NWIS / STORET Compatibility Discussions

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Statement of the Problem

- Transferring NJDEP/USGS Cooperative Ambient Monitoring Network data from NWIS format into STORET format takes considerable time and effort from both NJDEP and USGS-NJ District staff

Overall Status of USEPA / USGS / NJDEP Discussions

- Representatives from NJDEP, USGS-NJ District, USGS-Office of Information (NWIS), and USGS-Office of Water Quality met with Bob King, Lee Manning, and Margaret Heber from the USEPA-OW-Office of Wetlands, Oceans, and Watersheds on April 10 -11, 2003

Overall Status of USEPA / USGS / NJDEP Discussions (cont.)

- STORET Version 2.0 may provide solutions to several of the problems encountered by NJDEP in uploading monitoring data. However, it will not remove the labor intensive process now required to reformat NWIS data into a STORET compatible format.

Overall Status of USEPA / USGS / NJDEP Discussions (cont.)

- Margaret Heber volunteered the help of USEPA STORET staff (Lee Manning) to both USGS-NJ District and NJDEP in streamlining the NWIS data reformatting process.

NWIS To STORET Problem: Background

- NWIS and STORET models for storing monitoring data are very different and inherently incompatible
  - NWIS storage is based upon the "Trip" model
  - STORET storage is based upon a "Parameter" model

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NWIS To STORET Problem: Background (cont.)

- USGS-NJ alone expends 2+ person months annually translating the Cooperative Monitoring Network data from NWIS into STORET compatible format.
  - Large part of USGS effort results from manual breakout and entry of all parameter information for any given NWIS "trip".
    - For every data entry in NWIS, data must be broken out and entered into STORET format sixteen (16) times.

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NWIS To STORET Problem: Background (cont.)

- NJDEP-Bureau of Freshwater and Biological Monitoring (BFBM), and USGS-NJ District both expended ~0.75 FTE to develop existing reformatting process.

NWIS To STORET Problem: Status

- Accomplishments
  - Data has been reformatted from NWIS and entered into the national copy of STORET for Water Years 1998, 1999, 2000, & 2001.

- Status
  - NJDEP-BFBM will shortly be getting WY2002 data for entry into NJSTORET; deadline for entry into national copy of STORET is June 30, 2003

NWIS To STORET Problem: Status (cont.)

- Issues
  - With the retirement of a key person, USGS-NJ District no longer has the capability to proofread the NWIS reformat export file against the original NWIS file.

NWIS To STORET Problem: Status (cont.)

- Issues
  - USGS-NJ District must annually confirm any changes by the USGS laboratory in analytical methods used for a each of the parameters. If there have been any changes, the notations to the NWIS codes must be updated. This takes considerable time and effort since there is no central repository for this information in USGS.

Key Issues

- Incompatibility of NWIS and STORET is not going to be resolved soon, since USEPA-STORET does not have any funding to implement CDX or for creating an XML portal for STORET.

Key Issues (cont.)

- USEPA -STORET has no plans to translate USGS parameter codes into the equivalent sets of STORET codes; not even in STORET 3.0. **It is up to the individual users to get those translations into STORET.**

Key Issues (cont.)

- While both USEPA-STORET and USGS-NWIS see possibilities for scaling up the process developed by USGS-NJ and NJDEP, neither of them was certain that:

  - The process could be recreated in other cooperative agreements without considerably more automation of the parameter code "de-compiling" and proofreading.

Key Issues (cont.)

- While both USEPA-STORET and USGS-NWIS see possibilities for scaling up the process developed by USGS-NJ and NJDEP, neither of them was certain that:

  – Demand from other cooperating states for the translation of NWIS data into STORET would be sufficient to warrant the effort, given that not all USEPA regions are applying equal pressure on the States to use STORET.

Next Steps

- USEPA-STORET staff will work with USGS-NJ, and NJDEP staff to develop a method for getting the STORET data entries prepared by SIM outputted in a "flat file" format. This would allow for automating the proofreading of the NWIS translation output against the original NWIS file.

Next Steps (cont.)

- USEPA-STORET would like to use the STORET formatted USGS analytical methods table, prepared by USGS-NJ and NJDEP-BFBM, to update the national STORET.

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Next Steps (cont.)

- USEPA -STORET will provide technical assistance to both USGS-NJ and NJDEP in developing a streamlined version of the data translation protocol, especially with regards to the parameter code (P-code) de-compiling.

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Next Steps (cont.)

- All parties agreed to evaluate the incorporation of the new ACWI Data Elements in the re-design / design of their databases as a means of improving database compatibility.

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Questions?

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