



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

CHRIS CHRISTIE
Governor

BOB MARTIN
Commissioner

KIM GUADAGNO
Lt. Governor

MAIL CODE 401-0Q
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New Jersey Department of Environmental Protection NJ State Well Drillers and Pump Installers Examining and Advisory Board Meeting Minutes for January 26, 2017

Approved by the Board on March 16, 2017

Board Member Attendance:

Present

Art Becker (Chairman)
Gary Poppe (Vice-Chairman)
Gordon Craig
Joe Yost
Joe Pepe
Richard Dalton
Carol Graff

Absent

NJDEP representative position vacant
NJDEP representative position vacant

Board Legal Representative: Jill Denyes, Deputy Attorney General (DAG), NJ Division of Law (present at the meeting from the opening until 11:30 am)

NJDEP, Geologic and Water Survey: Steve Domber

NJDEP Bureau of Water Allocation & Well Permitting Staff Present: Terry Pilawski, Pat Bono, Julia Altieri, Steve Reya, Michael Schumacher, Mark Ortega, Jeremy Wick, Steve Kelly and Melia Stoop

NJDEP, Water Compliance & Enforcement: Bryan Barrett

NJDEP Division of Water Supply & Geoscience, Office of the Director: Katrina Angarone (present from approximately 10-10:20 am)

Members of the Public Present: Denis Crayon, New Jersey Ground Water Association (NJGWA) President and Summit Drilling representative

1. Call to Order-

The meeting was called to order by Chairman Art Becker at 9:48 am with a quorum present.

2. Introductions- Steve Domber, who works in the Department's Geologic and Water Survey, introduced himself to Board members and provided some background on his experience with the Department. He has primarily focused on water supply issues throughout his career. Mr. Domber is extensively involved in drought monitoring and management practices. Department staff is recommending to the Commissioner's office that S. Domber will be appointed to the Board to serve in place of Steve Doughty who has recently retired.

3. Review and Certification of the Minutes for the November 22, 2016 Meeting –

A motion to approve the minutes without change was made by G. Poppe, seconded by J. Yost and approved unanimously.

4. Review and Certification of the Minutes for the October 27, 2016 Conference Call –

A motion to approve the minutes without change was made by G. Poppe, seconded by G. Craig and approved unanimously.

5. Review and Certification of Well Driller and Exam Scores for the December 7, 2016 Master, Journeyman, Journeyman B, Monitoring Well Driller, Soil Borer and Pump Installers License Categories –

Master– A motion to approve one (1) listed license exam score was made by G. Poppe, seconded by Gordon Craig and approved unanimously. The applicant did not pass the exam.

Journeyman- A motion to approve three (3) listed license exam scores was made by G. Craig, seconded by J. Yost and approved unanimously. No applicants passed the exam.

Journeyman B- A motion to approve two (2) listed license exam scores was made by R. Dalton, seconded by Gordon Craig and approved unanimously. No applicants passed the exam.

Monitoring– A motion to approve thirteen (13) listed license exam scores was made by G. Poppe, seconded by C. Graff and approved unanimously. Five (5) individuals passed the exam and are now eligible for licensure.

Soil Borer– A motion to approve three (3) listed license exam scores was made by G. Craig, seconded by C. Graff and approved unanimously. All three (3) individuals passed the exam and are now eligible for licensure.

Pump Installer – A motion to approve seven (7) of the listed license exam scores was made by R. Dalton, seconded by J. Yost, and approved by all members with the exception of J. Pepe who abstained. One (1) individual passed the exam and is now eligible for licensure.

6. Well Rule Update by Katrina Angarone-

Katrina Angarone from NJDEP Division of Water Supply & Geoscience, Office of the Director, informed the Board that the proposal to update the well rules N.J.A.C. 7:9D has been sent to the Governor's office. She and other Division staff recently met with representatives of the Governor's Office to brief them on the rule and said the concepts of the proposed revisions were well received by those present. She thanked Bureau staff for their recent assistance in editing and revising the recent draft and added that Board legal counsel, Jill Denyes, Deputy Attorney General (DAG), NJ Division of Law, and one of her colleagues were of great value in reviewing the draft and providing their input before the document was presented to the Governor's office.

7. 2017 Board Meetings and Conference Call Dates-

Board members were reminded that 2017 meetings are scheduled for the following dates:

- January 26, March 16, May 25, July 20, September 21 and November 21
- Two (2) conference calls will be held to review/approve the April and October Exam scores. The conference calls will take place on April 27, 2017 and October 26, 2017.

Licensing Exam Dates for 2017 are: April 6, June 7, October 4 and December 6.

8. GeoPro Power TECx Geothermal Grout Thermal Enhancement Compound–

Following the Board's motion that recommended approval of the product at the November meeting, an approval letter signed by Terry Pilawski, was sent on January 3, 2017, a copy of which was provided to Board members. The letter approved seven (7) variations of geothermal grout mixtures manufactured by Geo Pro, Inc. PowerTECx mixed with Thermal Grout (TG) Lite or TG Select at multiple conductivity (Btu/hr ft°F) values (0.79, 0.88, 1.00, 1.07, 1.14, 1.20 and 1.40) were approved for use in NJ.

An Additional product briefly discussed at the November meeting was CG Plus, another geothermal grout from Geo Pro, Inc. Concerns were raised by Board members that the bentonite-to-cement ratio would result in the failure of the cement to properly cure, which would potentially leach in such a way as to raise the pH of the surrounding groundwater. At the November meeting, G. Craig volunteered to mix up a sample in accordance with the manufacture's

specifications for Board members to inspect. A second question raised in the November meeting was whether this product would be appropriate to use in consolidated formations. The well rules only permit a cement-based grout to be used in rock formations due to concerns over bentonite grouts washing out over time. To date, the only mix approved in the regulations is considered by many drillers to be impractical to mix and pump in the field. Hence, there is strong interest in finding another type of geothermal grout for use in rock formations. G. Craig did bring a sample to the January meeting and members commented that, although the sample was firmer than bentonite, it was still somewhat moldable.

In order to address the concerns regarding the effect of this grout on groundwater pH, G. Craig again volunteered to submerge a cured sample in distilled water for periodic monitoring of pH. The results will be made available to the May Board meeting.

9. Drought Update by Steve Domber-

Rainfall, stream flows, shallow ground water and reservoir levels have improved slightly over the last 30 to 60 days and overall water supply conditions have responded positively. However, conditions have not improved to the point where the department is considering changing the current warning/watch conditions across the state. Reservoir levels are still below long-term averages for this time of year and groundwater levels across the state in the drought network are in the “severely dry” category. The conditions present in late spring, at the start of the summer demand period, will be critical information the department will use to guide its actions in the following months. Ideally conditions will return to normal before then.

A Drought Watch was issued on July 25, 2016, for 12 northern NJ counties. The persistent dry weather resulted in the next level of response, a Drought Warning designation for the 12 counties already under Watch as well as Monmouth and Ocean counties, being made on October 22, 2016. A Drought Warning is a non-emergency, supply-side response by the NJDEP to preserve and balance existing water supplies within affected regions. Drought Warning Administrative Order 2016-10 (AO 2016-10) issued by Commissioner Martin directed modified stream passing flows, water transfers, and other related measures. The objective under a Warning is to avert or lessen the impact of an impending water emergency by balancing supplies between systems/regions.

10. Horizontal Directional Drilling (HDD) by Richard Dalton-

In response to the discussion initiated at the November meeting, R. Dalton presented more information on horizontal directional drilling (HDD) projects that have been performed in NJ along with several proposed HDD projects he has recently reviewed. He reiterated how the intent of the Subsurface and Percolating Waters Act (N.J.S.A. 58:4A) is to protect groundwater and the fact that HDD is essentially unregulated by the Department inconsistent with this mission,

especially considering that HDD drilling technology has advanced to the point where boreholes are drilled up to five (5) ft. in diameter and can be thousands of feet in length and hundreds of feet in depth. As suggested at the November meeting, a strategy to address failed installations that result in abandoned boreholes, was explored as those pose the most serious and imminent threat to both groundwater and public safety. The Board's legal advisor, DAG J. Denyes, found no specific mention of drilling for oil/gas/utility lines in the above referenced statute and could not locate any written interpretation of whether or not such activity would fall within the jurisdictional authority prescribed by the statute. She also noted that federal law and federal entities, such as FERC, regulate such activities, so the Board would need to be mindful that the state well drilling laws would not supersede any federal laws.

T. Pilawski suggested developing guidance on how to address abandoned boreholes created during HDD drilling. Such guidance could be provided to the Department's Office of Permit Coordination and could include a checklist stating that all HDD projects under review are required to contain an abandoned borehole plan as a contingency plan for situations when a HDD contractor is unable to install the pipe or the utility fails to complete the project as proposed.

G. Poppe made a motion that the Division of Water Supply and Geoscience develop guidance for the Office of Permit Coordination to address the issue of abandoned boreholes drilled for pipelines and utility line projects. The guidance should address the gravity of the situation as a threat to groundwater resources and specify under what conditions the borehole presents a concern. The motion was seconded by G. Craig and approved unanimously.

11. Program Updates from the Well Permitting Section-Training Outreach:

- **Online training outreach is available from Gould's Pumps free of charge.** P. Bono mentioned that a representative from Xylem had contacted her regarding their online training initiatives. J. Pepe, who is familiar with Gould's and other online training available from a

variety of other pump manufacturers, suggested that the well permitting staff inform applicants for NJ license exams that this training is available and would be beneficial as part of their test preparations. Denis Crayon agreed that this would be very beneficial but pointed out that there are some aspects that would not be in agreement with the NJ well rules.

- **Data Management of Antique wells now complete** – P. Bono announced that all the paper Antique Well Files are now in the well data base system. The wells, about 6900 in total, pre-date the 1947 statute requiring permits and go back as far as the late 1800s.

- At this point, it was noted that J. Denyes left the meeting at 11:30 am to attend another meeting.
- **New Procedures for Resolving Lost and Destroyed Wells** -M. Ortega presented a summary of the coordination efforts by the Division of Water Supply, Site Remediation program and the Enforcement Bureaus on how to resolve discrepancies and problems that arise from the reporting of lost and destroyed wells via a variety of Department programs. New internal procedures have been developed and a guidance document has been drafted for use by LSRPs, well drillers and others as to what level of effort must be expended before requesting that a well be declared “lost” or “destroyed” and its status noted as such in the database. T. Pilawski agreed with the Board suggestion to provide a copy of the guidance to the Department’s LSRP Board in hopes that they will decimate this document to their members.
- **Summary of Enforcement & Field Activities-** T. Pilawski presented an update on a current situation in Gloucester County where a field of closed-loop geothermal wells was installed without permits by an unlicensed driller. Staff from both the well permitting program and the Southern Enforcement Bureau met with representatives from the company and ordered all well installation activities to cease immediately. The situation was made more egregious when the property owner continued with the well installations despite assuring the Department that no further activity would occur at the site. Rather than decommission the wells in place, the property owner is proposing to remove the current loops and re-use the hole to re-install the loop with proper grouting. This is the first time a party has requested to re-use HDPE loops and the logistics of being able to accomplish this successfully is unknown. As a result, it has been established that a pilot demonstration take place first to establish the effectiveness of the proposed re-use techniques. A variety of concerns were discussed and S. Reya emphasized that, while there has been verbal discussion, a formal written pilot plan has not yet been submitted for Department review. Several Board members indicated that they would like to present when this activity takes place to help determine the effectiveness of the proposed methods. G. Poppe made the motion listed below. G. Craig seconded the motion and it was agreed upon unanimously.

Based on the seriousness of the situation and complexity of the proposed methods for remediating and re-installing the eighty closed-loop geothermal wells on this site, the Board requests advance notice of a pilot field demonstration so that a member or members, without having a quorum, may be present onsite to observe the proposed method(s) used in the pilot tests.

In the absence of the Board's legal advisor, T. Pilawski offered to consult with the Department's management as well as the Board's legal advisor to determine if there are any concerns about Board members witnessing part of the pilot demonstration for the purposes of providing technical advice on the effectiveness of the methods to Department staff.

- **Additional Updates on Enforcement Activities were presented by J. Altieri and B. Barrett.**

- A) Enforcement Actions - The Bureau continues to work towards settling confirmed issues of violations of the well drilling regulations in cooperation with Central, Northern and Southern enforcement regions with several different well drilling companies. The Central Bureau of Enforcement has assisted the well permitting program by issuing ten (10) letters ordering the sealing of wells and settlement offer letters. Violations include: improper grouting of closed loop geothermal, domestic and irrigation wells; instances of drilling without a proper license; drilling without permits; improper well construction other than grouting; improper decommissioning methods, and failure to get prior approval for decommissioning wells.
- B) Field Work- Well Permitting Section staff performed two (2) field inspections over the last two months with one resulting in a confirmed violation of the construction standards for a new domestic well and the other as follow-up for an on-going investigation of illegally constructed wells. Bureau staff are scheduled to witness an upcoming decommissioning of a well ordered sealed for being drilled without a valid permit.

- At 11:54 am Board member J. Pepe left the meeting at this point to attend another scheduled meeting.

- **Summary of Well Permitting Program Output for 2016:**

Mike Schumacher made up a Well Permitting 2016 Year End Progress Report on the number of Permit Reviews, Enforcement Activities, Field Work, Well Searches, & Licensing activities over the past year. (For the sake of brevity, a copy of his summary is attached.)

Note: Bryan Barrett exited the room to attend another meeting.

- 12. Final Note-**Denis Crayon brought to the Board's attention a public statement issued by the New York Department of Environmental Conservation (NYDEC) regarding the discovery of falsified records and documents submitted by a remediation company responsible for the cleanup of a major site in Staten Island. The company had been altering the sample results taken from monitor wells to the point where it appeared the site was clean. The impending court charges carry substantial financial penalties and jail time.

Meeting Adjournment

A motion to adjourn was made by G. Poppe at 12:15pm, seconded by G. Craig and approved unanimously.



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New Jersey Department of Environmental Protection NJ State Well Drillers and Pump Installers Examining and Advisory Board Meeting Minutes for March 16, 2017

Approved by the Board on July 20, 2017

Board Member Attendance:

Present

Art Becker (Chairman)
Gary Poppe (Vice-Chairman)
Joe Yost
Richard Dalton
Carol Graff
Steve Domber
Jeff Hoffman

Absent

Gordon Craig
Joe Pepe

Board Legal Representative: Robert Guzek, Deputy Attorney General (DAG) & DAG Jill Denyes (DAG), both with the NJ Division of Law

NJDEP Bureau of Water Allocation & Well Permitting Staff Present: Terry Pilawski, Pat Bono, Julia Altieri, Steve Reya, Michael Schumacher, Akinsana Ode, Brandon Carreno and Melia Stoop

NJDEP, Water Compliance & Enforcement: Bryan Barrett

Call to Order-

The meeting was called to order by Chairman Art Becker at 9:50 am with a quorum present.

Introductions-

Jill Denyes, DAG, announced that she will no longer be able to serve as the Board's legal counsel due to scheduling conflicts with another state Board assignment. She introduced Robert Guzek, DAG, who will now serve as Board's legal advisor. On behalf of all the Board members, Chairman Art Becker presented with J. Denyes with a letter commending her dedication to the Well Driller and Pump Installer Advisory Board over the last seven years and good wishes in her future endeavors.

It was further noted that R. Dalton recently celebrated his 50-year anniversary as a state employee. He was presented with a letter, signed by Chairman Art Becker on behalf of the Board members, commending his dedication and service to NJ residents over the past 50 years.

1. **Administrative Order No. #2017-02**, which appointed the individuals listed below to serve as members of the State Well Drillers and Pump Installers Examining and Advisory Board. Effective March 9, 2017, each member is appointed for a term of three years.

MEMBERS

Art Becker
F. Gordon Craig
Richard Dalton
Steven Domber
Carol Graff
Jeffrey Hoffman
Joseph Pepe
Gary Poppe
Joseph Yost

CAPACITY

Master Well Driller
Licensed Well Driller – any class
NJDEP Representative
NJDEP Representative
Public Member
NJDEP Representative
Licensed Pump Installer
Master Well Driller
Master Well Driller

2. **Review and Certification of the Minutes for the January 26, 2017 Meeting –**
One suggested revision was noted under item 10 of the January 26, 2017 draft meeting minutes. A statement, which mentioned when DAG Denyes left the meeting, was included twice. It was noted that this reference should be deleted from item #10 and left in #11.
A motion to approve the minutes, with the one change noted above, was made by G. Poppe, seconded by C. Graff and approved unanimously
3. **Review and Certification of Well Driller and Exam Applicants for the April 6, 2017 Master, Journeyman, Journeyman B, Monitoring Well Driller, Soil Borer and Pump Installer License Categories –**

Master– A motion to approve one (1) listed license exam applicant was made by G. Poppe, seconded by Joe Yost and approved unanimously.

Journeyman- A motion to approve two (2) listed license exam applicants was made by Joe Yost, seconded by Carol Graff and approved unanimously.

Journeyman B- A motion to approve three (3) listed license exam applicants was made by Gary Poppe, seconded by Richard Dalton and approved unanimously.

Monitoring- A motion to approve thirteen (13) listed license exam applicants was made by Jeff Hoffman, seconded by Joe Yost and approved unanimously.

Soil Borer- A motion to approve five (5) listed license exam applicants was made by Carol Graff, seconded by Gary Poppe and approved unanimously.

Pump Installer – A motion to approve five (5) of the listed license exam applicants was made by R. Dalton, seconded by Carol Graff, and approved unanimously.

4. 2017 Board Meetings and Conference Call Dates-

Board members were reminded that 2017 meetings are scheduled for the following dates:

- May 25, July 20, September 21 and November 21
- Two (2) conference calls will be held to review/approve the April and October Exam scores. The conference calls will take place on April 27, 2017 and October 26, 2017.

5. Senate Bill #2891- Proposal requiring Attorney General supervision of occupational and professional licensing boards-

There is a proposed bill which would require State Attorney General Supervision of occupational and professional licensing Boards. Clarification was requested as to whether any language in the proposal would impact the Board. J. Denyes explained the origin of this bill proposal and concluded that it is unlikely that anything in the proposal would have any adverse or significant impact on the current operation of the Board.

6. Update on the Board Request to witness field pilot demonstration for remediation of unpermitted geothermal wells-

As part of a continued discussion from the last meeting, Department staff had pursued the feasibility of accommodating the Board's request to have some members present to observe the effectiveness of a proposal to recondition an illegally installed closed loop geothermal system numbering several dozen wells. This request had been raised by the T. Pilawski to management and she explained that there were a number of concerns associated with this request including liabilities associated with access, safety and the intended role for the participating Board members. Several details could not be discussed openly as this is an ongoing enforcement case and the Department does not share certain information until a public document or action is taken. Before getting into specific questions and concerns regarding these liabilities, J. Denyes suggested that a closed session to freely discuss these would be appropriate. A motion was made by G. Poppe,

seconded by J. Yost and approved unanimously to go into a closed session at 10:33am to discuss issues related to potential litigation in which the Board may become a party or to which the Board members may be called as witnesses. The closed session ended at 11:15am and a brief break was called to allow others to reenter the room.

Following return to open session at 11:30 am the following motion was made by J. Yost:

Based on the concerns of the Board members regarding the difficulty of the proposed activity, the Board strongly recommends that the Department hire an independent NJ licensed driller of the proper class with expertise in the drilling and installation of closed loop geothermal wells to be present on site for the pilot demonstration. If the Department is not able to hire such an expert as described, the Board recommended that one licensed Board member with experience in geothermal drilling be present on site for the pilot demonstration to assist the Department with interpreting and evaluating the effectiveness of the rehabilitation and re-installation of the wells.

Further, the Board recommended that the Department require that only an experienced NJ licensed driller of the proper class operate the drill rig during the pilot demonstration; specifically excluding an unlicensed person to work under the supervision of a NJ licensed driller.

The motion was made by J. Yost seconded by G. Graff and approved unanimously.

7. Drought Update by Steve Domber-

S. Domber provided an update on hydrologic conditions across the state and provided colored graphs to visualize several trends between January 2015 and March, 2017. He noted that over the last year average temperatures have been warmer; while total precipitation has been lower than average. He discussed how the ground water levels vary by county and reservoir levels are also tracked. Some reservoirs have recovered they are still below normal on average and additional spring precipitation will be necessary to restore desired levels to cope with summer demand.

8. Horizontal Directional Drilling (HDD) by Richard Dalton-

At the November and January meetings, the subject of developing guidance to address the need for proper decommissioning of abandoned horizontal directional drilling (HDD) projects in which the installation of the utility line/piping has failed. Currently, these open boreholes, many of which are large diameter or lengthy, will transgress across different water bearing zones or serve as direct conduits for surface to groundwater contamination. In response, R. Dalton, M. Schumacher and Akin Ode, who works in the Water Allocation Section, recently met to begin drafting a guidance document, which will be provided to the Department's Office of Permit Coordination to give information to other

programs for implementing contingency plans that require grouting of these large diameter boreholes that have the potential to adversely impact the State's ground water resources.

- 9. Update on Well Rules:** T. Pilawski noted that the draft revisions to the well rules, N.J.A.C. 7:9D are currently under review in the Governor's office. A. Becker said that he was going to a meeting with Denis Crayon and John Robbins, who will all be representing the New Jersey Ground Water Association (NJGWA) at the Governor's Office on Wednesday, March 22, 2017. They will be inquiring as to the status of the rule proposal review.

10. Summary of Enforcement & Field Activities -Julia Altieri -

A summary of Well Permitting Program's enforcement and field activities over the past seven (7) weeks was presented by Julia Altieri.

A) Field work-

Well Permitting Section staff performed six (6) field inspections during the past seven (7) weeks. Well permitting staff witnessed two (2) well decommissioning that were a result of wells drilled before a driller had obtained a permit, one domestic and one monitor well. In both cases, the wells were ordered sealed by the Department. Staff also witnessed one (1) new test well (intended for future public supply) construction (at Stillwater) and conducted two (2) days of follow up field work concerning several ongoing investigations of illegally constructed wells. A Phase 2 assessment investigation was also performed.

B) Pending settlement of well drilling violations-

The Bureau is working with the Central, Northern and Southern enforcement regions towards settlement of confirmed well construction violations involving several different well drilling companies. Bureau staff will be onsite to witness the decommissioning of these wells over the coming weeks. Further enforcement action is anticipated as it becomes necessary to document and resolve all outstanding issues.

Meeting Adjournment

A motion to adjourn was made by G. Poppe at 12:11 pm, seconded by J. Yost and approved unanimously.



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BOB MARTIN
Commissioner

State Well Drillers and Pump Installers Examining and Advisory Board Conference Call Minutes for April 27, 2017

Approved by the Board on May 25, 2017

Board Members Present: Jeff Hoffman, Steve Domber

Board Members Participating Via Telephone: Art Becker (Chairman), Gary Poppe (Vice Chairman), Joe Yost, Gordon Craig and Carol Graff

Board Members Absent: Joe Pepe, Richard Dalton

NJDEP Water Supply Staff Present: Terry Pilawski, Pat Bono and Steve Reya (Bureau of Water Allocation and Well Permitting).

- 1. Call to Order** –A. Becker called the meeting to order at 10:13 am with a quorum present via telephone.
- 2. Certification of Exam Scores for April 6, 2017 Master, Journeyman, Journeyman B, Monitoring, Soil Borer and Pump Installers Exams–**

Master- A motion to certify the exam score for one (1) listed individual was made by G. Poppe, seconded by J. Hoffman and Approved unanimously. The one individual who sat for the Master well driller license exam passed.

Journeyman- A motion to certify the exam scores for two (2) listed individuals was made by S. Domber, seconded by J. Yost and approved unanimously. Neither of the individuals passed the exam.

Journeyman B – A motion to certify the exam scores for three (3) listed individuals was made by G. Craig, seconded by J. Yost and approved unanimously. None of the individuals passed the exam.

Monitoring – A motion to certify the exam scores for twelve (12) listed individuals was made by S. Domber seconded by G. Craig and approved unanimously. Four (4) individuals passed the exam.

Soil Borer – A motion to certify the exam scores for five (5) listed individuals was made by G. Poppe, seconded by G. Craig and approved unanimously. Three (3) individuals passed the exam.

Pump Installer – A motion to certify the exam scores for five (5) listed individuals was made by G. Poppe, seconded by J. Hoffman and approved unanimously. One (1) individuals passed the exam.

3. **Adjournment-** The call was adjourned at 10:21 am.



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New Jersey Department of Environmental Protection NJ State Well Drillers and Pump Installers Examining and Advisory Board Meeting Minutes for May 25, 2017

Approved by the Board on July 20, 2017

Board Member Attendance:

Present	Absent
Art Becker (Chairman) Gary Poppe (Vice-Chairman) Gordon Craig Joe Yost Joe Pepe Richard Dalton Carol Graff Steve Domber Jeff Hoffman	None

Board Legal Representative: Robert Guzek, Deputy Attorney General (DAG), NJ
Division of Law

NJDEP Bureau of Water Allocation & Well Permitting Staff Present: Terry Pilawski, Pat Bono, Julia Altieri, Steve Reya, Michael Schumacher, Mark Ortega, Jeremy Wick, Stephen Kelly Mark Miller and Melia Stoop

NJDEP, Water Compliance & Enforcement: Bryan Barrett

1. Call to Order-

The meeting was called to order by Vice-Chairman Gary Poppe at 9:52 am with a quorum present.

2. Introductions-

Mark Miller was introduced as a new member Bureau of the Water Allocation and Well Permitting. He has worked for the Department for many years in various capacities and will be working in the Water Allocation permitting groups.

3. Review and Certification of the Minutes for the March 16, 2017 Meeting –A

motion to approve the March 16, 2017 meeting minutes with this change was made by R. Dalton, seconded by J. Yost and approved by all, except for G. Craig and J. Pepe, who abstained. Later in the meeting, Robert Guzek, the legal advisor to the Board, suggested that the open session minutes be revised to note the specific reason(s) for which the Board entered closed session at the March meeting. The minutes will be revised accordingly for Board members to review at the July meeting.

4. Review and Certification of the Minutes for the April 27, 2017 Conference Call-

A motion to approve the April 27, 2017 minutes for the conference where the April 4th exam scores was certified by the Board was made by C. Graff, seconded by G. Craig, and approved by all, except for J. Pepe, who abstained.

5. Review and Certification of the Closed Session Executive Minutes for the March 16, 2017 Meeting -

Consistent with Item 3 above, R. Guzek, DAG, requested that the closed (executive) session minutes be changed to reflect the rationale as to why the Board moved to enter closed session. J. Yost motioned to approve the minutes with this revision. The motion was seconded by C. Graff and approved by all, except for G. Craig and J. Pepe, who abstained.

6. Review and Certification of Well Driller and Exam Applicants for the June 7, 2017 Master, Journeyman, Journeyman B, Monitoring Well Driller, Soil Borer and Pump Installer License Categories –

Master– There were no applicants for the June 7, 2017 Master Well Driller Exam.

Journeyman- A motion to approve three (3) listed license exam applicants was made by G. Craig, seconded by J. Hoffman and approved unanimously.

Journeyman B- A motion to approve two (2) listed license exam applicants was made by J. Yost, seconded by R. Dalton and approved by all, except for G. Craig, who abstained.

Monitoring– A motion to approve fourteen (14) listed license exam applicants was made by Gary Poppe, seconded by Gordon Craig and approved unanimously.

Soil Borer– A motion to approve two (2) listed license exam applicants was made by Gary Poppe, seconded by Steve Domber and approved unanimously.

Pump Installer – One of the listed applicants was homeschooled and was thus not in possession of a traditional High School Diploma or GED, a requirement prescribed by well rules in N.J.A.C. 7:9D. Instead, the applicant provided a diploma that was

generated by the homeschooling parent. Staff had checked with the NJ Department of Education website for clarification on the validity of the home-generated diploma but found none. The applicant does meet the experience requirement to sit for the exam. Suggestions were made as to how to proceed with determining the qualifications for home schooled students in general. Additional time will be necessary for Department staff and the Board DAG to determine whether or not the applicant's diploma is found to be equivalent to possessing "a high school diploma or G.E.D." as stipulated in the regulations.

A motion to approve two of the three (3) listed license exam applicants was made by G. Poppe, seconded by J. Yost, and approved unanimously. The Board will be updated on additional findings related to the third applicant at the next regularly scheduled meeting.

7. 2017 Board Meetings and Conference Call Dates-

Board members were reminded that 2017 meetings are scheduled for the following dates:

- July 20, September 21 and November 21
- A conference call will be held on October 26, 2017 to review/approve the October Exam scores.

8. Discussion on the USGS Private Well Consortium-

A. Becker provided an update on the second USGS Private Well Consortium meeting, which was held on April 20, 2017. (A. Becker was not able to attend the Department's initial meeting for the Private Well Consortium held on May 10, 2016.) He said that representatives from the NJ Geologic and Water Survey as well as the Bureau of Safe Drinking Water made informative presentations on drinking water quality issues. He noted that 46 individuals were in attendance, representing approximately 30 different organizations. Those present included well drillers, plumbers and regulatory officials. One of the issues of concern is the need to have knowledgeable professionals evaluate and determine what types of water treatment equipment is effective in removing contaminants from potable water systems. The Department is working to put together a task force to evaluate the feasibility of licensing individuals who install water treatment equipment for residential water systems. As has been discussed at previous meetings, this issue also touches upon the licensing jurisdiction issue of NJ Department of Community Affairs (NJDCA) licensed master plumbers and NJDEP licensed well drillers/pump installers. A. Becker has volunteered to participate on the task force and will keep the Board and Department apprised of any updates regarding any proposed new licenses as the task force has progresses on this issue.

9. Update on the Board Request to Witness a Field Pilot Demonstration for Re-Commissioning of Unpermitted Geothermal Wells-

On May 19, 2017 the Department entered into an Administrative Consent Order (ACO) with the party responsible for installing 80 geothermal wells in violation of N.J.A.C. 7:9D. The ACO requires the responsible party to pay penalties for the violations of these rules as well as develop

and implement a compliance plan, which is acceptable to the Department, to recommission or decommission the wells. As a result of a discussion on this case at the March 16, 2017, Board members strongly recommended that the Department hire an independent NJ licensed driller of the proper class with expertise in the drilling and installation of closed loop geothermal wells to be present on site for the pilot demonstration (for the recommissioning/decommissioning of the wells). Further, the motion stated that if the Department is not able to hire such an expert, that one licensed Board member with specific experience in geothermal drilling be present on site for the pilot demonstration to assist the Department with interpreting and evaluating the effectiveness of the rehabilitation and re-installation of the wells. T. Pilawski discussed how language in the signed ACO may potentially allow for Board members to be present onsite to assist the Department in evaluating the attempts to recommission the wells. Several Board members requested a copy of the pilot plan proposal once submitted to the Department for review. T. Pilawski will check with the Department's legal counsel and see if it is permissible to share the document at this stage, as there is not yet an agreed upon pilot plan.

10. Multi-Level Monitoring Well Systems-

Board members reviewed an April 14, 2017 letter from Carl Keller of Flexible Liner Underground Technologies, LLC (FLUTe), in which Mr. Keller questions the effectiveness of using certain other types of multi-level well systems to delineate and monitor contamination in groundwater. FLUTe technology allows a single borehole (well) to function as a multiport vertical sampling system and he maintains that his system provides a better seal vertical and, consequently, prevents vertical migration of contamination. Mr. Keller asserts that one system in particular does not properly seal off and isolate the different sampling zones, allowing contaminants to vertically migrate throughout the borehole. He noted that isolating sampling areas to discrete intervals is the intent of the regulatory requirement and that no monitoring well may contain more than 25 ft. of open borehole. After thorough review of Mr. Keller's letter, the Board found that he did raise some valid points and there might be instances in which the use of certain products would not be appropriate. Board members, however, also determined that none of the manufacturer designs, for any of the multi-level systems, of which there are several in addition to FLUTe, are appropriate for installation at all sites. Specifically, geologic formation, static water level, and contaminant type(s) among other things present in any given environment may favor one design over another. Members felt that no one specific manufactured system is appropriate for all sites. Similarly, they did not believe the Department should effectively ban any one particular manufactured product based on the fact it

would not work in all instances. These systems are currently installed on a case-by-case basis via a deviation request that is submitted along with the well permit application and reviewed by Department staff prior to issuing a well permit. P. Bono will draft a letter to this effect.

11. GeoPro Power TEX Geothermal Grout-

S. Reya presented a summary of a recent approval request by GeoPro for their Power TEC geothermal grout product which included independent lab permeability testing. Review of the supplied documentation by Board members raised some questions about the testing procedure that was used by the independent certified laboratory. G. Craig volunteered to look into this issue and will notify R. Dalton and S. Reya of his findings. If the questions are answered to the satisfaction of the Board, GeoPro staff will be notified that they may proceed with the required field demonstration to show that the product can be mixed in accordance with the manufacturer-provided specifications and placed in a geothermal borehole with conventional grouting equipment.

Note: J. Pepe left the meeting at this point (12:12 pm) for another engagement.

12. Drought Update by Steve Domber-

An update on hydrologic conditions across the state that utilized multiple graphs to visualize precipitation trends between January 2015 and March, 2017 was presented by S. Domber. He noted that Hunterdon and Somerset counties have not lifted the Drought Watch. Further, two extremely important reservoirs, Spruce Run and Round Valley, are currently only up to approximately 80% capacity.

13. Installing Liners in Public Community Supply Wells-

M. Schumacher sought guidance from Board members regarding the pros and cons of installing liners in public community supply wells. He has recently reviewed several proposed liner installations that he believes will complicate proper well decommissioning when the well is ultimately taken out of service. J. Yost, who has installed, a number of these over the years said that in many instances they are very effective and are a timely way to repair a well that saves a municipality from significant downtime. This is particularly important for shore communities where there is little time to address the problem during the summer season when demand is high. The fact that the installation of the liner is essentially a “Band Aid” or temporary fix was also discussed. Liners installations are a way for water systems to temporarily repair a well at a much lower cost, but it does not fix the initial problem and it may only work for a relatively short time. The added costs associated with decommissioning the well must still be addressed when the well is taken out of service. J. Yost pointed out that it is important to know the reason for the liner as there are major differences in installing a liner to rectify a well that is pumping sand due to a screen failure vs. one being installed due to a failed casing. In instances of a

failed casing, being able to grout the liner in place would be of crucial importance. Essentially no broad policy recommendations could be made; liners are believed to be appropriate in some instances and not in others. Therefore, each request will need to be reviewed on a case by case basis.

14. Update on Well Rules-

T. Pilawski noted that the draft revisions to the well rules, N.J.A.C. 7:9D, are currently under review in the Governor's office. A. Becker said that he attended a meeting at the Governor's Office on Wednesday, March 22, 2017 along with Denis Crayon and John Robbins, who will all be representing the New Jersey Ground Water Association (NJGWA). They will be inquiring as to the status of the rule proposal review.

15. Summary of Well Permitting Program's enforcement and field activities over the past seven weeks presented by J. Altieri

A) Field Inspections- Well Permitting Section staff performed fifteen field inspections during the past seven weeks, which over twice as many as usual in the same time period. Most of the field inspections are a response to complaints regarding improper well construction and failures to obtain a well permit prior to starting a well. Staff supervised the drilling out of one domestic well that was constructed before the well driller acquired an approved permit from the Bureau. In two cases, the local health department notified the DEP as a result of receiving water tests for unpermitted well.

B) Partial settlement of well drilling violations- As part of resolving a recent Administrative Order and Notice of Civil Administrative Penalty Assessment (AONOCAPA), Bureau staff witnessed the total removal (drilling out) of an improperly grouted 65 ft. deep irrigation well in Ocean County that was ordered sealed by the Department. Full payment of the penalties owed as part of the penalty to the Department are to be concluded by October of 2017. The driller and company have been fully cooperative in resolving this issue.

C) Additional Field Inspections and Training Activities- Staff spot checked several new properly permitted and constructed test, public, irrigation and monitor well construction around the State and had arranged for field demonstrations for new Bureau and Division staff the opportunity to observe well drilling activities conducted by a New Jersey Master well driller. Staff conducted field inspections to determine the presence of illegally constructed wells and to confirm proper construction.

16. Well Permitting Program Updates-

On May 19th Robbins Water Service performed a training event for the Department's Water Supply and Compliance & Enforcement staff, along with multiple county health departments. At this field event attendees were able to see the drilling of a borehole, setting of the casing/screen, gravel packing and grouting as well as the installation of the submersible well pump and pressure tank installation. P. Bono

noted that this was extremely beneficial in training regulators and the Department appreciates Robbins Water Service's assistance in volunteering to put on this training day.

17. Adjournment -At 1:06 pm, a motion to adjourn was made by G. Poppe, seconded by Carol Graff and approved unanimously.



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

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BOB MARTIN
Commissioner

New Jersey Department of Environmental Protection NJ State Well Drillers and Pump Installers Examining and Advisory Board Meeting Minutes for July 20, 2017

Approved by the Board on September 21, 2017

Board Member Attendance:

Present	Absent
Art Becker (Chairman) Gary Poppe (Vice-Chairman) Gordon Craig Joe Yost Richard Dalton Jeff Hoffman	Joe Pepe Carol Graff Steve Domber

Board Legal Representatives Present: Deputy Attorney Generals (DAG) Robert Guzek and Jill Denyes, NJ Division of Law

NJDEP Bureau of Water Allocation & Well Permitting Staff Present: Terry Pilawski, Pat Bono, Julia Altieri, Steve Reya, Mark Ortega, Jeremy Wick, Stephen Kelly, David Vella and Melia Stoop

NJDEP, Water Compliance & Enforcement: Bryan Barrett

NJDEP, Bureau of Energy & Sustainability: Sheryl Tembe, PhD, Bob Kettig (Bureau Chief) and Ravi Patraju

Member of the Public: Henry Robbins, Robbins Water Service, Inc.

1. Call to Order-

The meeting was called to order by Chairman Art Becker at 9:35 am with a quorum present.

2. Introductions-

David Vella was introduced as a new staff member in Bureau of the Water Allocation and Well Permitting. Mr. Vella is a recent geology graduate from Rutgers University who will be assisting the well permitting staff by performing well record and decommissioning reviews and conducting well searches.

3. Review and Certification of the Minutes for the May 25, 2017 Meeting –

It was noted that in Item 14, the second sentence must be revised to replace “will be attending” with “attended” as the referenced meeting occurred prior to the Board meeting at which the statement was made.

A motion to approve the meeting minutes with this change was made by J. Yost, seconded by R. Dalton and approved by all.

4. Review and Certification of Well Driller and Pump Installer Exam Scores for June 7, 2017–

Master– There were no applicants for the June 7, 2017 Master Well Driller Exam.

Journeyman- A motion to approve three (3) listed license exam scores was made by G. Craig, seconded by J. Hoffman and approved unanimously by all.

Journeyman B- A motion to approve two (2) listed license exam scores was made by R. Dalton, seconded by G. Craig and approved unanimously.

Monitoring– A motion to approve fourteen (14) listed license exam scores was made by J. Yost, seconded by R. Dalton and approved unanimously.

Soil Borer– A motion to approve two (2) listed license exam scores was made by G. Craig, seconded by D. Dalton and approved unanimously.

Pump Installer – A motion to approve two (2) listed exam scores was made by J. Hoffman, seconded by J. Yost, and approved unanimously.

The determination to allow an applicant to sit for the pump installer exam, Bryan Giles, was determined to be pending until DEP well permitting staff can determine whether home school diplomas can be acceptable as evidence of a high school diploma. Answers to some inquiries by staff to other NJ state agencies on this issue have not yet been answered. As discussed previously at the May meeting, this applicant was homeschooled and was thus not in possession of a high school diploma or G.E.D. The well rules (N.J.A.C. 7:9D-1) specifically stipulate that evidence of one or the other a requirement is required as part of an application to sit for an exam. Board legal counsel has requested that Bureau staff perform additional research to ascertain whether or not the provided home school diploma is considered to be the equivalent, and therefore would meet the requirements stipulated in the rules.

5. 2017 Board Meetings, Conference Call & Exam Dates-

Board members were reminded that the remaining 2017 meetings are scheduled for the following dates:

- September 21 and November 21
- A conference call will be held on October 26, 2017 to review/approve the October 4, 2017 Exam scores. The final exam for 2017 will be held on December 6th.

6. Bench Test Results on GeoPro CGPlus Geothermal Grout (G. Craig)-

G. Craig presented the results of a bench test he conducted over a six (6) week period to determine the effects of this grout mix when submerged in a bath of freshwater. The purpose of the test is to

determine if the high bentonite content in the mix would fail to set up properly in fresh water, and thus continue to leach out and raise the pH of the water in which the grout is placed. G. Craig provided a summary of the results in a table. Board members reviewed the results and determined that no measurable adverse effects were observed. Additionally, the grout was determined to be a material that does ultimately set-up properly; therefore, its use should not be prohibited in bedrock environments, as in the case of bentonite grouts per the regulations. S. Reya will contact the manufacturer representative to let him know that he can proceed with scheduling the required field demonstration of the product, which is the next required step for gaining product approval. It is likely that other bentonite products revised by GeoPro (e.g. PowerTec) reviewed at previous Board meetings, will be mixed and pumped that day as well.

7. List of Lapsed Licenses-

S. Reya provided Board members with a list of licensees whose driller/pump installer licenses were not renewed prior to the June 30, 2017 deadline. He indicated that those license holders will receive a second invoice for the original license fee plus a \$50 late payment reinstatement fee to reinstate the license. Members were encouraged to double check the list and contact any listed individuals in the industry if it is known that any still wish to retain the license as it is possible that the Department is sending the billing notices to the last known addresses on file, which could be outdated due to the three-year license cycle.

8. Flexible Liner Underground Technologies, LLC (FLUTE)-

Board members reviewed a letter drafted with the Board's response, July 20, 2017, to be sent in response to the April 14, 2017 letter from Carl Keller from FLUTEe, LLC. Mr. Keller questioned the effectiveness of using certain other types of multi-level well systems to delineate and monitor contamination in groundwater and contended that the Department should not allow the use of some of the systems currently in use for remediation and contaminant sampling within the state. Mr. Keller's letter was reviewed at the May 25th meeting and discussed. A number of the Board members have experience with a variety of these systems designed to address the need for sampling at different levels or depths. The consensus of members was that no one specific manufactured multi-port monitoring well system is appropriate for all sites. Similarly, they did not believe the Department should effectively ban any one particular manufactured product based on the fact it would not work in all instances. These systems are currently installed on a case-by-case basis via a deviation request that is submitted along with the well permit application and reviewed by Department staff. Deviation requests require the permittee/ driller applicant to specify the reason(s) why that well cannot be constructed in accordance with the well regulations and perform as needed. Members had no suggested revisions to the letter that was drafted by P. Bono and A. Becker. The letter will be sent under Chairman Becker's signature.

9. Developing Guidance and Tools to Support Ground-Source Heat Pump Systems in NJ Utilizing a Renewable Resource for Energy Efficiency

Sheryl Tembe, PhD, NJDEP Bureau of Energy & Sustainability-

To support the growth in installations of Ground-Source Heat Pump (GHP) systems in New Jersey, the Bureau of Energy & Sustainability (BES) is proposing the development of technical guidance documents and online decision making tools, in accordance with NJ State regulations and policies, and industry standards. Sheryl Tembe, PhD, presented overview of deployment conditions faced by the GHP industry, and described current incentive programs, market barriers, influence of energy prices, and NJDEP's role as a regulator and facilitator. BES is requesting collaboration with the

Board and NJDEP regulatory programs to develop the necessary outreach and educational resources to assist constituents in installing the appropriate GHP systems that would realize energy savings and reduce waste streams that are harmful to the environment and human health.

At the conclusion of her presentation, Dr. Tembe indicated there were a number of areas they would like to get some input from the Board and drilling industry professional. These include: cost estimates for well installation, how varying hydrogeologies affect the performance of geothermal wells, problems noted with various types of indoor mechanical systems, whether or not state regulations stay ahead of the technology, the need for consumer education or training of operators and inspectors for open and closed loop systems.

G. Craig, G. Poppe and S. Tembe discussed the financial difficulty currently facing the geothermal industry, which is primarily attributed to reduced government incentives. S. Tembe suggested that the Bureau may want to include a link to the NJ Board of Public Utilities (BPU) website on all geothermal well permits that are issued to allow property owners to research whether they are eligible for any financial incentives or rebates. She felt that many property owners may not even be aware of the rebates for which they are eligible and this may be a way to inform the public.

10. Drought update by Jeff Hoffman-

J. Hoffman indicated that recent rainfall has affected the state's water supply in a positive manner. Specifically, only two (2) counties now remain in drought warning. This is due to reservoir levels in the central water supply region still remaining lower than usual. Fortunately, he said these levels have also shown positive trends as water levels are slowly rising within the affected reservoirs. The wet month of May has also increased groundwater levels within the state, added J. Hoffman.

The formal comment period for the proposed NJ Water Supply closes tomorrow, July 21, 2017.

11. Board Procedures and Continuing Education Requirements for License Holders-

Members reviewed the well rule proposal sections which will establish the Board procedures and role in licensing of drillers and pump installers, including the proposed continuing education program for renewing licenses. DAG Jill Denyes, who actively worked on the rule draft on behalf of the Board, attended the meeting to provide clarification. Several questions were raised as to the process the Board will utilize to approve continuing education course providers and the requirements that licensees must meet to be eligible for renewal. During this review session, members did not find that the section contained any significant errors or omissions that needed to be addressed during the public comment period.

12. Enforcement of Well Construction Requirements: Concerns Raised by Public Attendee-

Mr. Henry Robbins, Master Well Driller with Robbins Water Well Service, expressed a serious concern he has had for decades. He stated that certain drilling contractors continue to knowingly violate the well rules by not properly grouting wells. He believes that the same drillers do this over and over to save on well installation costs and increase profits at the expense of protecting the state's groundwater resource. Without placing conforming grout, wells are susceptible to introducing contamination into groundwater from surface runoff and shallow contaminants. H. Robbins suggested that the Department require all well drillers to submit periodic, such as annually, grout receipts to show that they are purchasing the required amount of grout. This billing information could then be compared with well record documentation to ascertain whether or not the contractor is purchasing an amount of grout that is consistent with what would be required to grout

the footage claimed on their well record submittals. Bureau staff fully agree with his concern that failure to properly grout wells and the ability to enforce the grouting requirements is crucially important to protecting groundwater. However, they do not feel that the Department currently has the authority and the extensive resources to conduct such a wide-scale audit of every contractor's billing documents vs. Department submittal documents.

13. Update on Well Rules-

The Well Rule Proposal has been published in the New Jersey Register. The public comment period closes July 18, 2017 and the Public Hearing is scheduled for August 10th at the DEP headquarters at 401 East State Street in Trenton.

14. Water Allocation & Well Permitting Enforcement and Field Work Activities –

A summary of Well Permitting Program's enforcement and field activities over the past eight (8) weeks was presented by Julia Altieri.

A) Field Inspections- Well Permitting Section staff performed four (4) field inspections during the past eight (8) weeks. Field staff witnessed the proper construction of two (2) new test wells, both of which are intended to be converted to public supply use at a later date. Staff also performed follow up field inspection work at a property in Hunterdon County to confirm that a newly constructed irrigation well was properly constructed and grouted. Field staff also investigated the possible illegal construction of two (2) unpermitted monitor wells on a property in South Plainfield. The Bureau also started an investigation after a neighbor requested a well search and reported seeing two (2) monitor wells that the owner reportedly constructed himself. Follow-up site visits by staff could not confirm the presence of the wells on the property in question, as they were actually located on another property. Well permits and records for both were later located once the correct location was ascertained. Therefore, no enforcement action was necessary.

B) Negotiated settlement of well drilling violations - Significant Bureau time was spent preparing negotiated penalty assessment offer letters to various drillers and companies in order to resolve confirmed issues of noncompliance that were discovered earlier in the year. Over \$10,000 in penalties have been issued, primarily to resolve confirmed violations of drilling without valid permits, failure to submit records within 90 days and drilling wells with without a valid license.

C) Additional partial settlement of well drilling violations – B. Barrett mentioned that the Central Region of water compliance enforcement has referred two Notice of Civil Administrative Penalty Assessment (NOCAPA) cases to the Department's office of Dispute Resolution in an attempt to resolve violations to the well drilling regulations without going to Hearing. The case involves a well driller and company who improperly grouted the outer boreholes of two (2) closed loop geothermal wells located at a property in Mercer County. Also, the Bureau and Central Region Water Compliance Enforcement are further working towards the negotiation with a driller and company who has failed to fulfill the agreed upon order to drill out and reconstruct four (4) irrigation wells that were constructed without a valid permit in Ocean County. The driller and company had originally agreed to the orders and pay all penalties owed for violations to the well drilling regulations but has yet to comply as of today.

15. Update on Geothermal Wellfield Pilot Program-

T. Pilawski provided an update on the status of the pilot plan to retrofit and recommission a geothermal wellfield in which the wells were improperly constructed. Department staff and their legal counsel are currently reviewing and formulating a response to the pilot plan submitted by a consulting firm on behalf of the property owner. The plan proposal seeks to address the proper method(s) for recommissioning seven (7) closed loop wells prior to determining the feasibility of

recommissioning these wells and bringing them into compliance with N.J.A.C. 7:7D. The lessons learned would then be applied to the recommissioning the balance of the (unpermitted) wellfield. T. Pilawski also noted that the contractor in violation has paid the first penalty assessment as stipulated in the Administrative Consent Order.

16. 2018 Board Meeting Dates-

P. Bono suggested developing a 2018 Board meeting schedule. She will email proposed dates to members and provide dates with the most availability at the Board's September meeting for the final scheduling by members.

17. Adjournment –

At 12:50 pm, a motion to adjourn was made by G. Poppe, seconded by R. Dalton and approved unanimously.



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

BOB MARTIN
Commissioner

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New Jersey Department of Environmental Protection NJ State Well Drillers and Pump Installers Examining and Advisory Board Meeting Minutes for September 21st, 2017

Approved by the Board on November 21, 2017

Board Member Attendance:

Present	Absent
Art Becker (Chairman) Gary Poppe (Vice-Chairman) Gordon Craig Joe Yost Richard Dalton Jeff Hoffman	Joe Pepe Carol Graff Steve Domber

Board Legal Representative Present: Deputy Attorney General (DAG) Robert Guzek, NJ Division of Law

NJDEP Bureau of Water Allocation & Well Permitting Staff Present: Terry Pilawski, Pat Bono, Julia Altieri, Steve Reya, Mark Ortega, Jeremy Wick, and Melia Stoop

NJDEP, Water Compliance & Enforcement: Bryan Barrett;

NJDEP, Bureau of Licensing & Registration: Chrissy Gerstnicker

Others Present: invited speaker - Joseph Bonaccorso, CME Associates

1. Call to Order-

The meeting was called to order by Chairman Art Becker at 9:40 am with a quorum present.

- #### 2. Review and Certification of the Minutes for the July 20, 2017 meeting:
- A motion to approve the July 20, 2017 meeting minutes was made by G. Poppe, seconded by G. Craig and approved unanimously.

3. Review and Certification of Well Driller and Pump Installer Exam Applicants to sit for the October 4, 2017 Exams –

Master– There were no applicants for the Master Well Driller Exam.

Journeyman- A motion to approve three (3) listed license exam applicants was made by J. Yost, seconded by R. Dalton and approved unanimously.

Journeyman B- A motion to approve one (1) listed license exam applicant was made by J. Hoffman, seconded by G. Poppe and approved unanimously.

Monitoring– A motion to approve sixteen (16) listed license exam applicants was made by G. Craig, seconded by G. Poppe and approved unanimously.

Soil Borer– A motion to approve two (2) listed license exam applicants was made by J. Hoffman, seconded by J. Yost and approved unanimously.

Pump Installer – A motion to approve six (6) listed exam applicants was made by G. Poppe, seconded by G. Craig, and approved unanimously.

Bureau staff provide an update on the concerns raised previously regarding an application submitted by Bryan M. Giles’ to sit for the pump installer license exam. The question is whether the home school diploma submitted by Mr. Giles meets the application requirement prescribed in N.J.A.C. 7:9D-1 which require an applicant to provide evidence of a high school diploma or GED. In addition to the application, a letter was received from the Home School Legal Defense Association in which the representative noted that they have “an active litigation team” in their office working to improve homeschool policies and that the applicant is in good standing with their organization.

At the request the Board members, Bureau staff made attempts to obtain formal clarification regarding the state’s interpretation of home school diplomas in this regard. P. Bono summarized phone conversations which she and S. Reya had with the NJ Department of Education, NJ Civil Service Commission and the Ocean County Vocational Technical School which Mr. Giles attended. The result of these calls was that there is no conclusive written statement or NJ policy which answers the question as to how the Board should interpret the submitted diploma. The Board’s legal advisor, R. Guzek, pointed out that the laws on this topic are ambiguous and cautioned against denying the applicant without clarification. Both Board members and the supporting Bureau staff pointed out that the Board has been advised in the past to not permit any applicant who cannot meet the requirements as stated to sit for the exam and that doing so would open up the Board to possible law suits by those who have been denied the opportunity. For example, in 2016 an applicant who attended school in another country and was unable to obtain his diploma since his school no longer exists was denied approval to take the exam upon the advice of the Board’s legal advisor at that time. The Board and the Bureau will continue to seek further clarification on this issue before a final determination is made. It was noted that the proposed amendments to well rules at N.J.A.C. 7:9D, will eliminate the requirement to demonstrate academic proof.

A motion was made by G. Craig requesting that a letter should be sent to the applicant to inform him that his application is still pending and under review until further clarification is received and the Board will follow-up with him with additional notification if/when he is approved to sit for the exam. The motion was seconded by G. Poppe and approved unanimously.

Bureau staff will draft a letter notifying the applicant of the Board’s current concerns, send it to the Board’s legal advisor for comment prior to sending the draft to the Board’s chair, A. Becker.

4. Presentation by Mr. Joe Bonaccorso: Continuing Education Credit program for NJ Licensed Water & Wastewater Operators Under N.J.S.A. 58:10A-14.6 –

In anticipation of the implementation of a new continuing education program for NJ well driller and pump installer licenses, Chairman Becker had invited Mr. Bonaccorso to present an overview of the continuing education program for the NJ Water and Wastewater Licensing Program. Mr. Bonaccorso provided a great degree of insight regarding the successes and problem areas they identified throughout his time sitting on a committee charged with regulating and overseeing the continuing education program for the water and wastewater industries. He noted that their training requirement went into effect in 1992 and the continuing education requirement dates back approximately 15 years. He had many suggestions to the Board based on what he has seen as effective and successful in their program. Board members asked a variety of questions, on the specifics of how the courses themselves are managed and tracked. Ms. Chrissy Gerstnicker from the Department's Licensing & Registration unit was also present and described some of the details for the acceptance and tracking of classes and credits for licensees. She suggested that the Board consider allowances for military and medical leave that would allow qualifying individuals additional time to meet continuing education requirements. The current water/wastewater program does not have the ability to accommodate such requests. Mr. Bonaccorso further offered to assist Board members with any questions they have in the future. Chairman A Becker thanked Mr. Bonaccorso on behalf of the Board for his insights and assistance, which he noted will be invaluable to the Board as members work to get a new program up and running once the rule amendments are adopted.

5. Board Meetings, Conference Calls and Exam Dates-

Board members were reminded that the last remaining 2017 meeting is scheduled for the following Tuesday, November 21. A conference call will be held on October 26, 2017 to review/approve the October 4, 2017 Exam scores. The final exam for 2017 will be held on December 6th.

- Board members tentatively selected the following dates on which to meet in 2018:
January 18, March 15, May 24, July 19, September 20, November 29 and the standard conference calls to certify exam scores will be held on April 26 and October 25

6. GeoPro CGPlus and PowerTEC Geothermal Grout (S.Reya)-

Prior to approving any new grout material materials, the Board and Department require a physical demonstration to prove 1) the ability to mix and pump the material in accordance with the manufacturer's instructions and 2) the mixed grout meets New Jersey's minimum permeability standard. S. Reya reported on a geothermal grout mixing and pumping field demonstration which took place on September 18th and was attended by Board members A. Becker, G. Craig and R. Dalton. In addition to Mr. Reya, Sheryl Tempe from the Department also witnessed the event. The mixing and grouting were supervised by a NJ licensed master driller and under the direction of a representative from GeoPro, who was also on site. The following products were demonstrated:

- CG Plus (1.20 Btu/hr-ft- °F)
- TG Lite/PowerTEC (1.20 Btu/hr-ft- °F)
- TG Select/PowerTEC (1.60 Btu/hr-ft- °F)

All the Board members and Department staff reported that all three (3) geothermal products were able to be mixed and placed in vertical closed loop geothermal wells in accordance with manufacturer-provided product submittal information. Samples of the grout mixtures were obtained from the grout mixer hopper and from the well borehole return following tremie pipe

discharge. These samples will be tested for permeability in accordance with ASTM D5084 and results will be provided to S. Reya who will forward to Board members for review.

A motion was made by G. Craig to approve and recommend to the Department the use of these grout products provided the permeability data is found to be in compliance with the standards of the well rules (i.e. the measured values do not exceed the maximum permeability specified therein. The motion was seconded by G. Poppe and approved by all.

It was noted that this motion allows the Department to approve the product independent of Board meeting schedules so the manufacturer does not have to wait for the final product review to occur at a regularly scheduled Board meeting. S. Reya will forward permeability test results to all members present at the grout demo when they are available.

7. List of Lapsed Licenses-

S. Reya provided Board members with a list of licensees whose driller/pump installer licenses that have not been renewed. He indicated that those license holders who did not renew their license by the June 30th deadline have since received a second invoice for the original license fee plus a \$50 late payment reinstatement fee to reinstate the license. Of concern is the number of returned invoices where the addresses are no longer valid. Members were encouraged to review the list and to remind those who have not renewed to contact the Department in case their mailing information is out of date. It was noted, however, that some listed licenses are intentionally not being renewed as some of the license holders have either retired or since obtained a “higher level” license and no longer need their original (lower) license.

8. Drought Status Update (J. Hoffman)-

J. Hoffman, Board member and State Geologist, stated that recent rainfalls have improved hydrologic conditions within the state. On August 15, 2017, the Central Water Supply Region (including Hunterdon and Somerset counties) was removed from Drought Watch Status and is now listed as being in normal status. Currently the water supply status is posted as “normal” across the state. J. Hoffman indicated that both groundwater levels and stream flow levels have improved since the Board’s last update in late May.

9. Update on Well Rules (T. Pilawski)-

T. Pilawski reported that the comment period on the proposed amendments to the well rules closed on August 18, 2017. Comments were delivered verbally at the public hearing held on August 10th and in writing to the Department. Bureau staff member Mark Miller has been compiling all the comments and is drafting responses to these comments with input from other Bureau and Department staff. She noted that P. Bono, M. Schumacher and S. Reya are assisting him in the responses. The Department hopes to have the final version approved by the Commissioner and the Governor’s office so that it can be published as final in the New Jersey Register. The goal is to have an effective date early in 2018.

10. Water Allocation & Well Permitting Enforcement and Field Work Activities –

A summary of Well Permitting Program’s enforcement and field activities over the past eight (8) weeks was presented by J. Altieri and B. Barrett.

A) Field Inspections- Well Permitting Section staff performed eight (8) field inspections during the past eight (8) weeks. Field staff witnessed the proper construction of 2 new domestic wells in Hunterdon County. Staff also assisted in site inspection and GPS locating of wells contained in Water Allocation permits, witnessed sonic drilling and attended grout demonstrations. Staff also field investigated and/or responded to four (4) different complaints of illegal well drilling activity and pump installing. One of these instances involves a property owner reporting the negative impact of a hydro-fracking event on their neighboring domestic well. It was discovered the work was done by a licensed pump installer, whose license does not authorize them to conduct such work and that this individual has been warned about this in the past. Several of these inspections resulted in Notices of Violations issued, and further enforcement action to be taken by the Department.

B) On-going issues of well drilling violations – The Bureau is pursuing 2 separate drilling companies for constructing monitor wells prior to obtaining the permits. In one case, the driller filed permit applications for 2 wells that were drilled nearly 2 years earlier. The second drilling company had applied for permits a few days earlier, but these had been flagged for further Bureau internal review as they fell within a salt water zone. The wells were installed prior to the permits being issued. The Department will attempt to resolve the issues of non-compliance, by ordering the wells to be properly decommissioned. In both cases the drillers and company have agreed to remove the existing monitor wells and reinstall them in the existing boreholes. Bureau staff intend to witness the corrective work in the next few weeks.

C) Additional partial settlement of well drilling violations – In response to a violation fine for improper construction of geothermal wells, the driller and his company filed a request for an administrative hearing. The Department's policy is to encourage the disputing party to resolve the issue first through a mediated process referred to as the Alternate Dispute Resolution (ADR). Staff members from the Well Permitting Program and the Central Bureau for Water Compliance & Enforcement participated in a pre-ADR meeting on September 6, 2017 between the Department's Office of Dispute Resolution and the attorney representing the drilling company. A formal ADR meeting is scheduled for October 16, 2017 and involves settlement of the penalty portion of the enforcement action against the well driller and his company only.

11. Update on Geothermal Wellfield Pilot Program-

T. Pilawski provided an update on the status of the pilot plan to retrofit and recommission a geothermal wellfield in which the wells were not permitted and improperly constructed. Department staff and their legal counsel are currently responding to the pilot plan proposal submitted by a consulting firm on behalf of the property owner. The pilot plan proposal seeks to establish an effective method(s) for recommissioning seven (7) closed loop wells prior to determining the feasibility of recommissioning these wells in such a way as to bring them into compliance with N.J.A.C. 7:7D. The lessons learned from implementing the pilot plan would then be applied when determining whether recommissioning vs. decommissioning the balance of the (unpermitted) wellfield is preferable. Currently, the submitted plan proposal does not sufficiently address the Department's requirements and requirements with regard to recommissioning the existing closed loop geothermal wells in the ground.

12. Program Updates-

P. Bono announced that she will be retiring on February 1, 2018.

M. Schumacher is providing training to Department enforcement staff on well construction fundamentals and what to look for when onsite when inspecting a well driller installing a well or inspection of a finished constructed well. He is also educating staff on the importance of decommissioning abandoned wells and how to spot problematic wells when doing site inspections for other programs. To date he has provided training to two (2) of the three (3) enforcement regions

thus far. T. Pilawski also stated that she would like to perform similar training and outreach for local and county health department staff throughout the state when time allows.

13. Adjournment –

At 12:48 pm, a motion to adjourn was made by G. Poppe, seconded by J. Yost and approved unanimously.



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

BOB MARTIN
Commissioner

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State Well Drillers and Pump Installers Examining and Advisory Board Conference Call Minutes for October 26, 2017

Approved by the Board on November 21, 2017

Board Members Present at NJDEP Headquarters Building: Richard Dalton, Steve Domber

Board Members Participating Via Telephone: Art Becker (Chairman), Gary Poppe (Vice Chairman), Joe Yost, Gordon Craig and Carol Graff

Board Members Absent: Joe Pepe, Jeff Hoffman

NJDEP Water Supply (Bureau of Water Allocation and Well Permitting) Staff Present: Terry Pilawski, Pat Bono and Steve Reya

1. **Call to Order** –A. Becker called the meeting to order at 10:03 am with a quorum present via telephone.
2. **Certification of Exam Scores for October 4, 2017 Master, Journeyman, Journeyman B, Monitoring, Soil Borer and Pump Installers Exams**–

Master- A motion to certify the exam score for one (1) listed individual was made by G. Poppe, seconded by J. Hoffman and Approved unanimously. The one individual who sat for the Master well driller license exam passed.

Journeyman- A motion to certify the exam scores for two (2) listed individuals was made by S. Domber, seconded by J. Yost and approved unanimously. One of the individuals passed the exam.

Journeyman B – A motion to certify the exam scores for three (3) listed individuals was made by G. Craig, seconded by J. Yost and approved unanimously. None of the individuals passed the exam.

Monitoring – A motion to certify the exam scores for twelve (12) listed individuals was made by S. Domber, seconded by G. Craig and approved unanimously. Four (4) individuals passed the exam.

Soil Borer – A motion to certify the exam scores for five (5) listed individuals was made by G. Poppe, seconded by G. Craig and approved unanimously. Three (3) individuals passed the exam.

Pump Installer – A motion to certify the exam scores for five (5) listed individuals was made by G. Poppe, seconded by J. Hoffman and approved unanimously. One (1) individuals passed the exam.

3. Adjournment- The call was adjourned at 10:14 am.



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

PHILIP D. MURPHY
Governor

CATHERINE R. McCABE
Acting Commissioner

SHEILA Y. OLIVER
Lt. Governor

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New Jersey Department of Environmental Protection NJ State Well Drillers and Pump Installers Examining and Advisory Board Meeting Minutes for November 21, 2017

Approved by the Board on January 22, 2018

Board Member Attendance:

Present	Absent
Art Becker (Chairman) Gary Poppe (Vice-Chairman) Gordon Craig Joe Yost Joe Pepe Carol Graff Steve Domber Richard Dalton Jeff Hoffman	None

Board Legal Representative Present: Deputy Attorney General (DAG) Robert Guzek, NJ Division of Law

NJDEP Bureau of Water Allocation & Well Permitting Staff Present: Terry Pilawski (arrived 10:14 am), Pat Bono, Julia Altieri, Steve Reya, Mark Miller, Mike Schumacher, Chelsea Fernandez and Melia Stoop

Others Present: Denis Crayon, President, New Jersey Ground Water Association (NJGWA)

1. Call to Order-

The meeting was called to order by Chairman Art Becker at 9:37 am with a quorum present.

2. Review and Certification of the Minutes for the September 21, 2017 meeting-

R. Guzek noted that his last name was spelled incorrectly within Item 3 of the Minutes (Review and Certification of Well Driller and Pump Installer Exam Applicants to sit for the October 4, 2017 Exams). A motion to approve the September 21, 2017 meeting minutes pending this correction was

made by G. Craig, seconded by G. Poppe and approved by except for S. Domber and C. Graff who abstained.

3. Review and Certification of the Minutes for the October 26, 2016 Conference Call –

G. Poppe noted an inaccurate statement that noted that no one passed the Journeyman exam, however, one individual did pass and was approved by the Board. A motion to approve the minutes pending this correction was made by J. Yost, seconded by G. Poppe and approved unanimously.

4. Review and Certification of Well Driller and Pump Installer Exam Applicants to sit for the December 6, 2017 Exams –

Master– A motion to approve one (1) listed license exam applicant was made by G. Poppe, seconded by G. Craig and approved unanimously.

Journeyman– A motion to approve four (4) listed license exam applicants was made by J. Yost, seconded by S. Domber and approved unanimously.

Journeyman B– A motion to approve two (2) listed license exam applicant was made by G. Craig, seconded by J. Yost and approved unanimously.

Monitoring– S. Reya noted that one applicant, Kenneth Hynes, is currently obtaining additional documentation to demonstrate that he obtained his high school diploma, as his original diploma was reportedly misplaced many years ago. Board members agreed that provided he submits this documentation to the Bureau with sufficient time to be scheduled for the December 6th exam, his application should be approved. A motion to approve fifteen (15) listed license exam applicants to sit for the exam, as well as Mr. Hynes provided the required documentation is submitted to the Bureau. The motion was made by G. Craig, seconded by J. Hoffman and approved unanimously.

Soil Borer– A motion to approve three (3) listed license exam applicants was made by G. Poppe, seconded by S. Domber and approved unanimously.

Pump Installer – Six (6) applicants were listed with a status of approved. S. Reya said that he identified some questions and possible deficiencies with a seventh applicant, Mr. Kyle Caton, whose application status is listed with a “pending” status. Based on the applicant’s listed age, it was unclear if he had attained the required one (1) year minimum work experience in the pump installation/repair field in accordance with applicable state and federal labor laws. S. Reya intends to follow up with Mr. Caton to obtain additional information to resolve the outstanding issues prior to the exam. Board members agreed that if the additional information is submitted to clarify that he meets the application requirements of N.J.A.C. 7:9D, the Bureau should schedule him for the test. It was also noted that the hourly requirement of what constitutes one (1) full year of experience was clarified years ago by the Board and that previous Board minutes should be researched to ensure consistency with prior established precedent. A motion to approve six (6) listed exam applicants, and Mr. Caton’s application pending the required corrections. was made by G. Craig, seconded by J. Pepe, and approved unanimously.

5. Board Correspondence–

P. Bono discussed the status of a letter that was to be drafted by the Bureau regarding the Board’s review of a Pump Installer Exam application submitted by Bryan M. Giles. The letter, which was drafted in response to the Board’s motion at the September 21, 2017 meeting, notifies the applicant that the matter of his high school diploma is still under review as the Department and Board further investigate the matter. Further, the letter notes the status of the proposed amendments to the well rules, N.J.A.C. 7:9D1-4, in which the requirement that an exam applicant possess a high school diploma or GED is to be eliminated. The anticipated date on which the changes will take effect is

noted as “early 2018”, therefore, he will be able to sit for the exam under the new testing process and requirements provided the proposed rules are enacted as anticipated. The letter, which has also been reviewed by the Board’s legal counsel, was signed by Chairman A. Becker on November 21, 2017.

6. Proposed Well Rule (N.J.A.C. 7:9D) Revisions: Update from Mark Miller-

M. Miller, who is the manager of the well rules, reported that Bureau staff met with Chief Counsel Ray Cantor on November 1st and provided a briefing to the Commissioner on November 3rd. As a result of those meetings, the Bureau worked with the Department’s Office of Legal Affairs to resolve one outstanding formatting issue. On November 16th, the rule package was signed and forwarded to the Governor’s Office and the Office of Administrative Law for review and approval. If approved and adopted by November 22nd, the rule should be published in the December 18th New Jersey Register. If there are questions or delays, the publication could be delayed until the January 2, 2018 Register. Due to the large amount of support during the public comment period and the lack of any controversial comments during the open comment period, The Department anticipates the rule will move through this final phase of adoption as projected. However, M. Miller noted that nothing is guaranteed until it is signed by the Governor’s Office. The Bureau will inform the Board once the status is known.

- 7. Exam Dates:** The final exam for 2017 will be held on December 6, 2017. As previously noted, once the new rules take effect the Department will no longer administer the exams. Therefore, the December exam is likely the final exam to be scheduled. Under the new format, applicants will schedule exams directly with the exam vendor at the applicant’s convenience.

8. Work Group for the Proposed NJ Regulations Exam Modules-

Board members have volunteered to assist in the development of new exam modules that will be used under the new testing format. Every license class will require its own regulatory exam module. For a couple of licenses, the Board will also need to develop exams covering technical knowledge portion. Staff will begin compiling existing exam questions so they can be reformatted and updated to be consistent with the licensing, permitting, construction and decommissioning requirement of the new well rules. Work group meetings were scheduled for December 29, 2017 and January 11, 2018. Additionally, a group meeting will take place immediately following the open Board meeting today to begin this task.

9. 2018 Board Meetings and Conference Calls-

Board members selected the following dates on which to physically meet at the NJDEP Headquarters in Trenton beginning at 9:30 AM:

January 22, March 8, May 24, July 19, September 20, November 29

New to the Board’s regular meeting schedule are the addition of meeting via telephone conference calls during the intervening months for the purpose of establishing a continuing education program in addition to approving qualified candidates for NJ driller or pump installer licenses. Board members set the calls to start at 10:00 AM on the following schedule:

February 15, April 19, June 21, August 16, October 18, December 20

10. GeoPro CGPlus and PowerTEC Geothermal Grout (S.Reya)-

At the Board's September 21, 2017 meeting a motion was passed recommending that the Department approve the following grout products provided the permeability data is found to be in compliance with the standards of the well rules (i.e. the measured values do not exceed the maximum permeability specified therein):

- CG Plus (1.20 Btu/hr-ft- °F)
- TG Lite/PowerTEC (1.20 Btu/hr-ft- °F)
- TG Select/PowerTEC (1.60 Btu/hr-ft- °F)

Following the meeting, S. Reya followed up with the manufacturer representative who informed him that two (2) of the three (3) products tested exhibited permeability values that meet the Department's standard. The TG Lite and TG select permeability values, as measured on the field samples collected at the September 18, 2017 field demonstration that was conducted in the presence of Board and Department representatives, were sent to the Department for verification of compliance with the well rules. The independent lab permeability tables were forwarded to R. Dalton, who confirmed that the values of both products meet the permeability standard specified by N.J.A.C. 7:9D-2.9(b). These products can be approved by the Department consistent with the Board's September 21st motion, however, the manufacturer is still troubleshooting the reason that the CG Plus cementitious grout material exceeded the maximum allowable permeability value. S. Reya will keep the Board updated as additional information becomes available.

11. List of Lapsed Licenses-

Board members were again reminded that the six (6) month grace period in which lapsed licenses may be reinstated ends at the end of the year. They were provided with a list of lapsed licenses and encouraged to notify any of their colleagues who are listed should any of them wish to renew. Once the grace period expires, anyone who wishes to reinstate a licensee will have to retest.

12. Drought Status Update (Steve Domber)-

S. Domber provided a summary of this year's state-wide precipitation levels and explained that recent rainfalls have improved hydrologic conditions within the state. Currently the water supply status is posted as "normal" across the state.

13. Water Allocation & Well Permitting Enforcement and Field Work Activities:

A summary of Well Permitting Program's enforcement and field activities over the past eight (8) weeks was presented by Julia Altieri and Bryan Barrett.

A) Field Inspections- Well Permitting Section staff performed eleven (11) field inspections during the past eight (8) weeks. Field staff witnessed the proper construction of one (1) new public supply well in Red Bank, Monmouth County. Staff also conducted five (5) random field compliance inspections to verify wells were not constructed before the permit approval dates.

B) On-going issues of well drilling violations – The Bureau successfully resolved two (2) issues of non-compliance involving two (2) separate drilling companies that constructed monitor wells before they had approved permits by the Department. Bureau staff witnessed the reconstruction of three (3) monitoring wells in Bergen county and three (3) monitoring wells in Monmouth County. In both cases the drillers and company removed the existing monitoring wells and reinstalled them in the existing boreholes. The Bureau also investigated two (2) instances of individuals installing well pumps without a NJ pump installers license. As a result of the Bureau's investigation both well

pumps were reinstalled by properly licensed individuals as part of the resolution and additional issuance of penalties is pending at this time.

C) Additional partial settlement of well drilling violations – The Alternate Dispute Resolution (ADR) meeting scheduled for October 16, 2017 to settle a violation for improperly grouting two (2) geothermal wells in Mercer County has been re-scheduled for November 30, 2017.

D) Enforcement Outreach Initiative- Michael Schumacher traveled to Northern Enforcement Region to conduct cross – training with the Departments Water Compliance Enforcement staff as part of the sections educational outreach initiative. Mr. Schumacher had already reached out the Central Region Water compliance staff, as well. Training for the Southern Region is pending.

14. Update on Geothermal Wellfield Pilot Program-

T. Pilawski provided an update on the status of the pilot plan to retrofit and recommission a geothermal wellfield in which the wells were not permitted and improperly constructed. Department staff and their legal counsel are currently responding to the pilot plan proposal submitted by a consulting firm on behalf of the property owner. As reported at the last meeting there has been no final design agreed upon between the Department and the responsible party.

15. Program Updates-

Brick Twp., Ocean Co. – T. Pilawski mentioned that there have been recent instances where local municipalities have ordinances that restrict the installation of wells or place additional construction requirements beyond the Department's constraints for the same area. When a driller and property owner seek to install a well in one these areas, commonly referred to as CEAs, the Bureau will incorporate the added construction requirements in accordance with the DEP program that established the CEA. Typically, these areas are delineated by the Department's Division of Site Remediation as part of contamination investigation or site cleanup. Recently, the Bureau encountered instances when the Department (state) well permits established construction requirements in accordance with the SRP established CEA. In these instances, that meant double casing to a certain depth for homeowner irrigation wells. Later, it came to light that the local municipality had a larger area delineated as being in a well restriction area where no irrigation wells were to be installed. The two well permits in question resulted in wells being installed without the approval of the local municipality. The Department is working separately with each of the property owners to come to an amicable resolution on the decommissioning of these wells. To prevent this problem from reoccurring, the Bureau is now adding a statement on the DEP drilling permit which directs the driller and property owner to contact with the appropriate local authority with control over the CEA to learn of any additional construction requirements and permits in advance of drilling.

P. Bono announced that she will be retiring on February 1, 2018

16. Adjournment –

At 11:25 am, a motion to adjourn was made by J. Pepe, seconded by G. Craig and approved unanimously.