

OKLAHOMA WATER RESOURCES BOARD
OFFICIAL MINUTES
August 19, 2014

1. Call to Order

The regular monthly meeting of the Oklahoma Water Resources Board was called to order by Chairman Rudy Herrmann at 9:30 a.m., on August 19, 2014, in the Second Floor Board Meeting Room at the Oklahoma Water Resources Board offices, located at 3800 N. Classen Boulevard, Oklahoma City, Oklahoma.

The meeting was conducted pursuant to the Oklahoma Open Meeting Law with due and proper notice provided pursuant to Sections 303 and 311 thereof. The agenda was posted on August 15, 2014, at 3:00 p.m. at the Oklahoma Water Resources Board's offices at 3800 N. Classen Boulevard, and provided on the agency's website.

Chairman Herrmann welcomed everyone to the meeting, and asked for the roll call of members. Following the roll call, he recognized a quorum of members.

A. Roll Call

Board Members Present

Rudy Herrmann, Chairman
Tom Buchanan, Secretary
Bob Drake
Ford Drummond
Marilyn Feaver
Ed Fite
Jason Hitch
Richard Sevenoaks

Board Members Absent

Linda Lambert, Vice Chairman

Staff Members Present

J.D. Strong, Executive Director
Jerry Barnett, General Counsel
Amanda Storck, Chief, Administrative Services Division
Joe Freeman, Chief, Financial Assistance Division
Julie Cunningham, Chief, Planning and Management Division
Derek Smithee, Water Quality Programs Division
Lauren Sturgeon, Director of External Affairs
Mary Schooley, Executive Secretary

Others Present

Matt Coe, Myers Engineering, Guthrie, OK
Johnna Huddleston, Osage County Rural Water District #15, Skiatook, OK
Maxine Pruitt, City of Guthrie, OK
Charles Swinton, BancFirst, Oklahoma City, OK
Rachael Brown, eCapitol
Emily Summers, TRIR
Sereniah Breland, City of Guthrie, OK
Russ Doughty, Oklahomans for Responsible Water Policy
Joel Taylor, City of Antlers, OK
Mike Burrage, City of Antlers, OK
Michael Taylor, Oklahoma Department of Environmental Quality, Oklahoma City, OK
Derek Ryter, US Geological Survey, Oklahoma City, OK
Brad Pleima, Bartlett and West Engineering, Bartlesville, OK
John Harrington, Association of Central Oklahoma Governments, Oklahoma City, OK
Tony Rivera, City of El Reno, OK

B. APPROVAL OF MINUTES

Chairman Herrmann stated the draft minutes of the July 15, 2014, Regular Meeting minutes had been electronically distributed.

There were no changes, and Mr. Sevenoaks moved to approve the July 15, 2014, minutes, and Mr. Hitch seconded. Chairman Herrmann called for the vote.

AYE: Feaver, Fite, Sevenoaks, Hitch
NAY: None
ABSTAIN: Drummond, Buchanan, Herrmann
ABSENT: Drake, Lambert

C. EXECUTIVE DIRECTOR'S REPORT

Mr. J.D. Strong, Executive Director, addressed the members and said there was an Ad Hoc Budget Committee meeting this morning with Chairman Fite which reviewed the budget submitted for this fiscal year and is essentially the same as last year—5.5% less for state appropriations due to cuts during the last legislative session. He asked Ms. Lauren Sturgeon to present the legislative report. Ms. Sturgeon addressed the members and noted two interim studies that had been scheduled by the House of Representatives, one on groundwater uses on September 9, and another on water and water infrastructure and available resources on October 14. The Senate has released several studies; however, none have been approved as yet. Regarding federal government activities, Ms. Sturgeon stated that Congress has recessed until after elections. The Senate has released its appropriation bill which can be found under the Department of Interior and work continues on the Waters of the US rules, as well as the WRRDA Implementation which is ongoing. Ms. Sturgeon concluded her report. Mr. Buchanan asked about the broadness of the topic of the state interim studies, and Ms. Sturgeon stated regarding the OWRB, the topics are fairly broad and staff is working with the legislative members about what they are interested in learning. Mr. Strong added he will be presenting at Rep. Vaughan's meeting on September 9; Rep. Vaughan is from Ponca City and he is interested in groundwater usage for fracking, particularly, the private property aspect of groundwater in our state which results in some landowners deciding to sell or lease their water to oil and gas operations for

fracking purposes and leads to controversy with neighboring landowners thinking that will impact their groundwater supply. The study request is to come up a feasible compromise regarding owner's rights, neighbor's rights, and oil exploration as he feels there is a growing problem which a change in the law might need to address. Mr. Strong said the other interim study is a combination of two requests – water and water infrastructure and available resources – which is to look at the comprehensive water plan and see what has been accomplished and what is remaining to be done, and what is needed to ensure reliable supplies of water—the overarching goal of the plan and the agency. There were no other questions regarding legislative activities and Ms. Sturgeon concluded her report.

Continuing, Mr. Strong said Senator Simpson is sponsoring a Town Hall meeting regarding the Arbuckle Simpson on August 22 to focus on aquifer issues. Mr. Strong will meet with Senator Justice to talk about drought funding to coordinate and to prioritize funding along with Oklahoma State University. Mediation continues in the Chickasaw/Choctaw litigation and there will be an update at the next meeting; there will be an evidentiary hearing regarding the Arbuckle Simpson litigation August 29 about what should and should not be in the record.

Mr. Strong attended the Western States Water Council meeting in Helena, Montana, July 16-18; spoke to the Cattlemen's Beef Business Committee July 25; and conducted the agency management retreat on August 1 to update the agency's 5-year strategic plan. He spoke at the OSU-hosted Council for Agriculture Research, Extension and Teaching/Southern Land Grant Universities (Southeast) August 2, and the Association of Clean Water Administrators held its annual meeting in Oklahoma City August 3-6, where he spoke August 5—DEQ and OWRB organized the event bringing in people from across the country. Mr. Strong said the Water for 2060 Council will meet following the Board meeting and had conducted a Panhandle tour August 7, acquiring a great appreciation for the conservation measures that have been implemented in the area over the years and also had an opportunity to look at municipal water use and industrial water use touring the biodiesel plant and City of Guymon treatment facilities. The Water Quality staff spoke to the Agriculture groups on August 13 regarding wetlands WQS; and Mr. Strong said there is much activity regarding water reuse including meetings with DEQ, the City of Clinton, and the Environmental Federation of Oklahoma will conduct a technical workshop on August 22. He will be speaking to the Red River Valley Association at the Artesian August 28, the Governor's Energy Conference is September 4 in Oklahoma City, and the annual Arkansas-Oklahoma Arkansas River Compact Commission usually held in September will be held October 30 in Rogers, AR.

Mr. Strong introduced Mr. Jonathan Allen, new member of the staff of the Office of General Counsel. He said the next Board meeting will be held September 16 in Oklahoma City, and following the meeting in the afternoon the City of Moore will have a dedication ceremony for its State-of-the-Art water treatment facility funded by three loans by the OWRB. Mr. Strong concluded his report.

Chairman Herrmann reminded the members and Mr. Strong noted the October meeting will be held in conjunction with the Governor's Water Conference scheduled for October 22-23—a full day on the 22nd, and half day on the 23rd with the Board meeting that afternoon, anticipating at 3:30 p.m. The location is the Cox Center in downtown Oklahoma City with lodging at the Renaissance.

There were no questions from the members, and Chairman Herrmann noted the distribution of information regarding the Board's Ad Hoc Committees and membership; there were no changes from the previous year.

Mr. Bob Drake had joined the meeting at 9:38 a.m.

D. Monthly Budget Report

Ms. Amanda Storck, Chief, Administrative Services Division, stated to the members that the monthly report for July 2014 had been provided. She said the agency has 96% of funding remaining

with 92% of the fiscal year remaining. She said staff is working on the budget request document; the agency is not requesting new funding but must provide program information by department, revolving fund information, and grant information and which will be in a new system this year. She is working with the agency divisions about the information as well as updating the strategic plan and workforce plan that is due October 1.

Ms. Storck concluded her report. There were no questions by members.

2. FINANCIAL ASSISTANCE DIVISION

A. Consideration of and Possible Action on a Proposed Order Approving Increase in Obligation of Drinking Water Funds for Guthrie Public Works Authority, Logan County. Recommended for Approval. Mr. Joe Freeman, Chief, Financial Assistance Division, stated to the members that this first item is a request by the Guthrie Public Works Authority for \$140,000.00 increase in Drinking Water State Revolving Loan Funds. At the June 17, 2014, Board meeting, the Board approved a \$470,000.00 loan for Guthrie for laying approximately 7,100 feet of water line to supply water to the Town of Coyle. Subsequent to Board approval, Guthrie received bids from six contractors for the project, which came in higher than the engineers' estimate. He noted provisions of the approved loan; he said Guthrie has been a long-term customer of the Board's and currently has four loans outstanding with the Board with a total outstanding balance of approximately \$17.7 million dollars. The loans are in compliance with the SRF rules and regulations and will be in the form of principal forgiveness. Staff recommended approval.

Sereniah Breland, City Manager; Maxine Pruitt, Municipal Services Director; and Matt Coe, project engineer were present in support of the funding application.

Chairman Herrmann asked what drove the increase in the project costs, and Ms. Breland asked Mr. Coe to address the question. Mr. Coe said the original cost estimate was two years ago and there have been market price increases in the costs of pipe materials. The original cost estimate was based on the best information available based on similar projects. He said through value engineering the costs have been reduced by \$100,000.00 by reducing 500 feet of PVC pipe, minimizing the polyethylene pumps and utilizing an existing chlorine analyzer and saved considerable cost.

There were no other questions by Board members, and Mr. Fite moved to approve the increase in obligation of funds to the Guthrie Public Works Authority. Mr. Drake seconded the motion.

Chairman Herrmann called for the vote.

AYE: Feaver, Fite, Drummond, Sevenoaks, Hitch, Drake, Buchanan, Herrmann

NAY: None

ABSTAIN: None

ABSENT: Lambert

B. Consideration of and Possible Action on a Proposed Order Approving Drinking Water Funding Application for Rural Water Management District #15, Osage County. Recommended for Approval. Mr. Freeman stated to the members that this item is an \$840,000.00 loan request from Osage County Rural Water Management District #15. He said the District is requesting the loan to construct a 300,000 gallon water storage tank. He said the loan would be funded through the Drinking Water SRF loan program, and he noted provisions of the loan agreement. He said that over the last ten years, the District's water connections have increased by approximately 16% or 2,600 connections; the District is a long-time customer of the Board's and currently has one loan outstanding with the Board. The debt coverage ratio for Osage #15 stands at 1.79-times. Staff recommended approval of the funding request.

Ms. Johnna Huddleston, District Clerk, and Mr. Brad Pleima, Engineer for the District, were present in support of the funding request.

Mr. Pleima described the project, and Mr. Hitch asked the boundaries of the service area which is Highway 20 to Skiatook. Mr. Buchanan asked the water source and Mr. Pleima said the City of Tulsa and City of Skiatook.

There were no other questions, and Mr. Drummond moved to approve the Drinking Water SRF loan to Osage County RWMD #15, and Mr. Sevenoaks seconded.

AYE: Feaver, Fite, Drummond, Sevenoaks, Hitch, Drake, Buchanan, Herrmann

NAY: None

ABSTAIN: None

ABSENT: Lambert

C. Consideration of and Possible Action on a Proposed Order Approving Drinking Water Funding Application for Antlers Public Works Authority Pushmataha County. Recommended for Approval.

Mr. Freeman informed the members that this item is a \$3,110,000.00 Drinking Water State Revolving Fund loan request by the Antlers Public Works Authority located in Pushmataha County. He said Antlers is requesting the loan today to refinance two debt issues which were for the construction of a new water treatment facility and for improvements to the water distribution system. Mr. Freeman noted provisions of the loan agreement, and said Antlers will be saving approximately \$1.8 million in interest expense. Antlers PWA currently has one other loan with the Board with an outstanding balance of approximately \$2.3 million dollars; the debt coverage ratio stands at approximately 2.54-times. Staff recommended approval of the funding request.

Representing Antlers was Mayor Mike Burrage, City Manager Joe Taylor, and City Clerk Robin Byrum. Mayor Burrage said the PWA refinance along with the wastewater refinance in May will save nearly \$3 million, and reduce the term of the loan to 15 years.

There were no questions by members.

Mr. Fite move to approve the Drinking Water funding request to the Antlers Public Works Authority, and Mr. Buchanan stated.

AYE: Feaver, Fite, Drummond, Sevenoaks, Hitch, Drake, Buchanan, Herrmann

NAY: None

ABSTAIN: None

ABSENT: Lambert

D. Consideration of and Possible Action on a Proposed Order Approving Increase in Obligation of Clean Water Funds for El Reno Municipal Authority, Canadian County. Recommended for Approval.

Mr. Freeman stated that this request by the El Reno Municipal Authority is for a \$5,890,000.00 increase in Clean Water State Revolving Fund loan funds. He said that at the November 2013 Board meeting, the Board approved a \$16.5 million dollar loan for El Reno for construction of a 2 mgd wastewater treatment plant. Five bids for the project were received which were higher than had been estimated by the engineer. As approved, the loan would mature within 25 years of completion. El Reno has been long-time loan customer of the Board's and has six loans outstanding with the Board with a combined principal balance of \$3.6 million. He said the water connections have increased by approximately 7% over the last ten years, and the debt coverage ratio stands at approximately 1.84-times. Staff recommended approval of the funding increase.

Mayor and Authority Chairman Matt White, and City Manager Tony Rivera were present in support of the funding request application. Mayor White said the upgrade to the system built in the 1970s started several years ago and costs have increased similar to Guthrie. He thanked the Board noting the funding is a great opportunity for El Reno.

Mr. Hitch said Guthrie's increase was 9% and this increase is 33%. Mayor White said this is a more complicated project – a new complete sewer system and adjustments were required by DEQ as well as other changes. The system will process 600 gpd. Chairman Herrmann asked about the changes in DEQ requirements, and Mayor White explained most of the increase is due to the time frame from the engineer's estimate and increase in costs.

There were no other questions, and Chairman Herrmann stated he would entertain a motion.

Mr. Hitch move to approve the request for increase in obligation of funds to the El Reno Municipal Authority, and Ms. Feaver seconded.

AYE: Feaver, Fite, Drummond, Sevenoaks, Hitch, Drake, Buchanan, Herrmann

NAY: None

ABSTAIN: None

ABSENT: Lambert

E. Resolution Authorizing the Issuance of Oklahoma Water Resources Board State Loan Program Revenue Bonds in Aggregate Principal Amount not to exceed \$25,000,000; at a Net Interest Cost not to Exceed Six Percent (6.0%); Providing for the Issuance of Said Bonds in One or More Series; Approving and Authorizing Execution of a Twenty-Eighth Supplement Bond Resolution and, if Deemed Advisable, an Additional Supplemental Bond Resolution for Each Additional Series; Waiving Competitive Bidding on the Bonds and Authorizing the Sale Thereof by Negotiation and at a Discount Pursuant to the Terms of a Contract of Purchase Pertaining Thereto; Approving a Preliminary Official Statement with Respect to Said Bonds; Authorizing the Chairman or Vice Chairman to Deem Preliminary Official Statements for Additional Series of Bonds Final; Directing Deposit of Proceeds Derived from the Issuance of the Bonds in the State Treasury and Requesting the State Treasurer to Remit Such Proceeds to the Bond Trustee; Ratifying and Approving the Form of Promissory Note, Loan Agreement, and Note Purchase Agreement to be Executed by Borrowers in the State Loan Program; Authorizing Execution of Such Other and Further Instruments, Certificates and Documents as may be Required for the Issuance of the Bonds; Directing Payment of Costs of Issuance and Containing Other Provisions Relating to the Issuance of the Bonds. Recommended for Approval. Mr. Freeman stated to the members that this item is an authorizing resolution for a new issuance for FAP loan program bonds. The bonds are proposed to be used to fund projects for the Tulsa Metropolitan Utility Authority as well as other borrowers identified prior to closing. Tulsa will use the loan proceeds for work at its Southside Wastewater Treatment facility, Southside Collection system improvements, for area-wide sewer rehabilitation, and for providing service to unsewered areas.

Mr. Freeman said the resolution authorizes the following items: an issuance of bonds not to exceed \$25,000,000.00, authorizing execution of a twenty-eighth supplemental bond resolution for issuance of the bonds, authorizing the issuance be on a negotiated basis, directing deposit of the proceeds in the State Treasury to remit to BancFirst, the Board's Trustee bank, approving the form of promissory note and loan agreement, directing payment of the cost of issuance, and authorizing other documents necessary to close the issue. Staff recommended approval.

Mr. Chris Cochran, BOSC, Senior Underwriter, and Mr. Jacob Bachelor, the Board's FAP Bond Counsel, were present. Chairman Herrmann asked Mr. Freeman when the loan requests will come to the Board for action, and he answered in October, that TMUA is in the application process at this point. In view of the timeline for construction of these projects, it is anticipated the closing of the loans and bond issue simultaneously will be the first part of December. The projects will go online in 2017, and the anticipated costs is \$21 million, allowing room for comfort in the resolution amount.

Mr. Sevenoaks asked about the interest percentage indicated at 6%, and Mr. Freeman said an amount is requested to be included, but it would not likely be that amount. Mr. Cochran added that as of this morning, 20-year bonds issued for Tulsa today would be about 3%.

Chairman Herrmann summarized the action and asked if there were questions by the members. There were none, and he asked for a motion.

Mr. Drummond moved to approve the resolution authorizing the issuance of state loan program revenue bonds, and Mr. Buchanan seconded.

AYE: Feaver, Fite, Drummond, Hitch, Drake, Buchanan, Herrmann
NAY: None
ABSTAIN: Sevenoaks
ABSENT: Lambert

3. SUMMARY DISPOSITION AGENDA ITEMS

Any item listed under this Summary Disposition Agenda may, at the requested of any member of the Board, the Board's staff, or any other person attending this meeting, may be transferred to the Special Consideration Agenda. Under the Special Consideration Agenda, separate discussion and vote or other action may be taken on any items already listed under that agenda or items transferred to that agenda from this Summary Disposition Agenda.

A. Requests to Transfer Items from Summary Disposition Agenda to the Special Consideration Agenda, and Action on Whether to Transfer Such Items.

Chairman Herrmann asked if there were requests to transfer items from the Summary Disposition Agenda to the Special Consideration Agenda. There were no requests to transfer items.

B. Discussion, Questions, and Responses Pertaining to Any Items Remaining on Summary Disposition Agenda and Action on Items and Approval of Items listed.

Ms. Julie Cunningham asked that agenda item 3.J.6., #2014-024 (Loren & Vera Dierksen) be withdrawn from the Board's consideration.

Chairman Herrmann stated he would accept a motion to approve the Summary Disposition Agenda as amended. He noted there are several applications for permits for both groundwater and streamwater and asked if any were for fracking purposes. Ms. Cunningham answered the applications are all for irrigation use, except item G.3. which is for washing cement. One is irrigation and oil and gas, item H.1.

There were no other questions and Ms. Feaver moved to approve the Summary Disposition Agenda as amended, and Mr. Buchanan seconded. Chairman Herrmann called for the vote.

AYE: Feaver, Fite, Drummond, Sevenoaks, Hitch, Drake, Buchanan, Herrmann
NAY: None
ABSTAIN: None
ABSENT: Lambert

The following items were approved:

C. Consideration of and Possible Action on Financial Assistance Division Items:

1. Rural Economic Action Plan (REAP) Grant Applications:

<u>Item No.</u>	<u>Application No.</u>	<u>Entity Name</u>	<u>County</u>	<u>Amount Recommended</u>
None				

D. Consideration of and Possible Action on Contracts and Agreements:

1. Interagency Agreement with the Oklahoma Department of Agriculture, Food and Forestry for collecting, sampling, monitoring and analyzing of water quality at swine LMFOs (Licensed Managed Feeding Operations).

2. Land Use Agreement between the OWRB and private landowners Kent Livesay and Steven Livesay to use a plot of land, at no cost to OWRB, for the construction, operation, monitoring, installation, use, inspection, removal of equipment, and maintenance of an observation well located near the Oklahoma Mesonet Station in Wagoner County.
3. Land Use Agreement between the OWRB and the Oklahoma Agricultural Experiment Station to use a plot of land, at no cost to OWRB, for the construction, operation, monitoring, installation, use, inspection, removal of equipment, and maintenance of an observation well located near the Oklahoma Mesonet Station in Tillman County.
4. Land Use Agreement between the OWRB and the Alfalfa County Conservation District to use a plot of land, at no cost to OWRB, for the construction, operation, monitoring, installation, use, inspection, removal of equipment, and maintenance of an observation well located near the Oklahoma Mesonet Station in Alfalfa County.
5. Land Use Agreement between the OWRB and Pauls Valley Airport Authority to use a plot of land, at no cost to OWRB, for the construction, operation, monitoring, installation, use, inspection, removal of equipment, and maintenance of an observation well located near the Oklahoma Mesonet Station in Garvin County.
6. Amendment of Joint Funding Agreement with the U.S. Geological Survey to increase funding for water investigations of the North Fork Red River Alluvial Aquifer in Southwestern Oklahoma.
7. Intergovernmental Agreement with the University of Oklahoma through its University Outreach/College of Continuing Education's Forum & Conference Services ("OCCE") to provide facilities for workshops and courses on floodplain management for floodplain administrators.
8. Joint Funding Agreement with the U.S. Geological Survey to do groundwater hydrological survey on the Salt Fork of the Red River Alluvium and Terrace Groundwater Basin.
9. Joint Funding Agreement with the U.S. Geological Survey to monitor stream water flow sites at the One Lake and Cobb Creek Basins.

E. Consideration of and Possible Action on Applications for Temporary Permits to Use Groundwater:

1. Terry L. & Minda A. Phillips, Caddo County, #2014-502
2. Cheryl Lindsey & Tom Hill, Kay County, #2014-531
3. Bryan Kroeker Revocable Trust, Alfalfa County, #2014-532
4. Steve & LuAnne Detrick, Major County, #2014-533
5. Christopher M. & Marcy J. Pribyl, Kingfisher County, #2014-535
6. David & Heather Friesen, Major County, #2014-543
7. Tracy D. Whitley and Tamara L. Garcia, Caddo County, #2014-550

F. Consideration of and Possible Action on Applications to Amend Temporary Permits to Use Groundwater:

1. Goldsby Water Authority, McClain County, #2011-607

G. Consideration of and Possible Action on Applications for Regular Permits to Use Groundwater:

1. George F. Norwood Trust, Texas County, #2014-509
2. Mary Lea Sample, Texas County, #2014-514
3. Oklahoma Cementing Cushing, L.L.C., Payne County, #2014-516
4. Kevin Lee Kenney, Cimarron County, #2014-527
5. Steve W., Linda J. and Nathan Johnson, Cimarron County, #2014-549
6. Linda Ann Cooper, Grady County, #2014-554
7. Turkey Trak Ranch, L.L.C., Osage County, #2014-557

- H. Consideration of and Possible Action on Applications to Amend Regular Permits to Use Groundwater:
1. Fischer Family Farms, F.L.P., Texas County, #1990-517
 2. Newport Farms, L.L.C., Cimarron County, #2007-577
- I. Consideration of and Possible Action on Applications to Amend Prior Groundwater Rights:
1. None
- J. Consideration of and Possible Action on Applications for Regular Permits to Use Stream Water:
1. William Bailey Cook, III, Pontotoc County, #2012-018
 2. Oklahoma Department of Wildlife, Muskogee County, #2014-009
 3. Tommy & Shirley Edge, Choctaw County, #2014-015
 4. Matt & Malisa Bramblett, Grady County, #2014-018
 5. Alice & Jimmy Patterson, Caddo County, #2014-022
 6. *Loren & Vera Dierksen, Garfield County, #2014-024 item withdrawn*
 7. Austin Bain, Cotton County, #2014-029
- K. Consideration of and Possible Action on Dam and Reservoir Construction:
- None
- L. Consideration of and Possible Action on Well Driller and Pump Installer Licensing:
1. New Licenses and Operators:
None
 2. New Operators to Existing Licenses:

a. Licensee: Layne Christensen	DPC-0123
1. Operator: Matthew Chapman	OP-2055
b. Licensee: Crescent Services	DPC-0781
1. Operator: Joe Mendez	OP-1998
c. Licensee: W.E.S.T. Drilling	DPC-0896
1. Operator: Robert Williams	OP-2058
- M. Consideration of and Possible Action on Permit Applications for Proposed Development on State Owned or Operated Property within Floodplain Areas:
1. Oklahoma Department of Transportation, Delaware County, #FP-14-18
 2. Oklahoma Department of Transportation, Oklahoma County, #FP-14-19
 3. Oklahoma Department of Transportation, Oklahoma County, #FP-14-20
- N. Consideration of and Possible Action on Applications for Accreditation of Floodplain Administrators:
Names of floodplain administrators to be accredited and their associated communities are individually set out in the August 19, 2014 packet of Board materials.
- O. Consideration of and Possible Action on Resolution Appointing Members of the Water Well Drillers and Pump Installers Advisory Council.
Names of Water Well Drillers and Pump Installers Advisory Council members considered for appointment are set out in the August 19, 2014, packet of Board materials.
- 4. QUESTIONS AND DISCUSSION ABOUT AGENCY MATTERS AND OTHER ITEMS OF INTEREST.**
- A. Presentation on and Discussion of U.S. Geological Survey Scientific Investigations Report No. 2013-5219 on the Central Oklahoma (Garber-Wellington) Aquifer. Chairman Herrmann introduced the presentation stating this major study has been ongoing and he wanted the Board to have an update

on the status. Mr. Strong stated the Garber-Wellington study hasn't been in the forefront for the Board as the Arbuckle Simpson study had been. He said the Chairman had requested an update by staff, but he wanted to emphasize that it is not time for discussion about limits on groundwater withdrawals at this point as the technical study has just finished. The maximum annual yield and equal proportionate share are informed by the science but married with policy and those discussions have not taken place. He anticipated those recommendations within the next year or so.

Ms. Julie Cunningham, Chief, Planning and Management Division, stated to the members the study began in 2008 and is one of many that will be completed in the future due to the Water Plan funding. The agency is on schedule to complete the unstudied basins. She said this is a significant basin in the state, underlying 3,000 acres of land in central Oklahoma with a population of 1.2 million people, over six counties, with every water use and sector. She said there were beneficial mapping products as a result of the study an entire aquifer model to assist in locating water, and to determine thickness in the regions of the aquifer particularly, in the fringe areas where the levels change.

Ms. Cunningham introduced the study team and authors: Chris Neel, Supervisor for OWRB Technical Studies Team; Shana Mashburn and Derek Ryter, US Geological Survey hydrologists; John Harrington, Association of Central Oklahoma Governments; also Tinker Air Force Base, Oklahoma Geological Survey, and the Cities of Norman and Edmond.

Mr. Chris Neel introduced the OWRB staff geologists: OWRB Technical Studies staff Jacob Hernandez, Derrick Wagner, Byron Waltman, Kyle Spears, John Sanford, Qualla Ketchum and Jessica Magers who conducted field work collecting data, building models etc. Chairman Herrmann recognized their efforts, and Mr. Strong noted these geologist represent some of the many scientists on staff in the agency. Mr. Neel began the presentation stating the study on the complicated aquifer began in Fall 2008 and there were many cooperators: Scott Christenson – USGS, John Harrington – ACOG, Scott Bowen – Tinker AFB, Neil Suneson- Oklahoma Geological Survey, Stan Paxton – USGS, and Noel Osborn– OWRB/USGS/NPS. Funding was through a 50/50 cost match with the Bureau of Reclamation, and the OWRB contracted with USGS; the report was published in February 2014 at a cost of \$764,000. He said the aquifer is located in central Oklahoma and that many municipalities utilize the aquifer; however, Oklahoma City does not—Edmond and Norman use about 50% surface water and 50% groundwater. He displayed a map that illustrated the various geologic characteristics, noting the majority of the aquifer is the Garber Sandstone and Wellington Formation. The shale units on top do not allow much recharge from precipitation in that portion (which likely follows the Canadian-Oklahoma County border as there is not much data available and the exact boundary is unknown). He likened the geology of the Arbuckle Simpson as layers in a cake and the Garber-Wellington framework is not as simply constructed as the layers are not continuous throughout, and more like the Mississippi River delta, for example.

In an effort to characterized the aquifer, Mr. Neel said staff studied 11,000 lithologic well driller logs, and information from 600 gamma ray geophysical logs—domestic, public water supply, or any type of well log submitted by a driller. He showed information concerning the percent of sand in the aquifer indicating where water yields are located. The members asked and he explained that the definition of sand included sandstone, that the gamma rays wells were the municipal wells, and this information was included in the groundwater flow model.

Mr. Neel said other information considered was permitted groundwater use, illustrating that from 1995-2008 the average permitted groundwater use by municipalities was approximately 41,155 ac-ft, or 73% (29,989 ac-ft), and the municipalities that utilize the aquifer, noting the City of Edmond is the largest user. He showed the estimated domestic use, utilizing 1990-2000 census data to estimate population served by domestic wells and average domestic use per year, estimating that by 2010, 85 gallons per person per day is used in the central Oklahoma area, or 17,000 ac-ft annually, equating to 25-30% use of the aquifer.

A potentiometric map published in 2009 compared 160 of the wells from a similar map produced in 1987 making it possible to indicate how the aquifer had changed, indicating average saturated thickness of 400-500 ft, average recharge of 1.85 inches, and average decline in water levels of 3.75 feet (over 22 years). Mr. Drummond asked and Mr. Strong spoke to determining the MAY and there are conservative assumptions of pumping at certain rates, and assumptions of who is pumping, that mining is allowed, and considering a minimum 20 year-life. An aquifer test was conducted by the City of Norman production and other wells at various levels where sandstone and shale are layered with the purpose to pump wells which were completed in the same sandstone unit and to measure the drawdown. The test indicated that when sealed properly, there is not localized drawdown in the nearby domestic wells in the short term. Mr. Neel also talked about the digital groundwater flow model which was divided into eleven layers considering what is coming from wells, how much water is going in from precipitation, lakes levels and their effect on the aquifer, how much water is discharging to streams, and also water levels from 2009. He explained how the flow model is calibrated, and how drawdown scenarios are modeled for 50 years, and two maximum annual yield scenarios showing the rate from pumping 50% of the aquifer having 15 feet of saturated thickness which with varying factors indicated 1.1 and 1.5, and pumping 2.0 af per acre per year the aquifer life is 35-41 years. Mr. Neel concluded his report.

During the presentation, members talked about the material holding the water (sand/sandstone), whether the well drillings are perforated by municipalities, whether there is horizontal drilling of water wells, that arsenic is naturally occurring in the aquifer and generally on the western side, that domestic wells are not required to be permitted unless using more than 5 acre-feet per acre per year or irrigating 3 acre-feet, and what the Board will look at when determining the maximum annual yield.

Chairman Herrmann concluded the discussion stating this is good information on which to base a decision.

Mr. Buchanan departed the meeting at 10:20 a.m. Chairman Herrmann asked Mr. Bob Drake to be acting secretary in Mr. Buchanan's absence.

5. SPECIAL CONSIDERATION

- A. No items. There were no items for consideration.
- B. Consideration of and Possible Action on Items Transferred from Summary Disposition Agenda, if any. There were no items transferred from the Summary Disposition Agenda.

6. NEW BUSINESS

Under the Open Meeting Act, this agenda item is authorized only for matters not known about or which could not have been reasonably foreseen prior to the time of posting the agenda or any revised agenda.

Chairman Herrmann stated there were no New Business items for the Board's consideration. He reminded the members about the City of Moore facility dedication following the September meeting, and members indicated their interest in attending.

7. ADJOURNMENT

There being no further business, Chairman Herrmann adjourned the meeting of the Oklahoma Water Resources Board at 10:55 a.m. on Tuesday, August 19, 2014.

OKLAHOMA WATER RESOURCES BOARD

_____/s/_____
Rudolf J. Herrmann, Chairman

_____/s/_____
Linda P. Lambert, Vice Chairman

_____/s/_____
Edward H. Fite

_____/s/_____
F. Ford Drummond

_____/s/_____
Marilyn Feaver

_____/s/_____
Richard Sevenoaks

_____/s/_____
Bob Drake

_____/s/_____
Absent
Jason W. Hitch

ATTEST:

_____/s/_____
Tom Buchanan, Secretary
(SEAL)