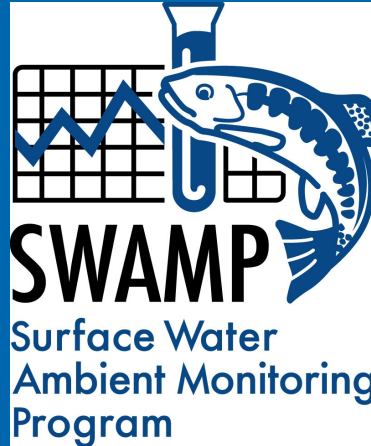




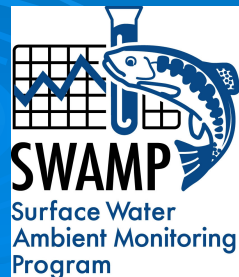
An Overview of the Quality Assurance Program

Valerie Connor, SWAMP Coordinator

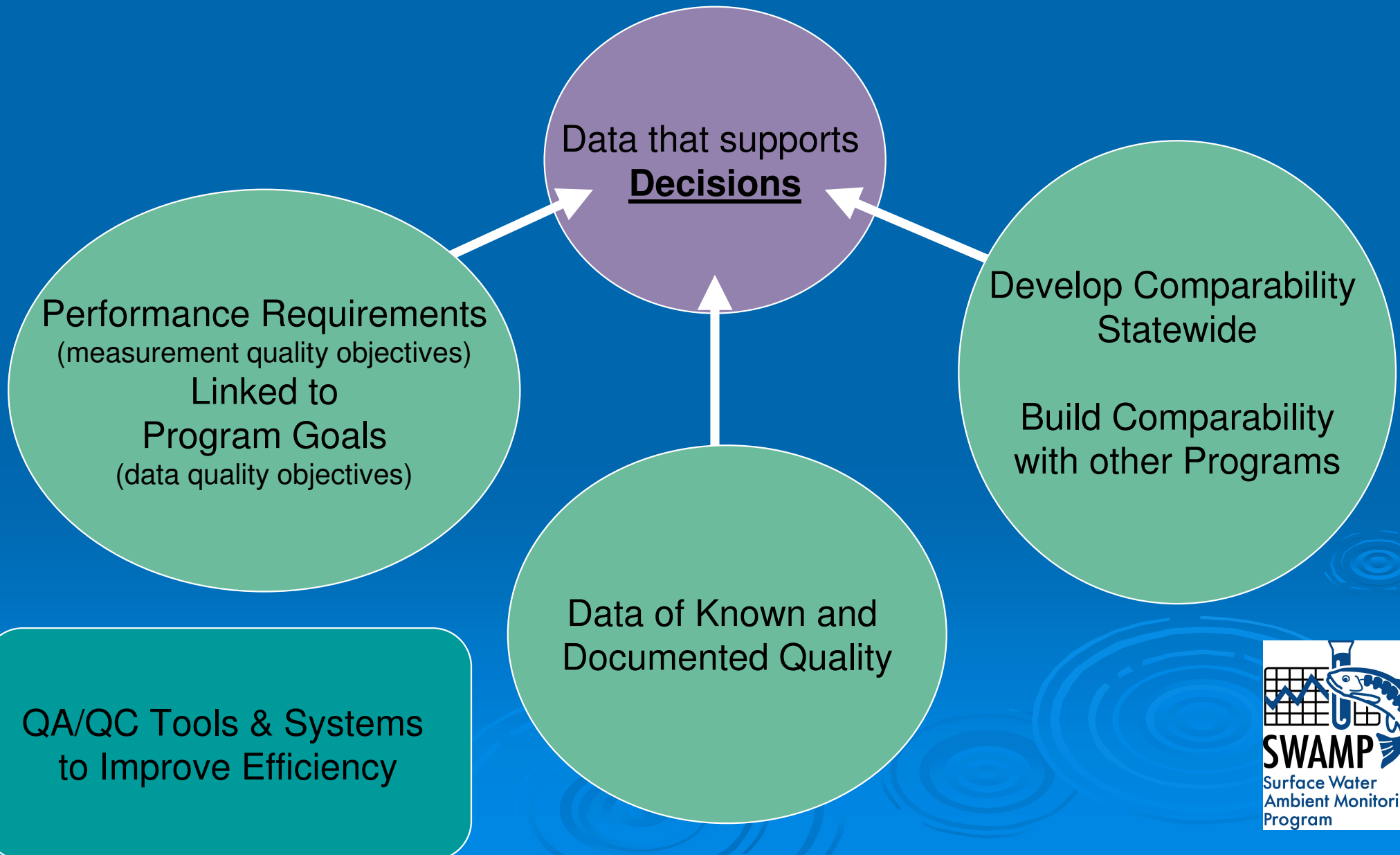
Model Ocean Discharge Monitoring Workshop
February 2, 2006

State Water Resources Control Board Division of Water Quality
Oakland, CA

The SWAMP QA
Program's goal is to help
produce data that is
USED in DECISIONS.

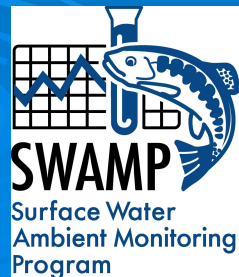


The SWAMP QA Program Goals

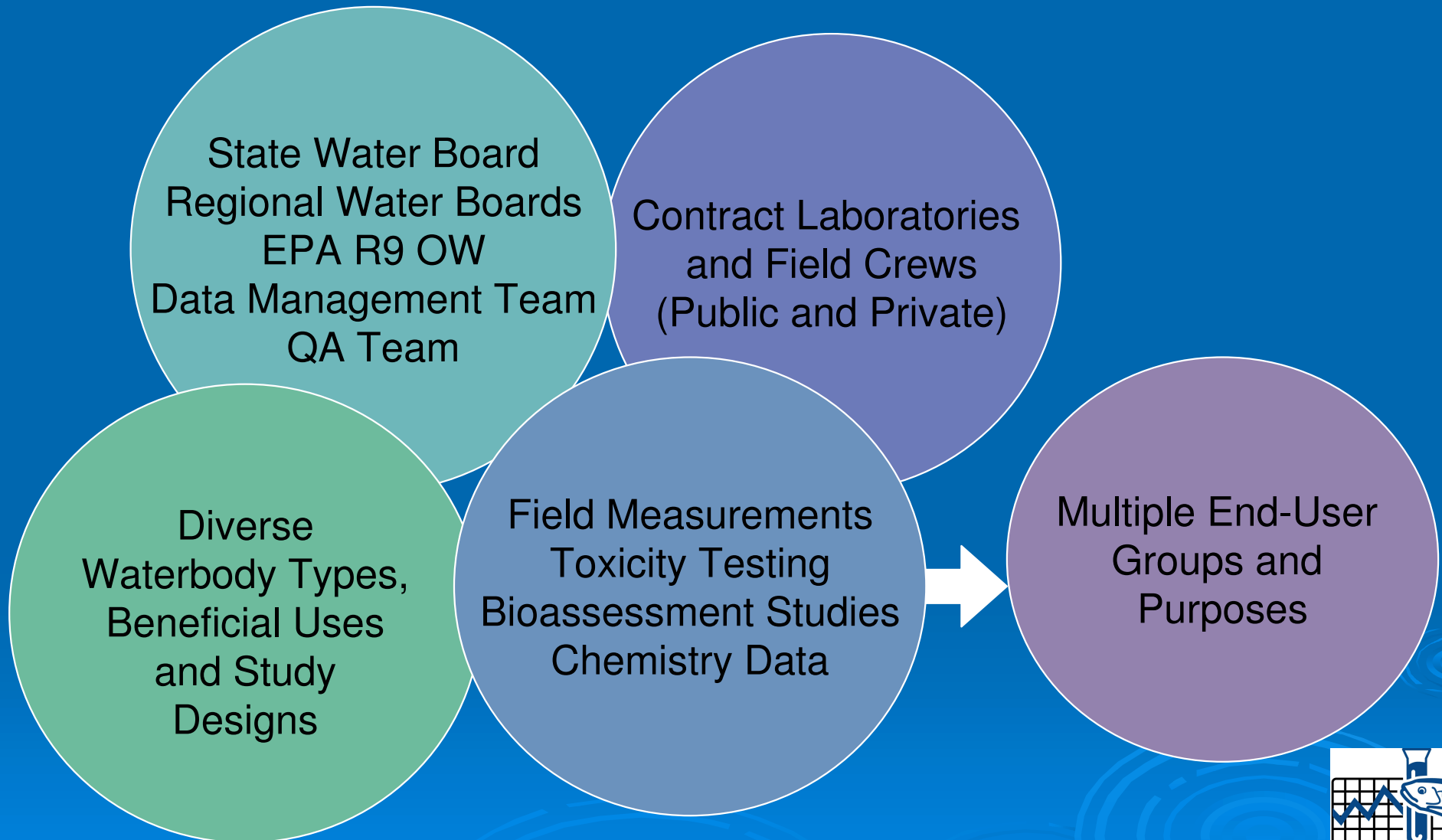


The SWAMP QA Vision

- Develop comparability to help answer state-wide questions and support environmental decision-making.
- Use a systems-based approach to the generation and storage of application-appropriate data and metadata.
- Emphasize science-based decisions and flexibility.
- Program changes will be evaluated with regard to data quality objectives.
- Coordinate with a variety of groups including the regulated community, other state programs, environmental organizations, and EPA R9.



The SWAMP QA Challenge

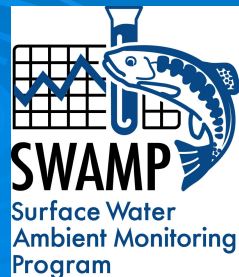


The SWAMP QA Answer

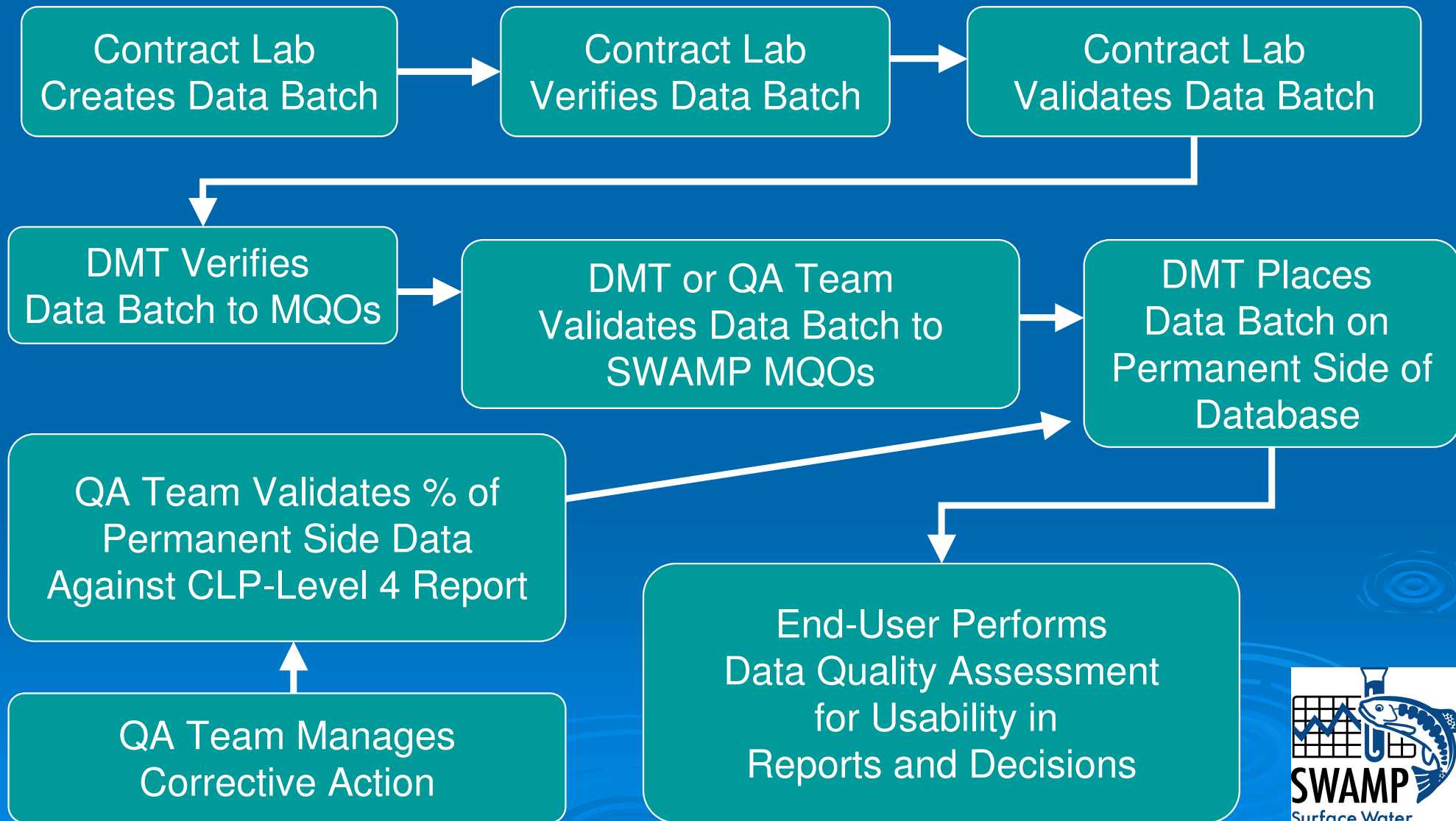
- Data Comparability
- Ensure the **Data Quality Objectives** and **Data Quality Assessment** processes are used in planning and data reporting
- Create systems that integrate objectives from multiple end-user groups – relate back to **DQOs**
- Test systems on small scales, refine and implement at program scale
- Re-assess annually – relate back to **DQOs**
- Are we doing all these? Not yet.
- Do we have a plan for implementing all? Yes.

The SWAMP QA Components

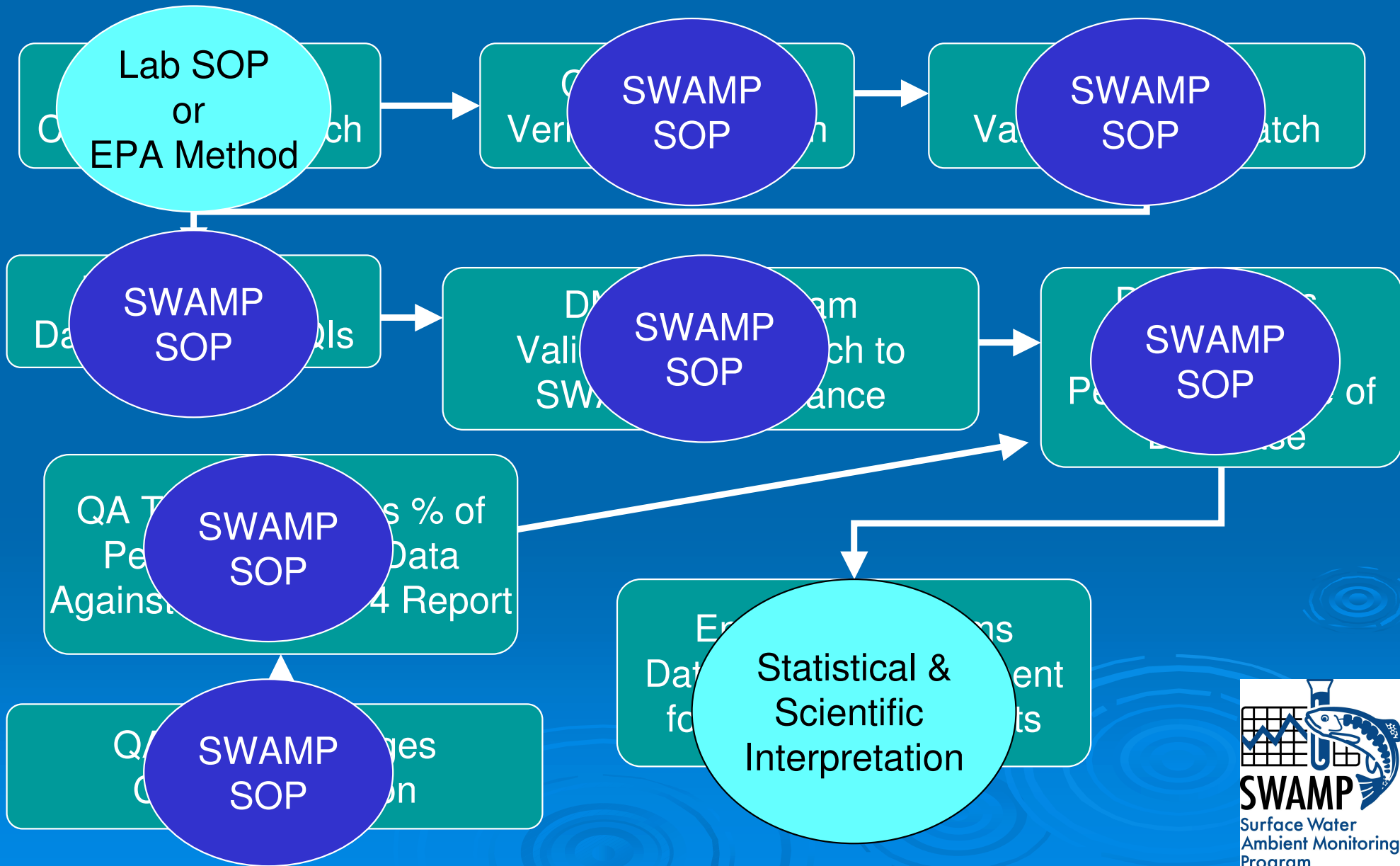
- Quality Assurance Management Plan
- Laboratory Audits
- QAPP Reviews
- Data Verification/Validation Procedures
- QA Communication Systems
- QA Reports to Management
- QC Sample Control Charts
- QA Toolbox and Training
- Assessment of project plans from a QA-standpoint (e.g., process used to pick contract labs, field crew, etc.)
- Corrective Action File
- On-site audits of field sampling (crew and procedures)
- MDL studies or low-level PE tests as appropriate
- SOP review and approval
- Method Review
- Training
- Expert Panel and Technical Research



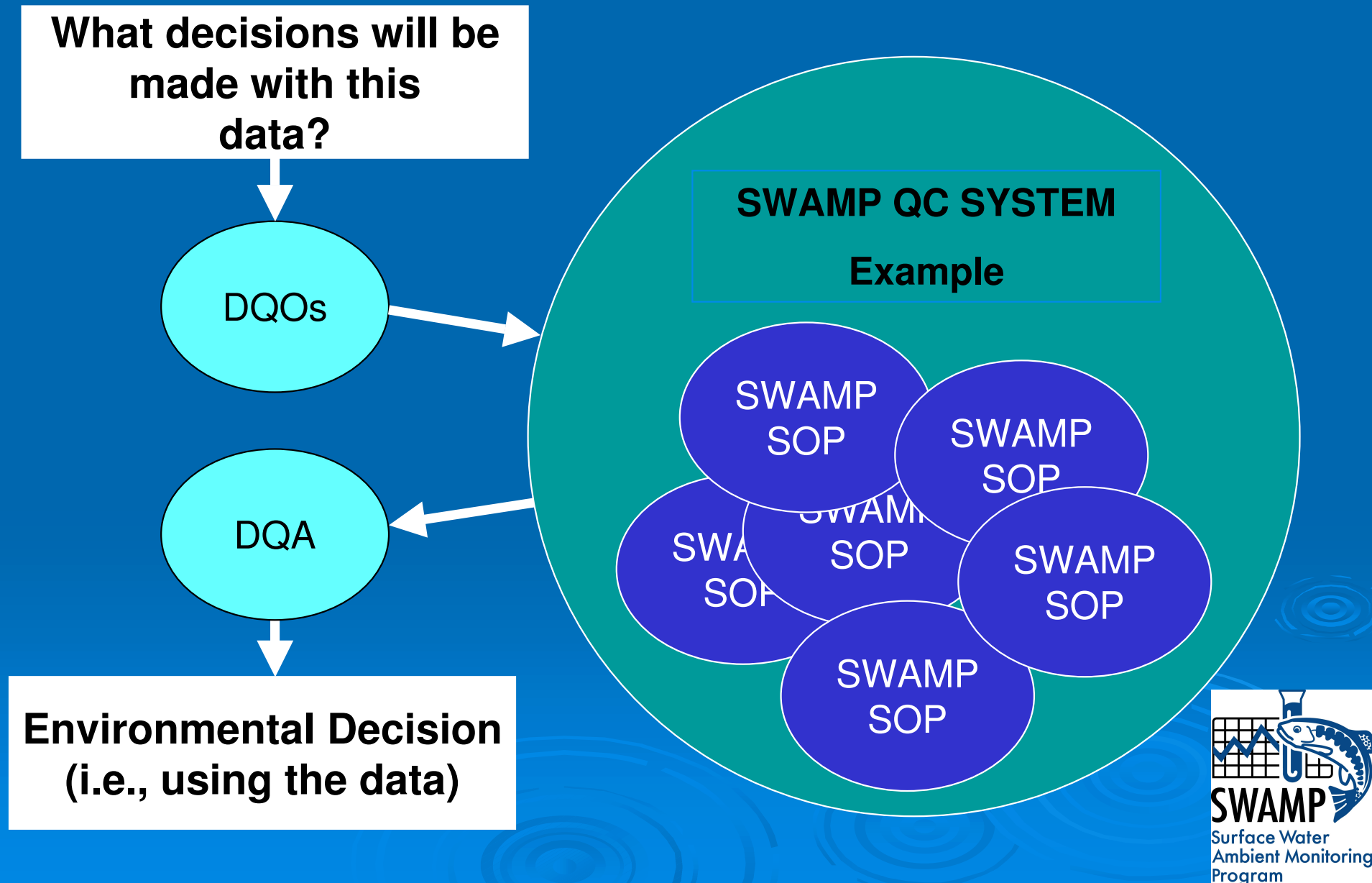
Example – Data Verification/Validation



Example – Data Verification/Validation



Systems Development - Example



Why use the SWAMP's QA/QC?

- Other programs/projects are encouraged to use the SWAMP's QA/QC criteria, systems and tools in order to leverage monitoring resources
- Tested QC criteria via expert focus groups
- State-of-the-art methods
- Systems for data collection, verification, validation, management, and reporting
- Covers most analyte/matrix combinations in addition to field measurements, toxicity testing and bioassessment studies
- Infrastructure and tools for others
- Peer-reviewed
- COMPARABILITY



The SWAMP QA Program

Coordination with Others

- CALFED/CBDA Science Program
- Regulated Community
- US EPA R9 OW
- SCCWRP
- SFEI
- NPDES
- USGS
- NWQMC
- Ag.-Waiver Program
- TMDL
- SWRCB DFA
- SWRCB OIT
- Non-Point Source Program
- CA universities and colleges (research)



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