

MEETING SUMMARY
NATURAL RESOURCES ADVISORY COMMITTEE
February 5, 2009

The February 5th meeting of the Natural Resources Advisory Committee was held in the Houston-Galveston Area Council Conference Room A at 3555 Timmons Lane, Houston, Texas. The meeting began at 1:32 PM. Chairman Dennis Caputo presided.

NRAC voting members present (19):

Jeff Brennan	Patrick Buzbee	Glenda Callaway
Del Canon	Dennis Caputo	James Dannenbaum
David Hubenak	Andrew Isbell	B.Z. Karachiwala
Carole Lamont	Sarah Metzger	Jack Miller
Tom Northrup	John O'Connell	Ellis Pickett
Linda Shead	Brian Shmaefsky	Mike Talbott
Pudge Willcox		

NRAC voting members not present (10):

Reed Eichelberger	Lori Gernhardt	Aston Hinds
Andy Icken	Jim Joyce	Jim Kachtick
Brett Kolaja	Ronald Schultz	Adam Smith
Kerry Whelan		

Lori Gernhardt was represented Phyllis Frank.

Current Vacancies:

Environmental Groups (1)	Waller County	Wharton County
--------------------------	---------------	----------------

NRAC advisory member (2):

Helen Drummond (GBEP)	Donna Phillips (TCEQ Region 12)
-----------------------	---------------------------------

H-GAC Staff Present (4):

Erin Anderson	Carl Masterson	Rachel Powers
Kathy Ramsey		

Others Present:

David Parkhill (AECOM); Tom Gooch (Freese and Nichols); Mike Reedy (AECOM); Kay Willcox (Chambers County resident); Wietske Medema (Citizen); Jon-Paul Komar (Harris County Watershed Protection Group); Ed Matuszak (URS Corp.)

Certify Quorum

Quorum was confirmed via self-introductions.

Approve Meeting Report

On a motion by Glenda Callaway and a second by Pat Buzbee, the November 6, 2008, meeting notes were approved by the Committee.

The following changes were requested:

- Ellis Pickett's name was missing a "T"
- Glenda Callaway's last name was misspelled

Membership

Carl reported on membership. Tom Northrup and Jack Miller have joined the committee. A vacancy was created when Mary Ellen Whitworth resigned from the BPA. The vacancy for an environmental group will need to be filled.

Subcommittees

Parks and Natural Areas Subcommittee: Linda Shead reported that the subcommittee has been working on its action plan. She also reported that 19 applications were received for the Parks & Natural Areas Awards. The five judges who scored the applications were Justin Rhodes, Michael Mauer, Michael Murr, Vaness Hamilton, and Raphael Longoria. The subcommittee then decided which awards to recommend to the NRAC:

- Special 'best in show' award: Mason Park Treatment Wetland Project. The project is notable because of documented water quality improvements.
- Planning
 - Lake Houston Wilderness Park Plan (Winner)
 - City of Shenandoah Parks and Pathways Plan (Honorable Mention)
 - Wharton County Parks and Open Space Master Plan (Honorable Mention)
 - Seabourne Creek Regional Sports Park, City of Rosenberg (Recognized)
 - Campus Master Plan, St. Catherine's Montessori School (Recognized)
- Policy
 - City of Houston's Accreditation and Park Set-aside Ordinance (Winner)
- Small Projects
 - Cypress Creek Hike and Bike Trail, Timber Lane UD (Winner)
 - East End Park, Kingwood Service Association (Honorable Mention)
 - The Park People's Trails map (Honorable Mention)
 - Ridgeview Park, Missouri City (Recognized)
- Large Projects

- Keith-Wiess Park, City of Houston (Winner)
- Camp Mohawk, Brazoria County (Honorable Mention)
- Clear Creek Nature Park, League City (Recognized)
- McClendon Park, Harris County MUD 120 (Recognized)
- Park on the Bend, Reid Road Mud 1 (Recognized)

The NRAC was asked to approve the recommended slate of winners. These winners would then be recognized at a reception in conjunction with the March 17 meeting of the H-GAC Board of Directors.

In response to a question, Mike Talbott reported that the cost for the Mason Park project was about \$350,000 beyond the cost of the channel improvements undertaken by HCFCD as part of a larger project.

Linda thanked H-GAC for taking on this project and doing so much work.

On a motion by Ellis Pickett and a second by Andrew Isbell, the motion to approve the proposed slate of winners was passed.

Topics of the Day

Carl Masterson introduced the three speakers, who spoke about water planning in our area.

Region K

David Parkhill of AECOM spoke about Region K. Region K occupies the western portion of the H-GAC region, including parts of Wharton, Matagorda, and Colorado County. It is the lower portion of the Colorado River.

This is the third round of a planning process that has been going on for over a decade. The last regional plan was completed in 2006, and this update will be completed in 2011. It will then be incorporated in the 2012 state plan.

The H-GAC region has four representatives on the Region K planning group. Haskell Simon from Matagorda County; Sandra Dannhardt from the STP project in Matagorda County; Ron Gertson, a small businessman from Wharton County; and Bob Pickens from Colorado County. A Wharton County Commissioner just left the group, so they are looking to fill a county spot if anyone is interested.

As part of the process, they look at projections for population, industry, agriculture, and power needs and compare those needs to ground and surface water availability. The projections are usually a topic of great discussion. Water availability is based on the drought of record. Strategies are then developed to address possible shortages. Opportunities to comment on and participate in the planning process are plentiful.

Region K has a healthy projected growth. Current populations appear to be larger than those that were projected in the last planning phase. Projected use takes into account decreasing agricultural use and increasing conservation measures.

David then discussed demographic information for the H-GAC portion of Region K. Colorado County had more migration into the county than expected. Matagorda County experience more net migration out of the county than projected. Wharton County projections were on target. Future predictions are for a 30% population increase in the region, largely in the Austin area.

The Gulf Coast Aquifer (which is one of 10) has water available for industrial and agricultural use. Other water use is largely surface water in the Colorado River. Models for surface water were somewhat controversial because complicated water rules would result in water shortages in the upper Colorado River basin. These conflicts were largely worked out by compromise in the last stage of the planning process.

There appears to be adequate supply for the next 50 years. Strategies include moving water, temporarily overdrafting aquifers, enhancing groundwater recharge, and conservation. Conservation is by law the primary strategy. Using return flows from municipal wastewater is not currently included.

Region H

Mike Ready of AECOM spoke about Region H. Region H consists of 15 counties, with the City of Houston right in the center of the region. It represents a large portion of the state's population, employment, and growth. The conversion from groundwater to surface water makes it an interesting area, along with our dependence on upstream usage, subsidence, and the plethora of water districts (over 500). The City of Houston and the three water authorities are major suppliers. It looks like supply volumes are adequate until 2035, although moving water to where it needs to be is more difficult.

Strategies range from conservation strategies to major infrastructure. After about 2020, most of our water will come from new water projects. Wastewater reuse is a major strategy. Water will be transferred from the Trinity River to Lake Houston. This project is in the permitting and preliminary engineering phase right now. Another major project is Allen's Creek Reservoir in Austin County, an off-channel reservoir to be run jointly by City of Houston and the Brazos River Authority.

Nine of the fifteen counties in Region H, particularly Fort Bend and Montgomery Counties, appear to have been under projected in the last plan. This is not a problem at a regional level, but may be more of a problem at the county or local level.

Interestingly, Fort Bend County's reliance on the Brazos River is expected to decrease. The supply from the Trinity River is dependent on returned water. Conservation and reuse account for about 30% of the supply.

Region H has also undertaken some special studies, including:

- Drought management study
- Interruptible supplies study
- Environmental flows and instream flows study

Information can be found at www.regionhwater.org and choosing downloads.

Region C

Tom Gooch of Freese and Nichols spoke about Region C. Region C is basically the Dallas Fort-Worth Metroplex. It is upstream of Region H along the Trinity River, although it also includes other basins. Tom reviewed the timeline for the planning process.

Special studies in Region C:

- Conservation and Reuse
- Use of water from out-of-region reservoirs
- Indirect reuse projects

Region C has the most Water User Groups (WUGs), which include cities with populations over 500 or Utility Districts with use over .5 MGD. It represents about a quarter of the population of the state and is only slightly larger than Region H. Regions H & C together represent half of the population in the state.

Region C is predicting about the same level of growth as Region K—about 2.5x growth over 50 years. Region C will have one of the largest population increases. While municipal demands will go up, irrigation needs will decrease.

Demand for water will increase in the next 50 years. Most of the supply comes from reservoirs within Region C. Reservoirs outside of Region C also provide water. Reuse and local surface and minimal groundwater are also sources, although much smaller sources than reservoirs. Future supply will need to come from reuse and reservoirs outside of the region.

Conservation and reuse is a major strategy. This will include education and water price increases and changes to golf course irrigation and more efficient energy generation processes.

Conservation and reuse will account for about 2/3 of projected demands. Projects include the Tarrant Regional Project and the North Texas Project, both of which are in implementation. Tom described other projects, including connecting existing supplies. The plan is also looking at water from Oklahoma. Four major reservoirs and one small reservoir have been proposed.

There is an excess projected supply over projected demand. This excess might accommodate potential growth higher than projections and global warming.

The cost of implementing all these strategies is \$13 billion (in 2006 dollars).

Return flows of treated wastewater will increase, including direct reuse (e.g., irrigating golf courses) and indirect reuse (water being returned to a waterbody and then reused). Because of fluctuations, flow to Region H will generally remain stable in the coming fifty years, although for a few years, there might be a slight dip during drought conditions.

Dennis Caputo then opened the discussion to questions.

Q: How will the dip in return flows affect the Region H supply including the firm yield in Lake Livingston? Studies have shown that the firm yield will be maintained at or above permitted levels.

Q: Has Region H looked at how the decreased return flows will impact Region H and Lake Livingston's firm yield? It is being studied.

Q: How dependent is Lake Livingston on new, major reservoirs? Not at all.

Jeff Taylor, who works for Freese and Nichols but who used to be the manager of the City of Houston's water and sewer utility, explained that there is a way to manage Region C reuse to maintain Lake Livingston's firm yield if new permits in Region C all include specific provisions for reuse.

Q: What is region C's website? www.regioncwater.org.

Q: To clarify, do the new plans incorporate water reuse in a way that the last plan did not? Yes.

Q: In the past, inter-basin transfers did not seem to play a prominent role in water planning. Has this changed? Yes. In 1997, new rules discouraged applications for inter-basin transfers. In the last five years, major permits have been applied for and approved in the last five years. It is harder to do than before, but still possible.

Q: How do water reuse rules and inter-basin transfers interact? The applications are separate.

Q: There appears to be excess capacity in Region C compared to Region H. Is this true and how does the state handle that? Some of the excess is dependent on climate change, which is possibly less applicable in Region H.

Q: What is the cost and where does the money come from for these projects? In one region, it is \$20 billion. The vast majority is paid for by water rates paid by users, and loans from the state and bonds. Some is subsidized, but that is not considered a reliable source of funds.

Q: Is there an attempt for the regional water plan to address wastewater treatment in such a way that it might decrease the costs to subsequently treat water for drinking? While it is important, quality is not being looked at as closely as quantity. It was not identified as a major strategy.

In Missouri City, in response to subsidence district requirements to use surface water instead of groundwater, it has been proposed that wastewater effluent have additional treatment prior to reuse. This is being considered by TCEQ for a reuse permit.

Q: Are there any bills in the legislature related to water planning? Several bills address backup power sources for utilities. One proposal addresses how water projects are funded. TCEQ is seeking better funding sources for its operation.

Q: Are there any new major reservoirs coming online soon? Most large reservoirs were completed in the 70s, a few smaller ones in the 90's. Two are under permitting now. They are about 1/6 the size of Lake Livingston. One reservoir is proposed in East Texas that would be 2/3 the size of Lake Livingston, but it is unclear whether that would ever happen. It will be at least ten years before anything could be done on a major reservoir.

Q: Is there any talk of Region C drawing water from Toledo Bend or Sam Rayburn? Toledo Bend is still in the plan, although it is far in the future and expensive.

Q: How are water rights prioritized in Texas? Specifically, how are agricultural, industrial, and municipal needs balanced, particularly during a drought? Individual contracts may determine water rights in some instances, but state law says that everything should be proportional. The Water Code establishes priority, although the code does not always function as well as it might.

Dennis thanked the speakers for providing information. Not expecting an answer, he asked about the inclusion of global warming in planning policies.

Shell Center for Sustainability

Carl Masterson introduced Lilibeth André with the Shell Center for Sustainability at Rice University.

Sustainable development is defined broadly, and encompasses economics, living standards, environmental quality, science, and livability. It also addresses the use of our resources for everybody and in the future.

The Shell Center is a research center at Rice University. In 2003, Shell and Rice formed the center, the mission of which is to create an interdisciplinary program to ensure sustainable development of living standards, not just science and technology but also the human impact. The center is housed in the School of Social Sciences. It involves all of the disciplines at Rice except for music. The center accomplishes its mission through academic research, education, and outreach.

Some of the projects that began at the center have become their own centers. Example projects include:

- A solar collector to develop a community's sustainability
- To break down cellulose into usable materials
- A model to examine new chemicals in the air
- Sustainability on the upper Texas coast
- A low cost solar refrigeration system
- The environmental effects of nanoparticles
- The true cost of biofuels
- Costs to replace infrastructure
- Carbon sequestration technologies

The center cannot do this all, and has a variety of partners.

Dennis Caputo then opened the discussion to questions.

Q: Is it possible to have development without a significant change in some of those elements that were just discussed? No. We have to change the way we do things. Our culture values convenience and this convenience often has a price that is passed on to other parties. We need to look comprehensively at these costs.

Q: Is the center just studying things? Or trying to make things happen? Both.

Lilibeth asked that we visit www.rice.edu and look at the calendar for many of the excellent, free presentations.

NRAC Roundtable

Dennis asked that the group begin the roundtable discussion.

Someone asked about any legislation pertinent to this group that might be of interest to the group? Carl mentioned legislation relating to coastal erosion; local plans have to be based on the Land Offices plan and commissioners have to sign off on things.

Carl reported on Envirocast, and the increasing number of news stories getting airtime on channel 2. He encouraged attendees to submit stories.

Sarah Metzger reported that the Houston region would be hosting the EPA Region 6 conference for Municipal Separate Storm Sewer Systems (MS4s) from June 21 to June 25. Sarah will send the announcement to Carl, who will forward it to the NRAC.

Sarah also announced the Armand Bayou Watershed Earth Day Celebration, which involved 20 sister cities and multiple other partners. It should be a zero-waste event on April 25 at the Pasadena Fairgrounds.

Carl reported that on February 12, a documentary on water produced by Texas Parks and Wildlife would be aired at 8:00 pm on channel 8 (PBS): The State of Flowing Waters.

H-GAC will be sending an e-mail with highlights. Please consider signing up for the departmental newsletter.

Next Meeting Date

The next regularly scheduled meeting date is Thursday, May 7, 2009, at 1:30 p.m.

Adjourn

The meeting was adjourned at 3:26 PM.

DRAFT