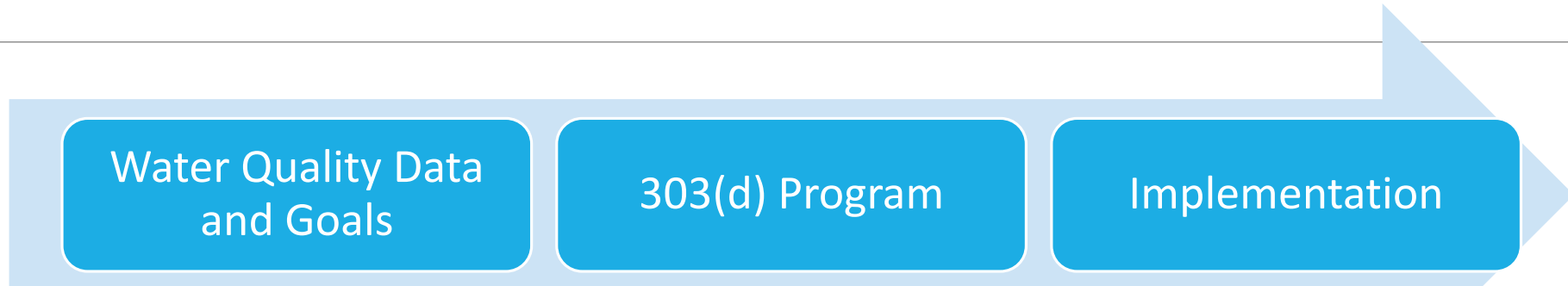
- Implemented through Point Sources and Non-Point Sources:
 - Point Sources –
 - Permit limits consistent with WLA are enforceable under CWA through National Pollutant Discharge System (NPDES)
 - Issued by EPA or states with delegated authority
 - Non Point Sources –
 - No federal regulatory enforcement program
 - Primarily implemented through state/tribal/local nonpoint source management programs

HOW CAN TMDLS BE IMPLEMENTED?

Permit limits (known as water quality-based limits) based on the values calculated in the TMDL (aka WLA) must be issued for point sources.

Controls and actions (often known as best management practices) may be established to achieve load reductions for nonpoint sources using voluntary or mandatory programs such as enforcement, technical assistance, financial assistance, education, training, technology transfer and installation of BMPs.

THE 303(D) PROGRAM: BRIDGING WQ GOALS AND ACTIONS NEEDED FOR RESTORATION



Questions?

Amy Feingold

Assessment, Listing and TMDL Coordinator

EPA Region 4

feingold.amy@epa.gov

404-562-9414