



STATE OF DELAWARE  
DEPARTMENT OF NATURAL RESOURCES  
AND ENVIRONMENTAL CONTROL

OFFICE OF THE  
SECRETARY

89 KINGS HIGHWAY  
DOVER, DELAWARE 19901

PHONE: (302) 739-9000  
FAX: (302) 739-6242

**Secretary's Order No.: 2013-W-0060**

**RE: Approving Final Regulations to Amend 7 DE Admin. Code 7101,  
*Delaware Regulations Governing the Design, Installation and Operation  
of On-Site Wastewater Treatment and Disposal Systems***

**Date of Issuance: December 17, 2013**

**Effective Date of the Amendment: January 11, 2014**

Under the authority vested in the Secretary of the Department of Natural Resources and Environmental Control ("Department" or "DNREC") the following findings, reasons and conclusions are entered as an Order of the Secretary in the above-referenced rulemaking proceeding.

The regulatory changes that will be implemented through this Order represent the culmination of more than five years of work that include multiple discussions with stakeholders, including the real estate industry, representatives of private and public utilities that operate wastewater treatment systems, environmental advocacy organizations, and legislators. These *revised* regulations are responsive to the concerns that have been raised in these discussions and through the public hearing process, and largely mimic the regulations governing on-site wastewater systems that have been working effectively for the past four years in the Inland Bays watershed. While public opposition to the first draft of proposed changes was significant at the May 2012 hearing,

*Delaware's Good Nature depends on you!*

there was minimal public comment in opposition to the regulations in response to the third and current version of the proposed *revised* regulation. Additional comments requested that the portion of the regulation affecting systems within 1000 feet of the tidal portions of the Nanticoke and Broad Creek be omitted, but as they do not become effective until January 2015, we believe sufficient time is available to allow regulated parties and the wastewater management industry to prepare for implementation of the new requirements. Comments also raised concerns about economic impacts. The Department has developed a number of financial assistance programs to help homeowners replace failing systems that often threaten drinking water. These programs include an option that would allow an owner to not pay back a loan until such time as the property is sold. These *revised* regulation amendments combined with available financial assistance programs appropriately balance economic considerations and environmental protection, and will help Delaware achieve its goals of obtaining water quality standards that protect public health and aquatic life.

### **Background and Procedural History**

This Order considers proposed *revised* regulations to amend 7 DE Admin. Code 7101, *Delaware Regulations Governing the Design, Installation and Operation of On-Site Wastewater Treatment and Disposal Systems*. The Department's Division of Water, Groundwater Discharges Section, commenced the regulatory development process with Start Action Notice 2008-29. The Department published its initial proposed regulation Amendments in the April 1, 2012 *Delaware Register of Regulations*, and over the course of this particular proposed promulgation, held three public hearings, to wit: May 3, 2012,

November 15, 2012, and most recently November 21, 2013. After an exhaustive review of the comment that was received after each hearing, the Department *revised* its initial proposed regulation amendments, to add further clarity to the proposed regulatory language and, in some instances, incorporate meritorious suggestions from the public and regulated community into its final draft. The *revised* proposed regulation amendments were published in the November 1, 2013 *Delaware Register of Regulations*, prior to the time of the third and final public hearing held in this matter on November 21, 2013.

It should be noted that, following the second public hearing held on November 15, 2012 as noted above, and, upon review of the comments having been received to date at that time, the Department recognized that a significant level of confusion was present with respect to the intent of these proposed regulation amendments, and, in some instances, substantial public concern regarding the same, due in part to certain misinformation existent within the public sector at that time about this proposed promulgation. Thus, during the majority of 2013, an extensive outreach was begun by the Department to correct erroneous beliefs regarding the intent of these proposed regulatory amendments. During that time, numerous stakeholder meetings and informative workshop sessions were held throughout the State of Delaware to clarify the actual intent of these proposed regulation amendments, and to correct the aforementioned misunderstandings that had become prevalent with regard to certain aspects of this promulgation. At these meetings, the Department concentrated on the following concerns, as set forth in the public comment received to date in this matter: (1) Inspection of all septic systems upon property transfer; (2) requirements to upgrade all new and replacement septic systems within 1,000 feet of Chesapeake Bay Watershed

tidal waters (i.e., Nanticoke River and Broad Creek); (3) large system treatment performance standards for nitrogen and phosphorus; and (4) inconsistencies between performance standards for spray irrigation versus other groundwater discharges (i.e., spray less stringent).

As a result of these numerous meetings held throughout 2013, the Department received additional public input, and again *revised* the proposed regulation amendments, as noted above. These revisions were made by DNREC to enhance clarity in some areas of the proposed language, and also to incorporate meritorious comment received from both the public and the regulated community. In the beginning of October, a formal press release was issued by the Department, announcing that DNREC's Ground Water Discharges Section would hold another public workshop Monday, October 14, 2013 in Georgetown, Delaware regarding the *revised* proposed amendments. This press release confirmed that these proposed amendments for residential and large septic systems included the following matters: soil investigations; hydrogeological investigations; design considerations; and operation and maintenance practices.

On-site industry licensees, wastewater utility representatives, environmental consultants, and the public were all encouraged to attend the October 14, 2013 workshop, and all were invited to send written comments, both before the workshop and at any time throughout the regulatory process by emailing John Hayes, Environmental Scientist, DNREC Division of Water's Ground Water Discharges Section. The aforementioned press release further noted that the proposed revisions to these regulation amendments would be discussed during the workshop, and public feedback was welcomed by the Department. The public was also once again encouraged to send written comments at any

time throughout the regulatory process. Furthermore, the press release reminded the public that all proposed changes to the *Regulations Governing the Design, Installation and Operation of On-site Wastewater Treatment and Disposal Systems*, the revised exhibits contained with the formal hearing record, and all additional information concerning this matter were posted on DNREC's website for public review.

On November 21, 2013, a third public hearing was held once again by the Department at the Richardson & Robbins Building Auditorium located at 89 Kings Highway, Dover, Delaware. Approximately 27 people attended the hearing that night, and many provided comment on the *revised* regulatory amendments. The record was left open for receipt of additional public comment through close of business on Friday, December 6, 2013. After the comment period formally closed, the Department's GWDS reviewed the hearing transcript and all comments received, and then prepared its supplemental Technical Response Memorandum, dated December 12, 2013, which addressed all concerns raised at this most recent hearing. As a result of the tremendous efforts of Department staff as detailed above, it should be noted that there were minimal negative comments received by DNREC at the third and final hearing.

The Department has the statutory basis and legal authority to act with regard to the proposed amendments to 7 DE Admin. Code 7101, *Delaware Regulations Governing the Design, Installation and Operation of On-Site Wastewater Treatment and Disposal Systems*, pursuant to 7 Del. C., Chapter 60. Again, a voluminous amount of public comment was received by the Department throughout this promulgation process, and the same was thoroughly addressed and responded to by the Division of Water in its

Technical Response Memorandum dated December 6, 2013. Proper notice of the hearing was provided as required by law.

The Department's presiding hearing officer, Lisa A. Vest, prepared a Hearing Officer's Report, dated December 13, 2013 ("Report"), which recommends certain findings and the adoption of the proposed *revised* Amendments, as attached to the Report as Appendix A.

### **Findings and Discussion**

As noted above, this particular promulgation has been ongoing with the Department since 2008. Throughout the regulatory development process regarding this particular promulgation, including, but certainly not limited to, numerous meetings with stakeholders, legislators, the regulated community and the public in general, along with three formal public hearings in 18 months, the Department received a voluminous amount of public comment, as noted in the Report. After the hearing record closed with respect to public comment on December 6, 2013, a thorough review of the same was undertaken by the Department's Division of Water. This comprehensive review subsequently yielded a formal Technical Response Memorandum, dated December 12, 2013, which the Hearing Officer then expressly incorporated into her Report. The aforementioned Technical Response Memorandum encompassed a summary of the public comment contained in the record concerning this matter, organized and grouped according to its subject matter, followed by a thorough and rational discussion of the issue based upon the record developed in this promulgation. Following the discussion of each subject matter, the Division of Water offered its recommendation as to what the position of the Department should be with respect to each issue.

I find that the Department's experts in the Division of Water fully developed the record to support adoption of these *revised* Amendments. I find that the *revised* proposed Amendments are well-supported by the record developed by the Department, and I adopt the Report to the extent it is consistent with this Order. I also find that the most recent proposed *revisions* to the Department's amendments to 7 DE Admin. Code 7101, *Delaware Regulations Governing the Design, Installation and Operation of On-Site Wastewater Treatment and Disposal Systems*, are not substantive in nature, and thus no additional vetting of these proposed *revised* regulatory amendments is necessary at this time.

With the adoption of this Order, Delaware will be enabled to properly address the management of large system site investigations, hydrogeological investigations, design considerations, operation and maintenance practices, facilitate the updating of individual on-site wastewater treatment and disposal system design criteria, establish new licenses and inspection protocols, and establish performance standards for small on-site systems utilizing alternative technologies and all large systems.

In conclusion, the following findings and conclusions are entered:

- 1.) The Department has jurisdiction under its statutory authority to issue an Order adopting these *revised* proposed Amendments as final;
- 2.) The Department provided adequate public notice of the proposed Amendments, and provided the public with an adequate opportunity to comment on the same, including at each of the three public hearings held on May 3, 2012, November 15, 2012, and most recently on November 21, 2013;

3.) The Department held all of its aforementioned public hearings, including its most recent on November 21, 2013, in order to consider all public comment before making any final decision;

4.) The Department's Hearing Officer's Report, including its recommended record and the recommended *revised* Amendments as set forth in Appendix A, and the Technical Response Memorandum dated December 12, 2013, as set forth in Appendix B, are adopted to provide additional reasons and findings for this Order;

5.) The recommended *revised* Amendments should be adopted as final regulation Amendments because Delaware will be able to (1) properly address the management of large system site investigations, hydrogeological investigations, design considerations, operation and maintenance practices; (2) facilitate the updating of individual on-site wastewater treatment and disposal system design criteria; (3) establish new licensees and inspection protocols; (4) establish performance standards for small on-site systems utilizing alternative technologies and all large systems; and, lastly, because (6) the *revised* amendments are well supported by documents in the record;

6.) The Department shall submit this Order approving the final regulation to the *Delaware Register of Regulations* for publication in its next available issue, and provide such other notice as the law and regulation require and the Department determines is appropriate.



Collin P. O'Mara  
Secretary

## MEMORANDUM

**TO:** The Honorable Collin P. O'Mara  
Cabinet Secretary, Dept. of Natural Resources and Environmental Control

**FROM:** Lisa A. Vest  
Public Hearing Officer, Office of the Secretary  
Department of Natural Resources and Environmental Control

**RE:** Proposed *Revised* Amendments to 7 DE Admin. Code 7101: ***Regulations Governing the Design, Installation and Operation of On-Site Wastewater Treatment and Disposal Systems***

**DATE:** December 13, 2013

---

### I. **Background:**

A public hearing was held on Thursday, November 21, 2013, at the Richardson & Robbins Building Auditorium by the Groundwater Discharges Section ("GWDS"), Division of Water, Department of Natural Resources and Environmental Control ("Department", "DNREC"), located at 89 Kings Highway, Dover, Delaware, to receive public comment on the Department's proposal to amend 7 DE Admin. Code 7101: *Regulations Governing the Design, Installation and Operation of On-Site Wastewater Treatment and Disposal Systems*. It should be noted that the aforementioned public hearing was the *third* public hearing held by the Department regarding this matter since the Division of Water's GWDS prepared its Start Action Notice ("SAN") 2008-29 to officially begin this proposed promulgation on November 12, 2008. The proposed revisions to the aforementioned *Regulations Governing the Design, Installation and Operation of On-Site Wastewater Treatment and Disposal Systems* were initially published in Delaware's Register of Regulations on April 1, 2012.

After 11 public workshops, and numerous stakeholder meetings, discussions and reviews, the Department placed legal notices in both the News Journal and the Delaware State News on April 1, 2012, advertising that a public hearing would be held on May 3, 2012, to provide an opportunity for the public to comment on the draft regulation. Approximately 43 people attended that public hearing, and many provided comment to the Department on the draft regulation. Given the amount of feedback the Department received at that hearing, the hearing record was left open for an additional 30 days to provide the public additional time to offer comment in this matter.

Subsequent to the record closing for comment after this initial public hearing in May of 2012, the Department's Division of Water (GWDS) then began a thorough review of the record that had been generated to date with respect to this proposed promulgation, including, but not limited to, a detailed review of the formal hearing transcript, and all comment received from both the regulated community and the public at large. As a result of that review, and at the request of this Hearing Officer, GWDS provided its initial Technical Response Memorandum ("TRM"), dated August 7, 2012. This TRM provided a summary of the concerns as set forth by the public comment received through that date in this matter, and offered the Department's formal responses to the same. As a result of some of the comment received, *revisions* were made to the initial proposed regulatory amendments, as the Department believed that numerous suggestions were meritorious and should be incorporated into the final amendments in this matter.

Upon review of the aforementioned TRM, it was determined that the suggested revisions to the Department's initial proposed regulatory amendments were substantive

enough to necessitate further vetting to both the regulated community and the public at large. Thus, after numerous additional legal notices and two outreach presentations (including a presentation in response to an invitation from Sussex County Council to discuss the proposed revisions to these regulatory amendments), a second public hearing was held once again by the Department at the Richardson & Robbins Building Auditorium located at 89 Kings Highway, Dover, Delaware on Thursday, November 15, 2012. Approximately 26 people attended the hearing that night, and many provided comment on the draft regulation. Given the amount of feedback the Department received during the public hearing, the hearing record was left open for a period of 30 days so the Department's GWDS could receive additional public comment in this matter, and once again review the hearing transcript and to address all concerns raised.

With respect to the comments that had been received by the Department up through that point in this promulgation, several members of the public voiced concern with regard to the proposed performance standards for rapid infiltration basins (RIB) with daily flows greater than 300, 000 gallons per day; nitrogen and phosphorus requirements for large and small on-site wastewater treatment and disposal systems (OWTDS); isolation distance requirements; concentration vs. mass load determinations; and associated requirements pertaining to the Chesapeake Bay Watershed Implementation Plan. Numerous people present at the November 15, 2012 hearing also questioned the Class H system inspection program with the mandatory septic tank pump out and system inspection prior to the sale of a single family dwelling unit utilizing an OWTDS. Also included with these comments was opposition to the Department's right of entry provisions, as set forth in the proposed draft regulation amendments at that time.

Additional comments received at that time responded to the permitting process for both small and large OWTDS, with many comments focused on the following: increasing the time period a permit is valid; the ability to modify an existing permit if conditions warranted it; peak vs. average daily flow; collection and transmission systems; flow in lieu of equivalent dwelling units; and the permitting of temporary holding tanks for large systems. Many comments concerned the newly proposed Surface Water Assessment Report (SWAR), while others questioned the length of time a site evaluation is approved for, the amount of requirements placed on the Class D site evaluator/soil scientist, and all requirements regarding the soil investigation report (“SIR”) if it expires prior to being permitted.

Following the second public hearing as noted above, and, upon review of the comments being received to date in this matter, the Department recognized that a significant level of confusion was present with respect to the intent of these proposed regulation amendments, and, in some instances, substantial public concern regarding the same, due in part to certain misinformation existent within the public sector at that time about this proposed promulgation. Thus, during the majority of 2013, an extensive outreach was begun by the Department at that time, to correct erroneous beliefs regarding the intent of these proposed regulatory amendments. During that time, numerous stakeholder meetings and informative workshop sessions were held throughout the State of Delaware to clarify the actual intent of these proposed regulation amendments, and to correct the aforementioned misunderstandings that had become prevalent with regard to certain aspects of this promulgation. At these meetings, the Department concentrated on the following concerns, as set forth in the public comment received to date in this matter:

(1) Inspection of all septic systems upon property transfer; (2) requirements to upgrade all new and replacement septic systems within 1,000 feet of Chesapeake Bay Watershed tidal waters (i.e., Nanticoke River and Broad Creek); (3) large system treatment performance standards for nitrogen and phosphorus; and (4) inconsistencies between performance standards for spray irrigation versus other groundwater discharges (i.e., spray less stringent).

As a result of these numerous meetings held throughout 2013, the Department received additional public input, and again *revised* the proposed regulation amendments. These revisions were made by DNREC to enhance clarity in some areas of the proposed language, and also to incorporate meritorious comment received from both the public and the regulated community. In the beginning of October, a formal press release was issued by the Department, announcing that DNREC's Ground Water Discharges Section would hold a public workshop Monday, October 14, 2013 in Georgetown regarding the *revised* proposed amendments to the *Regulations Governing the Design, Installation, and Operation of On-Site Wastewater Treatment and Disposal Systems* (also commonly known as Delaware's septic regulations) at the Georgetown Cheer Center, 20520 Sand Hill Road, Georgetown, DE 19947. This press release confirmed that these proposed amendments for residential and large septic systems included the following matters: soil investigations; hydrogeological investigations; design considerations; and operation and maintenance practices.

On-site industry licensees, wastewater utility representatives, environmental consultants, and the public were all encouraged to attend the October 14, 2013 workshop, and all were are invited to send written comments, both before the workshop and at any

time throughout the regulatory process by emailing John Hayes, Environmental Scientist, DNREC Division of Water's Ground Water Discharges Section. The aforementioned press release further noted that the proposed revisions to these regulation amendments would be discussed during the workshop, and public feedback was welcomed by the Department. The public was also once again encouraged to send written comments at any time throughout the regulatory process. Furthermore, the press release reminded the public that all proposed changes to the *Regulations Governing the Design, Installation and Operation of On-site Wastewater Treatment and Disposal Systems*, the revised exhibits contained with the formal hearing record, and all additional information concerning this matter were posted on DNREC's website for public review.

On November 21, 2013, a third public hearing was held once again by the Department at the Richardson & Robbins Building Auditorium located at 89 Kings Highway, Dover, Delaware. Approximately 27 people attended the hearing that night, and many provided comment on the *revised* regulatory amendments. The record was left open for receipt of additional public comment through close of business on Friday, December 6, 2013. After the comment period formally closed, the Department's GWDS reviewed the hearing transcript and all comments received, and then prepared its supplemental Technical Response Memorandum, dated December 12, 2013, which addressed all concerns raised at this most recent hearing.

The Department has the statutory basis and legal authority to act with regard to the proposed amendments to 7 DE Admin. Code 7101, *Regulations Governing the Design, Installation and Operation of On-site Wastewater Treatment and Disposal Systems*, pursuant to 7 Del. C., Chapter 60. A voluminous amount of public comment

was received by the Department throughout the five years this promulgation has been ongoing, as noted above. Proper notice of the hearing was provided as required by law.

**II. Summary of Hearing Record:**

The public hearing record consists of the following documents: (1) a verbatim transcript from *each* of the three public hearings held by the Department in this matter, to wit: May 3, 2012; November 15, 2012; and most recently, November 21, 2013, as noted above in Section I; (2) numerous documents introduced by responsible Department staff at *each* of the three public hearings, and marked by this Hearing Officer accordingly as Department Exhibits 1-11, cumulatively; (3) numerous written comments submitted from the public at the time of each of the aforementioned public hearings, as well as a voluminous amount of individual public comments received outside of each of the public hearings, but prior to the close of the hearing record on December 6, 2013; and (6) the Technical Response Memoranda from responsible staff of the Department's Division of Water, dated August 7, 2012, and then December 12, 2013. The Department's persons primarily responsible for the drafting and overall promulgation of these proposed amendments, Jack Hayes (Environmental Scientist), Dave Schepens (Program Manager), Ron Graeber (Program Manager), and Kathy Stiller, Director of the Department's Division of Water, all developed the record with the relevant documents in the Department's files.

Subsequent to the submission of the Department's supplemental exhibits into the record at the hearing held on November 21, 2013, the Department proceeded to offer its presentation for the benefit of the record, which contained a brief background on the history of this promulgation, and a very thorough overview of the regulatory process

undertaken by the Department at this time, to provide a greater understanding of the same by those members of the public in attendance that evening. Mr. Hayes advised that the Department had held numerous formal and informal meetings with stakeholders and legislators over the past year (i.e., subsequent to the second public hearing held on November 15, 2012), culminating with the aforementioned public workshop held on October 14, 2013 in Georgetown, Delaware. Many of the comments received throughout this process were taken into consideration and eventually integrated into the proposed regulatory language over that time frame. Mr. Hayes then proceeded to highlight the biggest changes the Department has made since the second public hearing in November of 2012.

Following the Department's presentation regarding each of these affected Sections, questions and comments were received from the general public who were in attendance at the aforementioned public hearing. The hearing record remained open following the conclusion of the hearing, to allow for additional public comment regarding this promulgation to be submitted to the Department. The record formally closed with respect to additional public comment being received by the Department in this matter at close of business on December 6, 2013. Following a review of the additional comment received as a result of the third public hearing, and a thorough review of the hearing transcript, the Department's GWDS prepared its final TRM dated December 12, 2013.

In its TRM, dated December 6, 2013, the comments and concerns about these *revised* regulation amendments proposed by the Department were carefully addressed and grouped by general topic area, and then fully addressed by the Division of Water. Following the discussion of each subject matter within the TRM, the Division offered its

recommendation as to what the position of the Department should be with respect to each issue. It should also be noted that, as a result of the ongoing efforts of the Department to reach out to the various stakeholders, members of the regulated community, and the public in general, many comments were received commending DNREC's efforts, and offering support of these proposed *revised* regulation amendments as currently written.

For the Secretary's review, and in order for the Secretary to gain a thorough understanding of this proposed promulgation, a copy of the above-referenced proposed *revised* amendments is attached hereto as Appendix "A", and the same is expressly incorporated into this Hearing Officer's Report at this time. Furthermore, a copy of the Division of Water's aforementioned Technical Response Memorandum dated December 12, 2013 is attached hereto as Appendix "B", and the same is expressly incorporated into this Report as well. It should be noted that the Department adhered to all appropriate Delaware statutes and the regulatory development process in this matter, and that the Department has met the required public notice obligations regarding these proposed amendments. It should also be noted that the Department has reviewed this proposed promulgation in the light of the Regulatory Flexibility Act, and believes the same to be lawful, feasible and desirable, and that the recommendations as proposed should be applicable to all Delaware citizens equally.

### **III. RECOMMENDED FINDINGS AND CONCLUSIONS:**

Based on the record developed, I find and conclude that the Department has provided appropriate reasoning regarding the need for the proposed *revised* amendments to 7 DE Admin. Code 7101, *Delaware Regulations Governing the Design, Installation and Operation of On-Site Wastewater Treatment and Disposal Systems*, as noted above.

Accordingly, I recommend promulgation of these proposed amendments in the customary manner provided by law.

Further, I recommend the Secretary adopt the following findings and conclusions:

1. Proper notice of each of the aforementioned three public hearings held in this matter was provided as required by law.
2. The Department has jurisdiction under its statutory authority to make a determination in this proceeding;
3. The Department provided adequate public notice of all proceedings in a manner required by the law and regulations;
4. The Department held each of its aforementioned public hearings in a manner required by the law and regulations;
5. The Department considered all timely and relevant public comments in making its determination;
6. Promulgation of the proposed *revised* regulatory amendments to 7 DE Admin. Code 7101, *Delaware Regulations Governing the Design, Installation and Operation of On-Site Wastewater Treatment and Disposal Systems*, will enable Delaware to (1) properly address the management of large system site investigations, hydrogeological investigations, design considerations, operation and maintenance practices; (2) facilitate the updating of individual on-site wastewater treatment and disposal system design criteria; (3) establish new licensees and inspection protocols; and to (4) establish performance standards for small on-site systems utilizing alternative technologies and all large systems;

7. The Department has reviewed these proposed *revised* regulatory amendments in the light of the Regulatory Flexibility Act, and believes the same to be lawful, feasible and desirable, and that the recommendations as proposed should be applicable to all Delaware citizens equally;
8. The Department's aforementioned proposed *revised* regulatory amendments concerning *Delaware Regulations Governing the Design, Installation and Operation of On-Site Wastewater Treatment and Disposal Systems*, as published in the April 1, 2012 *Delaware Register of Regulations* and as subsequently *revised* and set forth in Appendix "A" hereto, are adequately supported, are not arbitrary or capricious, and are consistent with the applicable laws and regulations. Consequently, they should be approved as final regulatory amendments, which shall go into effect ten days after their publication in the next available issue of the *Delaware Register of Regulations*; and
9. The Department shall submit the proposed *revised* regulation amendments as final amendments to the *Delaware Register of Regulations* for publication in its next available issue, and shall provide such other notice as the law and regulations require, and as the Department determines is appropriate .



LISA A. VEST  
Public Hearing Officer

