



*association of central oklahoma governments
Garber-Wellington Association*

Chair John Brown
Piedmont Councilmember

Vice-Chair Jim Pumphrey
Nicoma Park Councilmember

Secretary/Treasurer Marsha Jefferson
Spencer Mayor

Executive Director
Zach D. Taylor

AGENDA

**GARBER-WELLINGTON ASSOCIATION
POLICY COMMITTEE
May 31, 2007 (Thursday) 2:30 P.M.
(or immediately following the ACOG Board of Director's Meeting)**

ACOG CONFERENCE ROOM
21 EAST MAIN, SUITE 100, OKLAHOMA CITY, OKLAHOMA

- I. CALL TO ORDER - Roll Call
- II. INTRODUCTION OF GUESTS
- III. APPROVAL OF MINUTES ([Attachment III](#))

Action Requested: Motion to approve minutes of the April 26, 2007 meeting.

- IV. ELECTION OF GWA OFFICERS ([Attachment IV](#))

The Nominations Committee met to consider nominations for the officers of the Garber-Wellington Association.

Action Requested: Motion to approve the Nomination's Committee recommendation for the election of Chairman, Vice-Chairman and Secretary-Treasurer of the Garber-Wellington Association

- V. STAFF REPORT

A. **The Thunderhead Hills Survey** – Final Report on the groundwater survey in Thunderhead Hills.

Action Requested: None, for information only.

B. **Drought Update** – A quick review of the drought status in Oklahoma.

Action Requested: None, for information only.

C. **Legislation Update** – A review of the water-related bills that are getting attention from our legislature.

Action Requested: None, for information only.

VI. PROGRESS REPORT ([Attachment VI](#))

VII. NEW BUSINESS

VIII. ADJOURNMENT

MINUTES

GARBER-WELLINGTON ASSOCIATION
POLICY COMMITTEE MEETING

April 26, 2007

The fourth regularly scheduled meeting of the Garber-Wellington Association Policy Committee for the calendar year 2007 was convened on April 26, 2007 in the Association of Central Oklahoma Governments (ACOG) Board Room, 21 E. Main Street, Suite 100, Oklahoma City, Oklahoma. The meeting was held as indicated by advance notice filed with the Oklahoma County Clerk and by notice posted at the ACOG offices at least twenty-four hours prior to the meeting.

PRESIDINGCITY/AGENCY

Hon. Jim Pumphrey, Councilmember, Acting Chairperson	City of Nicoma Park
--	---------------------

POLICY COMMITTEE PRESENT

Hon. Philip Shirey, Councilmember	City of Bethany
Hon. Grant Hedrick, Commissioner	Canadian County
Hon. Dave Howe, Councilmember	City of Choctaw
Hon. Roger Malone, Councilmember	City of Choctaw
Hon. Rusty Sullivan, Commissioner	Cleveland County
Hon. Ken Bartlett, Councilmember	City of Del City
Hon. Julie Rozsypal, Councilmember	City of El Reno
Hon. Marianne Yarbrough, Trustee	Town of Forest Park
Hon. Jon Gumerson, Mayor	City of Guthrie
Hon. Ray Poland, Councilmember	Town of Jones City
Hon. Mark Sharpton, Commissioner	Logan County
Hon. Margaret Graham, Councilmember	City of Luther
Hon. Russell Smith, Mayor	City of Midwest City
Hon. David Roberts, Councilmember	City of Moore
Hon. Kathy Walker, Councilmember	City of Nichols Hills
Hon. David Hopper, Councilmember	City of Norman
Hon. Willa Johnson, Councilmember	City of Oklahoma City
Hon. Jim Roth, Commissioner	Oklahoma County
Hon. Larry Kesler, Councilmember	Town of Union City

GUESTS

Hon. Kevin Leach, Commissioner	Logan County
Mary Murphey, Administrative Assistant	Logan County Commissioner's Office

Joe Blough, Deputy Commissioner
Marsha Blair, Town Administrator
Hon. Jason Murphey, State Representative
Karlie Foster

District 1, Oklahoma County
Town of Slaughterville
State of Oklahoma
Citizen

ACOG STAFF PRESENT

POSITION

Zach D. Taylor
John M. Harrington
Jane Sutter
Debbie Cook
John G. Johnson
Doug Rex
Jerry Church
Ellen Owens

Executive Director
Division Director, Water Resources
Division Director, IGS
Director of Finance and Budget
Legal Consultant
Division Director, TPDS
Communications Programs Coord., IGS
Division Secretary, Water Resources

I. CALL TO ORDER

Director Pumphrey called the meeting to order at 2:15 p.m., noting that a quorum was present.

II. INTRODUCTION OF GUESTS

The aforementioned guests were present at the meeting.

III. APPROVAL OF MINUTES

Director Kesler made a motion to approve the minutes of the March 29, 2007 meeting. Director Rozsypal seconded the motion and the motion carried with the following vote:

AYE: Pumphrey, Shirey, Hedrick, Howe, Malone, Sullivan, Bartlett, Rozsypal, Yarbrough, Gumerson, Poland, Sharpton, Graham, Smith, Roberts, Walker, Hopper, Johnson, Roth, and Kesler

NAY: None

ABSTAIN: None

IV. STAFF REPORT

A. Are Our Wells Running Dry? – John Harrington informed the Committee that the Oklahoman ran a front page article with the headline “Are Our Wells Running Dry?” He commented that newspaper articles are sometimes over simplified, especially when it comes to groundwater aquifer systems. He read an excerpt from the Oklahoman article which stated that, “instead of trying to take frequent measurements, the Oklahoma Water Resources Board (OWRB)

conducted an annual survey of hundreds of wells to measure water levels. The State's major aquifers have dropped several feet in the past five years according to the study. The Garber-Wellington of central Oklahoma aquifer, which lies under Oklahoma City and its surrounding cities, dropped more than six feet from the years 2001 to 2006".

Mr. Harrington explained that the Garber-Wellington is a 2,000 square mile aquifer. He remarked that because water drops six feet in Nichols Hills, does that mean it will also drop six feet in Choctaw? He said if the aquifer is thought of as a big underground lake that would make sense, but the aquifer is not a big underground lake. He said that there are various water quality and various units in the aquifer, such as Garber sandstone, the upper and lower Wellington Aquifers, deep municipal wells drawing from the lower part of the aquifer, domestic wells drawing from the upper parts of the aquifer, and the Hennessey formation overlying the aquifer in certain areas, especially towards western Oklahoma County and into Canadian County. He said that in Oklahoma County, for the most part, Garber sands are what the domestic wells draw from and this would be true for Cleveland County and the eastern half of Logan County as well.

Mr. Harrington made the comment that a six foot decline is not significant enough to warrant a headline story. He said that most of the municipal wells have 500 to 600 feet of saturated section and that a six foot decline in 500 or 600 feet is not worrisome nor is a six foot decline in a domestic well with 150 to 200 feet of saturated section in the Garber sandstone. He said, however, that six feet of decline in a domestic well in the Hennessey shale or in Duncan sandstone might be a different situation.

Mr. Harrington informed the Committee that there is a major aquifer map on the OWRB web page. He said there you will find a graph of a monitor well close to the Tinker Industrial Park that dates back to 1976. The graph indicates the decline that a drought takes on the static water level. He said the aquifer will usually tend to lag the surface drought by a year or two, even when there is a lot of rain. He said that however long it takes to get an aquifer into a drought, it may take that long or longer to recover from it.

Mr. Harrington pointed out a well on the Oklahoma County line northwest of the City of Edmond's water well field. He said that only one year reflected the drought and that it gained in water level through the drought period of the 1980's and early 1990's. He remarked that the aquifer behaves differently in different areas and must be viewed in fairly localized areas, rather than as an entire unit. Director Hopper asked if the 100 year recharge study will view it as a whole area and also asked if the Arbuckle-Simpson Aquifer was looked upon that way. Mr. Harrington said that the Arbuckle-Simpson Aquifer study was divided up into three different sections and they will be developing a model for each section, one at a time. He said that although it is the same geologic unit, hydrologically it behaves in three different ways in three different areas.

Mr. Harrington said that in determining the Aquifer's static water declines or increases, he studies the domestic drillers' well reports to check the first 200 feet of the Aquifer. He said that

drillers are required to record what the static water level is in the well that they drill. He said he then makes a static water level map and compares it to previous years. Mr. Harrington displayed a map of the declines or increases for the aquifer, comparing the years between 2002 and 2006. He said that normally there are about 700 to 800 wells drilled in the Aquifer each year, but last year there were 2,000 wells drilled. He commented that he estimates that 2007 will be close to the 2006 number. He said that, for the most part, in Oklahoma County, the static water levels are declining. He said that surface water reservoirs will influence domestic wells three or four miles away from them and that when Lake Thunderbird was built, it probably increased the groundwater levels around by 60 or 70 feet. When surface water bodies decline, domestic wells will decline as well. He said that Shawnee Lake has not recovered from that, so the lake levels are low.

Director Shirey mentioned that Mr. Harrington said the drilling levels for the last two years will be three times of normal. He asked if this was due in large part to geothermal drilling. Mr. Harrington replied that there have been increased numbers of geothermal wells being drilled, but his feeling is that last year's increases are due to domestic well drilling. Mr. Harrington promised to have a short report for the next Board meeting.

Director Smith asked if the recharge area is directly above the aquifer and Mr. Harrington replied in the affirmative. He said that east of I-35, is on the aquifer itself, west of I-35 is on Hennessey shale and the Garber will be underneath dipping west at a rate of 40 feet per mile.

Mr. Harrington indicated that he concludes that the drillers reports for the Garber Aquifer show decreases in average depth of static water levels, about three feet for the year 2000. He said, however, that drilling activity is two to three times higher than normal.

Mr. Harrington went on to speak about Canadian County. On the graph, he pointed out the Garber sandstone, the Hennessey shale, and the Duncan sandstone, indicating all the new domestic wells drilled in 2006. He said all these new wells are adding to the already close to 20,000 domestic wells in central Oklahoma. He said that the City of Oklahoma City has had numerous phone calls about people in eastern Canadian County regarding the fact that their wells are going dry. He said since these people are not in an aquifer, their hydrology is different and said they are in fracture systems, drawing water out of a fracture. The Hennessey shale is essentially an 800 foot thick brick that extends all the way up to Kansas and said there are big cracks in it and people are finding water in those cracks. Mr. Harrington said that fractures tend to be oriented in a N30E direction. He said that by running resistivity lines, he was able to find fractures for a gentleman who had drilled wells and found no water.

- B. Drought Update – Mr. Harrington said the central Oklahoma is still in a drought and probably will be for the next six to eight years, despite the recent rainfall. He said all that rain just made us catch up to normal for the water year. He indicated that statewide there has been an inch more rain than normal. Mr. Harrington said that the U.S. Drought Monitor has dropped Oklahoma off its list of drought areas and that surface water conservation levels look very good.

Director Sullivan asked about Lake Thunderbird. Mr. Harrington indicated that it is at about 71% of normal, but it is steadily increasing.

Mr. Taylor commented that, in Cleveland County, there has been a lot of activity associated with rehabilitation of wells and abandoned mineral wells because of the arsenic rules. He said the demand has been shifted to a higher level on the Lake. He said that as new wells are drilled and older wells are rehabilitated, pressure off the Lake will be eased.

C. Legislation Update – Mr. Harrington said the rural water districts can now charge ten cents per thousand gallons of water, but otherwise, legislation has been quiet.

V. PROGRESS REPORT

There was no discussion of the Progress Report at the meeting.

VI. NEW BUSINESS

No new business was discussed at the meeting.

VII. ADJOURNMENT

Director Sullivan made a motion to adjourn the meeting. Director Johnson seconded the motion and the meeting adjourned at 2:45 p.m.

MEMORANDUM

TO: Garber-Wellington Policy Committee

FROM: John M. Harrington, Division Director, Water Resources

DATE: May 31, 2007

SUBJECT: Garber-Wellington Association Officers

The Nominations Committee has met and made the following recommendations related to Garber-Wellington Association Officers.

Chairman	John Brown
Vice-Chairman	Jim Pumphrey
Secretary-Treasurer	Russell Smith

Action Requested:

Motion to approve the Nomination's Committee recommendations for the election of Chairman, Vice-Chairman and Secretary-Treasurer of the Garber-Wellington Association

MEMORANDUM

TO: Garber-Wellington Policy Committee
FROM: John M. Harrington, Division Director, Water Resources
DATE: May 31, 2007
SUBJECT: Progress Report

Staff is attending State Water Plan meetings with the Department of Commerce.

Staff is continuing the Thunderhead Hills geophysical field work. More saltwater pits have been delineated. The report is in preparation.

Staff reviewed Canadian River dissolved oxygen model and submitted another report (March 2007) for the expansion of the Mustang plant from 1.50 to 2.00 mgd.

Staff is reviewing surface water models for Oklahoma City planning report to analyze options regarding future sites or increasing present capacities.