TOPIC: Future of SLEDS

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BACKGROUND:

SLEDS was originally designed using the Ingres database management system and the Ingres OpenRoad graphical user interface (GUI) to be compatible with NWIS. OpenRoad was later abandoned by NWIS and due to security reasons there was no direct interaction between NWIS and SLEDS. Data transfer between the two databases was all done by hand. Recently new tools have been developed to assist with the data transfer. Data is imported into SLEDS with SedLOGIN and exported with QWDX. Recent development of SLEDS has dealt with interfacing with these programs and creating data in the correct format so more useful data can be stored in NWIS. Also of concern is how a move by NWIS to a new database management system will affect SLEDS and its relationship with NWIS.

ISSUES TO DISCUSS:

* A new version of SLEDS is nearing completion of testing and should be ready for release. Set and event averaging have been completely rewritten. Some parameters are simply averaged while suspended particle sizes are weighted by sediment concentration. Also adjustments are made for missing bottles.
* SLEDS now prepares data for entry into NWIS and now assigns appropriate parameter codes and methods. Constituents that do not have a valid parameter and method code in NWIS, like bedload fall diameter, loss on ignition, or total sample weight, are not reported. The exception is that bed material wet sieve is reported as bed material dry sieve with the blank method code.
* There are plans for NWIS to move from an Ingres database to an Oracle database. This would not be a concern to SLEDS because thanks to SedLOGIN and QWDX, SLEDS has no need to directly interface with NWIS. There is the possibility that without NWIS, funding for Ingres and OpenRoad will change. This could seriously affect SLEDS if the sediment labs are asked to pay too high a price to use Ingres.

OPTIONS TO RESOLVE:

* Are the new methods of calculating set and event averages correct?
* What method should an event average of two sets with different methods have?
* Several sets of new parameter and method codes are needed for NWIS. How should bed material wet sieves be handled?

1. The way they are now with the blank method and bed material dry sieve parameters.
2. The way they are now but with the bed material dry sieve parameters being renamed to bed material sieve size and a wet sieve method added.
3. New parameter codes added for bed material sieve size with wet and dry sieve methods (similar to suspended sediment).
4. New parameter codes added for bed material wet sieve.

* Do we need new parameter codes for:

1. Bedload fall diameter
2. Bedload loss on ignition
3. Bedload, total sample weight

* SLEDS uses the NWIS legacy method codes because they are consistent with SLEDS methods and help SLEDS determine which of the new, inconsistently applied NWIS method codes to use with each parameter. Options include:

1. Where there are two virtually identical method codes, have at least of them added to all applicable parameters.
2. Eliminate one of the method code pairs and just have one applied to all applicable parameters.
3. Ensure that new parameters include the legacy method code that SLEDS uses. New method codes have been added with only blank legacy method codes even when there are non blank NWIS method codes.

* If NWIS switches to Oracle, SLEDS could use an Oracle database relatively easily. The big problem would be if SLEDS loses the right to use the OpenRoad GUI. Options:

1. Continue as usual; funding won't be a problem.
2. If possible, find an open source version of OpenRoad.

Rewrite the GUI of SLEDS in another language like Java or Visual Basic.