New Mexico's ATTAINS Story

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Water Quality Data Management Meeting
May 30 - June 1, 2018

New Mexico Environment Department
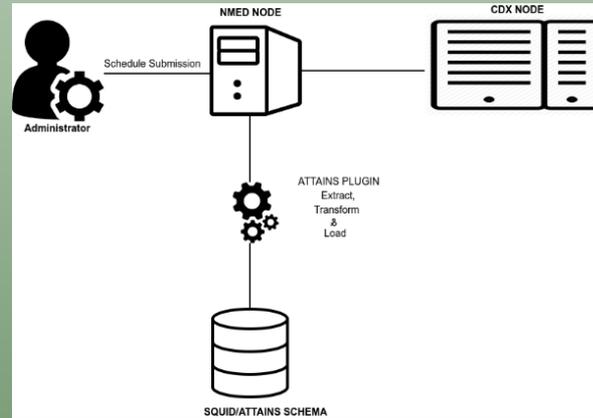Surface Water Quality Bureau
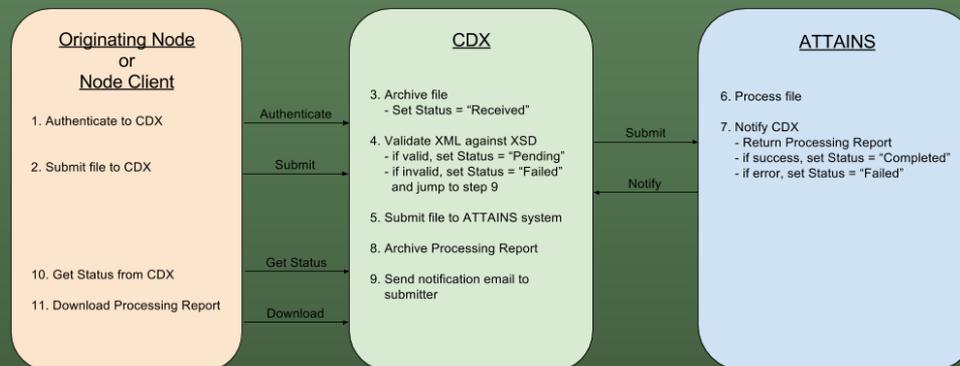
Surface Water Quality Data Management in New Mexico

- The New Mexico Environment Department (NMED) Surface Water Quality Bureau (SWQB) collects the vast majority of surface water quality data in the state

- Our in-house **S**urface water **QU**ality **I**nformation **D**atabase (SQUID) house all surface water quality data collected by SWQB

  - Developed in Oracle platform as a hybrid of NM EDAS (data) and NM ADB (assessment)
  - Development and enhancements funded primarily with EPA Exchange Network and CWA § 106 Supplemental grants
  - Includes semi-auto assessment reports for certain parameters such as nutrients and long-term data sets
  - Supports electronic data submission to both WQX (data) and ATTAINS (assessment)
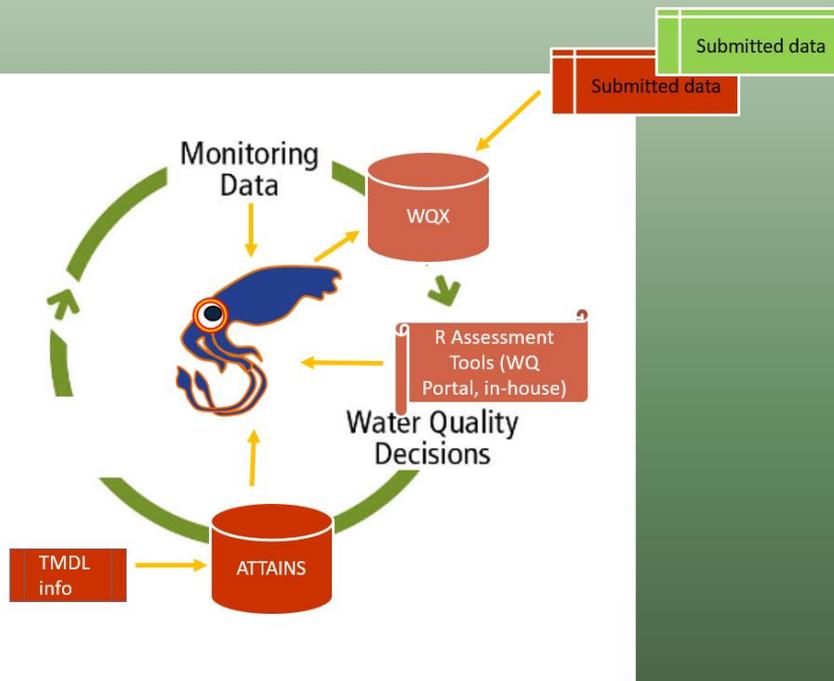
Electronic Reporting

Assessment conclusions flow to ATTAINs via Central Data Exchange (CDX)

- ATTAINS Java plugin for OpenNode2 built in-house.
- Successful ATTAINS Organizational Draft submission of 2018 IR cycle via internal exchange node.

Database Modifications Required to Upload to ATTAINS

- Parts of NM's SQUID schema were revised to conform to the revised ATTAINS schema.

- Our ATTAINS Java plug-in was built in-house and will be posted to EPA's Reusable Component Services.

- NM developed SQUID assessment import template based on ATTAINS Assessment Batch Upload Template (WQ Portal compatible)

NM's 2018 IR ATTAINS SUBMISSION STEPS

Challenge: TMDL/Action Tracking

- NM opted to take on TMDL/Action tracking but had inadequate IT funds to build out this functionality in SQUID

Solution: NM uses the ATTAINS web interface to enter TMDLs/Actions then imports TMDL/Action data from ATTAINs to SQUID via additional module to our ATTAINs plug-in using SOAP services so we can import draft info

Remaining issues: How to handle TMDL revisions, need to revise SQUID IR Category 4 toggle to associate actions

Challenge: De-list Discrepancies

- The ATTAINS De-list report contained only a subset of the NM SQUID De-list report (also received related submission warnings)

  <u>Solution</u>: Discussed potential reasons with ATTAINS Team and EPA Region 6 reviewer; NM provided more detailed SQUID De-list report with notes
  - KEY to resolution is open lines of communication with EPA Regional reviewer
  - De-list reports should match next cycle comparison (2018 → 2020)
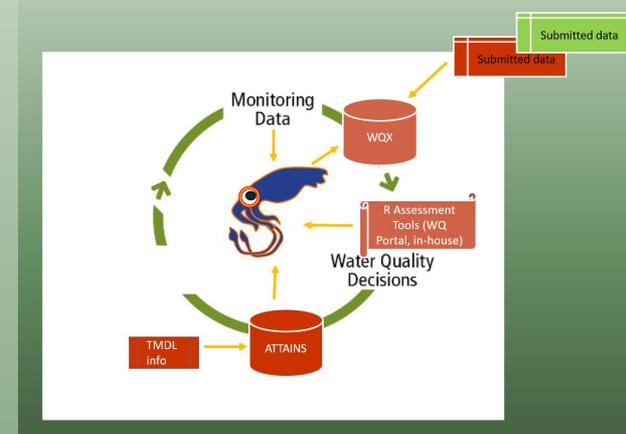
Challenge: AU and Descriptions

- Merging AUs → NM SQUID allows user to delete retired AU if merged into another. ATTAINS would not allow AU deletion because AU was listed on 2016 IR (albeit for a parameter that no longer has an associated WQ standard). Resulted in following error message:

<Text>Your submission did not include the following assessments for assessment units already in the system. They will be carried over from the previous cycle and will be a part of this cycle.</Text>

- Conference call with EPA HQ and Region to discuss both policy and system need to retain AU one cycle for comparison tracking. Ultimate fix TBD….

Next Steps

- Shorten paper IR even further
  - Looking for more ops, clear EPA guidance, report-ready ATTAINS output
  - Looking into ERSI Story Maps with river basin focus for 2020 IR

- Encourage outside data collectors to submit data through WQX
  - May not accept certain types (ex, CWA 319 habitat monitoring data)
  - ALTERNATIVE: Convince my management to allow outside data into SQUID

- Identify IT funding/tech transfer for custom database maintenance and enhancements

- Enhance R scripts to create Assessment Batch Upload output file

Conclusion

- SQUID is an essential data, assessment management, and reporting tool for New Mexico, and provided a solid basis for accommodating ATTAINS schema for continued electronic reporting.

- An iterative process worked well to resolve errors prior to promotion to our Public Comment draft.

- It's important to review ATTAINS reports that EPA Regional staff will be using to compare cycles.

- Open communication with the ATTAINS team and EPA Regional contacts is crucial!!

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