The Vision for Bioassessment in Water Quality Regulation from the State Waters Resources Control Board

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SWAMP Surface Water Ambient Monitoring Program

The SWAMP Challenge

- To change the CA regulatory paradigm:
  - From collecting effluent data that sits in file cabinets;
  - From relying primarily on a suite of chemical objectives;
- To making regulatory decisions informed by biological and ecological assessment endpoints provided by multiple entities, but shared through a common portal.

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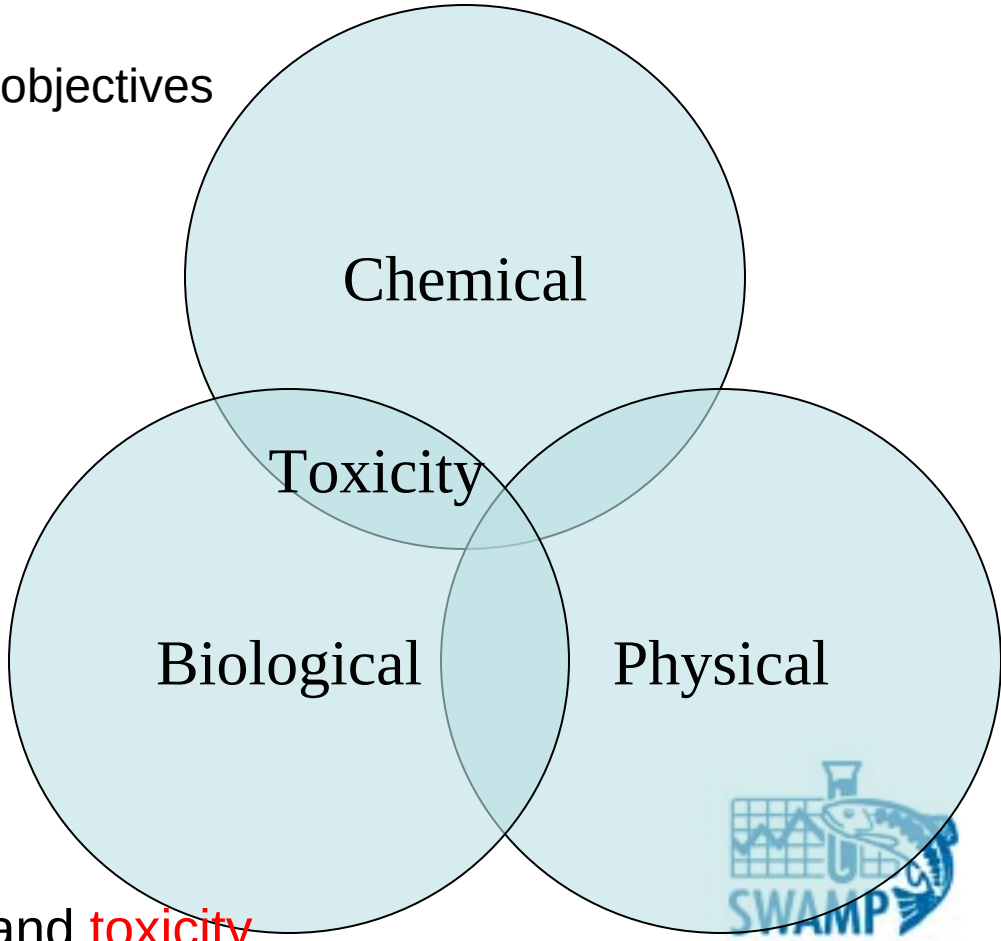
Traditional Regulatory Endpoints

- Chemical Measurement
  - Compliance with water quality objectives
  - Estimate mass loading
- Toxicity tests
  - Affect on aquatic life
  - Pollutant identification (TIEs)
- Biological
  - Affect on aquatic communities
  - Effectiveness of actions
- Physical
  - Flow (hydromodification)
  - Habitat degradation



Relatively easy to interpret chemistry and toxicity
Harder to interpret on biology and alterations to physical habitat

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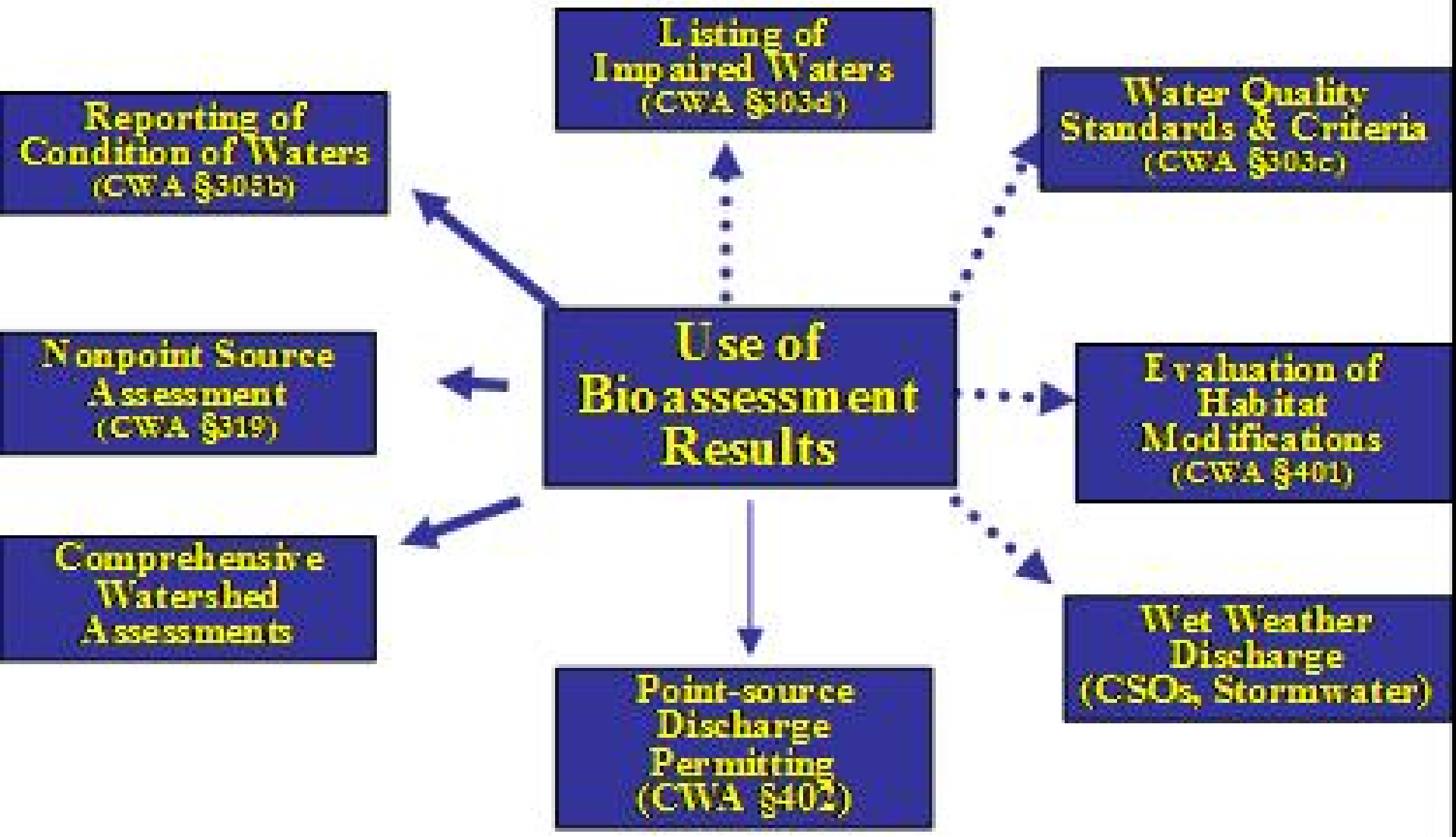
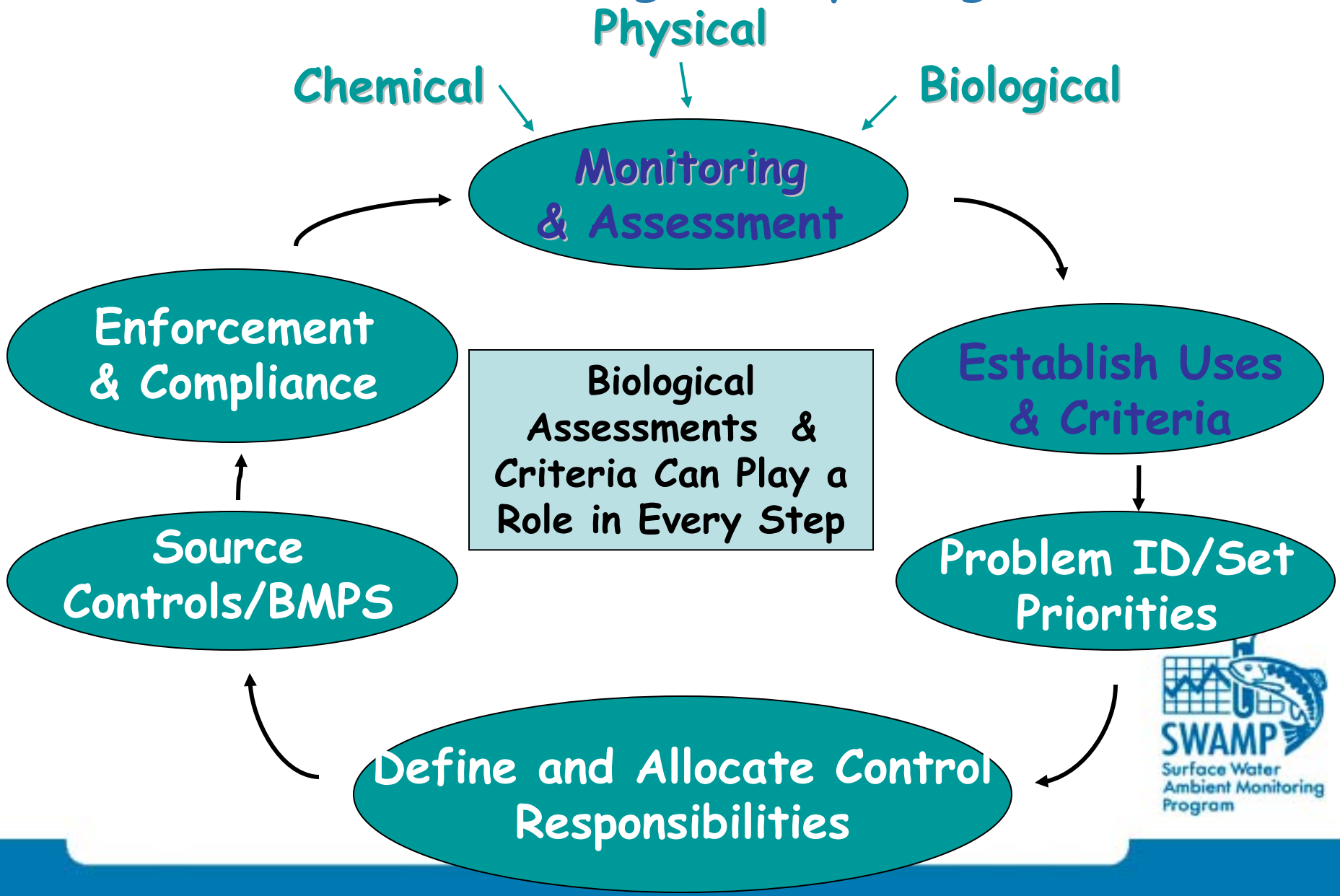
Use of Biological Information



Water Board Regulatory Programs



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Bioassessment in Water Quality Management Activities

Monitoring and Assessment

- Assess the quality of current aquatic life resources --305(b)
- Identify what resources have been lost or degraded --303(d))
- Identify what remains to be protected
  - --identify reference conditions

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Bioassessment in Water Quality Management Activities

Determine Protection Level

- Establish uses to protect or restore aquatic life
- Improve aquatic life uses by refining, tiering or subcategorizing
- Set criteria for aquatic life uses or act as restoration goals-

- Biocriteria

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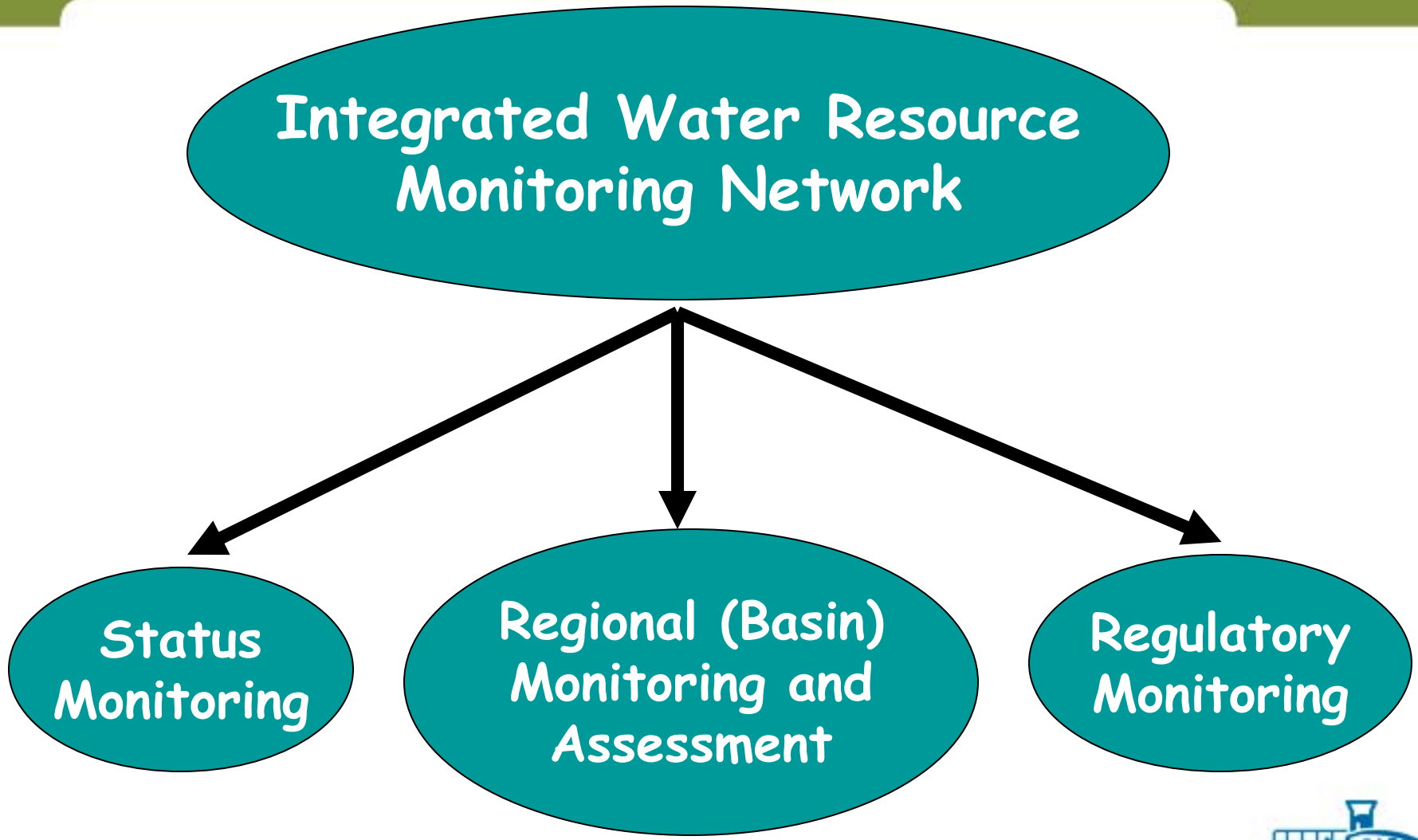

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Status Monitoring

SWAMP Statewide Assessments

305b Report

NPS 319h

State Report Card

Regional (Basin) Monitoring and Assessment

SWAMP by RWQCBs

Stressor ID

Watershed Man.

303d Listing And Delisting

Regulatory Monitoring

NPDES

Stormwater

Ag. Waiver

Mitigation Effectiveness

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Word of Caution

- Research is good, monitoring is nice, but…
  - Need practical tools (criteria) incorporated into our regulatory programs
  - Need standard methods, QA, data storage formats, and assessment thresholds
  - We need biocriteria in permits in 3 years.
  - We have invested millions in SWAMP; it is time to realize that investment.

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Summary

- Great work has been done.
- Especially acknowledge Jim Harrington, Dave Herbst, Tom Suk, Dave Gibson and Pete Ode
- Now is the time to change: to add the SWAMP bioassessment program to the Water Board's regulatory toolbox.
- Questions?

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