

**NOTES FROM THE NAWQA AQUIFER COORINATOR MEETING
FEBRUARY 19 –21, 2002
RESTON, VA**

Participant	Role
Ann Ardis	Coordinator for Mississippi Embayment – Texas Coastal Uplands aquifer system
Marian Berndt	Coordinator for Floridan aquifer
Kevin Dennehy	Coordinator for High Plains aquifer
Bruce Lindsey	Coordinator for Piedmont – Blue Ridge aquifers
Paul Stackelberg	Coordinator for North Atlantic Coastal Plain aquifer system
Sue Thiros	Coordinator for Basin and Range alluvial and carbonate aquifers
Roland Tollett	Coordinator for Coastal Lowlands aquifer system
Kelly Warner	Coordinator for Glacial Deposit aquifers
Bill Wilber	NLT
Mike Yurewicz	NLT
Wayne Lapham	NAWQA ground-water specialist

Summary of proposed factors used for stratification of each principal aquifer

Stratification layer	Miss. Embay. – Tx. Coastal Uplands	Coastal Lowlands	NACPAS	Basin and Range	Glacial deposits	High Plains	Piedmont – Blue Ridge	Floridan
1	Hydrogeology	Susceptibility (confined / unconfined)	Hydrogeology	Mountains vs valleys	Source rock material	Regional hydrogeology	Rock type	Degree of confinement of Upper Floridan
2	Susceptibility (confined / unconfined)	Hydrogeology	Anthropogenic susceptibility	Unconsolidated vs bedrock	Surficial material	Sub-regional hydrogeology	Land use	Land Use
3		Land use	Aquifer vulnerability	Susceptibility (confined vs unconfined)	Aquifer geometry	Land use		
4				Land use		Land-use subdivision		

Summary of common stratification approach that will be applied to each principal aquifer after discussion of above stratification approaches

The stratification would include layer(s) that, based on current knowledge, would consider 3 aspects of the aquifer system that might affect water quality in each stratum at the regional aquifer scale: (a) the physical framework / hydrogeology of the aquifer system; (b) a relative measure of the intrinsic susceptibility of each stratum to contamination; and (c) a relative measure of the potential vulnerability of each stratum to contamination. Factors related to intrinsic susceptibility could include recharge rate, the presence or absence of an overlying confining unit, the confined / unconfined nature of the stratum, travel time from recharge to the stratum (age of the ground water), thickness and characteristics of the unsaturated zone, pumping, etc. Factors related to potential vulnerability could include features related to anthropogenic sources of contaminants (such as the character of the upgradient land use (i.e. urban, agricultural, undeveloped, etc) and those related to natural sources of contaminants (such as the minerology of the aquifer material or the geochemical condition in each stratum).

Other Notes and Action Items

Kevin Dennehy suggested that the key parameter to compare QW among aquifers is ground-water age because this incorporates many hydrogeologic characteristics and is, therefore, a key determining factor for water quality. In other words, consider ground-water age as a possible first stratification level. He also suggested that we can not use only MAS / SUS networks to do regional synthesis because of the significant variation in GW ages of the wells sampled.

Bill Wilber raised the question of how data on ground-water hydraulic parameters might possibly be used to develop a relation between hydrogeologic characteristics and GW quality. The group felt that there would be significant variability of hydraulic values at the regional level (as well as often at the local level). Paul Stackelberg emphasized the importance of analyzing cores collected during well drilling for analysis of properties such as percent organic carbon in the unsaturated zone as one of the hydrologic properties valuable for synthesis.

The issue of summarizing QW at the regional aquifer scale was raised. Kelly Warner presented some preliminary findings and will continue to develop statistical summaries. Mike Yurewicz recommended that we identify someone (like Nate Booth) to provide central support to the aquifer coordinators for retrieving data from the data warehouse, for example, because almost all aquifer coordinators have limited time available in FY02.

Action item: Bill Wilber will have Rosemary Musson check the latest NIT multi-year budget spreadsheet to help determine how the program might adequately budget activities for support of the aquifer coordinators and for regional synthesis. A proposal (charter) needs to be developed and presented to the NLT for review and approval. A draft charter should be developed before the end of FY02.

Action item: Kelly Warner will check with Jim Stark about TANC's plan to serve up material on the WWW. Although it is not an urgent issue, eventually aquifer workplan material should be available on the WWW. Kelly plans to proceed to post some information on the WWW for review and comment by the aquifer coordinators. To the extent possible, a common design to all of the principal aquifer web pages would be desirable.

Common data gap issues: This discussion focused on needs for the same data by all aquifer teams doing synthesis at the principal aquifer scale. A coordinated approach to developing these data for all principal aquifers studied is needed.

1. Water use. **Action item:** Bill Wilber will check with Molly Maupin regarding how water-use information might be compiled. Water-use information could be used for 2 purposes: input to aquifer characterization for each aquifer workplan and application for interpretive work. Key questions are: (a) how much effort would it be to discretize

water-use data at different scales; (b) how to compile the information in a centralized, systematic approach (rather than through individual District Water Use Specialists); (c) how and when could we use data from the 2000 National Water-Use Compilation; and (d) how can public-water supply withdrawals from ground water, especially for large systems, be tied to specific aquifers.

2. Application of land use/land cover (LULC) and chemical-use data. **Action item 1:** Bill Wilber will find out from Gail Thelin what chemical-use coverages and other national-level GIS and remote-sensing coverages are available or planned that might be used during synthesis. **Action item 2:** Kevin Dennehy discussed the collaboration that HPGW developed with NMD/EROS on farming intensity and will provide the Group with more information. **Action item 3:** Mike Yurewicz will follow-up with Earl Greene to set up a cyber seminar on the EPA-supported regional ground-water quality study currently being conducted to predict ground-water quality based on NAWQA LUS/MAS data.

3. Kelly Warner indicated a need for a surficial materials map. **Action item:** Kevin Dennehy will check with Dave Fullerton regarding the status and plans for a regional surficial materials map that has been prepared. Kelly is interested in obtaining a digital coverage of this map. We will determine the appropriate next steps after Kevin checks with Fullerton.

Charters for the Aquifer Coordinators: Bill Wilber handed out copies of the HPGW Planning Team charter. **Action item:** Bill will write a draft charter applicable to each aquifer coordinator. Each aquifer coordinator should look this over and provide comment. Bill will also discuss with NLT plans to develop charters and the need to identify adequate program resources for the aquifer coordinators if we are to more fully implement plans for synthesis at the principal aquifer scale.

The timing for developing work plans and conducting regional synthesis: It was generally agreed that it would be helpful for aquifer coordinators to have a conference call with their respective study units to determine the timing for finalizing workplans and plans for synthesis activities during Cycle II. This issue of timing relates both to manpower constraints and to when data collection that would be used in synthesis are planned in the principal aquifer during Cycle II. For example, Rolland Tollett indicated that it would probably be best for him to develop the workplan for the Coastal Lowlands during FY03 and to complete a possible aquifer assessment summary report by the end of FY07.