

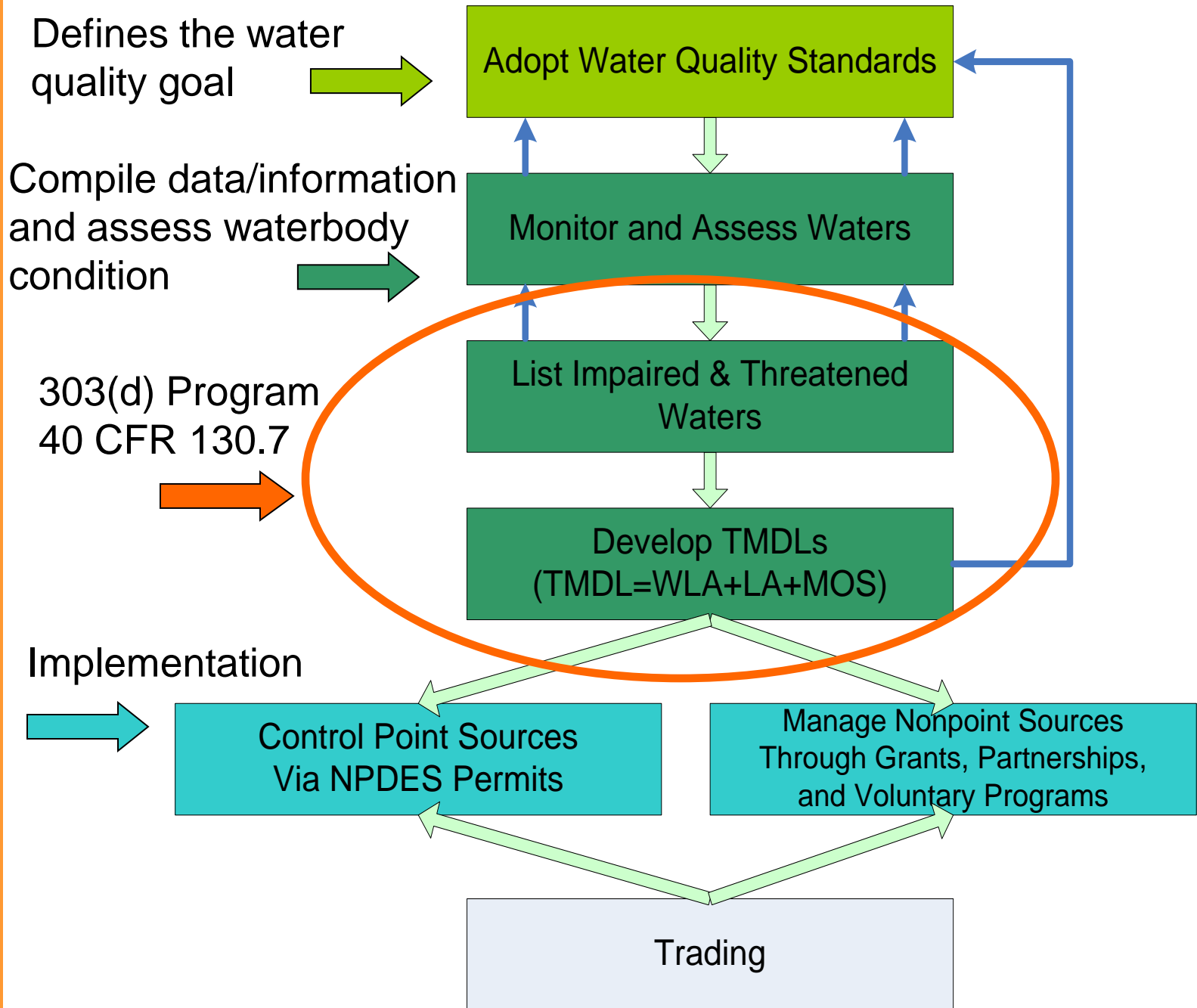


**Clean Water Act Section 303(d):  
Water Quality Assessment and Total  
Maximum Daily Loads (TMDLs)**

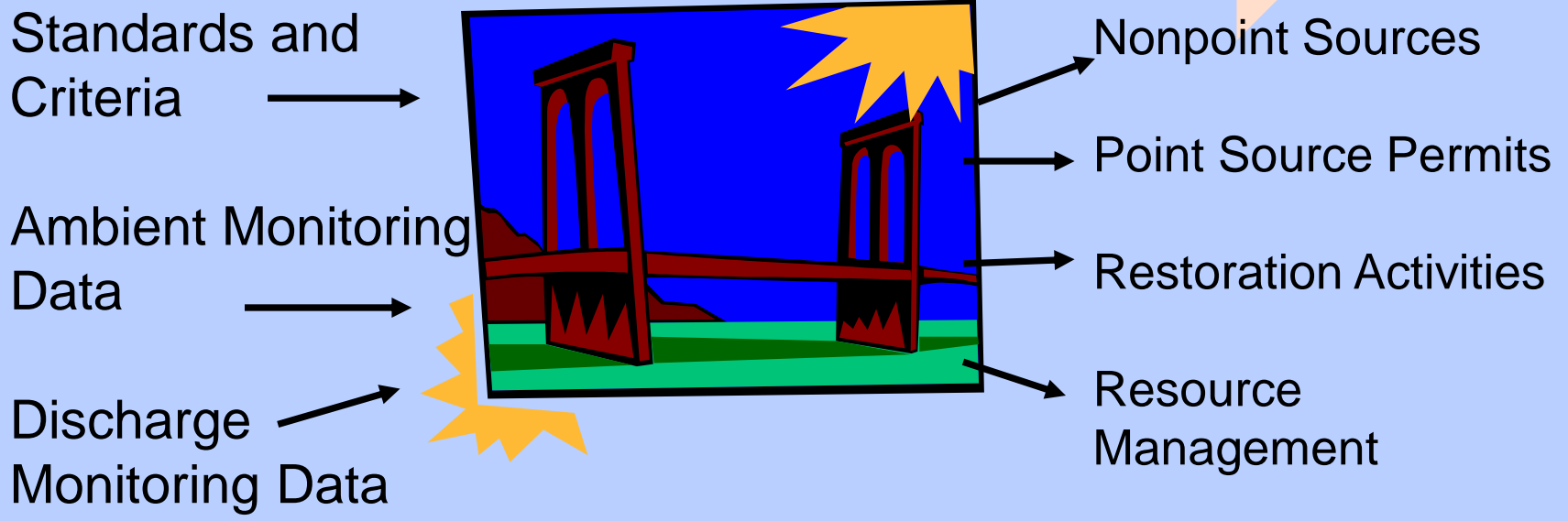
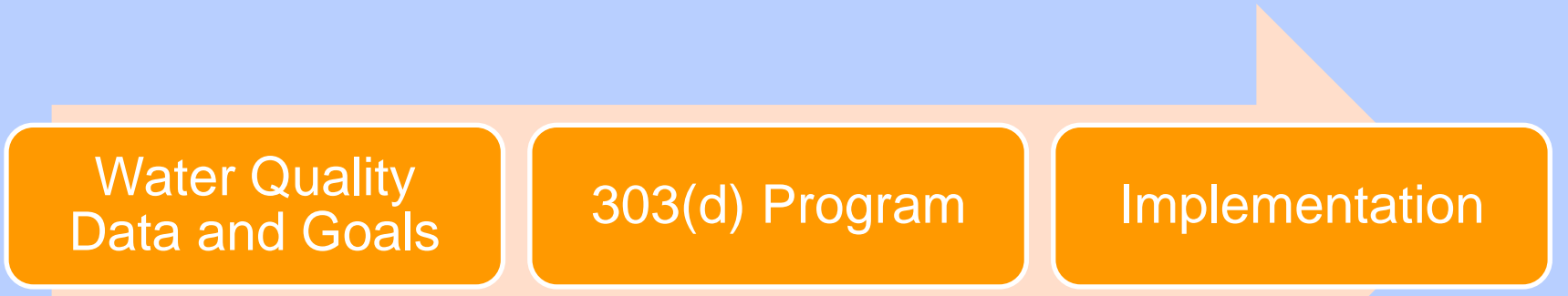
# 303(d) Listing & TMDLs

- Objectives of this presentation:
  - Present a brief overview of CWA Section 303(d)
  - Discuss process of identifying impaired waters
  - Describe State reporting & submission of 303(d) list
  - Define Total Maximum Daily Loads (TMDLs)
  - Discuss process to develop TMDLs
- 303(d) of the Clean Water Act authorizes EPA to assist states, territories and authorized tribes in listing impaired waters and developing Total Maximum Daily Loads (TMDLs) for these waterbodies.

CWA Framework



# The 303(d) Program: Bridging WQ Goals and Actions Needed for Restoration



# ***Which waters are placed on a 303(d) list?***

Each State shall identify those water quality-limited segments *still requiring TMDLs* within its boundaries for which:

- Technology-based effluent limitations
- More stringent effluent limitations
- Other pollution control requirements

*Are not stringent enough to implement any water quality standards applicable to such waters.*

# *How are waters placed on a 303(d) list?*

State Driven  
Process

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 their WQS, to determine whether waters are impaired.

Listing

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

# State Reporting Formats

**303(d) list\*** (impaired/threatened waters)

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

**+ 314 report** (health of lakes/reservoirs)

**= Integrated Report (IR)**

Since 2002, the IR is due April 1, every even-numbered year

Reporting guidance issued for each listing cycle (2002, 2004, 2006, etc.)

\*Requires EPA approval

# Five Integrated Report Categories

Category	Description
1	All designated uses (DU) met
2	Some, but not all, DU met
3	Cannot determine if DU are met
4	Impaired/threatened, TMDL not needed
4a	TMDL compelled
4b	Regulatory requirement in place
4c	Non-pollutant causes
5	Impaired/threatened, but a pollutant, TMDL needed
5alt	Impaired/threatened, but a pollutant, TMDL needed but an alternative restoration approach is in place



*Section 303(d) List*



# Impaired Waters Summary

- Approximately 89,800 listed AUs in ATTAINS
- Nearly 173,400 AU-pollutant combinations reported
  - Indication of TMDLs that will need to be completed
- Top causes of impairment
  - Pathogens (24%)
  - Sediment (13%)
  - Nutrients (7%)
  - Metals [other than Mercury] (7%)
  - Mercury (6%)
  - Organic enrichment/oxygen depletion (6%)
  - Cause unknown (impaired biota) (4%)

# *What happens to waters on the 303(d) list?*

For waters identified in the 303(d) list:

- “TMDLs shall be established for all **pollutants** preventing or expected to prevent attainment of water quality standards...”
- “TMDLs shall be established at levels necessary to attain and maintain the **applicable narrative and numerical WQS...**”



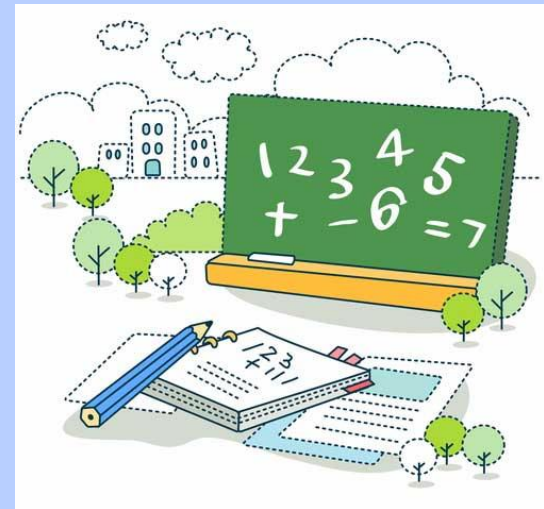
No statutory or regulatory timeframe for TMDL development.

- EPA guidance establishes 8-13 year time frame from time of initial listing.

# What is a TMDL?

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.

The TMDL 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

# WLAs for 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.*

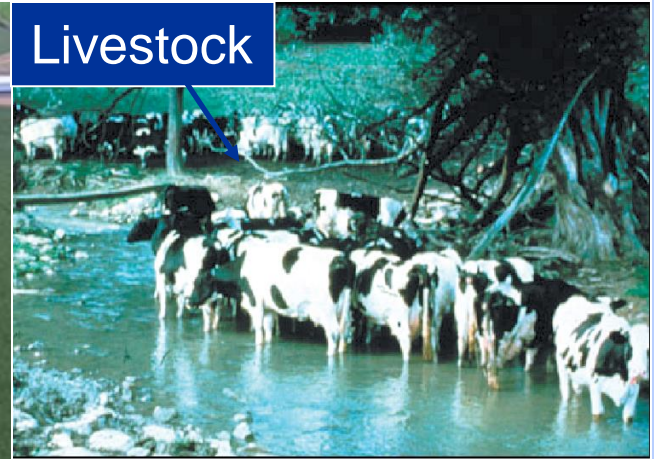


Pipe

# LAs for Nonpoint Sources



Agricultural lands



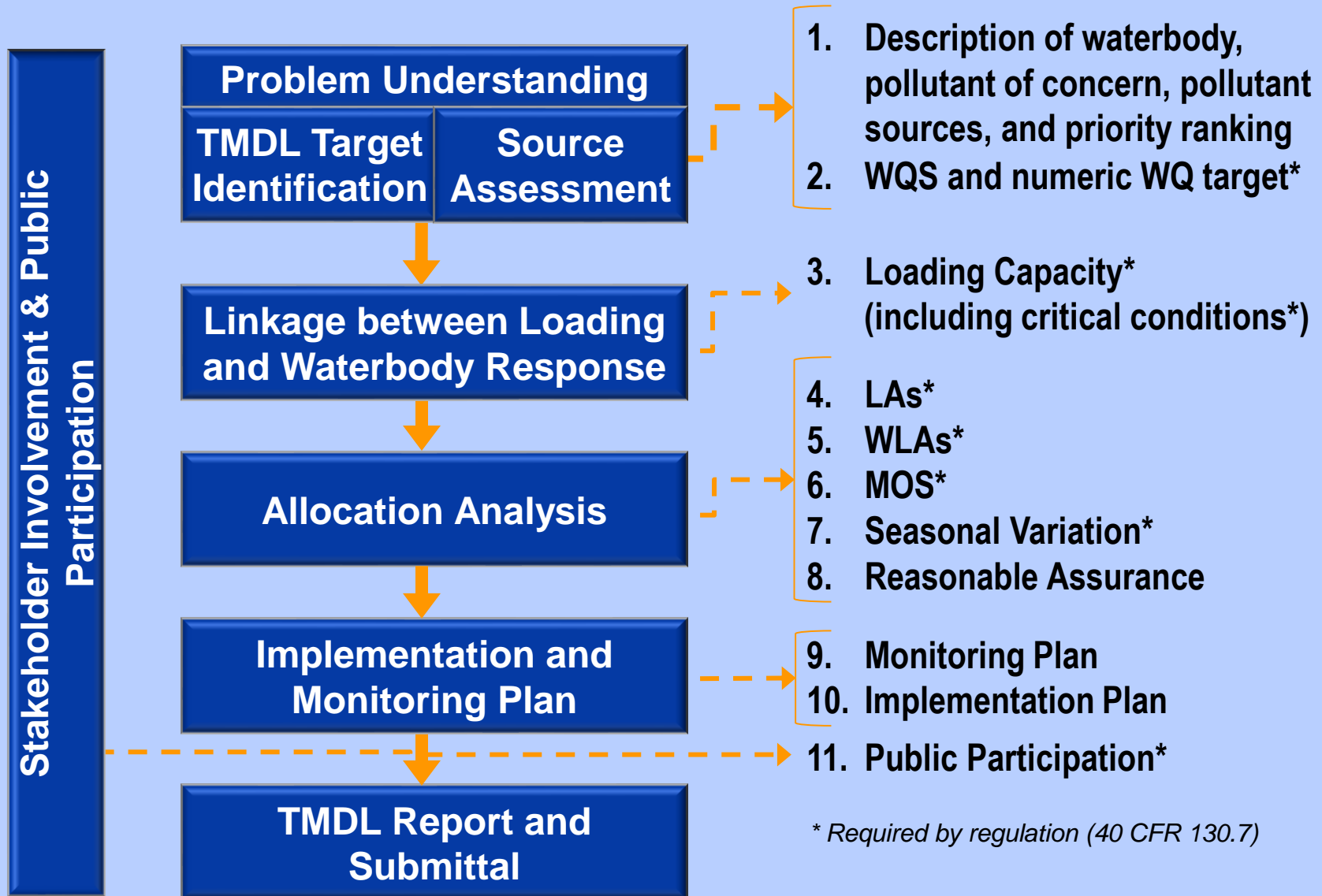
Livestock



Forest land

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

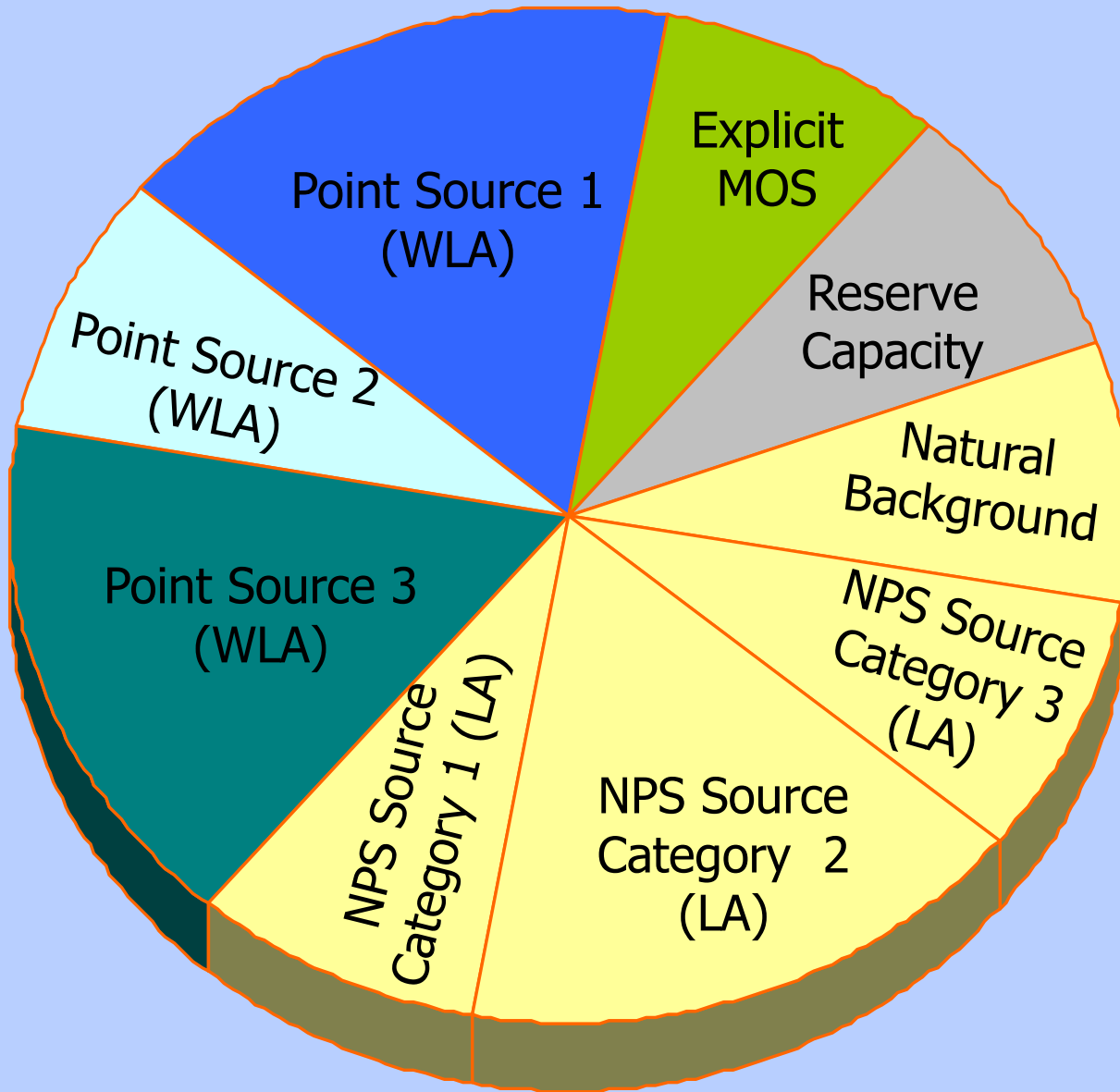
# TMDL Process



From *Guidelines for Reviewing TMDLs under Existing Regulations* issued in 1992 (May 20, 2002)

[see Student Manual for website]

# TMDL Allocation



Allocation Example



# What happens after the TMDL is completed?

- TMDLs not self implementing under 303(d)
- Point Sources:
  - Permit limits consistent with WLA are enforceable under CWA through National Pollutant Discharge Elimination System (NPDES).
  - Issued by EPA or States w/ delegated authority.
- Nonpoint Sources:
  - No federal regulatory enforcement program.
  - Primarily implemented through State/Tribal/local NPS management programs (few w/ regulatory enforcement).

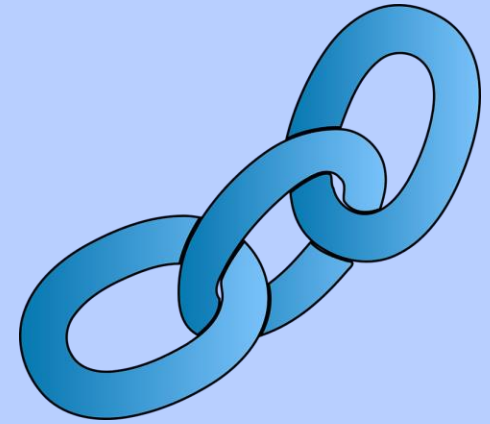
# Vision: A Framework to Manage the CWA 303(d) Listing and TMDL Program

## Key Principles:

- **Flexibility for states & tribes** to set program priorities in the context of their overall water program goals
- Focus state/tribal accountability on **priority waters** addressed with TMDLs, **alternative restoration approaches** and protection plans, reflecting a state's or tribe's strategic choices
- Emphasis on **environmental results** through TMDLs, alternative restoration approaches and protection plans
  - Recognition that there are various effective approaches to restore waters
- **Integration** across CWA and other federal/state/tribal programs to achieve results
- **Engagement of public** on priorities and implementation

## 303(d) Program Links to Other CWA Programs

- NPDES – discharge permitting
  - TMDLs and RP
- 319 – Nonpoint Source Program
  - TMDLs and funding
- Grant programs



**Questions?**