



The Clean Water Act Puzzle

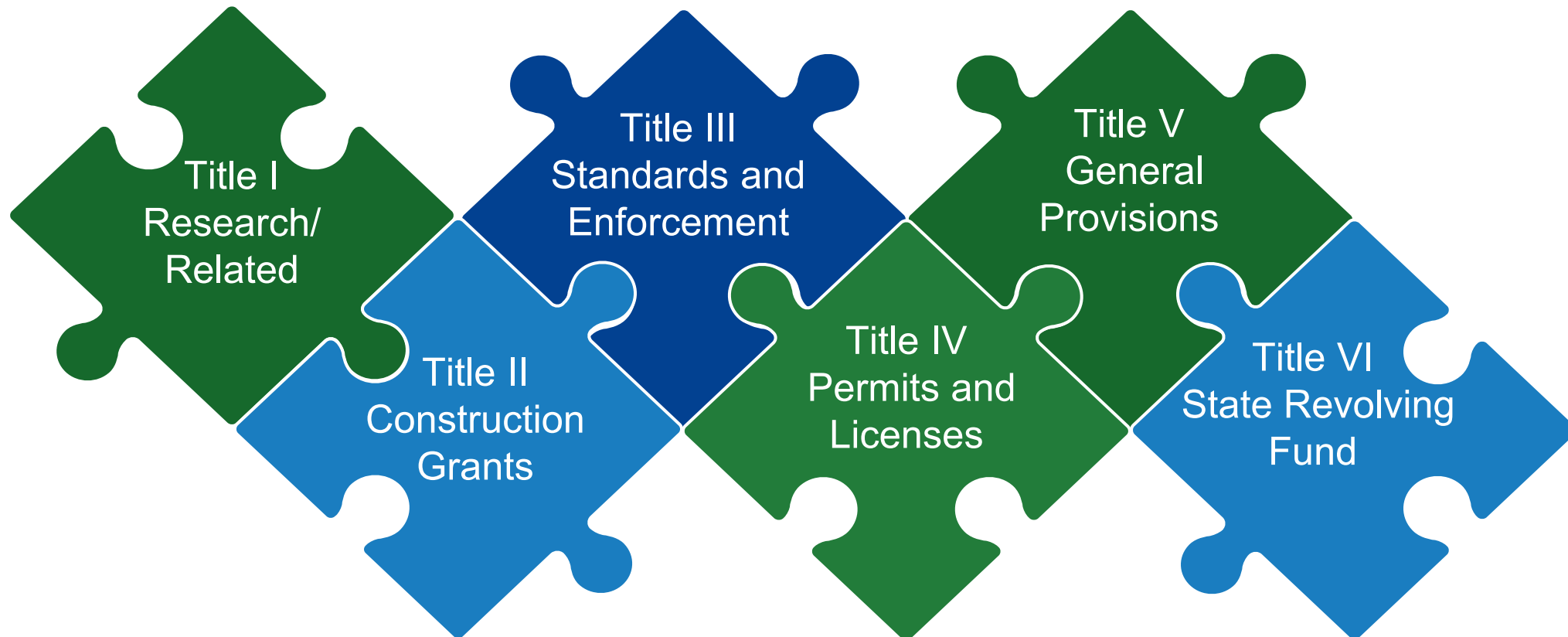
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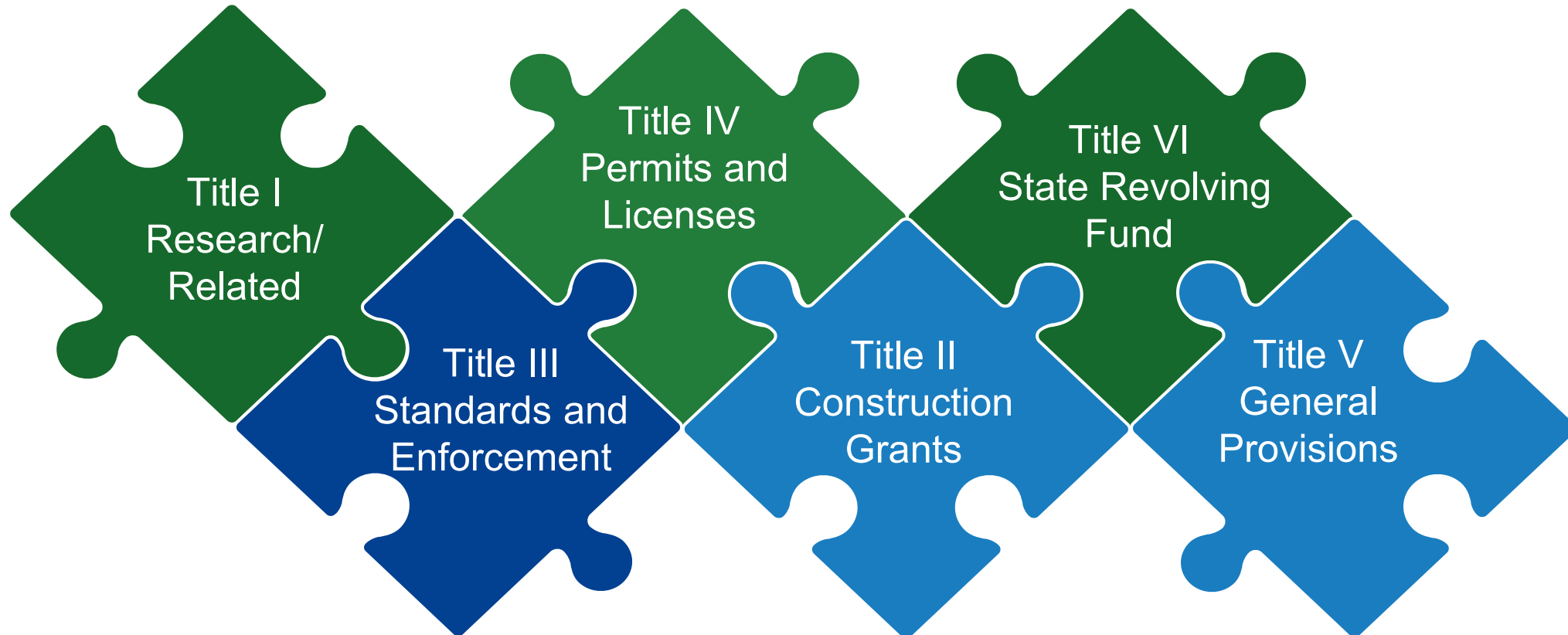
Presentation Summary

The Clean Water Act – The Law



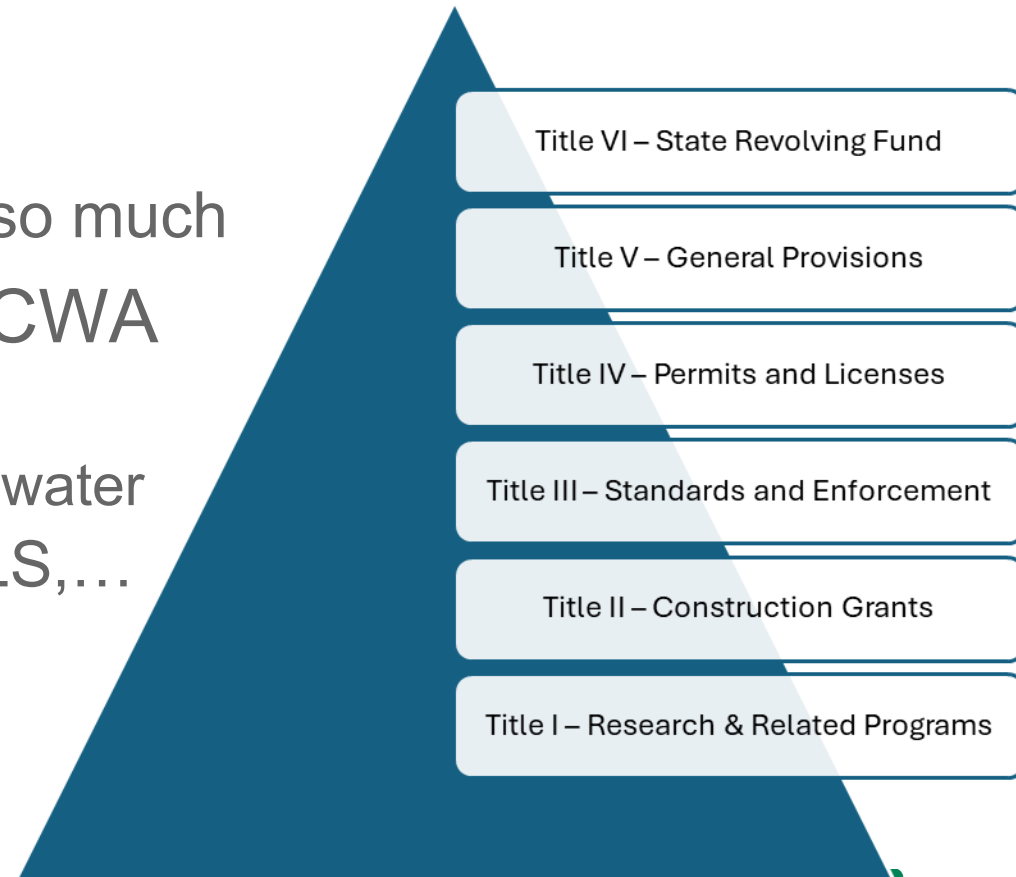
Presentation Summary

The Clean Water Act – The Law



Clean Water Act

- IMO, the CWA was far thinking
 - It has withstood the test of time
 - However, the implementing regulations... not so much
- Regardless, we are going to focus on the CWA
 - **My goal**
 - Show how each part of the act supports clean water
 - Some familiar with NPDES, or WQS, or TMDLS, ...
 - However, each fits together rather elegantly
 - We will cover all the *Titles/Chapters*
 - We won't cover each *section* in each title
 - However, we will cover key sections



First - A Little History –The Statutes

- 1948 Federal Water Pollution Control Act (FWPCA)
 - Federal tech assistance/funds to States wanting to protect water quality
- 1965 Water Quality Act
 - Charged states with setting WQS for interstate navigable waters
- **1972 FWPCA Amendments - a/k/a Clean Water Act (CWA)**
 - NPDES Permit Program was created
 - Permits control discharge of pollutants to protect water quality and human health
 - Permits translate general requirement of CWA and federal regulations
 - Permits issued by EPA or authorized states
 - Construction Grants Program was created

NOTE: Law vetoed by President Nixon; veto overridden

– House voted 247-23 and the Senate voted 52-12, so popular and bipartisan

First - A Little History – The Statutes

- 1977 Clean Water Act (CWA)
 - Control of toxic pollutants
- 1987 Water Quality Act (WQA)
 - Stricter regulation of toxic chemicals from industry
 - Moved from Construction Grants to Clean Water State Revolving Fund
- 2014 Water Resources Reform Development Act (WRRDA)
 - Water Infrastructure Finance and Innovation Act (WIFIA)
 - Alternative loan program

Statutes and Regulations

- Statutes (laws) are broad and passed by Congress
- Regulations add detail to implementing statutes and created by agencies
 - EPA, in the case of the CWA was granted authority to develop regulations
- Regulations enacting the CWA
 - Found in Title 40 of the Code of Federal Regulations (CFR)
 - 40 CFR Part 100 – 140 – Clean Water Program
 - 40 CFR Part 220 – 238 – Ocean Dumping
 - 40 CFR Part 400 – 471 – Effluent Guidelines and Standards
 - 40 CFR Part 502 – 503 – Sewage Sludge

The Clean Water Act – Super Simplified

- States the Goal – restore and maintain clean surface water
- Define how clean is clean – water quality standards (WQS)
- Create a program requiring permits to discharge pollutants
 - National Pollutant Discharge Elimination System (NPDES)
- Create a program to help pay for municipal wastewater trt. (POTWs)
 - Construction grants initially
 - State Revolving Funds later
- Lay out general provisions for implementing the CWA
 - Primarily – public participation is paramount

Title I – Research & Related Programs

- Includes
 - Declaration of Goals and Policy
 - Various grant authorizations
 - Research programs
 - Pollution control programs
- Key Sections
 - 101 – Declaration of Goals and Policies
 - a. *The objective of this Act is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters*
 - 1) National goal that the discharge of pollutants to **navigable waters*** eliminated by 1985

*Note: CWA does not apply to groundwater

Title I – Research & Relate Programs

- Key Sections

- 101 – Declaration of Goals and Policies

- a. The objective of this Act is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters
 - 2) National goal wherever attainable, water quality which provides for
 - The protection and propagation of fish, shellfish, and wildlife and
 - Provides for recreation in and on the water be achieved by July 1, 1983
 - 3) National policy that the discharge of toxic pollutants in toxic amounts be prohibited
 - 4) National policy Federal financial assistance be provided to construct POTWs
 - 5) National policy for areawide treatment management planning processes
 - 6) National policy for major research to develop treatment technology
 - 7) National policy for programs that control nonpoint sources of pollution

Title I – Research & Relate Programs

- Key Sections – contd.
 - 101 – Declaration of Goals and Policies
 - b. Recognize, preserve, and protect responsibilities and rights of States to address pollution
 - c. Insure foreign countries shall take action to prevent, reduce, and eliminate pollution
 - In their waters
 - International waters
 - d. States and EPA develop regulations for public participation in development of CWA regs
 - e. Administrator of EPA administers the CWA
 - f. Minimize paperwork and best use available manpower
 - g. States have sole authority to allocate water quantity

Title I – Research & Related Programs

- Key Sections – contd.
 - Section 104 – National programs to prevent, reduce, and eliminate pollution
 - Funded operator training/education – 104(g)
 - Funded technical support for POTWs
 - Funded education/training for state regulatory agencies
 - Funded water quality monitoring networks
 - Funded university research
 - Section 106 – Grants for Pollution Control Programs
 - Grants to states to carry out water pollution control programs

Title I – Research & Relate Programs

- Key Sections – contd.
 - 109 - Training grants and contracts
 - Grants to institutions of higher education to assist them in
 - Carrying out programs to prepare undergraduate students to enter an occupation which
 - Involves the design/O&M of treatment works to improve water quality
 - Training faculty
 - Training students
 - Full or part time
 - Provide short courses

Title III – Standards and Enforcement

- Key Sections

- Section 301 - Effluent Limitations

- Prohibits the discharge of pollutants from point sources into navigable waters unless
 - In compliance with EPA permits (NPDES)
 - Utilizing technology-based standards
 - Secondary Treatment – POTWS, by 1974
 - Water quality-based limits - 1977, forward
 - Best Practicable Control Technology Currently Available (BPT) – Industry by 1977
 - Best Available Technology Economically Achievable (BAT) – Improve on BPT 1977, forward

- Section 303 - Water Quality Standards (WQS)

- Requires **States**
 - To set water quality standards for surface waters – including heat
 - Develop Total Maximum Daily Load (TMDL) for impaired waters
 - Ensure water quality maintained

Title III – Standards and Enforcement

- Key Sections
 - Section 307 - Toxic and Pretreatment Effluent Standards
 - Strict controls on toxic pollutants
 - Pretreatment standards for industries discharging into municipal sewer systems
 - Section 308 - Inspections, Monitoring, and Entry
 - Authorizes EPA to require dischargers
 - Monitor, report, and keep records of their discharges - assess compliance with NPDES permits
 - Allows EPA to enter and inspect permitted facilities
 - Requires records and reports (excluding trade secrets) to be available to the public

Title III – Standards and Enforcement

- Key Sections
 - Section 311 – Oil and Hazardous Substance Liability
 - Control, prevent, and respond to discharge of oil and haz. substances into navigable waters
 - Prohibits discharge of oil and hazardous substances
 - National Contingency Plan – framework for dealing with spills/releases of oil and haz. substances
 - EPA has authority for inland waters
 - The Coast Guard has the authority for coastal and marine waters
 - Section 319 - Nonpoint Source Management Programs (NPS)
 - *Encourages* states to develop programs for nonpoint source pollution – e.g., ag runoff
 - NPS is essentially unregulated vs point sources (wastewater treatment plants)

Title IV – Permits and Licenses

- Title IV of the Clean Water Act establishes the permitting procedures for:
 - Discharging pollutants – National Pollutant Discharge Elimination System
 - NPDES – what many think of in terms of the CWA
 - Dredged/fill materials into U.S. waters
- Key Sections
 - Section 401 Water Quality Certification
 - Requires **State** certification for federal permits to ensure projects meet **State** WQS
 - Remember Title III gave states responsibility for setting WQS in their states' waters
 - EPA must get certification from state that EPA-issued permits meet the State WQS

Title IV – Permits and Licenses

- Key Sections

- Section 402 National Pollutant Discharge Elimination System (NPDES)
 - *The Big Kahuna*
 - Authorizes the EPA to issue permits for municipal and industrial discharges
 - Requires public notification and public input on any proposed permit
 - Public participation is foundational to the CWA
 - Allows states to seek approval to directly issue NPDES permits in lieu of EPA
 - Even if approval is granted, EPA can still object to state-proposed permits
 - Plus, approval can be withdrawn where a state does not follow its approval requirements
 - 47 of 50 states are authorized – EPA issues NPDES permits in the other 3 and DC
 - Only 1 territory – US Virgin Islands is authorized – EPA issues NPDES permits in other 4
 - No Tribes have been authorized, so EPA issues NPDES permits on all Tribal Land
 - Regardless of who is authorized, public notification and public input required

Title IV – Permits and Licenses

- Key Sections

- Section 404 Dredge and Fill Permits

- Requires permits from the Corps of Engineers for discharge of dredged/fill material into
 - Navigable waters
 - Wetlands
 - States can apply for approval to issue permits – only 2 states are approved

- Section 405 Disposal of Sewage Sludge

- Requires regulations for the disposal and use of sewage sludge (biosolids)
 - 40 CFR §503
 - Permit requirements for POTW sludge disposal must be incorporated in NPDES permits
 - Requires additional state authorization – only 9 states have been approved
 - The requirements *self-implement* in other states and territories
 - Self-implementation means permittees must comply with federal rules even if no permit

Title II – Construction Grants Program

- Key Sections
 - Section 201 – Purpose
 - Assist municipalities in building/expanding sewage treatment plants
 - The *Construction Grants* program
 - Promote areawide planning
 - Promote recycle and reuse of wastewater
 - Promote sludge disposal in a manner not harming the environment
 - Section 202 – Federal Share
 - 1972 - Provided federal funds for up to 75% of costs/POTW provide 25%
 - 1981 - Congress reduced the federal share to 55%

Title II – Construction Grants Program

- Key Sections
 - Section 204 – Limitations and Conditions
 - Locals were to set up replacement funds
 - Only construction costs, not Operation and Maintenance (O&M)
 - Section 208 – Areawide Waste Treatment Management
 - Encourages the creation of regional management plans to address
 - Wastewater
 - Stormwater
 - Agricultural/urban runoff
 - Instead of each city managing wastewater, look at on a regional basis
 - Some successes, but could have been better

Title VI – State Revolving Loan Fund

- Title VI of the Clean Water Act
 - Added in 1987
 - Replaced Construction Grants with
 - The State Water Pollution Control Revolving Funds (Clean Water SRF)
 - Shifted fed funding from direct grants to capitalization grants for state-run loan programs
 - Idea is to provide a sustainable, revolving source of low-interest loans for wastewater treatment
 - Still in place today
 - \$172 billion to finance 48,000 loans since inception

Title V – General Provisions

- Title V of the Clean Water Act contains "General Provisions"
 - Authorize the EPA to implement the law
 - Define key terms
 - Establish enforcement mechanisms
 - Citizen suits
 - Administrative penalties
 - Criminal penalties
 - Legal framework for
 - Adopting regulations
 - Conducting investigations
 - Ensuring compliance with the goals of the Act

Title V – General Provisions

- Key Sections
 - Section 501 – Administration
 - Authorizes EPA Administrator to adopt regulations necessary to carry out the Act
 - Section 502 - Definitions
 - For example:
 - “Pollutant”
 - “Discharge” and “Discharge of Pollutants”
 - “Navigable Waters” (waters of the United States - WOTUS)
 - “Treatment Works”.
 - “Point source”

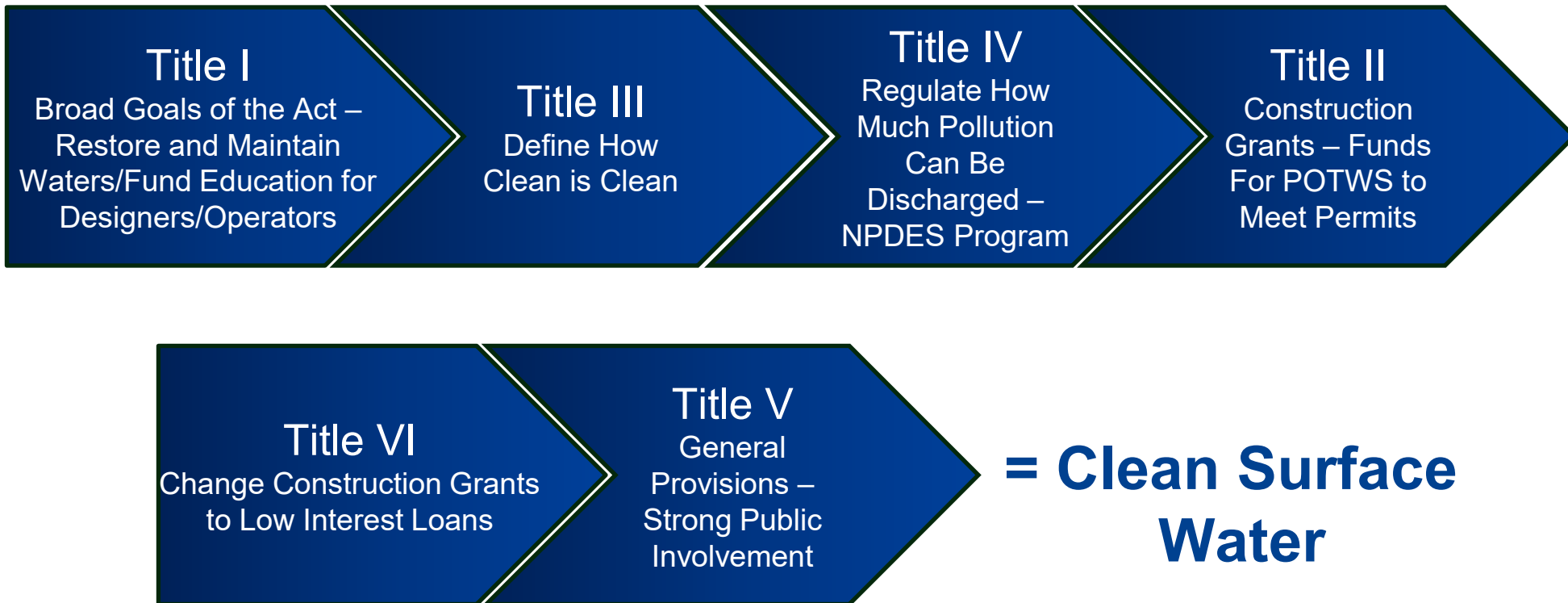
Title V – General Provisions

- Key Sections
 - Section 504 - Emergency Powers
 - Authorizes EPA to bring suit immediately to stop discharges that
 - Present an "imminent and substantial endangerment" to human health or welfare
 - Section 505 - Citizen Suits
 - Allows private citizens to take *civil* action against violators of the CWA
 - Section 507 - Employee Protection
 - Whistleblower provision
 - Protects employees from retaliation for reporting water pollution violations
 - Section 510 - State Authority
 - Preserves the right of states to set more stringent WQS than the federal government.

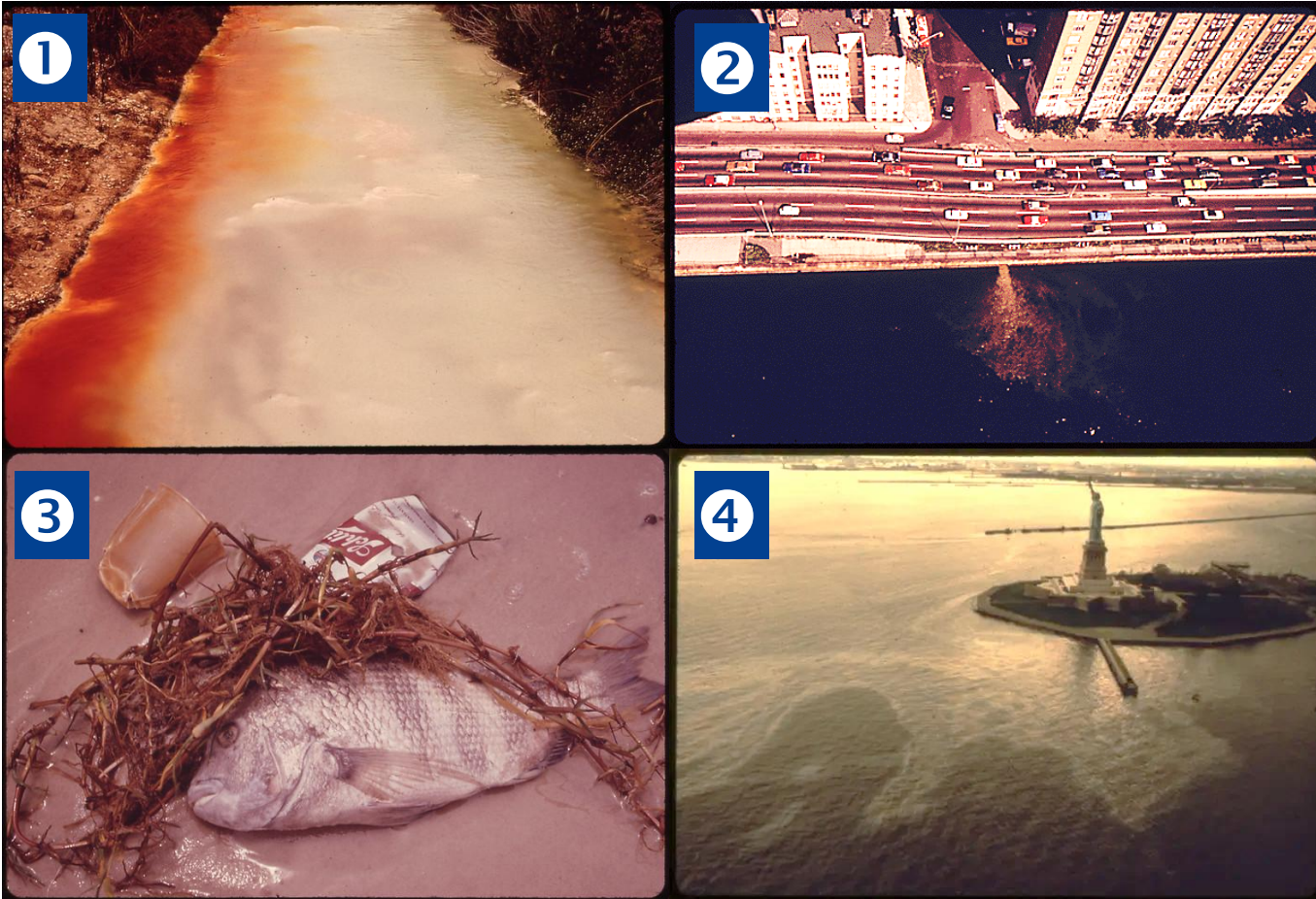
Title V – General Provisions

- Key Sections
 - Section 513 - Labor Standards
 - Requires proper wages for workers building treatment plants funded by the CWA
 - Davis-Bacon Act
 - Section 517 - Authorization of Appropriations
 - CWA funding levels authorized by Congress for the Environmental Protection Agency
 - Funds to support all the programs outlined in the Act

Summary – How it All Fits Together



Has the CWA Worked?



- IMO – Yes, **ABSOLUTELY!**
- There are still challenges
 - Primarily nonpoint source (IMO)
 - But significant progress made

All pictures from 1970s (Pre-CWA)

- 1 – Industrial Discharge Louisiana
- 2 – Raw Sewage Discharge NYC
- 3 – Dead Fish – New Orleans
- 4 – Oil Slick – NYC Liberty Island

Questions/Comments!



Thank You!

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