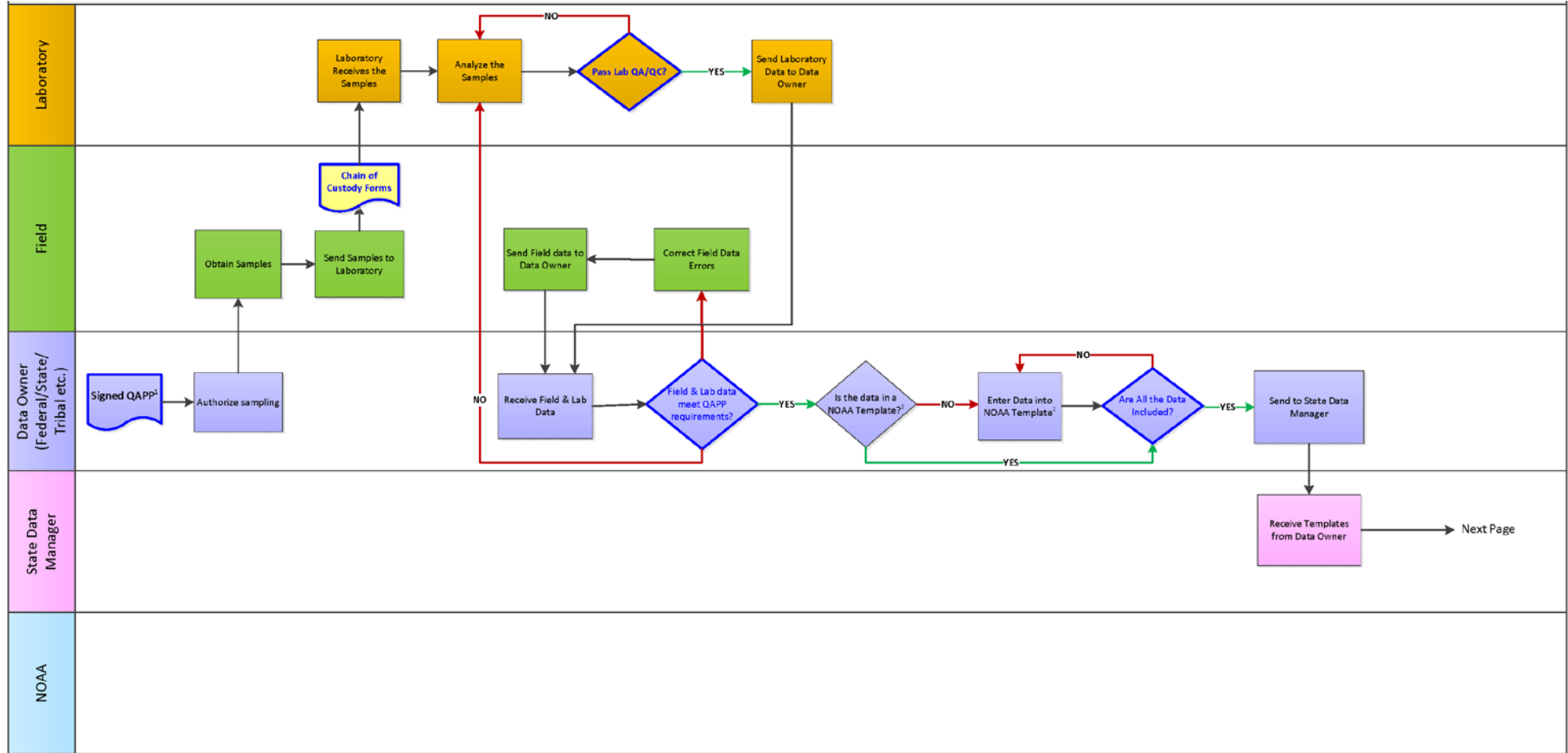


Great Lakes DIVER Data Flow and QA/QC Process Map for St. Louis River AOC

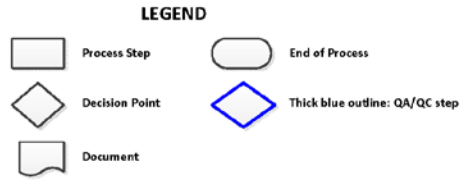


QAPP Includes:

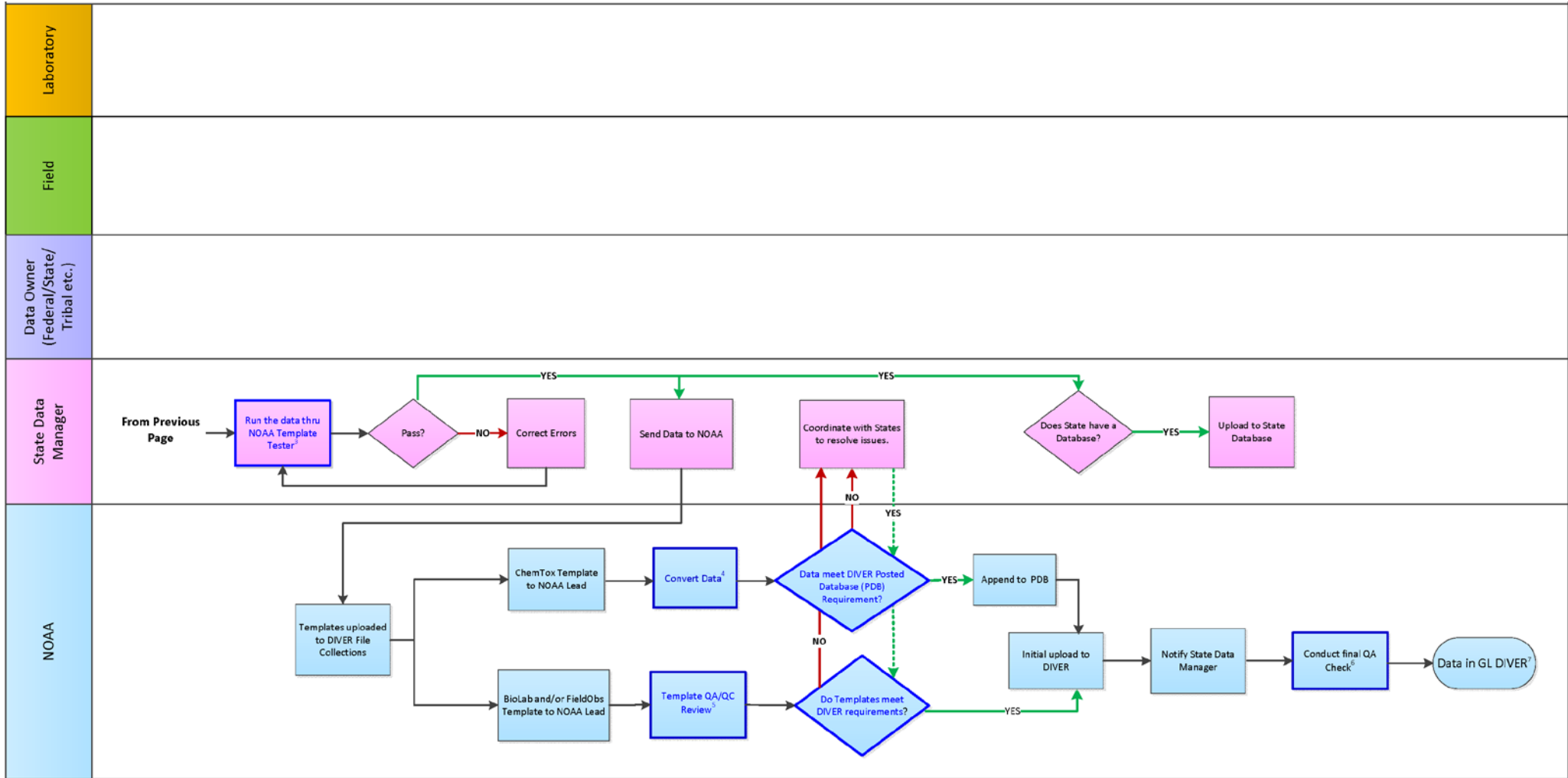
- Problem Definition and Background
- Project Description, Organization, and Responsibility
- Project Documents and Records
- Quality Objectives and Criteria
- Sampling Process Design and Methods
- Sample Handling and Custody
- Analytical Methods
- Quality Control
- Instrument/Equipment Calibration and Frequency
- Data Management, Validation & Verification and Usability

Note that there are three NOAA Templates:
ChemTox: Chemistry and toxicity results
BioLab: Biological and other non-chem laboratory analysis (sample-based)
FieldObs: Field measurements/biological surveys (not sample-based)

A single study may include data suitable one or more templates.



Great Lakes DIVER Data Flow and QA/QC Process Map for St. Louis River AOC



³ The QM Template Tester is a QA/QC tool that will check for internal consistency and identify issues that are relatively straightforward for the user to identify and repair. Refer to NOAA guidance documents for information on the use of the Template Tester and the List of Checks conducted.

⁴ The QA/QC checked and revised Template data is converted into the database field types, formats, and standardized codes required for the NOAA posted database (PDB) format and DIVER. Additional QA/QC checks are conducted to:

- Check for outliers
- Ensure data integrity through the translation process
- Ensure calculations to standardize results (e.g., unit conversions) were conducted accurately
- Ensure all fields for which valid values apply are represented in the associated dictionary files

⁵ Template QA/QC checks include, but are not limited to:

- Examine metadata for completeness
- Compare study name to master list, to determine if data are paired with contaminant chemistry
- Ensure each record is unique
- Conduct checks on specific fields to ensure adherence to valid and suggested values, including date and spatial coordinates
- Compare raw data with template file to ensure integrity in transformation process

⁶ Final QA checks, post-upload to DIVER, include:

- Visually inspect the resultant DIVER export
- Check that the reported coordinates map as expected
- Ensure records counts are correct
- Query and export the data to ensure data are viewable by correct audience and maintain integrity on export.
- NOAA and States conduct final review & QA/QC.

⁷ If errors are found in the data, submit corrections and supporting documentation to orr.diver@noaa.gov. Data updates will be published on the DIVER website in "What's New" link, currently in development.