



STATE OF DELAWARE  
DEPARTMENT OF NATURAL RESOURCES  
AND ENVIRONMENTAL CONTROL

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OFFICE OF THE  
SECRETARY

**Secretary's Order No. 2011-W-0009**

**Re: APPLICATION OF ASHBURN HOMES INCORPORATED FOR A  
PERMIT TO CONSTRUCT AN ON-SITE WASTEWATER TREATMENT  
AND DISPOSAL SYSTEM TO SERVE THE LANDINGS SUBDIVISION  
NEAR LEIPSIC, KENT COUNTY**

**Date of Issuance: January 31, 2011  
Effective Date: January 31, 2011**

Under the authority granted the Secretary of the Department of Natural Resources and Environmental Control (Department or DNREC) under 7 *Del C. §6003*, the following findings, reasons and conclusions are entered as an Order of the Secretary.

**Background**

This Order considers the record developed during the Department's public hearing process on Ashburn Homes Incorporated's (Applicant) application for a permit to construct and operate a 39,600 gallons per day (gpd) capacity on-site wastewater treatment and disposal system (OWTDS or System). The System would be a large community OWTDS, which would provide central sewer service to 132 proposed single family houses to be built in a 342.5 acre residential subdivision known as The Landings (Landings).<sup>1</sup> The Landings would be located approximately ¼ mile west of the municipal boundaries of the Town of Leipsic, Kent County on 2 parcels on the north and south sides of Fast Landing Road (SR 42). The System would be on the southern parcel.

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<sup>1</sup> Kent County Levy Court approved the subdivision after denying approval twice. The denials were reversed on appeal.

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The application was the subject of objection from the Town of Leipsic, which requested a public hearing. The Department held a public hearing on July 22, 2010 before presiding hearing officer Robert Haynes, and the public hearing record contained numerous comments opposing the System. Mr. Haynes prepared a Report of recommendations, dated January 27, 2011, as attached hereto and incorporated herein, which recommends denial of the requested permit based upon the application not complying with the Department's OWTDS Regulations. The Report also was based upon the record that the System would pose an undue risk to the environment and public health and safety from flooding and does not conform to policies directing State strategies and spending.

#### **FINDINGS AND DISCUSSION**

I adopt the Report and its review of the record and recommendations to the extent it is consistent with this Order. First, the Department does not support placing property and lives at an undue risk from flooding. The project area historically has been subjected to flooding and the Department's experts have concluded that the Landings would experience increased and potentially more intense flooding in the expected time span that the OWTDS would be in service putting residents at avoidable risk. The record includes public comments on the frequency of flooding in the proposed project area and concerns that the System, if built, would place 132 houses and their expected several hundred occupants at an undue risk from flooding. Specifically, residents commented upon the frequency of flooding of Fast Landing Road which is the primary access road that the Landings' residents would have to use to evacuate during flood events. The public comments also raise valid concerns with the adverse water quality impacts from the

System, which will enable intensive residential development to occur in an environmentally sensitive area. The risk of flooding also is projected to increase over the expected design life for the proposed System, based upon the Department's analysis of sea level rise.. Therefore, I find that the combination of department scientific conclusions and public comments warrant denying the System a permit.

The Report chronicles problems with the receipt of information from the Applicant. I agree with the Report's conclusion that the Applicant failed to timely provide the Department with information required by the Department's OWTDS Regulations. Applicant's failure to provide the Department with the requested information is not acceptable, particularly when the Department put the Applicant on notice in an April 26, 2010 letter that the information initially submitted failed to comply with the OWTDS Regulations. Applicant waited until July 8, 2010 to submit any response, albeit still incomplete, and Applicant's delay denied the public the opportunity to comment on a complete application, which the Report finds remains incomplete.

I do not agree with the Report that the Applicant should be denied a permit based upon Applicant's reliance on the Department's guidance document the design capacity for a community OWTDS based upon 300 gpd demand per house, as opposed to a more precise 120 gpd per bedroom that was the basis for the Report's recommendation for denial. I agree with the Report that guidance documents should not be followed when they are contrary to a clear interpretation of the OWTDS Regulation, but I find that the OWTDS Regulations are vague in exactly what design rate should be used. I agree with the Report that the Department should be sympathetic to the Applicant.

Applicant properly relied on the guidance document's design rate even though the actual metered data from similar development was never provided to support the use of a surrogate design rate than the number of bedrooms. In the future, I will direct that the Department clarify this important design foundation to any community OWTDS in a more formal manner, as opposed to continued reliance on an informal guidance document. The Applicant followed the guidance document in good faith and it would be unfair to penalize the Applicant for designing the System based upon the one Department guidance document, even though I agree with the Report that the record does not support reliance on the guidance document alone absent more information in the record based upon actual metered data from a similar development.

In addition, I find that the application to build the System is contrary to the policy goals of preserving a Level 4 area from intensive residential use, such as proposed by the Landings. The State of Delaware has determined that projects proposed in these areas should not receive governmental support for public infrastructure. The approval of a large community OWTDS for the Landings would enable undue residential development to occur in a fragile environmental area that both the State and Kent County have determined should be protected from such undue residential development. Therefore, this project is contrary to sound environmental policies set forth in Delaware laws. *7 Del C. Chap. 60.*

### **Conclusions**

I find and conclude that sound environmental reasons support the denial in order to protect the environment and public health from the undue risk of harm if the System

were to be built as proposed. The risk of flooding will increase over time based upon reasonable projections and the Department should not facilitate placing property and lives at such risk over the projected design of the System and the houses it would serve. The Department's duty to protect the environment and public health should consider the long-term consequences of all permit decisions, such as the one presented by the System.

In sum, as more fully described in the reasons and findings in the Report, I adopt and direct the following as a final order of the Department:

1. The Department has jurisdiction under its statutory authority to make a determination in this proceeding;

2. The Department provided adequate public notice of Applicant's application and the public hearing: however, such notices were premature in light of the record that showed that Applicant failed to timely provide the Department with a complete application and thereby Applicant denied the public its right to comment on a complete application;

3. The Department considered all timely and relevant public comments in the record and the advice of its experts making its determination;

4. The record of decision supports the denial the requested permit based upon the proposed undue residential development of an agricultural, recreational and scenic Level 4 area, the flooding and public safety concerns with adding 132 single family houses that is now subject to frequent flooding and is projected to be subject to increased flooding over the expected design life of the System, and the System's adverse environmental and public financial impacts; and that

5. The Department shall provide notice of this Order to the persons affected by this Order, as determined by the Department, including those who participated in the hearing process.

A handwritten signature in black ink, appearing to read 'Collin P. O'Mara', written in a cursive style.

Collin P. O'Mara  
Secretary

## HEARING OFFICER'S REPORT

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

FROM: Robert P. Haynes, Esquire  
Hearing Officer, Office of the Secretary  
Department of Natural Resources and Environmental Control

RE: Application of Tony Ashburn Incorporated for A Permit to Construct a Community On-site Wastewater Treatment and Disposal System to Serve 132 Lots within The Landings, a Proposed Residential Subdivision near Leipsic, Kent County.

DATE: January 27, 2011

### I. PROCEDURAL HISTORY

This Report (Report) reviews a record and makes recommendations to the Secretary of the Department of Natural Resources and Environmental Control (Department) on Ashburn Homes Incorporated's (Applicant) permit application. The application seeks approval for a groundwater discharge of pollutants from a 39,600 gallon per day (gpd) capacity community on-site wastewater treatment and disposal system (OWTDS or System). The System would serve 132 single family houses proposed to be built within 'The Landings' (Landings), Applicant's proposed 382 acre subdivision approximately 1/4 mile west of the municipal boundaries of the Town of Leipsic, Kent County along the south and north sides of Fast Landing Road (SR42).

The Department's Division of Water, Groundwater Discharge Section (GWDS) received Applicant's application in 2010, but the Department's regulatory review began in 2005 based upon Applicant's June 3, 2005 submission to GWDS of a sewer feasibility study.<sup>1</sup> This feasibility study was based upon Applicant's preliminary soils analysis conducted in 2004, which

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<sup>1</sup> The Lands of JNK, LLC (JNK) owned the land, and Applicant was JNK's authorized agent. The name of the development and its legal ownership has changed over the years, but this Report will refer only to the Landings for the 382 acre parcel and the Applicant as the owner.

identified an approximate 20 acre area that may be suitable for a community OWTD.<sup>2</sup> DNREC Ex. 5.

In a letter dated May 4, 2005, Tidewater Environmental Services, Inc. (TESI) wrote to GWDS notifying of notice of intent based upon TESI's acceptance to provide public utility wastewater service to the Landings. DNREC Ex. 4.

GWDS in response to the Applicant's June 3, 2005 sewer feasibility study indicated in a June 20, 2005 letter that the Department opposed the Landings, but concluded that the Landings could receive OWTDS sewer service under the current criteria in the Department's regulations *Governing the Design, Installation and Operation of On-Site Wastewater Treatment and Disposal Systems as emended April 11, 2005*. The letter ended with the following caveat:

**The comments in this letter are technical and are not intended to suggest that DNREC supports this development proposal. The letter does not in any way suggest or imply that you may receive or may be entitled to permits or other approvals necessary to construct the development you indicate of any subdivision thereof of these lands.**

The Applicant's next regulatory step with the Department was the submission to GWDS of a Soil Investigation Report (SIR) dated November 7, 2005. The SIR was based upon a 55,440 gpd community OWTDS serving 132 lots. The SIR indicated that the treated wastewater would be discharged into the groundwater at 45 minute per inch (MPI) rate using a micro-drip irrigation system. DNREC Ex. 5. In a November 23, 2005 letter, GWDS approved the SIR, but indicated that the approval would expire on November 23, 2005. DNREC Ex. 5.

The Applicant's next regulatory step was taken when the Department received Applicant's entitled 'Ground Water Impact Assessment Proposed Subdivision "The Landings" LC 039.00-01-02.00 Kent County, Delaware' dated February 7, 2006. DNREC Ex. 6. This submission was reviewed by Scott Strohmeier in the Division of Water's Groundwater

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<sup>2</sup> Applicant's tax parcel LC39.00-01-02.00, which is 201.4 acres on the south side of Fast Landing Road.

Protection Branch, who prepared a March 29, 2006 memorandum for GWDS that considered the groundwater analysis of the impact of the proposed 55,440 gpd community OWTDS. DNREC Ex 7. The memorandum recommended GWDS approve Applicant's Groundwater Impact Assessment subject to the following conditions: 1) that the disposal area should be where the land surface is 9 feet above mean sea level or greater and 2) a well monitoring location map is submitted once the final disposal system layout has been completed.

In an April 7, 2006 letter, GWDS conditionally approved Applicant's Groundwater Impact Assessment and SIR. DNREC Ex 8. The approval was based upon the conditions included in the Mr. Strohmeier's March 29, 2006 memo.

On April 22, 2010, the Department received Applicant's 'Design Engineer's Report for Landings at Leipsic Community WWTP' dated April 2010 and 13 pages of plans, which were prepared by Daniel String, P.E. of Green Stone Engineering. In addition, Applicant submitted the Department's permit application form dated April 22, 2010. Hilary Valentine, an Environmental Engineer in GWDS, reviewed Applicant's submission and in an April 26, 2010 letter to Applicant provided extensive comments, which noted that Applicant would have to provide required additional information. DNREC Ex. 11.

On May 9, 2010, the Department had published a legal public notice of Applicant's application, which notice provided the public with a 15 day deadline for any written public comments and/or to submit a meritorious request for a public hearing. (DNREC Ex. 1) In a letter dated May 14, 2010, Nancy Goodfellow, Secretary of the Town of Leipsic, provided comments in opposition to the application and requested a public hearing. DNREC Ex. 2.

The Department determined to hold a public hearing on the application and on June 13, 2010 had published a legal public notice of a July 22, 2010 public hearing, which notice also

provided the public with the opportunity to submit written comments within 20 days of the publication. DNREC Ex. 3.

In a letter dated July 8, 2010, Mr. String responded to the Department's April 26, 2010 letter. DNREC Ex. 12. The response indicated that the Applicant's Design Engineer's Report and permit application form had been revised in response to the Department's April 26, 2010 letter, except that the required legal documents on the community OWTDS would be provided at a later date. Applicant also submitted the revised Design Engineer's Report (DNREC Ex. 9), the revised 13 sheets of plans for the System (DNREC Ex. 10), and the revised Department application form dated July 8, 2010 (DNREC Ex 13).

I was assigned to preside over the Department's July 22, 2010 public hearing, which was held at the Department's King Highway offices. At the conclusion of public hearing, I kept the public comment period open to receive written comments until August 26, 2010. The Department received additional written comments during the extended public comment period. The Applicant also has requested status updates on the timing of the Department's decision and indicated Department action was needed for final approval of the plan by the Kent County Regional Planning Commission (RPC). On October 2, 2009, RPC conditionally approved the Landings, subject to numerous conditions, including Applicant's receipt of a construction permit for the community OWTDS. DNREC Ex. 14. I requested technical assistance from experts in the Department's Coastal Program in order to consider the issue of flooding, and received a memorandum dated January 25, 2011.

## **II. SUMMARY OF THE RECOMMENDED RECORD**

This report of recommendations is based upon a recommended record of decision, which contains: 1) the verbatim transcript of the July 22, 2010, public hearing including hearing exhibits, and 2) the documents identified in this Report.

At the July 22, 2010 public hearing, representatives of the Department were present, including Ron Graeber, Manager of SWDS' Large Systems Branch. Mr. Graeber developed the record with certain relevant documents from the Department files, as identified above in the procedural history section of this Report.<sup>3</sup>

The Applicant's representatives included its counsel, John Paradee with the law firm of Prickett, Jones & Elliott, who made an opening statement and introduced Daniel String, P.E of Green Stone Engineering, Steve Cahill of Atlantic Hydrologic and Bruce Patrick of Tidewater Utilities, who will own and operate the System. Mr. String made a power point presentation that indicated that the proposed OWTDS was similar to small systems even though it will serve a community. He indicated that the Department's review previously has included preliminary feasibility, detailed soils investigation and groundwater impacts. He noted the Department's November 2005 approval of the SIR, which was based upon borings and not just review of maps. He also indicated that the Department approved the PGIA in April 2006 and that this report further defines and restricts the area to be used and reduced the proposed disposal area. He noted that the groundwater was located at 4.9 to 8.2 feet below the surface and that a mounding analysis was done to determine the impact of the discharge being added to the groundwater and that this analysis showed an increase of .3 feet based upon use of a drip irrigation disposal method. The groundwater analysis was done over an extended period of time and during time when there was a high water table. The groundwater analysis also reviewed the nearby water supply wells and he indicated that it found no adverse impact from the potable wells within 1,000 feet of the disposal system. The disposal area was to be limited to be above the 100 year flood plain, which was 9' above mean sea level (msl). He indicated the need to comply with

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<sup>3</sup> The Department's role at the hearing is that it takes no position on the merits of the application until after a public hearing. Instead, the Department develops the hearing record with certain information relevant to the record of decision, including the legal proof of the public notices, and any timely and relevant written public comments.

the Department's OWTDS Regulations, as last revised in 2005, and guidance documents. He referred to the 2008 supplemental guidance and the community and large system application requirements in 2007, and the specific document on drip irrigation systems. He described how the application to the land also treats the wastewater, but that for the proposed OWTDS that the pretreatment would occur by an advanced wastewater treatment process before any discharge. He explained how the discharge would be spread out through the zones to be used. He indicated that the treatment would be to a level similar to the treatment by Kent County's sewer system.

Mr. String indicated that the System was based upon the average household use of 220 gpd per each equivalent dwelling unit (EDU) based upon the Department's guidance document. In addition, he noted that the disposal area would have to be designed to accept 39,600 gpd. He described the Sequencing Batch Reactor (SBR) treatment process and how it would reduce the wastewater's Biological Oxygen Demand (BOD) level from 225 to 30 milligrams per liter (mg/l), its Total Suspended Solids (TSS) from 225 to 30 mg/l and its Total Nitrogen (TN) from 45 to 10 mg/l. He indicated that the treatment system is an established process and would be installed as a pre-packaged unit. He described the micro-drip discharge system and its low discharge rate of 0.18 gallons per day per square foot of discharge area if the OWTDS operated at maximum capacity. He explained that a minimum 220,000 square feet of disposal area was required, and that the proposed disposal area had slightly more area than required. He indicated that the Department requires a spare area in the event that something would go wrong, and that the proposed disposal area had a 318,000 square foot spare area available to it. He discussed the drip irrigation equipment to be used and the automatic selection of the 13 zones and the control equipment to monitor the operations. He described the manufactured building that would enclose the treatment equipment except for the emergency generator to be available in the event of a power failure. The building would have a restroom for employees. All the disposal zones

would be above the 100 year flood plain. He described the monitoring wells network that would be installed outside the discharge area for sampling and monitoring the performance of the OWTDS similar to surface water discharge system. He noted the OWTDS would be operated by TESI, which would use licensed operators. He noted that TESI has experience with such advanced treatment systems, such as at the OWTDS at The Retreat, a subdivision near Rehoboth Beach, Sussex County.

The following public officials introduced themselves: Kent County Levy Court Commissioner Allan Angel, State Senator Bruce Ennis, State Representative Bill Carson, Leipsic Town Council member Nancy Goodfellow, and Leipsic Mayor Pugh.

Ms. Goodfellow provided comments and introduced her letters to the Department as exhibits, which were identified as Goodfellow exhibits. She also commented on the Department's Delaware Coastal Programs Office report entitled "Sea Level Rise Initiative Project Compendium," dated March 2010 as containing new scientific evidence relevant to the application. She commented that the application for a private community sewer system posed a serious environmental threat similar to what is unfolding in the Gulf of Mexico. She questioned the scientific support for the application as tentative and hypothetical. She noted the site is in an area that the Department has identified as likely to require shoreline protection as the sea level is expected to rise. She commented on Leipsic's difficulty in dealing with wet season construction because of the high water table. She claimed the test borings were done during time of extreme drought. She disputed the Applicant's claim that the treated wastewater would be good enough to drink. She noted that the subdivision has been opposed by local residents and that the Department should protect the public and the environment from flooding. She also noted the environmentally sensitive area and that the Leipsic River should be protected as it is used to support livelihoods.

Wayne Holden spoke in opposition and indicated he owned between 900 and 1000 acres along the Leipsic River, which has been in his family since 1946. He commented on his family's recreational use of the Leipsic River for fishing, swimming and other water sports. He recalled the study of the water quality conducted in the mid 1990's and the establishment of Total Maximum Daily Loads (TMDLs) to protect the river from pollution as the Department had determined that it was impaired and failed to meet the water quality standards because of elevated levels of nutrients Nitrogen and Phosphorous. The TMDLs he claimed did not support an additional discharge of pollutants such as proposed to be discharged by the Landings. He cited a 2006 report that did not identify the Applicant's proposed discharge. He provided photographs of flooding along Fast Landing Road adjacent to the Landing that occurred on the Mother's Day storm of 2009. He questioned the proposed septic system functioning if flooded. He indicated that OWTDS fail and the consequences of such failures is higher cost to taxpayers, and that if the development connected to the Kent County system that this concern with failure of the OWTDS would be alleviated. But the proposed housing density he viewed as a recipe for disaster because of the potential to be flooded and the need for police and fire personnel to rescue homeowners. He provided a copy of the News Journal article on a community system's failure in New Castle County. He also commented that his property now has marsh on about 100 acres that used to be farmed. He requested denial of the application because of the poor location and the consequences that would come from approval. He asked those in attendance to stand if they supported denial of the application, and all but the Applicant's representatives stood in response to this question. .

Jay Goodfellow spoke in opposition to the application. He indicated he was the chairman of the Leipsic Planning Commission and he read a letter from the Planning Commission to the Department into the record. The letter commented on the Department's lax enforcement of

environmental laws based upon the News Journal's article on the Lea Era Farm community system that was discussed. The letter commented on the presence of approximately 100 shallow potable wells in Leipsic that are 15 to 40 feet deep and that due to the age are not listed on the Department's inventory of wells. The letter questioned the reliance of information that did not consider the impact on these shallow wells. The letter commented that the System proposed would impact the drinking water from the shallow wells. The letter noted that Leipsic is downstream from the Landings and would be impacted by pollution entering the water. The letter requested test wells be drilled in April to accurately test water table levels. The letter requested an analysis of the impact on the shallow wells in Leipsic. The letter requested that the results be reflect in a revised OWTDS proposal. The letter was admitted as Goodfellow Ex 2.

Jean McDonald spoke in opposition as a homeowner along Fast Landing Road adjacent to the Landings. She spoke about how many times she has been forced to evacuate because of flooding. She indicated that she has lost landscaping from the salt water from the repeated flooding. She counted 11 storms that caused flooding in four years and that she has been evacuated 4 times, including 3 times in the past season. She indicated that the proposed OWTDS was dangerous to the environment and her septic systems and well and that it was no place for a community system.

Jerry Manley, Sr. spoke in opposition and indicated he had a business in Leipsic and was on the Leipsic Planning Commission. He spoke about his tour of the treatment plant near Rehoboth and that the plant operator told people not to drink the treated effluent. He questioned the discharge into a marsh area that could fill up like a sponge and that a system in such a low lying area that would affect the health and safety of people is 'crazy.' He said the location would have flooding problems in years, and that the OWTDS should be moved inland and be located near land that gets frequently flooded.

Flo Burrows spoke in opposition as a nearby resident who was concerned with the loss of habitat. She indicated her husband was a trapper and that the water table is rising and causing higher tides. She indicated the System would harm crabbers and trappers and asked if the System would be limited to only the 132 houses and whether the water would be tested on-site. Mr. Sting informed her that the System would be limited to the 132 houses and that the testing would be done on site. She also commented that the development was outside the Kent County growth zone and that taxpayers would be burdened if it fails.

Fred Bass spoke in opposition as a resident along Fast Landing Road adjacent to the Landings. He indicated that the Applicant had misled people and that the development should never have been approved.

William Jacobson spoke in opposition as a resident of Fast Landing Road. He commented on the flooding he experienced and that the concern with the rising sea level and loss of wetlands from sinking. He questioned the continued reliance of information taken in 2005 from the proposed location. He questioned whether the 100 year flood plain accurately reflected the flooding experienced, and that the System's failure would impose a burden on taxpayers. He cited the New Castle County system that failed and cost taxpayers \$1.5 million. He said it doesn't make sense to take away farmland and discharge 40,000 gpd into the Leipsic River. He commented that the maps do not show the marsh area and whether there is adequate buffer to protect the marsh. He wondered about the discharges of nitrogen and phosphorous and further commented that such discharges would adversely impact the water quality.

Mayor Craig Pugh asked about the monitoring well system and was informed by Mr., Graeber that the Department has not determined the number of wells yet. Mr. Graeber was questioned about the problems reported in the News Journal and that site had problems even with monitoring wells. Mr. Graeber explained how the problems with the Lea Era Farm system were

different from any from Applicant's OWTDS, which would not use treatment lagoons. Mayor Pugh reported no studies were done on the impact on wells located only 20' deep and that only wells 125' deep were considered. He noted this issue was raised at a meeting 5 years ago in the Leipsic Fire Hall and still has not been addressed. He also requested that the Applicant be ordered to provide a better level of treatment than the level proposed. Mr. Graeber commented that the Department requirements for drinking water standards were met for total nitrogen. The Department's TMDL required a 40% reduction and the proposed OWTDS met this goal. Mayor Pugh also requested funding be required in the event the System failed. Mr. String indicated that the funding would not be necessary because TESI would provide a utility service. Mayor Pugh also asked about the need for a 6" water main and Mr. String informed him that was for the wash down of the hose bibs and other water uses.

State Representative William Carson of the 28<sup>th</sup> Representative District spoke in opposition and noted that despite the test borings and elevation used for the discharge that with the right tides and weather conditions the area gets flooded. He noted that the development is outside the growth zone and as a private system there is the concern with failure causing taxpayers to bear the cost.

Glenn Towery spoke in opposition as a resident of a development near Route 13. He commented about the close proximity to Route 9 and that houses near Route 9 needed more land for septic systems. He questioned the reliance of the 100 year flood because places still flood even if not in the 100 year floodplain.

State Senator Bruce Ennis of the 14<sup>th</sup> Senatorial District spoke in opposition and indicated he had represented Leipsic as a State Representative. He noted that the Landings has been consistently opposed beginning with the 2005 Regional Planning Commission's denial. He noted that 7 days after the denial that Levy Court received a petition from 218 residents opposed

to the Landings. He noted the State Planning Office opposed the Landings because of environmental concerns and that the development was proposed outside the growth zone in a Level 4 area. He also commented on the high water table based upon his involvement with local road project that were delayed because of high water levels.

Kent County Levy Court Commissioner Allan Angel of the 3<sup>rd</sup> Levy Court District spoke in opposition based upon his personal observation of high water level at Jean McDonald's house and the frequency of flooding in the area. He questioned the ability to repair the System during adverse weather condition and that sea level rise will make the flooding occur even more.

Ruth Ann James spoke in opposition and also commented on the pending sea level rise that was the subject of a News Journal article. She reported that the report expected a rise of between 1.5 to 5 feet and asked the Department to stop leaning on the 100 year floodplain map but take into account the sea level rise information. She indicated she was the founder of the Leipsic River Watershed Association and that no one is actively monitoring the TMDL compliance. She stated that the Leipsic River is an important watershed and encompasses federal, state, county and private lands. She noted that the Leipsic River is the deepest river in Delaware that goes inland.

Jay Goodfellow reported that he spoke to Levy Court Commissioner and President Brooks Banta and that he also opposed the application.

At the conclusion of the public hearing and after discussion about further comments, I kept the public comment period open for written public comments until August 26, 2010. The Applicant submitted written comments responding to the public comments. Applicant Ex. 1. Joe Shallenberger provided written comments and a CD with photographs of Fast Landing Road during flooding. Shallenberger Ex. 1 Jean McDonald submitted written comments and photos and a calendar marking when the area flooded. Her comments indicated that 29 houses were built

by the Applicant along Fast Landing Road. McDonald Ex 1. The Department has received communications from the Applicant inquiring about the status of the Department's decision, and a Freedom of Information Act request for the post hearing documents.

The Department investigated the comments at public hearing record, and has further developed the record based upon its experts' advice. I provide as an appendix a summary of certain technical information based upon the documents identified as in the record.

Based upon my review of the record, I find the record to be inadequately developed to support issuance of a permit as consistent with OWTDS Regulations and the Department's duty in Chapter 60 to protect the environment and public health. The record includes the Department's Coastal Program January 25, 2011 memorandum, which supports denial based upon the public health and public safety considerations based upon flooding conditions, which are projected to become more frequent over the expected design life of the System. The recommendation to deny based upon inadequate information also is made in light of the deadline imposed by Kent County's preliminary plan conditional approval, which does not provide the Applicant or the Department with sufficient time to provide the information that is not in the record and would require a new public notice and likely a new public hearing.

### **III. DISCUSSION AND REASONS**

The Department's statute set forth in 7 Del Code Chapter 60 provides the underlying authority to act on the permit application. The regulation of the discharge of pollutants into the groundwater, such as proposed by the OWTDS, is based on 7 *Del. C. §6003(a)(4)*, which grants the Department to regulate by permit "any activity...[i]n a way which may cause or contribute to discharge of a pollutant into any surface or ground water...." The OWTDS requires a permit because it will result in the discharge of pollutants into the ground water.

Pursuant to its Chapter 60 authority, the Department promulgated *Delaware Regulations Governing the Control of Water Pollution*, as amended (Water Regulations), 7 DE. Admin. Code 7200, and *Regulations Governing the Design, Installation and Operation of On-Site Wastewater Treatment and Disposal Systems* (OWTDS Regulations), 7 DE Admin Code 7101. The Department's OWTDS Regulations govern the application process and the Water Regulations govern the water quality standards.

1. THE APPLICANT FAILED TO TIMELY PROVIDE A COMPLETE APPLICATION.

The procedural history section of this Report indicates that the Applicant first filed a sewer feasibility study with the Department in 2005, which the Department approved in 2005. The Applicant then filed for of the Groundwater Impact Assessment in 2007, which the Department approved in 2007. The Applicant then waited until April 2010 to file a permit application. Based upon the record, I find that Applicant's delay in providing the Department with the information it required in a timely manner prevents the Department from issuing a permit under the OWTDS Regulations. I also find that in light of the pending deadline for a permit as imposed by Kent County's Regional Planning Commission in its October 2, 2009 decision that there is no time to cure the Applicant's failure to provide the required information. Consequently, I recommend denial of the permit application as there are no permit conditions that can rescue the procedural problems in time to satisfy the Kent County's deadline for a construction permit from the Department.

The OWTDS Regulations provide that the Department may deny a permit "when it determines that a denial: 1) will "best implement the purposes of 7 Del. C. Ch. 60 and these Regulations." 7 DE Admin 7101 section 5.5.1. I find based upon the evidence that the Applicant failed to comply with the OWTDS Regulations in providing the Department with required information to allow the application to be determined to be complete. The OWTDS Regulations

provide that even a completed application can be denied because “[p]roviding of the requisite information in the application procedure...shall not be construed as a mandatory prerequisite for issuance of the permit...” Section 5.4.5 also set forth grounds for denial based upon an application containing false information, the proposed system would not comply with the OWTDS Regulations, the proposed system would violate a Department moratorium, or a central wastewater system which can serve the proposed wastewater flow is both legally and physically available.

I recommend a finding that the application should be denied because the Applicant failed to comply with the OWTDS Regulations. Applicant’s formal application process began with a false start with Applicant’s April 22, 2010 of an incomplete application. I find that the application was not even remotely complete based upon the GWDS’ review and April 26, 2010 comments to the Applicant. The Department provided the Applicant with notice of the deficiencies in the April filing, but also made a decision to publish legal notice of the April submission, possibly under the assumption that Applicant would quickly provide the requested information during the time lag when the newspapers actually published the legal notice. In hindsight, the Department’s decision to publish prior to actual receipt of the requested and required information was a mistake.

While the record is clear that the Department’s decision to publish the public notice was premature, the publication time lag between the Department’s notice of the deficiencies in the application and the actual publication provided the Applicant with the opportunity to provide all the requested information before publication to complete the application. Moreover, the whole problem with the application began when Applicant failed to comply with the filing requirements in its April submission. The Department is often faced with pressure by permit applicants who seek to cut procedural corners in an effort to gain permits, and the Department may overlook

some procedural problems when the applications are not opposed, but there was considerable public opposition to the application. Thus, the Department quickly pointed out the problems with the April submission and properly assumed that the Applicant would timely provide the information prior to the public notice publication on May 9, 2010. If Applicant had provided the requested and required information by May 9, 2010, then the premature decision to publish the public notice could have been cured. The Applicant did not provide the Department any response prior to May 9, 2010. As discussed later, the Applicant as of today still has not provided the information requested in the April 26, 2010 letter. Thus, the Applicant failed to provide the Department (or the public) with the requested information prior to the May 9, 2010 public notice, which made the public notice defective under the law.

Applicant's problem with not timely providing information in its April filing and in response to the April 16, 2010 letter could have been cured by the Department's publication of another public notice. The Department's receipt of a request for a public hearing provided the Applicant with even more time to provide the information needed to complete the application. The Department published a new public notice of the public hearing on June 13, 2010.<sup>4</sup> The second public notice provided Applicant even more time to cure the original failure to provide timely information, but the Applicant again failed to provide a complete application by the June 13, 2010 deadline. Thus, the publication of the second public notice also was premature because Applicant failed to provide the Department with the requested and required information before the June 13, 2010 publication and the public had no public notice of a complete application.

The opportunity for the public to comment on a complete application is a right established by law and the OWTDS Regulations. The OWTDS Regulations define a 'completed

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<sup>4</sup> The Department sometimes combines public notice of an application and a public hearing when the Secretary determines that a public hearing should be held on an application.

application’ as “one in which the application form is properly completed in full, is signed by the applicant, is accompanied by all required exhibits, detailed plans and specifications, and required fee.” *7 DE Admin. Code 7101 Sec. 2.1.* Section 5.4.4 also provides that “[a]n application is complete only when the form is completed in full, signed by the owner or the owner’s legally authorized agency, accompanied by all required exhibits (provided an approved site evaluation report is on file) and fee.” The law in Chapter 60 also requires publication of a public notice of an application “in such form and accompanied by such plans, specifications and other information as required by the applicable statute or regulation.” *7 Del C. 6004(a)* and that the publication should occur only “upon receipt of an application in proper form.” The record is clear that Department established an application form for the requested permit and the Department notified the Applicant that the application form was not completed and that additional information was needed to make the application complete. I further find that the extent of Applicant’s revisions to the April application in the application package submitted July 8, 2010 made Applicant’s delay more than a harmless error that otherwise could be explained or excused by the Secretary, who is ultimately has the responsibility for the Department complying with the law and the Department’s own regulations, which have the force and effect of law.

1. THE APPLICANT FAILED TO PROVIDE INFORMATION REQUIRED FOR A LARGE COMMUNITY OWTDS

In addition to the deficiencies noted in the Department’s April 26, 2010 letter, I recommend a finding that the Applicant’s July 8, 2010 still is not complete as of the date of this Report. The Applicant has not provided the Department with the information on a community OWTDS, which the OWTDS Regulations require. Indeed, the Applicant’s July 8, 2010 response noted that the requested legal documents on the community OWTDS and the transfer to TESI would be provided later, including a certificate of public convenience and necessity for TESI’s service. Applicant never provided this requested information, although GWDS’ own efforts

obtained the Public Service Commission's July 22, 2010 Order that approved TESI's authority to provide sewer service. I recommend that this document be included in the record, but this shows a completed application based upon this information was not possible before July 22, 2010. Indeed, the Department obtained this important document after the public hearing. I find that Applicant also has not provided any details on the transfer and the interim operation as a community OWTDS. The Department's April 26, 2010 letter noted this problem and the transfer to TESI was raised in the public comments and may have alleviated some of the public concerns with Applicant operating the community OWTDS. The Kent County planning approval also raised the same concerns and the Department's OWTDS Regulation require full disclosure of the details on the ownership and operations of a community OWTDS as part of a complete application.

The Applicant seeks approval to construct a community OWTDS, but yet failed to provide any of the information required for community OWTDS, as set forth in Section 5.13 of the OWTDS Regulations. The required information includes documents on ownership, transfer of ownership, maintenance, repairs, operation, performance and funding of the community OWTDS through the design life of the OWTDS. The record does not contain the necessary documents to fulfill this application requirement. While the Department is aware of a proposed transfer to TESI, which the Department recognizes is an experienced sewer utility, the OWTDS Regulations require more than a vague proposal to transfer ownership. Applicant has not provided the necessary documents on this transaction despite this defect being identified in the April 26, 2010 letter. In this case the legal entity seeking a permit is the Applicant, which can only receive a permit for a community OWTDS after complying with Section 5.13. Moreover, the OWTDS Regulations do not allow regulated wastewater utilities relief from most of the

otherwise applicable requirements for a community OWTDS.<sup>5</sup> The problem is that this information should have been provide as part of a “complete application.” Consequently, I find as of the date of this Report that the record still lacks the information to support a finding of a complete application. TESI’s receipt of PSC authority on July 22, 2010 to provide public utility service to the Landings does not eliminate Applicant’s duty to submit the information required for a community OWTDS in order that this important information is available both to the Department and the public. TESI indicated its intent early in the process, but yet it is the Applicant, and not TESI that still seeks the permit 5 years after TESI provided its notice of intent to serve. The OWTDS Regulations require the Department to have specific information and Applicant failed to provide the requested information. Indeed, even the conditional approval by RPC required this information. The fact that TESI, a capable sewer utility, is waiting in the wings to take over the community OWTDS at some point in the future and pursuant to some unknown terms and conditions does not allow the Applicant to ignore the filing requirements for a community OWTDS. Even if Applicant provided the requested information after the public notice, then this would require a new public notice and likely public hearing, Hence, the late filing of required information would again raise public notice issues based upon Applicant’s failure to submit the require information first in April and then later in response to the Department’s April 26, 2010 letter. Consequently, I recommend denial as the RPC’s deadline time does not allow any time to start the process over based upon Applicant’s failure to provide the necessary information for a community OWTDS, as required by the OWTDS Regulations.

## 2. THE APPLICANT’S FAILED TO PROVIDE AN UPDATED SIR

The record indicates the Applicant began the regulatory process as early as 2004 with a preliminary soils analysis. The Applicant submitted a SIR and received Department approval of

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<sup>5</sup> The definitions define a ‘community OWTDS’ as providing service to more than 3 lots, condominiums or planning units.

it on November 23, 2005. The problem is that Applicant waited until April 2010 to attempt the formal submission of information to complete the application process, but the November 23, 2005 approval indicated that it would expire on November 23, 2010 unless Applicant updated it. The record does not include any update as required by the OWTDS Regulations.

The SIR is an important part of the information the Department requires for a community OWTDS permit. Section 5.1.16 of the OWTDS Regulations recognizes the need to have the most current information. Consequently, the OWTDS Regulations indicate that all Department approved SIRs expire 5 years after they have been issued, as the Department's November 23, 2005 approval noted. The OWTDS Regulations also place the obligation on an Applicant to update a SIR before it expires. The record indicates that Applicant failed to provide the Department with an updated or supplemental SIR as required by Section 5.1.17.

I agree that the time between when the application was filed in April and the November 23, 2010 expiration date could have provided enough time for Department review if the application had not been the subject of opposition, but then the Applicant knew or should have anticipated delays from the opposition and planned to have an updated SIR as part of the application submitted in April. The record indicates substantial opposition to the Landings as a planned residential development. The record does not indicate why the Applicant waited to submit a permit application so long after the Department approved the SIR. Nevertheless, the Applicant failed to conduct an updated SIR, and the Department's approval of the 2005 SIR expired by operation of law without any update on November 23, 2010. The OWTDS Regulations do not provide for any procedure to grant an extension, but I find that there was adequate time before the expiration for the Applicant to have submitted a new SIR as contemplated by the OWTDS Regulations.

Moreover, I find that the Department should require an updated SIR because the area has been subject to changes since the 2005 SIR was conducted. The record indicates that the Snowshoe development has resulted in several houses built along Fast Landing Road. The record does not indicate how many, although public comments indicated 29 houses. The record indicates that each house would use a well for its water supply and an individual OWTDS for its wastewater. This reflects a change that should be reflected in the 2010 application. There houses should be considered in an updated SIR along with the possible changes that the frequent flooding may have caused, as set forth in the record. Moreover, the Landings will use a public water supply well and that is unknown on the record. The proposed disposal area may have been subject to other changes during the past 5 years, which is why the OWTDS Regulations require an applicant to submit a new SIR after 5 years in order to prevent reliance on stale information. Thus, I am not able to recommend approval of a permit based upon a SIR that has not been supplemented and hence is not current and approved by the Department, as required by OWTDS Regulations

3. APPLICANT'S FAILED TO PROVIDE SUFFICIENT DATA TO SUPPORT A 39,600GPD OWTDS TO SERVE 132 HOUSES AS REQUIRED BY THE OWTDS REGULATIONS IF SYSTEM NOT BASED UPON NUMBER OF BEDROOMS TO BE SERVED

The Applicant submitted a design for a 39,600 gpd OWTDS permit to serve 132 lots. I find that this submission is contrary to OWTDS Regulation Section 6.15.3, which requires 120 gallons per day per bedroom. Applicant indicates that it relied on Department guidance document for the design used for calculating the treatment and disposal capacity. I agree that the Department has a guidance document, which sets forth a design rate based upon 300 gallons per day per equivalent dwelling unit (EDU) and may be used if the OWTDS Regulations allow for such a substitution. The Applicant's reliance on a guidance document that is contrary to a clear regulation is ill-advised legally.

The Applicant may cite Section 6.15.2 to support the use of a different design rate, but this Section require Applicant to provide the necessary support “[w]here actual calibrated metered flow data indicating peak daily flows over the most recent three (3) year period are available for a similar facility, such peak flow data may be substituted for the wastewater flows listed in this Section subject to the approval of the Department.” I find nothing in the record from the Applicant to support use of this Section, but instead Applicant relied on a Department guidance document issued in 2007 and not subject to any formal regulation process.

I find that the OWTDS require the use of a design flow based upon the number of bedrooms, which Applicant’s higher 55,400 gpd capacity OWTDS may have been based upon in the 2005 SIR. I agree that the Department could issue a permit based upon a restricted number of bedrooms in order to conform to the OWTDS Regulations. If the Department did conform to the OWTDS Regulations, then the permit would have to limit the bedrooms to only 330 based upon the current 39,600 gpd design capacity. Based upon the proposed 132 lots, this would result in 2.5 bedrooms per lot on average. The record has no information of how many bedrooms would be in the houses to be built.

I also do not find that the design calculates any design flow from the treatment building. The public comments questioned the water usage and the treatment plant may be a major user of water, which in turn could produce a wastewater demand based upon the 6” water main. This use would be as a commercial user and the OWTDS Regulations provide a method to calculate this demand for design purposes. Based upon the record, I am unable to ascertain whether the design capacity that was used for the treatment plant’s wastewater demand.

I recommend denial because the design rate used is not supported in the record. If the Department decides to issue a permit, then any permit would have to be limited to the design rate based upon the OWTDS Regulations. If Applicant intends to build 4 bedroom houses on

average such as Applicant did for the Snowshoe development, then the disposal area as submitted could be inadequate, including the spare area.

I am sympathetic to the Applicant's reliance on a Department guidance document, but then the public did not have any opportunity to participate in the guidance document's issuance in a manner required by law. It is an informal policy, but yet sets forth a policy that the Department apparently would enforce as if it was a regulation. The guidance document was not issued as a formal regulation and as such cannot have the same force and effect as a duly issued regulation. A regulation is the only lawful way to establish an enforceable policy. The law clearly requires that such an important policy be subject to a formal regulation process as required by Chapter 60 and the Delaware *Administrative Procedures Act, 29 Del C. 10101 et seq.* The OWTDS Regulations require either that a design be calculated based upon proposed bedrooms or 3 years of actual metered flow data from a similar OWTDS and Applicant failed to provide either as part of its application.

4. APPROVAL OF THE LANDINGS COMMUNITY OWTDS WOULD NOT BE CONSISTENT WITH CHAPTER 60.

The Applicant has been on notice since the Department's June 2005 letter on Applicant's sewer feasibility study. The Department stated its opposition to the Landings as contrary to the Department's duty to protect the environment. The July 2005 letter opposed the Landings indicating that a 148 lot residential subdivision because it was "within the environmental sensitive Leipsic Watershed and proposed nutrient reductions in the near future the developer may want to consider use of new technologies which will reduce nitrogen levels below 5/mg/l prior to the wastewater being sent to the disposal system." In addition, the Department's objection stated that "[t]his project represents a major land development that will result in 148 residential units in an Investment Level 4 area according to the *2004 Strategies for State Policies and Spending.*" The letter noted that the proposed development was in a Level 4 area, which

was not within the State prescribed growth zone to be supported by the State's resources. The letter further informed the Applicant that Level 4 area was to be preserved for agriculture, natural resource protection and the continuation of the rural nature. The letter also indicated that "[n]ew development activities and suburban development are not supported in Investment Level 4" as consistent with their current use as prime agricultural lands, environmentally sensitive wetlands or wildlife habitats. The letter also indicated that the development was fiscally inappropriate because of government's cost to provide its services to developments in rural areas, and that the development would result in long term unseen negative ramifications that will become even more evident as the community matures and the cost to maintain infrastructure increases.

The Department also submitted comments as part of the planning approval process that raised similar issues with the Landings and its adverse environmental impact. I recommend the Department's comments be included as part of the record as well as the State Planning Office's comments. The Kent County RPC approval includes many of the considerations as conditions to the approval, which is an approval that occurred only after Kent County RPC initially denied the Landings. The Department does not know whether Applicant intends to satisfy the Department's concerns as stated in the planning comments, and the Applicant has not provided any response to the comments as part of this record. I recommend that the Department review Applicant's submission to the RPC to determine whether the Department's environmental concerns were satisfied, although I recognize such a Department review of Applicant's submission to the RPC may not be necessary to receive final RPC approval.

The Applicant deserves to know the full reasons supporting a recommended denial decision, but the reasons originated based on the Department's 2005 letter and its PLUS comments. The recommended denial is based upon sound environment reasons and submitted by the public comments that the Landings is not a suitable location for such intensive residential

land use based upon the adverse environmental impacts. Consequently, even if the Applicant overcame the many problems with its application, I recommend denial because of the adverse environmental impact of the Landings, which is directly the result of the proposed OWTDS and its sewer service to the proposed 132 houses in an environmentally sensitive area and exposing people to an undue risk from the loss of property and possibly their lives from flooding.

The Department recognizes that the Landings received the RPC's conditional approval in October 2009, but after initially denying the proposed land use. The RPC's 2009 approval is evidence of local land use approval based upon when the land use application was submitted to the RPC. The RPC's conditional approval may expire if Applicant does not satisfy all the RPC's many conditions, and the Department is aware that a permit for the OWTDS is one of the RPC's many conditions. All the RPC's conditions must be satisfied by March 10, 2011, unless the RPC grants an extension.

The Department also is aware that if the Landings was submitted to the RPC today that the RPC would deny approval as contrary to Kent County's current land use regulation. In effect, the Landings is only before the Department as a result of a grandfathered status based upon when an application for approval was submitted to Kent County for approval. The OWTDS Regulations do not require the Department to base its decision on when an application was filed with Kent County. Instead, Section 3.3 states that "[n]o permit may be issued by the Department under these Regulations unless the county or municipality having land use jurisdiction has first approved the activity through zoning procedures provided by law." A strict interpretation of this would require final approval, but I do not recommend such an interpretation and this is consistent with Department practice. I find that Applicant's October 2, 2009 RPC approval is sufficient proof to support the application, even though the approval may expire on March 11, 2011. I raise this issue to the Secretary if he decides to apply Section 3.3 differently.

Section 3.7 also indicates that the OWTDS Regulations, being necessary for the health and welfare of the State and its inhabitants, shall be liberally construed in order to preserve the land, surface waste and ground water resources of the State.” Under a liberal interpretation, the Department could apply its OWTDS Regulations to require that an OWTDS permit applicant satisfy the current land use regulations in effect when a “complete” application is submitted to the Department, as opposed to land use regulation that has been superseded with more current regulation. Under such an interpretation, the proposed OWTDS would not meet the current RPC requirements for an approved land use.

I find that the Department’s authority to protect the environment is sufficient to deny the application based upon record developed that supports finding the Landings is contrary to conserving prime agricultural area in a level 4 area and that type of intensive residential development proposed and enabled by the community OWTDS would pose an undue risk to property and public health and safety.

The Department’s administration of Chapter 60 authority is subject to the General Assembly’s stated statutory purposes, as set forth below:

The State, in the exercise of its sovereign power, acting through the Department should control the development and use of the land, water, underwater and air resources of the State so as to effectuate full utilization, conservation and protection of the water and air resources of the State.

(c) Purpose. -- It is the purpose of this chapter to effectuate state policy by providing for:

(1) A program for the management of the land, water, underwater and air resources of the State so directed as to make the maximum contribution to the interests of the people of this State;

(2) A program for the control of pollution of the land, water, underwater and air resources of the State to protect the public health, safety and welfare;

(3) A program for the protection and conservation of the land, water, underwater and air resources of the State, for public recreational purposes, and for the conservation of wildlife and aquatic life;

(4) A program for conducting and fostering research and development in order to encourage maximum utilization of the land, water, underwater and air resources of the State;

(5) A program for cooperating with federal, interstate, state, local governmental agencies and utilities in the development and utilization of land, water, underwater and air resources;

*7 Del. C. §6001.*

The Department submitted comments based upon its environmental concerns as part of the Department's review of the sewer feasibility study in 2005. The Department further raised its environmental concerns as part of the local planning review process in the Department's participation in the PLUS comments, which I recommend be included in the record along with the Executive Order that established the State Strategies and the reports prepared thereunder.

The executive policies issued to DNREC and other state agencies indicate different roles for the state agencies. The directive indicated that the Department should not approve any community OWTDS in a Level 4 area, which is an area to be protected from intensive residential development such as proposed by the Landings. The only way the Landings can be built as currently proposed is with a connection to a central sewer system, such as a large community OWTDS such as proposed by Applicant or to Kent County's sewer line located in Fast Landing Road.

Based upon the Department's environmental concerns, as set forth in the prior comments in opposition and the Coastal Program's January 25, 2010 memorandum, I recommend finding that the Landings and the OWTDS needed to provide the Landings utility sewer service is ill-advised. The proposed location along the Leipsic River and its Dyke Branch tributary will expose the residents of the Landings to an undue risk from flooding and impose a burden upon

the State's resources to protect the environment and public safety. The Department experts conclude that this location will be flooded due to project sea level rise over the expected life of the OWTDS and the houses it is designed to provide sewer service. I agree that it is important for the Department to consider the risks from projected flooding over a projected life of the OWTDS and the houses it will serve. The Landings will be subject to flooding based upon the Department's projected sea level rise. The sea level rise projections show that portions of the Landings will be flooded as the sea level rises. This projected sea level rise will mean even more flooding during storm events, high tides and wind conditions. I agree that the Landings is ill-advised and if built will require State resources to protect the Landings from flooding such as shoreline protection. More important than property loss, the Landings will pose an undue risk of loss of life to the residents from flooding and expose emergency service personnel to the risks in protecting the residents from such danger. The record indicates that the existing Snowshoe development is subject to frequent flooding now, and imposes a burden on public safety resources to evacuate the residents.

The Department's role and duty under Chapter 60 is to protect the environment and public health. While the proposed OWTDS would be located on the high ground in the Landings, the location of the OWTDS does not end the Department's concerns under Chapter 60. Instead, the Department considers the impact on the residents from the frequency of flooding and looks to the frequency over the anticipated service life of the OWTDS. The Department, as a matter of policy, requires consideration of projected sea level rise in its permit decisions and I find that such a consideration is appropriate for long-term permit decisions because the Department should not look merely at a snapshot based upon current conditions. The public comments on the frequency of current flooding conditions should be considered. The residents along Fast Landing Road report chronic flooding and regret the purchase of houses subject to

such frequent flooding. The record indicates in the numerous photographs the extent of the flooding during the Mother's Day 2009 storm.

I agree with the experts that the Department's sea level rise should be considered in permit application such as this one where the margin for safety will erode in less than the anticipated design life of the proposed OWTDS and the houses it will serve. This design life of a residential development subject to the projected sea level rise scenarios that the Department policy requires to be considered. The Department experts indicate that flooding will pose an undue risk to the residents of the Landings and that this reason supports denial of the OWTDS that will allow the houses to be built that will pose an undue risk to public health and safety.

In sum, I recommend that the Department deny the requested permit for the above-stated reasons, subject to Applicant submitting a revised application that complies with the OWTDS Regulations and addresses the environmental and public health risks discussed herein.

## **V. RECOMMENDED FINDINGS AND CONCLUSIONS**

Based upon the discussion and reasons, I find and conclude that the record does not support the issuance of the requested permit to the Applicant to construct a 39,600 gpd OWTDS to serve 132 lots in the Landings. I recommend the Secretary adopt following findings and conclusions:

1. The Department has jurisdiction under its statutory authority to make a determination in this proceeding;
2. The Department failed to provide adequate public notice of a complete application despite the Department's notice to the Applicant that the application was not complete and that the application still is not complete;

3. The Department held a public hearing in a manner contrary to the law and its regulations because Applicant failed to timely provide requested information before the public hearing was held;

4. The Department considered all timely and relevant public comments in making its determination;

5. The Department should not issue the Applicant the requested permit because of the Applicant's failure to adequately and timely support the application with information requested and required by Regulations and that the proposed community OWTDS is contrary to protecting the environment and public health and safety; and

6. The Department shall provide: a) the Applicant with the Order and otherwise publish its decision on the Department's web site; b) and shall provide such other public notice as required by Regulations and the Department determines is appropriate, including the right to appeal to the Environmental Appeals Board pursuant to Section 6008 of Chapter 60.

*s/Robert P. Haynes*  
Robert P. Haynes, Esquire  
Senior Hearing Officer

## Appendix A

The record indicates that Applicant initial began the approval process in 2005 by seeking approval of a 55,400 gpd community OWTDS to serve 148 lots in the Landings. The Department in a July 2005 letter opposed the Landings indicating that a 148 lot residential subdivision because it was “within the environmental sensitive Leipsic Watershed and proposed nutrient reductions in the near future the developer may want to consider use of new technologies which will reduce nitrogen levels below 5/mg/l prior to the wastewater being sent to the disposal system.” In addition, the Department’s objection stated that “[t]his project represents a major land development that will result in 148 residential units in an Investment Level 4 area according to the *2004 Strategies for State Policies and Spending*.” The letter noted that the proposed development was in a Level 4 area, which was not within the State prescribed growth zone to be supported by the State’s resources. The letter further informed the Applicant that Level 4 area was to be preserved for agriculture, natural resource protection and the continuation of the rural nature. The letter also indicated that “[n]ew development activities and suburban development are not supported in Investment Level 4” as consistent with their current use as prime agricultural lands, environmentally sensitive wetlands or wildlife habitats. The letter also indicated that the development was fiscally inappropriate because of government’s cost to provide its services to developments in rural areas, and that the development would result in long term unseen negative ramifications that will become even more evident as the community matures and the cost to maintain infrastructure increases.

The Applicant apparently also entered into an agreement with TESI to provide sewer service to the Landings, but Applicant never provided that agreement to the Department. In 2005 TESI properly submitted its notice of intent to provide service as required by OWTDS Regulations, but Applicant did not transfer the application processing to TESI.

At some point the Applicant determined to revise the Landings and reduced the size of the proposed community OWTDS to 39,600 gpd capacity and the number of lots it would serve to 132. The Applicant’s revised 39,600 gpd community OWTDS was based upon a design flow rate of 300 gallons per day per equivalent dwelling units ( EDU), which was based upon GWDS guidance memorandum.

The System’s treatment process was designed to treat would use a dual train sequencing batch reactor (SBR) equipment.<sup>6</sup> This equipment’s treatment would reduce the pollutants in the wastewater as follows: Biological Oxygen Demand (BOD) in the wastewater would be reduced from 250 to 30 milligrams per liter (mg/l); the pollutant Total Suspended Solids (TSS) would be reduced from 225 to 10 mg/l; and the pollutant Total Nitrogen (TN) would be reduced 55 to 10 mg/l. The System would satisfy the Department’s water quality standards for a non-point source discharge of pollutants within the Leipsic River watershed if the Applicant follows certain best management practices (BMP), as submitted to the Department’s Division of Watershed Stewardship’s Watershed Assessment Section. The BMP controlled waters quality through the OWTDS, buffer area, and stormwater management. The Plans submitted to WAS were not included in the Applicant’s plans to GWDS, and WAS indicated a pre-development estimate of agricultural discharge of 3.56 lbs/day of TN and 0.50 lbs/day of TP. The analysis showed discharges of 10.21 lbs/day of TN and 1.87lbs/day of TP from the Landings without the proposed OWTDS or BMP. The analysis assumed the Landings’ OWTDS would discharge 1.54 lbs/day of TN and 0.24 lbs/day of TP based upon a design flow used for the calculations. The Department’s TMDLs require a 40% reduction of discharge from the base line period based upon

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<sup>6</sup> Fluidyne Corporation’s ISAM package equipment

the agricultural use, and the Department's experts concluded that the OWTDS and the BMP for stormwater and land buffers would achieve the 40% reductions in TP and TN.

The treated wastewater would be discharged into the groundwater using underground micro-drip irrigation equipment.<sup>7</sup> The treated wastewater would be discharged using automatic control equipment to pressurized pipe system using 13 dispersing zones. The proposed disposal area first was based upon the soil map units "T" and "O," as identified in Applicant's 2005 SIR. The Applicant then reduced the proposed disposal area in order to comply with the Department's April 7, 2006 conditional approval of Applicant's 2006 Groundwater Impact Assessment. The Department's approval required that the entire disposal area should be above the 100 year flood line, as measured at 9' above msl, and that monitoring wells be included. The record does not contain any location of proposed monitoring wells, which would require a permit from the Department but no permit application has been received.

The proposed underground irrigation system has 109,200 linear feet of drip irrigation pipes, laid out in lateral of 300' in length. The drip irrigation system is designed to dose 2 zones every 51 minutes or 28 times a day at a rate of 42.7 gpm. The irrigation system requires flushing periodically based upon a 48.8 gpm rate. The disposal system's design used a hydraulic loading rate of 0.18 gpd per square foot of disposal area, which calculates using to requiring a disposal area of 220,000 square feet for the 39,600 gpd peak design flow. The discharge area's layout of the underground pipes shows 13 primary disposal area zones, which would use 221,648 square feet disposal area. The Design Engineer's Report System's drawings identify a 7.13 acre area as the reserve disposal area, but the plans do not show the layout of the drip irrigation pipe system. .

An existing single family residential development, approved as 'Snowshoe,' is located on either side of Fast Landing Road and adjacent to the Landings. The Design Engineer's Report indicates several houses, but provides no information on the number of houses, their wells or OWTDS. The Snowshoe development also was on land owned by Applicant or an affiliate. The build out of the Snowshoe development appears to have occurred after Applicant's 2005 SIR and the PGIA. Kent County has sewer line in Fast Landing Road, but the Department is aware that Kent County is unwilling and legally cannot connect to houses built outside the Landings is located outside of Kent County's growth zone and a Kent County ordinance prohibits such connection. The Landings is located outside of the Kent County and the Delaware designated growth zones.

In an October 2, 2009 letter, Kent County's Department of Planning Services, on behalf of the Regional Planning Commission, indicated that the Landings' received conditional planning approval. DNREC Ex. 14. The approval letter indicated findings of fact that the community's wastewater system was to be owned and operated by Tidewater Utilities. Kent County Regional Planning Commission indicated that Applicant was to provide details "regarding the third party ownership, construction and the ongoing maintenance of the community system." The Applicant was to provide the Department's permit to construct the OWTDS prior Kent County's final approval. The Planning Commission's approval indicated that it would be valid until March 10, 2011, but the letter indicated that a 6 month extension could be granted.

In addition to the System, TESI submitted a permit application for the Landings' central sewer system, which would use grinder pumps and force mains to transport untreated wastewater to the System. This separate application is under Department review by the Division of Water's Surface Water Discharge Section. The System will receive central public utility water service

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<sup>7</sup> American Manufacturing Company's pipe equipment would be installed.

by Tidewater Utilities, a regulated water utility, but the Department has not received any application for the public water supply well.

The record indicates that Applicant intends to have TESI own and operate the System, and TESI would provide utility sewer service subject to regulation by the Delaware Public Service Commission based upon a certificate of public convenience and necessity issued July 2010. The record does not have any document or specifics on a transfer of the System's ownership from Applicant to TESI.

## Memorandum

To: Robert P. Haynes, Esquire  
Hearing Officer, Office of the Secretary

From: Sarah W. Cooksey, Administrator  
Delaware Coastal Programs

Re: The Landings Community WWTP

Date: January 25, 2011

### **BACKGROUND**

In October of 2010 the Delaware Coastal Programs (DCP) was approached by the Groundwater Discharges Sections and asked to review the Landings at Leipsic Wastewater Treatment and Disposal System in regard to our sea level rise inundation mapping scenarios. This memorandum should serve as a summary of that analysis and may be utilized as you consider and weigh your recommendations to Secretary O'Mara regarding the application of Tony Ashburn for the Community On-site Wastewater Treatment and Discharge System.

On January 27, 2010 Secretary O'Mara signed DNREC Policy D-1306 Sea Level Rise Adaptation (attached). That policy sets forth DNREC's position on preparing for sea level rise and states:

"It is the position of the Department of Natural Resources & Environmental Control (DNREC) that sea level rise is currently occurring and will continue to occur at an accelerated rate due to global climate change. Further, it is the policy of DNREC to proactively consider and plan for the potential effects of coastal inundation department-wide using projections based on the best available science."

"All DNREC staff when representing the Department shall communicate the Department's policy internally and externally."

"All DNREC programs shall consider the potential effect of coastal inundation in project planning, engineering, design, and review, as well as land acquisition, management, and restoration."

The policy further directed all DNREC programs to use a specific range of sea level rise scenarios, appropriate to the project's longevity and nature. Projects of a longer expected life or more critical nature should practice precautionary principles and use a more protective sea level rise scenario.

### **ANALYSIS**

The DCP has developed maps depicting potential Sea Level Rise (SLR) inundation scenarios for the entire State of Delaware. The attached power point presentation by Dr. Robert Scarborough, Senior

Scientist for the DCP, outlines the scientific, technical and policy methodology developed for the various inundation scenarios. The maps are to be used as planning tools to depict possible regional flooding scenarios caused by SLR of 0.5 meters (m), 1.0m, and 1.5m.

### **Proposed Treatment Plant & Disposal Area**

DCP staff reviewed the plans for the proposed Landings subdivision in Leipsic and the associated wastewater treatment plant with respect to SLR concerns and potential impacts to the site. The DNREC scenarios allow review of projects based upon lifespan of a project, investment level and public safety cost. For projects with a limited useable life (boardwalks, temporary access roadways etc.) and low investment and public safety ramifications, it would be appropriate to plan for a lower level of future sea level rise and the 0.5m scenario would be appropriate. Because this project involves permanent placement of homes with an assumed lifespan of 50-100 years or more and involves placement of critical infrastructure for these homes, the 1.5m scenario was used to evaluate the potential future risk for this project. This scenario is the most risk adverse scenario.

Under this 1.5m SLR scenario, fringe portions of the proposed wastewater disposal area would be permanently inundated by 2100 (see figure 1); the proposed site for the treatment plant itself would not be inundated under any of the SLR scenarios.

As sea level increases from its current level and mean sea level encroaches landward, it is expected that storm events could create surges causing portions of the disposal area to become temporarily flooded. At 1.5m of sea level rise, storm tides would result in a much greater area of the disposal site to become temporarily inundated. The extent, duration of frequency of such flooding cannot be accurately predicted at this time.

The DCP recommends a risk adverse approach to this project that takes into consideration potential effects of future sea level rise. The proposed boundaries of the disposal area should be restricted to the 9 ft Mean Sea Level contour to ensure that the treatment plant and the irrigation field will be above the 1.5m SLR scenario. In addition, the treatment facility should be located well outside of this potential zone and to the extent practicable, should be built using techniques that would allow it to withstand temporary flooding events.

### **Groundwater Tables**

The potential impact to groundwater tables from SLR was not evaluated as relevant data does not exist at this time. It is probable that the distance to groundwater in the project area would decrease as the sea level rises, although the degree to which this might occur is unknown. With respect to the wastewater disposal area, there could be a point at which the water table would rise above acceptable limits for the drip irrigation, but it is important to stress that we have no data to neither support nor negate this. The placement of monitoring wells within the irrigation field to record depth to the water table would provide data useful to evaluate this concern.

Because this project is located in a Level 4 area, the State will likely oppose use of public funding to provide sewer service to this area should the disposal area or treatment facility fail due to the effects of storms and/or sea level rise. As such, a contingency plan should be developed by the applicant that outlines the actions that will occur to maintain wastewater service to homeowners if and when the drip irrigation system no longer operates in compliance with permit conditions due to elevated ground water

table. An evaluation of whether the county will allow connection to central sewer infrastructure should be conducted.

### **Existing Properties and Infrastructure**

Although the treatment plant itself would not be inundated under any of the SLR scenarios, many of the surrounding existing properties will be, some in their entirety. At the most conservative range (0.5 meters) four existing properties are inundated; at 1.0 meters of SLR nine existing properties are inundated; and at 1.5 meters twelve properties are inundated at least partially with estuarine water. Additionally, portions of Fast Landing Road would be completely overtopped.

The addition of 132 new homes and the associated increase in impervious surface from roof tops, driveways and roads will add additional water on top of SLR during rain events, further increasing flooding in this area.

### **Conclusion and Recommendation**

The location of this proposed development is in an area where existing homes and infrastructure are susceptible to flooding hazards. Sea level rise will exacerbate these conditions. The placement of additional homes and critical infrastructure is ill advised.

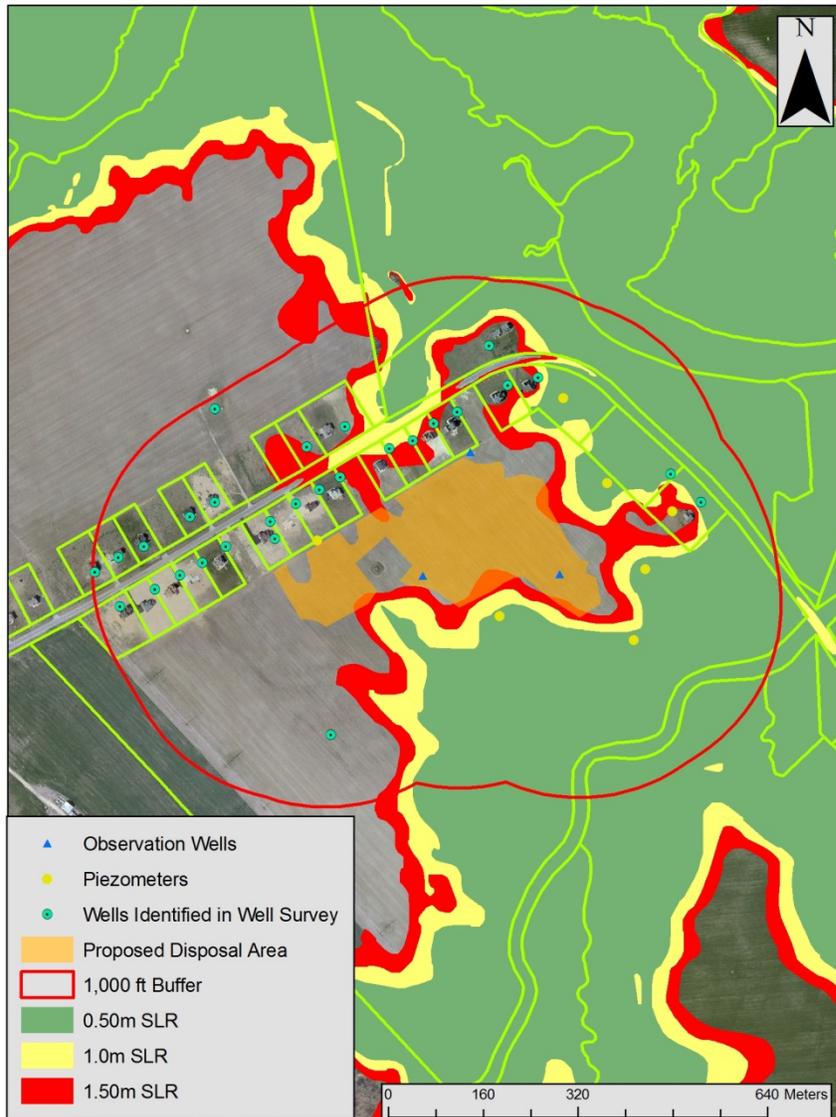


Figure 1 Map depicting three sea level rise inundation scenarios

**Attachments**

DNREC Policy D-1306 Sea Level Rise Adaptation, January 2010

Dr. Robert Scarborough. DNREC Sea Level Rise Policy and Inundation Maps. January 24, 2011  
<http://intranet5.dnrec.state.de.us/SLR/Shared%20Documents/Forms/AllItems.aspx>