

THE NATIONAL ACADEMIES

Advisers to the Nation on Science, Engineering, and Medicine

National Academy of Sciences
National Academy of Engineering
Institute of Medicine
National Research Council

AGENDA

Committee to Review the Edwards Aquifer Habitat Conservation Program

Second Meeting May 12–14, 2014

Edwards Aquifer Authority Headquarters
900 E. Quincy, San Antonio, TX 78215

Monday, May 12

Closed Session

8:30–9:00

Open Session

9:00–9:05

Introductions, Review of Meeting Agenda

Danny Reible, Committee Chair, NAE, Texas Tech

9:05–10:30

Finite Element (FE) Model for the Edwards Aquifer

Ron Green, SWRI

- Rationale for the FE model (versus MODFLOW)
- Model development strategy including:
 - Conceptual model
 - How preferential flows are modeled (details of the mesh, conduits or not, more homogeneous permeability distribution)?
 - How could the FE model be used to represent conduits if they decide to use them in the model now or in the future?
 - Model calibration and verification (methods, role of stage, flow and dye studies; calibration targets)
 - Sensitivity and uncertainty analysis (are there plans to use PEST?)
 - Period of simulation, time steps, run times, scenarios?
 - How (and how often) are new data incorporated?
- Schedule for the FE model

10:30–10:45

Break

10:45–12:00

Panel Discussion on Hydrology

Geary Schindel, EAA

Jim Winterle, EAA

Ron Green, SWRI

MODFLOW

- Brief overview of model conceptualization and assumptions-- hydrogeologic framework, dual porosity, spatial and temporal discretization, scale of physical features that can be represented
- Data priorities and incorporation of new data into the MODFLOW model
- Are there plans to model extreme scenarios like drought?
- What do they think are the largest sources of predictive uncertainty at this point?
- What new information or data would have the greatest effect on reducing predictive uncertainty quantitatively?
- What are the respective roles of MODFLOW and FEFLOW models?
- How to reconcile FEFLOW vs. MODFLOW differences?
- Would there be a benefit to exploring telescoping models?

HSPF

- *Questions to be developed*

12:00–1:00

Working Lunch

1:00–2:00

Representativeness of Reaches in the Biological Monitoring Program

Ed Oborny, BIOWEST Consulting

2:00–3:30

Overview of Ecological Modeling Progress

Fish: Bill Grant, University of Texas

SAV: Todd Swannick, ERDC

Texas Wild Rice: Thom Hardy, Texas State University

3:30–3:45

Break

3:45–5:00

Science Committee Discussion: Applied Research Program

Doyle Mosier, Chair

Miguel Acevedo University of North Texas at Denton

Tom Arsuffi, Texas Tech University

Janis Bush, University of Texas at San Antonio

Jacquelyn Duke, Baylor University

Charlie Kreidler, LBG-Guyton Associates

Glenn Longley, Texas State University

Robert Mace, Texas Water Development Board

Chad Norris, Texas Parks and Wildlife Department

Jackie Poole, Texas Parks and Wildlife Department

Floyd Weckerly, Texas State University

- Introduction to the Science Committee and its Role
- Results from the 2014 Applied Research topics
- Prioritization of Applied Research topics for 2015

Tuesday, May 13

Closed Session

8:15–10:00

10:00–10:15

Break

Open Session (if needed)

10:15–12:00

Discussion with Sponsor

- Give thoughts on science to date
- Ask additional questions/get clarification
- Request materials/information

Closed Session

12:00–4:00

Wednesday, May 14

Tour of the Comal and San Marcos Springs

Itinerary to follow