Water Quality Management Improvement Work

DOH and DLNR Quarterly Sharing Sessions

May 27, 2026

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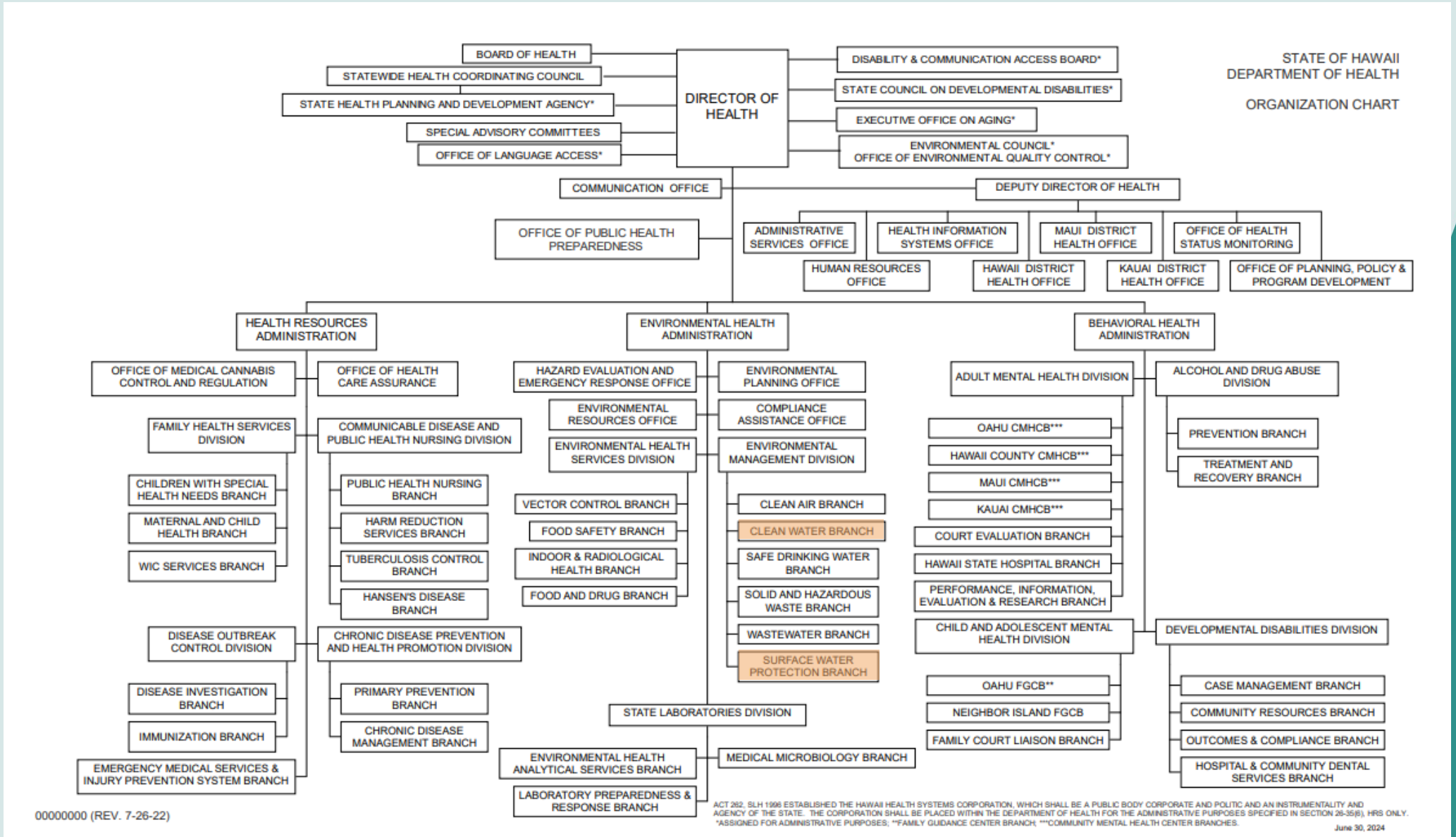
Presentation Overview

- DOH's role in water quality management
- Key regulatory water quality concepts
- Priorities for program improvement
- Need for coordination

DOH Org Chart



Regulatory Role of DOH

- Serves as Hawaii's Water Quality Standards (WQS) authority.
- Administers WQS and regulates water pollution through laws, rules, permitting compliance, enforcement, and oversight.
- Regulates responsible parties rather than performing pollution-mitigation activities directly.

PART III. WATER POLLUTION CONTROL

§342D-50 Prohibition. (a) No person, including any public body, shall discharge any water pollutant into state waters, or cause or allow any water pollutant to enter state waters except in compliance with this chapter, rules adopted pursuant to this chapter, or a permit, water quality certification, or variance issued by the director.

(b) No person, including any public body, shall knowingly establish, extend, or alter any system of drainage, sewage, or water supply, or undertake any project in sewage outfall areas where there may be a possibility of alteration of currents depended upon for dilution without first securing approval in writing from the director.

(c) No person, including any industrial user, shall discharge any water pollutant or effluent into a publicly owned treatment works or sewerage system in violation of:

(1) A pretreatment standard established by the department or the publicly owned treatment works; or

(2) A pretreatment condition in a permit issued by the department or a publicly owned treatment works.

(d) No person, including any public body, shall violate any rule adopted pursuant to this chapter or any permit, water quality certification, or variance issued or modified pursuant to this chapter. [L 1989, c 212, pt of §2; am L 1995, c 180, §14; am L 2023, c 233, §7]

Key Regulatory Water Quality Concepts

- Point vs. nonpoint source pollution
- Water quality standards
- Designated uses
- Antidegradation

Nonpoint Sources Typically Discharge **Indirectly** to Waterways:

- Agriculture
- Hydromodification
- Urban Runoff
- Roads, Highways and Bridges
- Abandoned Mine Drainage
- Atmospheric Deposition
- Marinas and Boating
- Timber Harvest
- Septic System

Point Sources Typically Discharge **Directly** to Waterways:

- Factory
- Wastewater Treatment Plant
- Stormwater Discharge

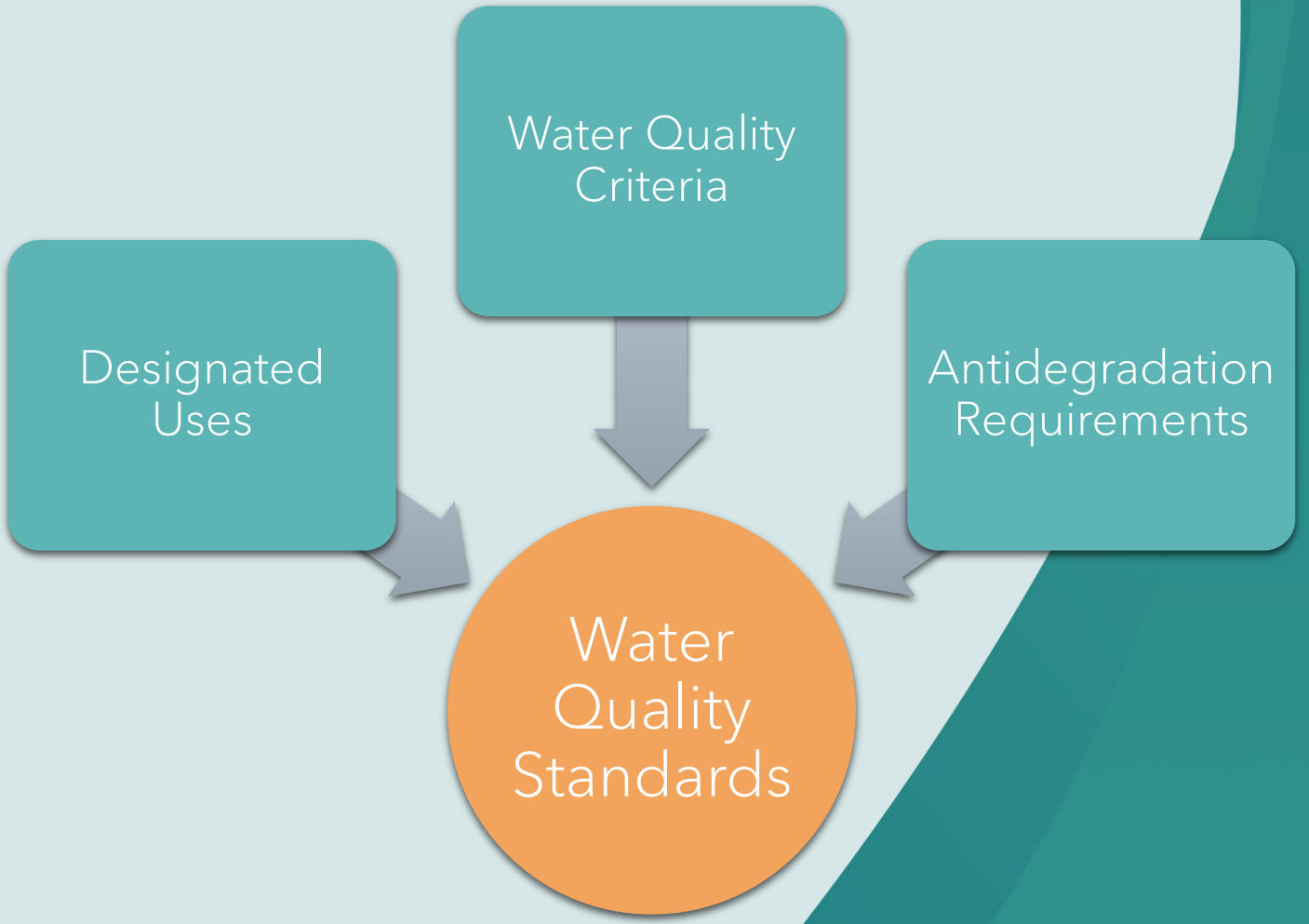
Hydrologic Cycle:

- Overland Flow
- Infiltration
- Groundwater Flow
- Transpiration
- Evaporation
- Rainfall
- Aquifer

Source: EPA (2024)

Water Quality Standards (HAR 11-54)

- Legal basis to control water pollution.
- Discharges to State surface waters must comply with WQS.
- Processing and issuance of NPDES permits and Water Quality Certifications implement WQS.



Designated Uses (HAR 11-54-3)

- The uses to be protected in the waterbody.

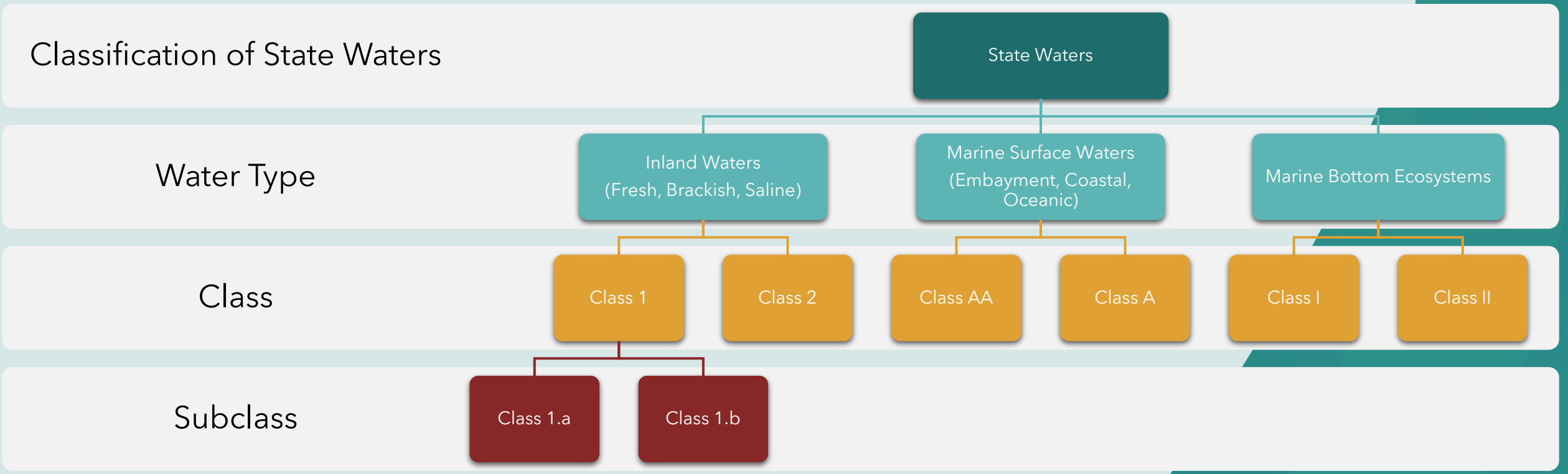
  Example: recreation, aesthetic enjoyment, fish propagation, scientific research.

- Waterbody type specific and characterized by different classifications.

  Example: Class 1, 2, A, AA

- Some designated use classifications may explicitly prohibit certain types of discharges to protect these uses.

Designated Use Classifications (HAR 11-54-2 and 11-54-3)



Water Quality Criteria (HAR 11-54-4 through 11-54-8)

Narrative Criteria

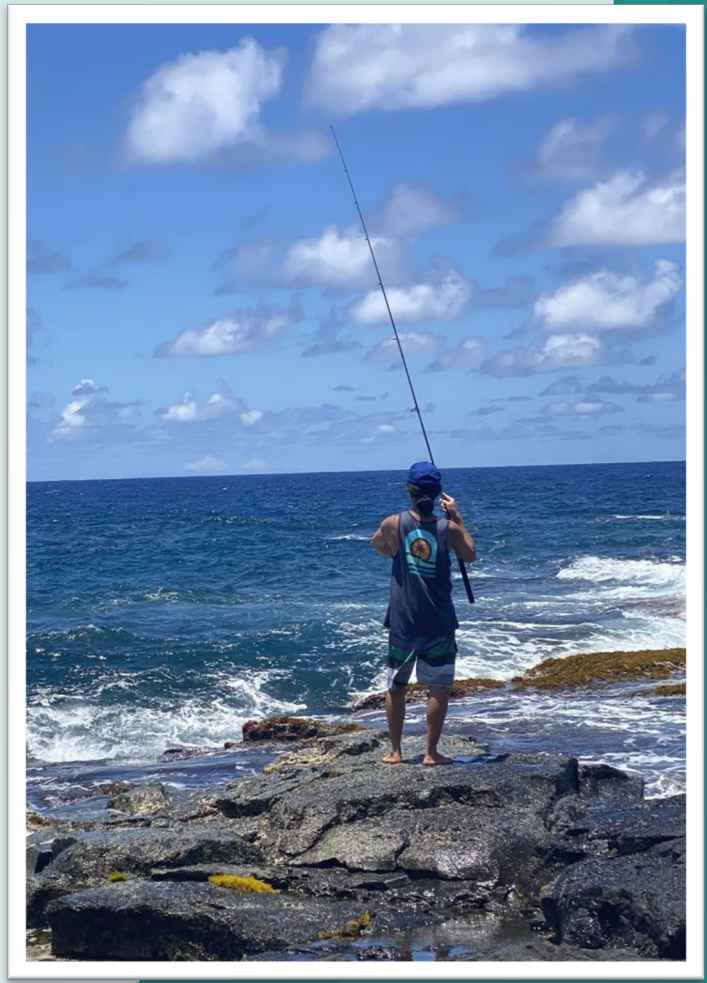
- General criteria that is not based on water chemistry/chemical analysis. Typically, these are general statements on what the desired conditions of the waterbody should be, such as not containing certain types of pollutants or undesirable conditions.
- Example: Waters shall be free of floating debris, oil, grease, scum, or other floating materials.
- Applies to all state waters.

Numeric Criteria

- Criteria based on acceptable amount of a substance detected in the water through sampling and chemical analysis. Samples should not have a concentration higher than the numeric criteria.
- Criteria may be expressed as acute criteria (short-term effects on aquatic life), chronic criteria (long-term effects on aquatic life), and fish consumption criteria (protection of human health from consumption of fish).
- Specific values are waterbody type specific.

Antidegradation Policy (HAR 11-54-1.1b)

Where the quality of waters exceed levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected **unless the director finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the State's continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located**.



Source: University of Hawaii System

Antidegradation Process to Justify Lowering of Water Quality

1. Determine Baseline Water Quality (BWQ) for Pollutants of Concern.
2. Assess the level of water quality degradation caused by the proposed activity using the BWQ data on a pollutant-by-pollutant basis.
3. Conduct Alternatives Analysis that compares the amount of water quality degradation of the proposed activity with alternative actions considering feasibility and cost-effectiveness.
4. Conduct Socioeconomic Analysis that documents the social and economic benefits and costs associated with the discharge.
5. Publish a notice to solicit public comments.
6. DOH makes final determination.

Source: University of Hawaii System

Issues with Hawaii's Water Quality Standards

- WQS were established in the 1960s and revised in the 1970s as goals.
  - Stringent numeric criteria were based on pristine coastal water quality.
  - Intention was to adjust the numeric criteria as more data became available, however, revisions to WQS criteria and designated use classification were never made.
  - WQS implementation procedures were never created for point and nonpoint source pollution. This is biggest challenge facing current DOH staff and others, including DLNR.
- In 2011, WQS administration was given to CWB and the DOH's Environmental Planning Office was later dissolved.

Water Pollution Control Timeline

- 1948 – Federal Water Pollution Control Act
- 1968 – DOH adopted its first comprehensive water quality standards (formerly Chapter 37-A, Public Health Regulations)
- 1972 – Major amendments to form the Clean Water Act; key provisions making it illegal to discharge pollutants from a point source into navigable waters without a permit
- 1973 – Hawaii State Legislature formally established the water pollution control program and codified HRS Chapter 342
- 1974 – EPA delegated administration of the National Pollution Discharge Elimination System (NPDES) Permit program in Hawaii to DOH.
- 1974 – Act 249 represents initial attempt to address nonpoint source pollution problems by instructing each of the counties to develop an ordinance requiring grading permits for erosion control in urban areas
- 1979 – Initial approval of CWA Section 208 Water Quality Management Plans (updated in 1993)
- 1987 – Amendments to Clean Water Act establishing the section 319 Nonpoint Source Management Program
- 1990 – Authority for administrative rules as we know them today (HAR 11-54 and HAR 11-55)
- 1993 – Established authority for a nonpoint source pollution control program at the state level through HRS 342E
- 2011 – Water Quality Standards (WQS), Integrated Report, and Total Maximum Daily Load (TMDL) administration reassigned to Clean Water Branch.
- 2012 – NPDES program overhauled in Hawaii to implement WQS and TMDLs.
- 2019 – DOH's first antidegradation implementation procedures for NPDES and WQCs developed.
- 2019 – Initiation of reorganization to create Surface Water Protection Branch to regulate and enforce nonpoint source.
- 2021 – Adoption of HAR 11-56, nonpoint source rules.
- 2022 – Water Quality Certification program overhauled to improve DOH process to regulate work in Waters of the United States requiring a federal permit.
- 2024 – DOH begins Water Quality Management Improvement Project to improve how DOH will manage and administer water quality statewide with clear and transparent workflow directed at addressing point and nonpoint source pollution.

Priority Initiatives

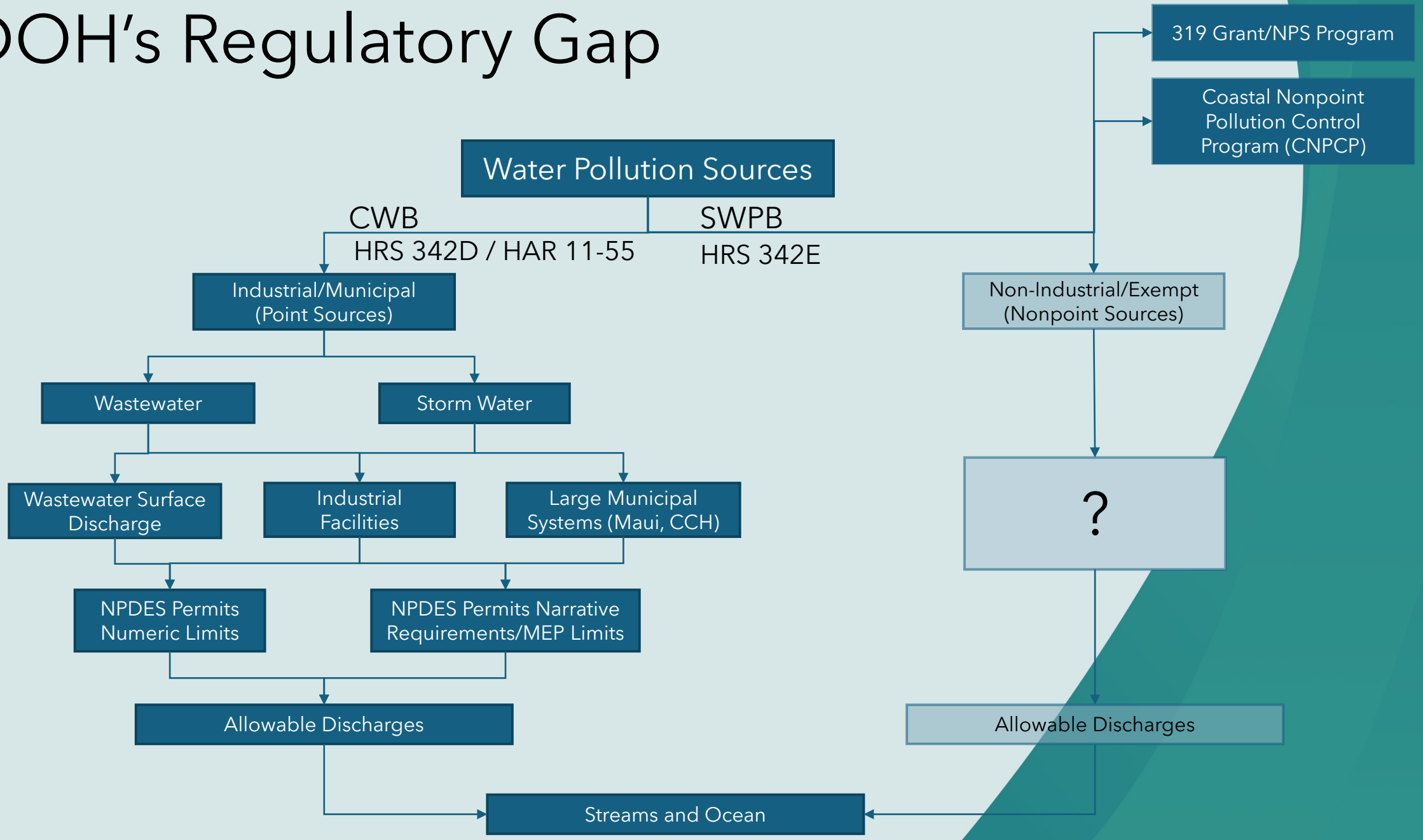
1. Establish the Surface Water Protection Branch to regulate and enforce nonpoint source pollution.
    - Point source program well established > Working to improve how we address nonpoint source pollution.
2. Improve how water quality is managed in Hawaii.
    - Overall idea is to provide clear workflow that identifies actions DOH will take in response to point and nonpoint source pollution events.
    - Includes addressing water quality problem in systematic and transparent process from beginning (problem identification) to end as defined by DOH.
    - Includes process for other departments such as DLNR involved in improving water quality.

Priority Initiative 1:
Establishment of the Surface Water Protection Branch (SWPB)

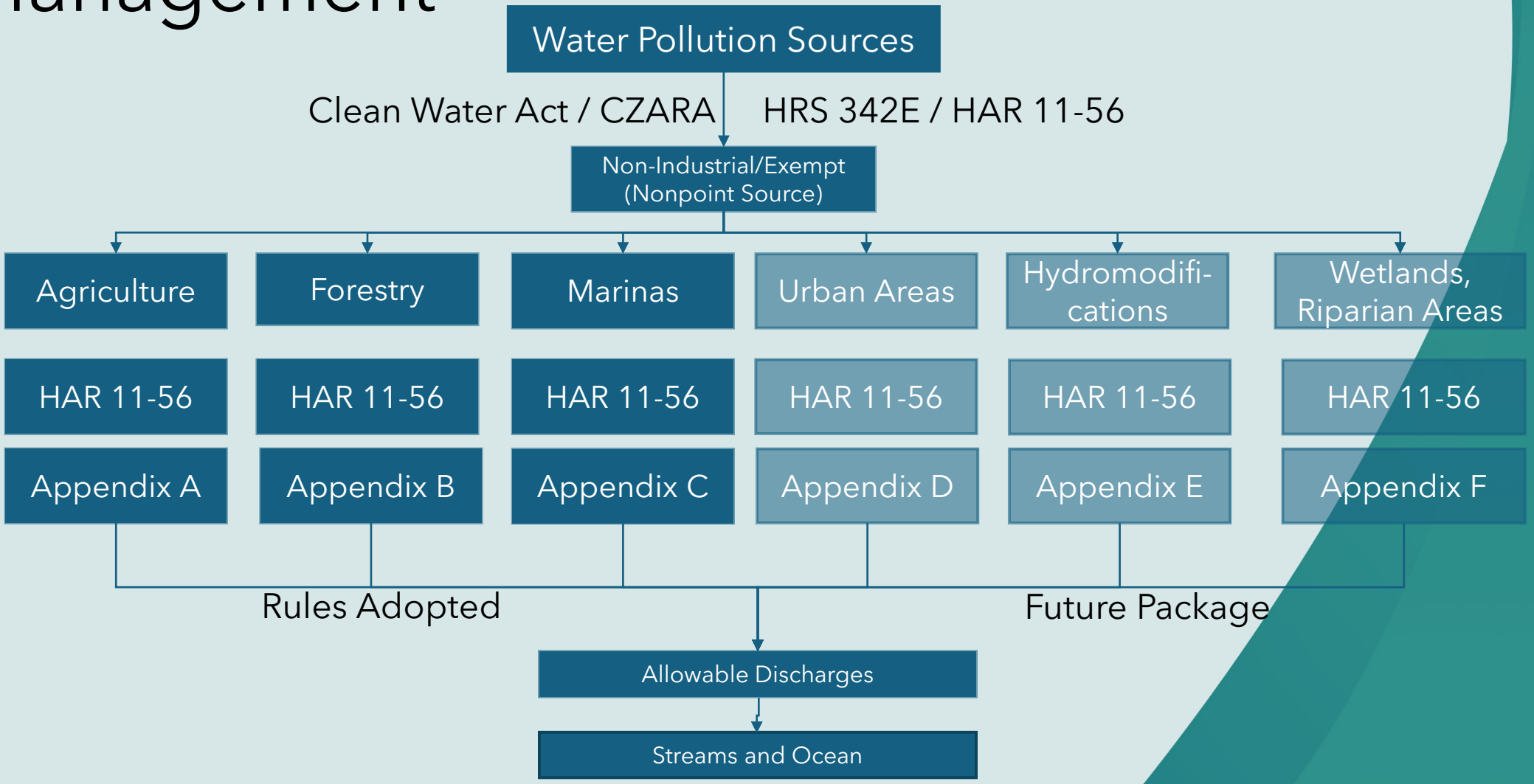
SWPB

Hawaii Revised Statutes [HRS 342E-2(a)] states that this is a nonpoint source pollution management and control program to administer, enforce, and carry out all laws, rules, and programs relating to nonpoint source pollution in the State. Also, this program shall assist in the implementation and enforcement of HRS 342D.

DOH's Regulatory Gap

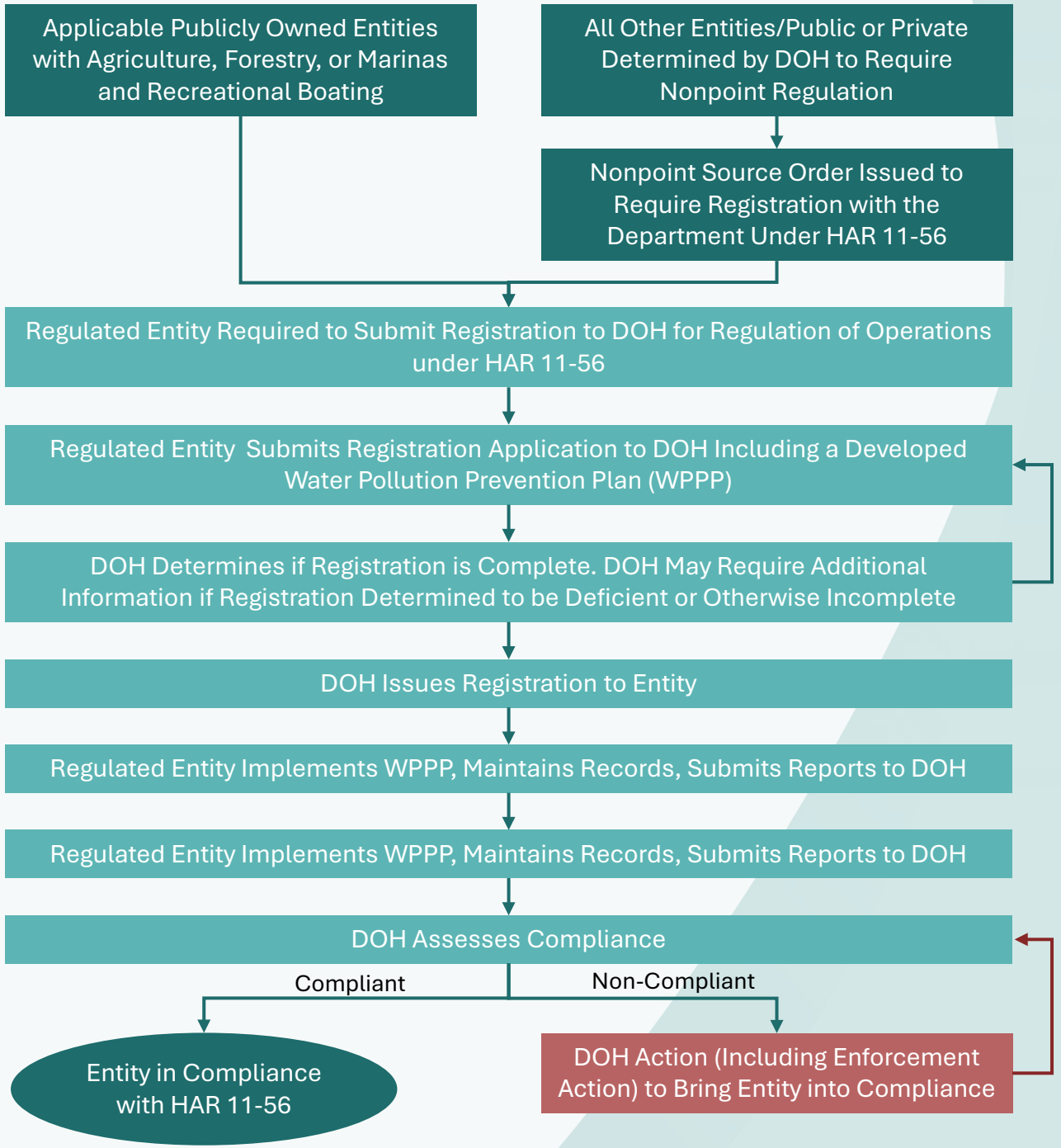


New Regulatory Construct over NPS Management



Initial Process

- Start with publicly-owned entities.
- Require registration and development of Water Pollution Prevention Plans (WPPPs).
- Oversee compliance.
- Amend rules as program develops and matures.

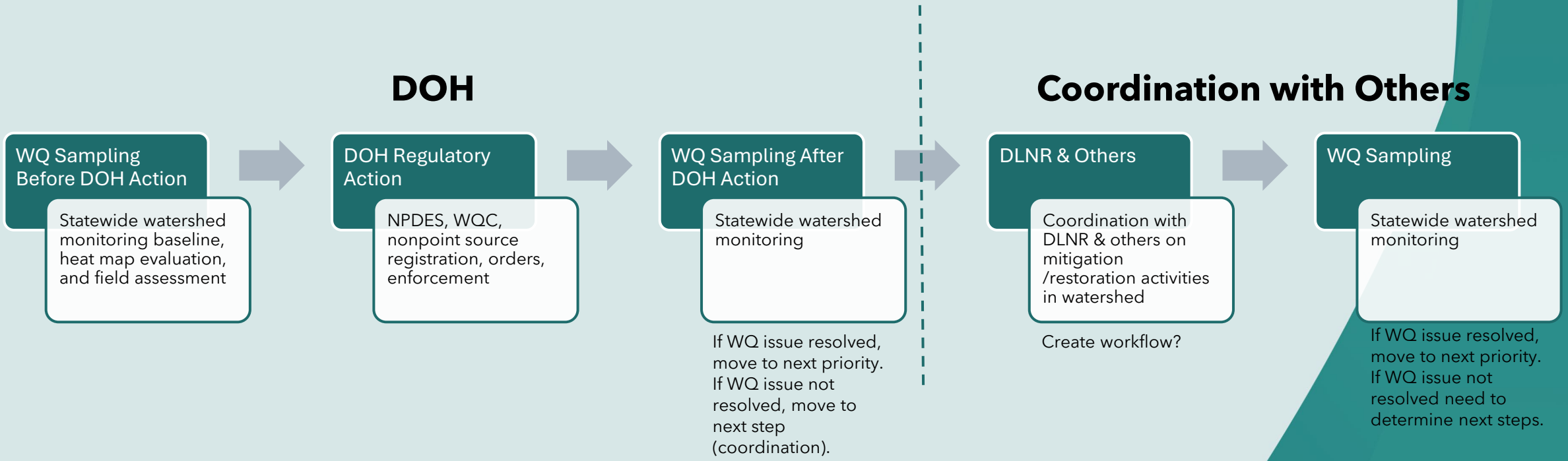


Priority Initiative 2:
Water Quality Management (WQM) Improvement Project

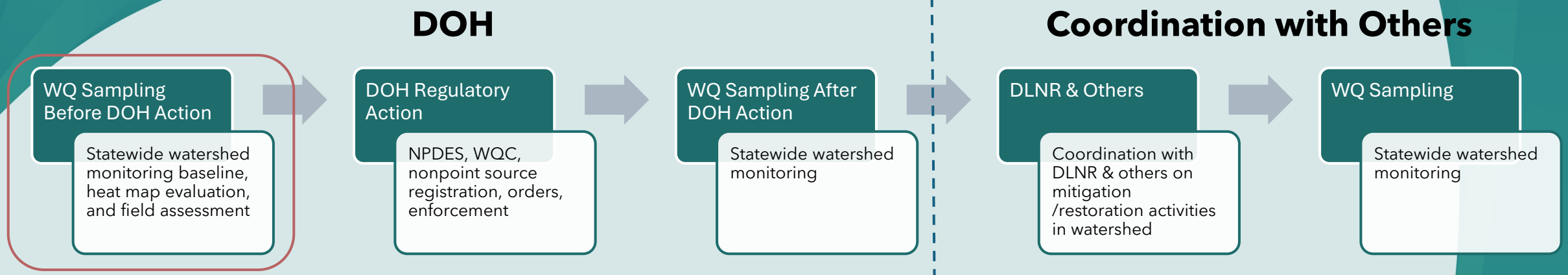
WQM Improvement Project

- The Water Quality Management improvement work with statewide water quality monitoring program is being created to:
  - Tie the water pollution control process together (point and nonpoint source);
  - Direct DOH action so water quality complaints and problems can be addressed;
  - Provide the public a structured and transparent process to address water pollution; and
  - To use water quality monitoring data to drive management decisions.

Basic Process



Note: DOH will have a website summarizing this entire process and decision making to show how the water quality issue was resolved from beginning to end.



1. Create statewide monitoring program (inland and coastal), collect samples, and analyze results (compare to WQS).
2. Identify impaired waterbodies and add to IR/303(d) list.
3. Perform desktop analysis (using heat map and other resources) and field walkthroughs to identify pollutant sources, land usage, and ownership.

DOH

Coordination with Others

WQ Sampling Before DOH Action
Statewide watershed monitoring baseline, heat map evaluation, and field assessment

DOH Regulatory Action
NPDES, WQC, nonpoint source registration, orders, enforcement

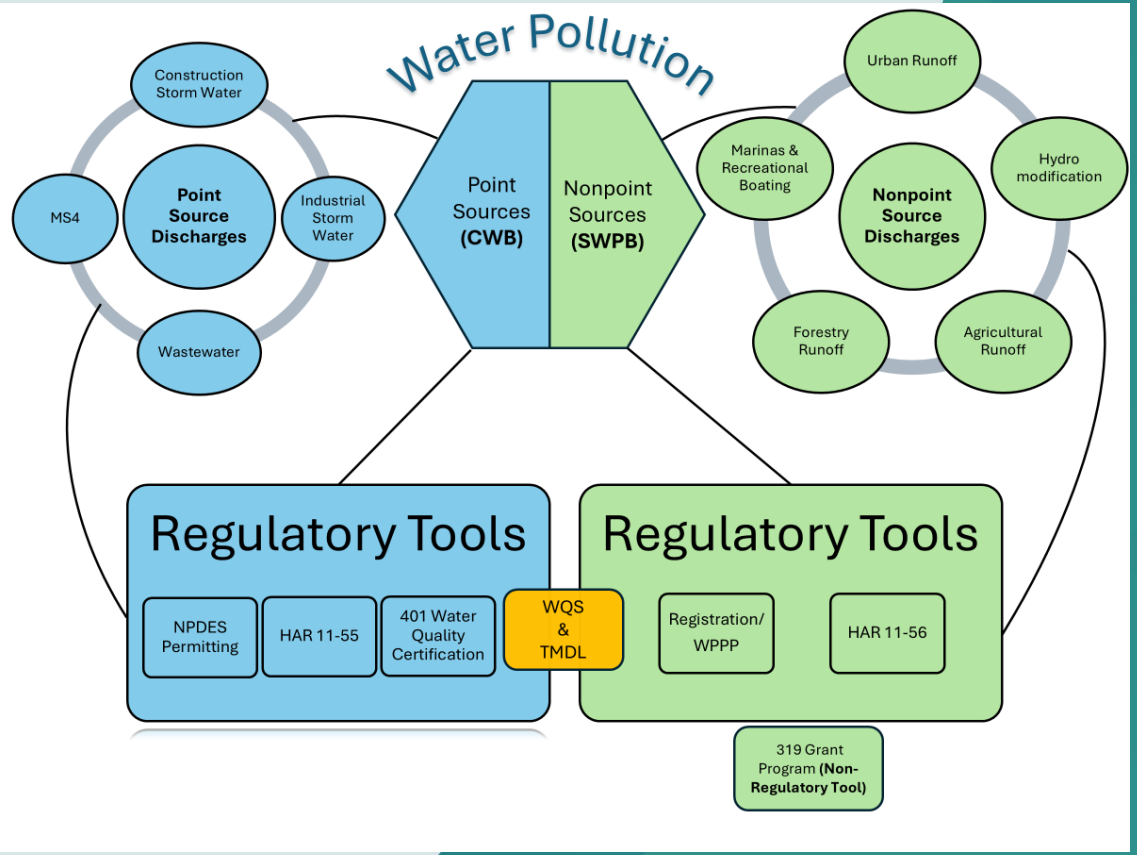
WQ Sampling After DOH Action
Statewide watershed monitoring

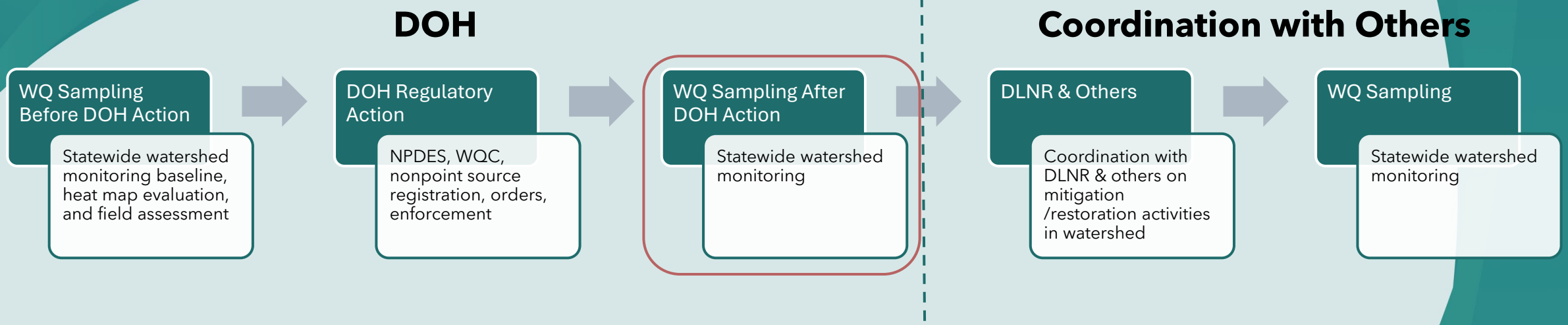
DLNR & Others
Coordination with DLNR & others on mitigation /restoration activities in watershed

WQ Sampling
Statewide watershed monitoring

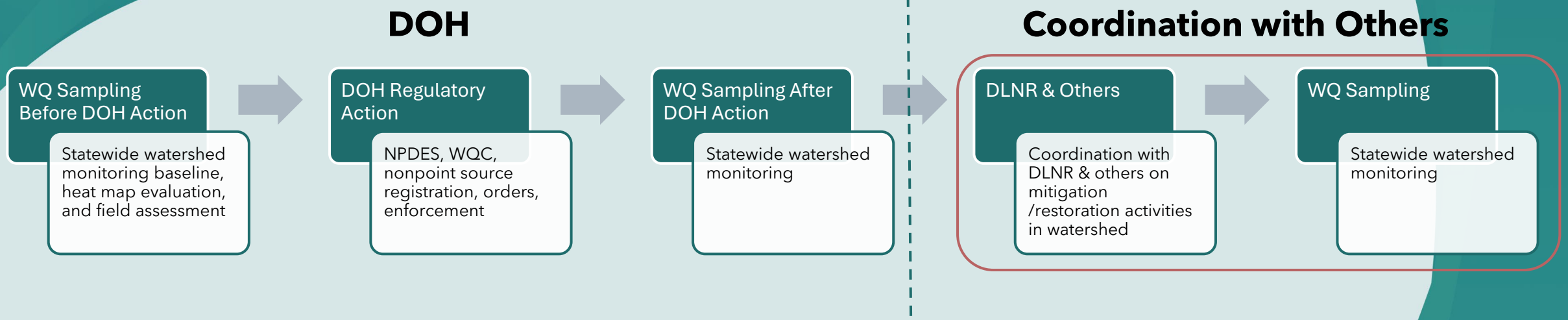
4. Implement point and nonpoint source tools (e.g., NPDES, non-point source registrations, and enforcement).

5. Assess compliance to determine whether tools identified were implemented and if not, DOH will take follow up action.





6. After compliance determination and appropriate DOH follow up action, collect samples and reanalyze to determine whether actions taken by DOH were effective at reducing pollutants of concern.



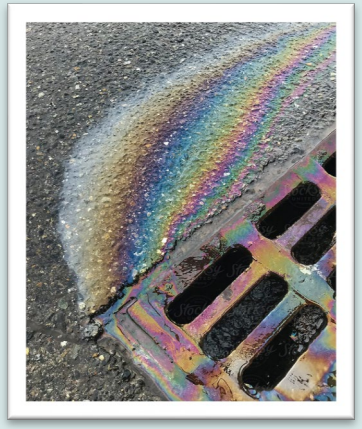
7. If criteria are not met, coordinate with others to narrow down potential causes:

   - Regulated sources that have been addressed by DOH action can be ruled out.
   - Pollutant sources determined or presumed to originate from cesspools will be documented. Cesspools are scheduled to be banned in 2050, and those sources are expected to be mitigated by this action (although follow-up monitoring should be conducted and documented).
   - Consult with other departments such as DLNR and counties to determine whether there are any planned or ongoing activities in the area and coordinate with them to reduce pollutant loads.
   - Explore 319 funding opportunities in area through interested community/watershed groups.
   - Determine and verify whether pollutant source(s) may be due to natural background conditions, and if so, document specific pollutants, provide rationale, and move on.
     - 319 funds may also be used to mitigate sources of pollution.

Water Quality Management Challenges

- Pollution comes from everything we do – from the way we use land, the policies we create, the products we consume, and the everyday choices we make.
- Who should be held responsible for that pollution? Would regulation or enforcement be fair?





A Work In Progress

- DOH is committed to moving the WQM Improvement Project forward.
- Anticipate process will be more iterative than linear.
- “How” to coordinate is still unclear.
  - Watershed-based plans and TMDL implementation plans can be valuable tools, but there are limitations.
  - Existing rules and plans cannot address every situation and every source.

Value of Coordination

We each play an important role in improving water quality, but we need work towards the same goal.

What's Next

- Waikele/Kapakahi Stream monitoring will be used as pilot project for WQM improvement project.
- Special project legislative proposal for 2027 legislative session for Year 1 baseline statewide monitoring for WQM improvement project.
- Outreach and initial registrations for HAR 11-56.