

STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION



IN THE MATTER OF : *APPLICATION NO.*
201003469

EDEN HARBOUR CONDOMINIUM
ASSOCIATION, INC. : *MARCH 25, 2011*

PROPOSED FINAL DECISION

I
SUMMARY

The Eden Harbour Condominium Association, Inc. (applicant/Eden Harbour) has applied to the Department of Environmental Protection (DEP/department) to modify its existing wastewater discharge permit. The requested modification would allow the applicant to decommission the existing sequencing batch reactor (SBR) advance treatment system and convert the wastewater discharge system into a conventional subsurface wastewater absorption system (SWAS) with the necessary septic tank and leaching field to serve the current and future wastewater disposal needs of a 32-unit age-restricted residential development on Ferry Road in Old Saybrook.

The department published notice of its tentative determination to approve the application on August 5, 2010. A timely petition for a hearing was submitted to the DEP on August 31, 2010. Eden Harbour LLC, the condominium declarant, and MDC Corp., the original condominium developer, intervened in the hearing as parties. The hearing was conducted over four days. An evening hearing was held at DEP Marine Headquarters in Old Lyme on November 30, 2010 and the hearing was completed in Hartford on December 14, 2010.

I have reviewed the record in this matter, including the documentary evidence, oral testimony, and public comment. Following this review, I conclude that the applicant, through the presentation of substantial evidence, has demonstrated that the proposed activity, if conducted in accordance with the proposed draft permit, complies with the Connecticut Water Quality Standards and the relevant statutory and regulatory requirements. General Statutes § 22a-430; Regs. Conn. State Agencies §§22a-430-3 and 4.

The proposed treatment system, if constructed, operated, and monitored in accordance with the conditions of the proposed draft permit as revised by this decision, would protect the waters of the state from pollution in accordance with General Statutes § 22a-430. The proposed activity would also be consistent with all applicable goals and policies of the Coastal Management Act. General Statutes §22a-92(a). I recommend that the Commissioner authorize the applicant to submit plans and specifications of the proposed water treatment system for approval and that upon approval and construction of the facility according to the approved plans and specifications, issue the proposed water discharge permit modification as revised by this decision.

II

DECISION

A

FINDINGS OF FACT

1

PROCEDURAL HISTORY

1. On May 17, 2010, the department received an application from Eden Harbour Condominium Association, Inc. (applicant) to modify its existing wastewater discharge permit. The requested modification would allow the applicant to decommission the sequencing batch

reactor (SBR) advance treatment system and convert the wastewater system into a traditional subsurface wastewater absorption system (SWAS) utilizing a septic tank and leach field. The conversion would require the existing leach field to be reconstructed and expanded to accommodate the currently permitted flow. The application included an engineering report and location plans with sufficient information for DEP staff. (Exs. APP-3, 4, DEP-6.)

2. The facility currently operates under permit UIC Permit, ID UI0000328 issued to MDC Corporation on March 14, 2006 with an expiration date of March 13, 2016 based on an as-built “Improvement Location Plan” submitted by Milone and MacBroom, Inc. (MMI) and last revised on March 1, 2006. The permit was transferred to the applicant on November 28, 2007 and presently allows the applicant to discharge up to a maximum 9000 gallons per day (gpd) with an average flow of 6000 gpd. The application for a modification does not seek to alter the currently permitted average or maximum daily flow. (Exs. APP-3, 4, 27.)

3. DEP’s technical review was completed by a staff member who is a professional engineer with seventeen years of experience in subsurface wastewater disposal permitting. Following a technical review of the application and all supplemental materials, the DEP made a tentative determination to approve the application and modify the existing permit and, on August 5, 2010, published a notice of the tentative determination, including the proposed draft permit, in the Middletown Press. On August 31, 2010, the DEP received a timely petition signed by more than twenty-five persons requesting a hearing. (Exs. DEP-1, 2, 5, 6.)

4. Eden Harbour LLC, the condominium declarant, and MDC Corporation, the builder of the condominium complex (the intervening parties) filed a motion to intervene as parties on September 28, 2010. Each entity was granted status as an intervening party under Regs., Conn. State Agencies §22a-3a-6(k)(1)(B) on October 4, 2010.¹

¹ All documents pertaining to the procedural history that are not specifically cited as exhibits are contained in the docket file maintained by the Office of Adjudications and are part of the administrative record in this matter. General Statutes §4-177(d).

5. A Public Hearing was held on November 30, 2010 at the DEP Marine Headquarters in Old Lyme. An evidentiary hearing was conducted at DEP Headquarters over three days, commencing on December 2, 2010, continuing on December 7, and concluding on December 14, 2010. (Ex. DEP-3.)

2

Site and Resource Description

6. The application relates to certain real property, encompassing approximately 8.12 acres located at 175 Ferry Road in Old Saybrook (site). This site is located in the watershed of the Connecticut River. A wetland tributary to Ragged Rock Creek is located to the west. I-95 is to the north. Ferry Road and the Connecticut River are to the east and Between the Bridges (BTB) Marina is to the south. The groundwater classification on the site is GA, which denotes an area of existing private water supply wells or an area with the potential to provide water to public or private water supply wells, which is suitable for drinking without treatment. The site is served by public water, but no municipal sewer system is available to serve the site. (Exs. APP-4, 27, DEP-6.)

7. Eden Harbour is an active adult condominium community planned for a maximum of 32 units. Eden Harbour, LLC has declared 22 units; 21 are occupied and one remains as the model unit. MDC Corporation built the 22 declared units. Eden Harbour LLC can declare an additional 10 units. The proposed SWAS will have sufficient capacity to handle all 32 units, if and when they are all declared and built. (Exs. APP-4, 27; test. 12/2/10², M. Lancor.)

² The testimony and proceedings in this matter were recorded. No written transcript has been prepared. The audio recording of this hearing is on file with the Office of Adjudications and is the official record of this proceeding.

Wastewater Characteristics and Flow

8. The site's average daily and maximum daily design flows of 6000 and 9000 gpd respectively are based on a standard of 150 gpd per bedroom as required by DEP. The actual maximum flows from the occupied units as measured while the existing system has operated have ranged from 1582 gpd or 56.5 gpd per bedroom in 2007 to 1780 gpd or 49.5 gpd per bedroom in 2009. Based on this data, the applicant recommended an average daily flow of 4125 gpd for the community at full build out as opposed to the current 6000 gpd. DEP would have allowed this reduction if the condominium association agreed to and recorded an occupancy limitation for each unit. Because the condominium association did not approve a permanent limitation on the number of occupants per unit, the DEP did not permit the requested reduction in flow. However, it did agree to reduce the average daily flow to 5000 gpd by basing it on a standard of 125 gpd per bedroom. The applicant decided to continue its application based on the initial standard of 150 gpd per bedroom or the average daily flow of 6000 gpd. This represents a conservative factor in the application and is an appropriate design flow. (Exs. APP-4, 27, DEP-6; test. 12/2/10, M. Lancor.)

9. The applicant reviewed actual data from the existing SBR system to determine the nitrogen levels in the raw wastewater when it enters the disposal system. The average nitrogen concentration represented by the geometric mean in the raw wastewater entering the system is 55.4 milligrams per liter (mg/l). The applicant used a higher value of 60 mg/l in its initial calculations to maintain a conservative approach to calculating the nitrogen levels and the resulting reduction in nitrogen concentration achieved in the wastewater system and groundwater. (Exs. APP-4, 22, 23, and 27; test. 12/2/10, M. Lancor.)

Permitting Requirements: Vertical Separation, Travel Time, and Phosphorus Absorption

10. For the discharge of domestic wastewater to the ground, the DEP requires that the proposed leaching system be of sufficient hydraulic size to transmit the effluent, based on a maximum effluent application rate of 0.8 gallons per day per square foot of leaching area. The proposed design modification with a leaching system of 12,896 square feet provides more than the required effective area. The proposed system must also be designed to provide a minimum of two feet of vertical separation distance between the bottom of the subsurface soil absorption system and the mounded seasonal high ground water elevation. There is more than three feet of space between the bottom of the subsurface soil absorption system and the mounded seasonal high ground water elevation. The soils must be able to move the effluent underground for at least twenty-one days, the travel time necessary to allow the system to successfully renovate bacteria from the waste stream to the point of environmental concern. A point of concern is a property boundary of a site or the nearest environmental resource, such as a wetland or body of water. The points of concern at this site are the property lines to the north, south, and east and the wetlands to the west. A distance of 88.2 feet from the SWAS to a point of concern is needed to meet the 21-day travel time at the site. The distance from the SWAS to the points of concern in all directions is greater than 88.2 feet and therefore will provide more than twenty-one days travel time to all the points of concern on this site. The site must have a minimum sorption capability to handle six months production of phosphorus. The proposed modification to the system as designed has a projected retention capacity of 129.2 months and exceeds the six-month requirement. The site has the hydraulic capacity to transmit the effluent a sufficient distance without surfacing or breakout. (Exs. APP-4, 20, 27, and 28, DEP-6, 11.)

Permitting Requirements: Nitrogen Concentration and Dilution

11. The upper level for nitrogen in domestic water supplies is 10 mg/l. A nitrogen concentration in excess of 45 mg/l is toxic. The groundwater on the site must be protected from nitrogen concentrations in excess of 10 mg/l because it is considered a potential source of domestic drinking water. The intervening parties are concerned that the proposed decommissioning of the SBR system will result in nitrogen concentrations in excess of 10 mg/l at the western and eastern points of concern. DEP requires total nitrogen concentrations to be treated or diluted to 10 mg/l or less at the point of concern and prior to it leaving the site. The discharge as currently permitted meets the standards for nitrogen dilution through the use of the existing SBR advance treatment system and the associated subsurface disposal system. In the proposed SWAS, the nitrogen concentration will be reduced by twenty percent in the septic tank and another twenty percent in the subsurface leaching field. The nitrogen concentration remaining in the discharge to the soil must be reduced to 10 mg/l or less by dilution from rainwater that can reasonably be expected to infiltrate groundwater and mix with the discharge plume. (Exs. APP-4, 27, DEP-4, 6, 11, INT-J.)

12. To calculate the total nitrogen concentration after dilution by rainwater, one must analyze the water available for in-soil nitrogen dilution by calculating the land area on the site that could serve as a source of groundwater before the in-soil discharge reaches the points of concern. An analysis of groundwater flow and impact on this flow from the artificial increase in the water table caused by the discharge must be performed to calculate the area available to contribute rainwater to the discharge plume. The artificial increase in the water table from the wastewater flow is also known as the groundwater mound. (Exs. APP-4, 27, DEP-11; test. 12/2/10, M. Lancor.)

13. To determine the land area that could serve as a source of rainwater for in-soil nitrogen dilution, the applicant relied on and analyzed the data available from the application for the current permit collected by MMI on behalf of MDC Corp, the original holder of the permit.

Specifically, the applicant reviewed groundwater elevation data to understand the groundwater contours for the site and the direction of groundwater flow from the wastewater system that can be inferred from those contours. The groundwater data was collected on a weekly basis from March 26 to July 23, 1998. The applicant used the groundwater data to develop its own groundwater contours and determined the contours it developed were similar to those developed by MMI. The applicant's interpretation of this data led to its initial conclusion that the wastewater will flow in a radial manner in all directions from a highpoint in the central portion of the site that currently serves as and will continue to serve as the location for the SWAS. Based on its conclusion that groundwater flows radially from the SWAS, the applicant determined that 7.48 acres of the site's overall land surface area can be used in calculating the volume of water available to dilute the wastewater discharge in the soil before it reaches the points of concern. The calculation of 7.48 acres was based on an independent topographical survey conducted by the applicant. (Exs. APP-4, 22, Exhibit C-1, 27; test. M. Lancor.)

14. MMI filed the initial wastewater discharge application for this site to service a proposed assisted living facility and associated discharge flow of 14,000 gpd. MMI determined that the entire site acreage would not provide sufficient dilution of nitrogen for a flow of 14,000 gpd. As a result, that application employed the SBR advance treatment system to resolve the nitrogen issue. When the proposed use was changed to a 32-unit age restricted residential development, the maximum daily flow was reduced to 9000 gpd. MMI did not determine whether the entire site acreage would provide sufficient dilution for the new average daily flow of 6000 gpd or the maximum daily flow of 9000 gpd. Only the central portion of the property was utilized in the subsequent nitrogen dilution calculations but its acreage did not provide sufficient dilution volumes for the new flow values. Based on these calculations, MMI maintained the use of the SBR system to provide the required nitrogen renovation. MMI concluded that the flow from the system is not radial but primarily west toward the wetlands and east toward the Connecticut River. As a result, MMI did not include the entire site acreage in its calculation of surface area that could provide rainwater for the dilution of nitrogen in the discharge plume. Using only the central portion of the property as a source for dilution does not provide enough water to dilute the nitrogen to levels below 10 mg/l. (Exs. APP-4, 27, INT-J, K.)

15. The applicant hired Leggette, Brashears and Graham (LBG) to collect additional data in the field to confirm the conclusions it originally reached in the application based on MMI's data. LBG was founded in 1944 and is one of the most senior groundwater consulting firms in the United States. To conduct the independent groundwater study, LBG installed seven new groundwater monitoring wells to determine groundwater levels throughout the site. LBG also used two pre-existing monitoring wells on the western portion of the site. In the course of installing the wells, LBG retained soils samples from the borings for hydraulic analysis. LBG measured groundwater levels in the wells on a continuous basis at fifteen minute intervals over nine consecutive days. (Exs. APP-20, 28; test. 12/7/10, R. Good.)

16. LBG's analysis of the soil borings confirmed that the unconsolidated sediments beneath the Eden Harbour site are uniformly comprised of fine to coarse sand and gravel with little and varying amounts of silt and are relatively permeable and transmissive. There are no known deposits of different, less permeable material that would serve to impede flow on the site or force it in any particular direction. Water can move throughout the entire site with slight shifts in direction of flow based on the height of the tide in the River. (Exs. APP-20, 28; test. 12/7/10, R. Good, 12/14/10, R. Good and K. Taylor.)

17. LBG's monitoring wells showed that the groundwater beneath the site exists in the unconsolidated sediments at depths ranging from approximately 22 feet below grade (ft bg) beneath the central, higher elevation portions of the site to approximately 7 ft bg near the wetlands along the western site boundary, with corresponding groundwater elevations of approximately 2.0 feet above mean sea level. In October 2010, groundwater elevations observed in three monitoring wells closest to the southern end of the site ranged from 2.24 ft to 2.1 ft. The difference between the low and high groundwater elevations across the site ranged from 0.10 to 0.25 foot. In April and May 1998, groundwater elevations observed in three similarly placed monitoring wells ranged from 4.27 to 3.58 feet. The groundwater elevations at the southern and northern ends of the site are lower than the elevations in the central part. Groundwater will flow from a higher elevation to a lower elevation. Tidal fluctuation in the

Connecticut River influences groundwater levels on the site but will not alter the radial flow of groundwater from the SWAS. (Exs. APP-20, 28; test. 12/7/10, R. Good and K. Taylor, 12/14/10, R. Good, K. Taylor, and D. Murphy.)

18. MODFLOW is a computer model published by the United States Geological Survey and is the most widely used and accepted groundwater modeling code in present use. LBG used MODFLOW to conduct the mounding analysis necessary to determine the land area that will contribute to nitrogen dilution. LBG first calculated the height of the mound created by the 2172 gpd of wastewater discharged from the current system then subtracted this mound from groundwater levels determined from the monitoring well analysis to understand the water table present on the site without any discharge. LBG then ran its model using the preexisting water table to calculate the height of the mound from the design discharge of 6000 gpd. This mound was then superimposed on the pre-existing water table to show the post-mounding groundwater contours and the resulting direction of flow along these contours. LBG then analyzed the flow along the post-mounding groundwater elevations using Path 3D, a particle tracking program that is an add-on to MODFLOW, to determine the actual flow pathlines from the proposed system operating at full design flow of 6000 gpd. The flow moves to the points of concern in all directions from the proposed SWAS. The use of the existing water table incorporates all existing boundary conditions, including those to the north and to the south. The existing boundary conditions do not block the flow of groundwater in any given direction. (Exs. APP-20, 26, 28; test. 12/7/10, R. Good and K. Taylor, 12/14/10, R. Good and K. Taylor.)

19. The groundwater gradient on this site is relatively flat. The mound created by the wastewater discharge under existing conditions and under the design conditions of 6000 gpd does not alter the gradient significantly. The mound created by the actual discharge of 2187 gpd is 0.23 ft. The mound created by the design discharge of 6000 gpd would increase the water table by approximately 0.5 ft. The gradients across the site range from 0.0003 to 0.0006 ft./ft. Radial flow is consistent with the uniform site geology and the flat groundwater gradient. (Exs. APP-20, 28; test. 12/7/10, R. Good and K. Taylor. 12/14/10, R. Good, K. Taylor, A. Greene and D. Murphy.)

20. MMI also used MODFLOW in its review of the subject application and of LBG's report. MMI's model does not reflect the actual conditions of the water table shown by the 1998 groundwater data it collected for the original application or the data collected by LBG in October 2010. MMI used a range of values for the groundwater contours in its model. It considered these values to be reasonable based on the data it had reviewed for the site and used them to generate a simulated water table map. The groundwater elevations that were utilized fall within the typical range for groundwater on the site. The groundwater contours on the graphical representations of MMI's model do not match with field determined values collected by LBG in 2010 and by MMI in 1998. If the simulated elevation values are not precisely calibrated to the conditions reflected in the data, they can change the direction of flow in situations where the groundwater gradient is relatively flat. (Exs. APP-20, 28, INT-K; test. 12/7/10, R. Good and K. Taylor, 12/14/10, R. Good, K. Taylor and D. Murphy.)

21. The groundwater gradient at Between the Bridges Marina (BTB) is relatively flat and flows south. Groundwater levels were monitored there from January 21, 2009 until July 17, 2009. The groundwater elevations in the three monitoring wells placed in the northern portion of the BTB site adjacent to the Eden Harbour site's southern boundary range from 1.51 to 0.85 ft. The specific monitoring well readings from May 13, 2009 at these three wells were 1.02 ft, 1.03 ft, and 1.17 ft. The readings on April 16, 2009 were 1.42 ft, 1.42 ft, and 1.51 ft. Groundwater elevations at BTB are lower than the groundwater elevations on the southern end of the Eden Harbour site. The reasonableness of this conclusion is also supported by the surface topography and the uniform subsurface geology, including the relatively flat groundwater gradient that is consistent with that found on the Eden Harbour site. Although shown on USGS maps, there is no significant deposit of glacial till on the BTB property that would impede or redirect flow from the Eden Harbour site. (Exs. APP-20, 26; test. 12/7/10, R. Good, 12/14/10, R. Good.)

22. Stormwater reaches the groundwater through infiltration through the pervious surfaces on the site and through the collection in recharge basins and dispersal from the collection basins to the groundwater. The system of basins designed to collect stormwater and provide groundwater

recharge is capable of collecting water from very large and intense storm events without overtopping. The volume of water collected in this system contributes to the volume of rainwater entering the groundwater and contributes to nitrogen dilution. The site area that provides rainwater through infiltration and recharge to dilute the groundwater plume extending from the disposal system equals 7.48 acres. (Exs. APP-4, 22, 23, 27; test. 12/2/10, M. Lancor.)

23. The applicant's calculations show total nitrogen levels below 10 mg/l at the point of concern. The applicant conducted several variations of a sensitivity analysis in response to comments from the intervening parties and the Old Saybrook Water Pollution Control Authority on values it used in its calculations in addition to comments on the contributing acreage values. Even when employing more conservative factors and assumptions as part of this sensitivity analysis, levels still fall below 10 mg/l. Although it disagreed with the acreage value used by the applicant as contributing to groundwater dilution, MMI concurred that the applicant completed the necessary calculations accurately. The concentration of nitrogen at the points of concern will be below 10 mg/l under all the scenarios anticipated by the applicant. The proposed modified system will adequately reduce nitrogen concentrations to levels that comply with the Connecticut Water Quality Standards. (Exs. APP-22, 23, 27; test. 12/2/10, M. Lancor, 12/14/10, A. Greene.)

6

The Proposed Draft Permit

24. The proposed draft permit requires the applicant to monitor the system and the groundwater on the site for compliance with the terms and conditions of the permit, including incorporated standards such as the Connecticut Water Quality Standards. The schedule for groundwater monitoring is provided in Table B of Attachment 2 to the permit. The permit requires sampling for nitrogen on a quarterly basis. The table references three groundwater monitoring wells as sampling locations but provides no precise detail on the geographic location of these three monitoring wells. The calculations of nitrogen levels in the application materials are based on modeling predictions and scientific opinion. The sampling of monitoring wells in the western and eastern parts of the site would confirm nitrogen levels at these points of concern

with actual data when the proposed system is in operation. Three monitoring wells from the LBG study exist on the western edge of the property and three exist on the eastern edge. (Exs. APP-4, 20 27, 28, DEP-4, 6.)

B

CONCLUSIONS OF LAW

1

General Statutes §22a-430 and Implementing Regulations

The proposed treatment system must continue to protect the waters of the state from pollution. General Statutes §22a-430. In order for the requested modification to be approved, the applicant must demonstrate that the proposed subsurface wastewater absorption system (SWAS) will treat the wastewater to a level to prevent pollution and maintain a high water quality consistent with drinking water standards. The application included an engineering report and analysis, location plan, and all other material necessary to determine the consistency of the proposed activity with the applicable standards.

The application materials reveal compliance with the requirements for vertical separation distance, hydraulic capacity, travel time, and phosphorus. No contravening evidence was presented by the intervening parties during the hearing or in post-hearing submissions and DEP fully supported those conclusions in its application review. The applicant has successfully demonstrated compliance with those requirements.

The issue of nitrogen renovation in the system and through dilution by rainwater was the focus of this hearing. The applicant and intervening parties concentrated almost exclusively on this issue throughout the presentation of testimony and exhibits. The calculation of the land area that contributes rainwater to the discharge plume is the critical element in calculating nitrogen concentration at the points of concern. The experts presented by the applicant and the

intervening parties disagreed on few points, but the difference of opinion over the contributing acreage has significant impact on the final calculations and the decision on this application.

Ultimately, the applicant has the burden of proof in an application case before the department. Regs., Conn. State Agencies §22a-3a-6(f). In attempting to meet that burden, the applicant presented the application as originally presented to and reviewed by DEP staff. This application was tentatively approved by staff with significant experience and expertise in these types of applications. The applicant also presented an independent analysis of the application conducted by another group of reputable and reliable experts in groundwater hydrogeology. These experts concurred with the initial determinations of the applicant and staff that the site could provide sufficient stormwater to the soil to reduce nitrogen concentrations below 10 mg/l as required by DEP.

The expert testimony presented by the intervening parties was credible. However, their presentation failed to effectively demonstrate that the applicant's methods or conclusions were unreasonable or invalid. The testimony demonstrated that they disagree with the applicant and its experts. However, that demonstration by itself was not enough to overwhelm the substantial evidence presented by the applicant. Also, the applicant's use in its model of real groundwater data it had recently collected on site carried more weight than the MMI model. While certain assumptions were made by the applicant's experts in the modeling stage, these assumptions were reasonably based on scientific analysis of data gathered on and off the site. The intervening parties' attempt to discredit this work utilizes scientific methods but relies on predictions and assumptions that do not coincide with the real world data. Although the MMI model used groundwater elevation values within acceptable ranges for its simulated water table, the values used pushed water in a certain direction not clearly supported by the actual data collected.

Given the flat groundwater gradient on the site, it was clear in the evidence that deviations from actual water table levels could alter the direction of groundwater flow. LBG's consistent description of its method of placing the discharge mound on the existing measured water table for the site seemed to protect against the potential to artificially tilt the gradient one

way or another. Therefore, this approach was more reasonable for understanding the direction of groundwater flow on a relatively flat site. Based on the actual data and the modeling results, it was reasonable to conclude that groundwater will flow in several directions from the SWAS to the points of concern.

MMI's presentation of the assumed impact of BTB and the marina's wastewater system on potential southerly flow from the Eden Harbour site also demonstrated the potential flaws in its approach of simulating groundwater levels. MMI's model shows a groundwater mound on the BTB site significantly higher than elevations noted in the study of the site, calling into doubt the accuracy of MMI's model predictions.³ The data that the applicant presented from the BTB site shows groundwater elevations lower than those on the Eden Harbour site. MMI's simulated groundwater elevations for the BTB site appear to be based on an assumption that groundwater will not flow south from the Eden Harbour site onto the BTB site. The actual groundwater elevation values indicate southerly flow from the Eden Harbour to the Between the Bridges site. These discrepancies weaken MMI's position and foster support for the radial flow presumed by the applicant.

The MMI model also reflects the presence of the glacial till island to the south of the Eden Harbour site that could serve as a block to any southerly component of groundwater flow. Although the glacial till's presence on the BTB site was reasonably based on the existing USGS map, the actual data from the borings and groundwater monitoring wells analyzed and observed

³ The hearing and the review of the application are not a commentary on the work done by MMI for the previous application. The applicant made repeated attempts to question the consistency of MMI's approach during the previous application as a means to discredit or impeach MMI's witnesses. For instance, the applicant focused on the May 1, 2003 memo (APP-24) and accompanying cross-section completed by Mr. Murphy of MMI to show that MMI had repeatedly changed its mind about the direction of flow. This argument is a "red herring" and ignores the clear and specific context under which the memo was authored. The record, including the applicant's expert testimony shows the limited purpose of the study conducted in 2003. As a result, it is not interpreted to constitute an alteration of or inconsistency in MMI's opinion that flow moves only east and west from the disposal system.

for the marina's own permit application shows that the glacial till island is not present in actual subsurface conditions.⁴

When faced with expert testimony, “[t]he determination of the credibility of expert witnesses and the *weight* to be accorded their testimony is within the province of the trier of facts, who is privileged to adopt whatever testimony he reasonably believes to be credible.’ (Internal quotation marks omitted, emphasis added.) *Melillo v. New Haven*, 249 Conn. 138, 151, 732 A.2d 133 (1999).” *Windels v. Environmental Protection Commission*, 284 Conn. 268, 291 (2007). Both sets of experts presented credible testimony based on scientific data and methods. However, the work done by LBG to collect data and simulate the actual water table based on that data was more persuasive. The assumptions made by the applicant regarding flow in a southerly direction were reasonable based on the data collected on site. The BTB data further corroborated LBG's conclusions about the groundwater contours on the southern end of the site. All parties agreed that water flows downhill. The applicant's analysis showed that downhill can occur in several directions.

The intervening parties argue that the data from BTB is not particularly useful because there is no corresponding data from the Eden Harbour site for the same dates. While that is true, I find the applicant's conclusions reasonable based on the body of data collected on the Eden Harbour site. The evidence from the Eden Harbour site shows a groundwater elevation range from 2-4 ft. at varying times of the year. The groundwater data collected at BTB during the timeframe of seasonal high water reflects groundwater elevations that are lower than levels at the Eden Harbour site. The BTB data confirms the reasonable expectation that the groundwater levels south of the Eden Harbour site are lower and provide a gradient that would allow groundwater on the site to flow south. This is especially so given the lack of boundary conditions that prevent flow in this direction.

⁴I acknowledge that MMI also ran its model without the presence of the glacial till island making its existence somewhat moot. However, the confirmed lack of such an impediment to flow is important given the overall southerly gradient from the Eden Harbour site to the BTB site.

The intervening parties may not be convinced by the evidence collected by the applicant, but the law supports my reliance on the applicant's experts and the evidence they presented. *Id.* The evidence and testimony represent substantial evidence that the water will flow in all directions with some varying degree based on the height of the tide in the Connecticut River. I do understand and appreciate the stated concern of the intervening parties. The system MMI designed and that is currently in use on the site is protective of the waters of the state and specifically addresses any concerns about excess nitrogen through the use of the SBR. However, the success of MMI's system does not prevent the applicant from pursuing other options with equal success. The approach to the proposed SWAS has always included conservative estimates of flow and nitrogen concentration values that exceed actual data collected from the existing system while in operation. Even with the conservative factors used within the permitting process, the applicant has shown that the proposed system, if operated in accordance with the proposed draft permit, will comply with the applicable standards.

2

Coastal Management Act

The Commissioner must ensure that activities proposed in the coastal boundary are consistent with the goals and policies of the Coastal Management Act. General Statutes §22a-98. The proposed modification to the current wastewater system does not alter the use of the site or the amount of flow from the site and will continue to protect the waters of the state from pollution by ensuring the discharge meets applicable water quality standards. The proposed draft permit requires future monitoring to ensure compliance with all necessary standards. Therefore, the proposed activity is consistent with the applicable goals and policies of the Coastal Management Act.

C

RECOMMENDED PERMIT REVISION

The applicant has shown that under several different scenarios the nitrogen in the wastewater will be diluted to levels below 10 mg/l at the points of concern. However, under

certain scenarios, the predicted level of nitrogen at the point of concern leaves little margin for error. Currently, the success of the proposed system is based on modeling results and scientific opinion. Although I understand the need to use these tools to predict system performance during the application process, the post-construction monitoring program is apparently the only way to confirm that the system works as predicted. The monitoring program in the proposed draft permit requires quarterly sampling from three well locations. However, the locations of these wells are not specified. The levels of nitrogen at the eastern and western points of concern will demonstrate whether the system's performance meets the applicant's expectations.

In order to confirm nitrogen levels in these critical locations, I recommend that the monitoring program be revised to include six identified monitoring locations. Table B of Attachment 2 should specifically require the applicant to monitor groundwater in well locations noted on Figure 2 of APP-20 as MW-2, TP-7, and TP-9 on the western side of the site and as MW-5, MW-4, and MW-7 on the eastern side of the site. If these monitoring wells are no longer usable or are not up to DEP standards for compliance monitoring, then the applicant shall install alternate wells in substantially similar locations as close to the eastern and western points of concern as feasible. The increase in the number of monitoring sites is intended to address concerns identified by the intervening parties with real world data and would provide assurance that the flow in these directions will be sufficiently diluted at the points of concern to reduce the nitrogen concentrations below 10 mg/l.

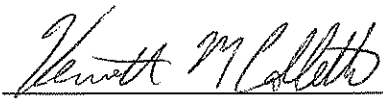
D

CONCLUSION

Through the presentation of substantial evidence, the applicant has met its burden of proving that the proposed wastewater system modification, if operated in accordance with the proposed draft permit as revised by this decision, will continue to protect the waters of the state from pollution and will treat the wastewater to a high water quality consistent with drinking water standards in compliance with applicable statutes and regulations. Further, the proposed activity is consistent with the applicable policies of the Coastal Management Act.

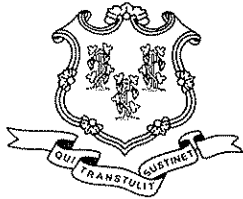
III
RECOMMENDATION

I recommend that the Commissioner authorize the applicant to submit plans and specifications of the proposed wastewater treatment system modification for approval and that upon approval and construction of the facility according to the approved plans and specifications, the proposed water discharge permit (Attachment A) be issued with the revision recommended in this decision.



Kenneth M. Collette, Hearing Officer

STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION



UIC PERMIT MODIFICATION

issued to

Eden Harbour Condominium Association, Inc.
c/o Platts Lane Property Management
P.O. Box 988
Deep River, CT 06417

Location Address:

Eden Harbour
175 Ferry Road
Old Saybrook, CT 06475

Facility ID: 106-059

Permit ID: UI0000328

Permit Expires: March 13, 2016

Watershed: Connecticut River

Basin Code: 4000

SECTION 1: GENERAL PROVISIONS

- (A) This permit modification is issued in accordance with section 1421 of the Federal Safe Drinking Water Act 42 USC 300h et. seq. and section 22a-430 of Chapter 446k, Connecticut General Statutes ("CGS"), and Regulations of Connecticut State Agencies ("RCSA") adopted thereunder, as amended.
- (B) Eden Harbour Condominium Association, Inc., ("Permittee"), shall comply with all conditions of this permit including the following sections of the RCSA which have been adopted pursuant to section 22a-430 of the CGS and are hereby incorporated into this permit. Your attention is especially drawn to the notification requirements of subsection (i)(2), (i)(3), (j)(1), (j)(6), (j)(8), (j)(9)(C), (j)(11)(C), (D), (E), and (F), (k)(3) and (4) and (l)(2) of section 22a-430-3.

Section 22a-430-3 General Conditions

- (a) Definitions
- (b) General
- (c) Inspection and Entry
- (d) Effect of a Permit
- (e) Duty
- (f) Proper Operation and Maintenance
- (g) Sludge Disposal
- (h) Duty to Mitigate
- (i) Facility Modifications; Notification
- (j) Monitoring, Records and Reporting Requirements
- (k) Bypass
- (l) Conditions Applicable to POTWs
- (m) Effluent Limitation Violations (Upsets)
- (n) Enforcement
- (o) Resource Conservation
- (p) Spill Prevention and Control
- (q) Instrumentation, Alarms, Flow Recorders
- (r) Equalization

PERMIT # UI0000328

Section 22a-430-4 Procedures and Criteria

- (a) Duty to Apply
 - (b) Duty to Reapply
 - (c) Application Requirements
 - (d) Preliminary Review
 - (e) Tentative Determination
 - (f) Draft Permits, Fact Sheets
 - (g) Public Notice, Notice of Hearing
 - (h) Public Comments
 - (i) Final Determination
 - (j) Public Hearings
 - (k) Submission of Plans and Specifications. Approval
 - (l) Establishing Effluent Limitations and Conditions
 - (m) Case by Case Determinations
 - (n) Permit issuance or renewal
 - (o) Permit Transfer
 - (p) Permit revocation, denial or modification
 - (q) Variances
 - (r) Secondary Treatment Requirements
 - (s) Treatment Requirements for Metals and Cyanide
 - (t) Discharges to POTWs - Prohibitions
- (C) Violations of any of the terms, conditions, or limitations contained in this permit may subject the Permittee to enforcement action, including but not limited to, seeking penalties, injunctions and/or forfeitures pursuant to applicable sections of the CGS and RCSA.
- (D) Any false statement in any information submitted pursuant to this permit may be punishable as a criminal offense under section 22a-438 or 22a-131a of the CGS or in accordance with section 22a-6, under section 53a-157 of the CGS.
- (E) No provision of this permit and no action or inaction by the Commissioner of Environmental Protection ("Commissioner") shall be construed to constitute an assurance by the Commissioner that the actions taken by the Permittee pursuant to this permit will result in compliance or prevent or abate pollution.
- (F) The authorization to discharge under this permit may not be transferred without prior written approval of the Commissioner. To request such approval, the Permittee and proposed transferee shall register such proposed transfer with the Commissioner, at least 30 days prior to the transferee becoming legally responsible for creating or maintaining any discharge which is the subject of the permit transfer. Failure, by the transferee, to obtain the Commissioner's approval prior to commencing such discharge(s) may subject the transferee to enforcement action for discharging without a permit pursuant to applicable sections of the CGS and RCSA.
- (G) Nothing in this permit shall relieve the Permittee of other obligations under applicable federal, state and local law.
- (H) An annual fee shall be paid for each year this permit is in effect as set forth in section 22a-430-7 of the RCSA.
- (I) This permitted discharge is consistent with the applicable goals and policies of the Connecticut Coastal Management Act (section 22a-92 of the CGS).

SECTION 2: DEFINITIONS

- (A) The definitions of the terms used in this permit shall be the same as the definitions contained in section 22a-423 of the CGS and section 22a-430-3(a) and 22a-430-6 of the RCSA.
- (B) In addition to the above the following definitions shall apply to this permit:

"Quarterly", in the context of a sampling frequency, shall mean sampling is required in the months of February, May, August, and November.

"3 times per year", in the context of a maintenance frequency, shall mean the maintenance must be performed at least 3 times during the period of May to November.

SECTION 3: COMMISSIONER'S DECISION

- (A) The Commissioner has made a final determination and found that modification of the existing system or installation of a new system will protect the waters of the state from pollution. The Commissioner's decision is based on **Application No. 201003469** for permit modification received on May 20, 2010 and the administrative record established in the processing of that application.
- (B) The Commissioner hereby authorizes the Permittee to discharge 9,000 gallons per day of domestic sewage in accordance with the provisions of this permit, the above referenced application, and all approvals issued by the Commissioner or the Commissioner's authorized agent for the discharges and/or activities authorized by, or associated with, this permit.
- (C) The Commissioner reserves the right to make appropriate revisions to the permit in order to establish any appropriate effluent limitations, schedules of compliance, or other provisions which may be authorized under the Federal Safe Drinking Water Act or the Connecticut General Statutes or regulations adopted thereunder, as amended. The permit as modified or renewed under this paragraph may also contain any other requirements of the Federal Safe Drinking Water Act or Connecticut General Statutes or regulations adopted thereunder which are then applicable.

SECTION 4: EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

- (A) The use of sewage system additives, as defined in section 22a-460(g) of the CGS, are prohibited unless such additive is registered with the Commissioner in accordance with section 22a-462-3 of the RCSA. The Commissioner in no way certifies the safety or effectiveness of any registered additive. The Permittee shall include in the public offering statement, condominium instruments, rules and regulations adopted pursuant thereto, and any management agreement for the facility the requirement that no sewage system additive shall be used in the subject treatment system unless such additives is registered with the Commissioner, in accordance with section 22a-462-3 of the RCSA.
- (B) Oils, greases, industrial or commercial wastes, toxic chemicals, wastes from water treatment systems, or other substances, that will adversely affect the operation of the subsurface sewage treatment and disposal system, or, which may pollute ground or surface water, shall not be discharged to the subsurface sewage treatment and disposal system. The Permittee shall include in the public offering statement, condominium instruments, and rules and regulations adopted pursuant thereto, and any management agreement for community sewerage system the requirement that no oils, greases, industrial or commercial wastes, toxic chemicals, wastes from water treatment systems or other liquids that will adversely affect the operation of the subsurface sewage treatment and disposal system or which may pollute ground or surface water shall be discharged to the subsurface sewage

- (C) The Permittee shall assure that groundwater affected by the subject discharge shall conform to the Connecticut Water Quality Standards.
- (D) Any limits imposed on the discharges listed in this permit take effect on the issuance date of this permit, hence any sample taken after this date which, upon analysis, shows an exceedance of permit limits will be considered non-compliance.

The monitoring requirements of this permit begin on the date of issuance of this permit if the issuance date is on or before the 12th day of a month. For permits issued on or after the 13th day of a month, monitoring requirements begin the 1st day of the following month.

- (E) The discharge shall not exceed and shall otherwise conform to specific terms and conditions listed in this permit.
- (F) The Permittee shall monitor inspect and maintain the treatment facilities in accordance with Table A, which is incorporated into this permit as Attachment 1.
- (G) The Permittee shall perform ground water monitoring in accordance with Table B, which is incorporated into this permit as Attachment 2. The requirement that the monitoring plan be performed shall be included in the Public Offering Statement, Condominium Bylaws, and the rules and regulations adopted thereto.
- (H) The Permittee shall monitor the performance of the treatment process in accordance with the Onsite Wastewater Renovation System Quarterly Monitoring Report and the Groundwater Monitoring Report incorporated into this permit as Attachment 4, Tables C through F.

SECTION 5: SAMPLE COLLECTION, HANDLING AND ANALYTICAL TECHNIQUES AND REPORTING REQUIREMENTS

- (A) Chemical analyses to determine compliance with effluent limits and conditions established in this permit shall employ methods approved by the Environmental Protection Agency pursuant to 40 CFR 136 unless an alternative method has been approved in writing in accordance with 40 CFR 136.4.
- (B) The results of chemical analysis and treatment facilities monitoring required by Section 4 shall be entered on the Discharge Monitoring Report (DMR), provided by this office, and reported to the Bureau of Materials Management and Compliance Assurance, at the following address, by the end of the month following the month in which the samples are taken. The report shall also include a detailed explanation of any violations of the limitations specified and corrective actions performed, and a schedule for the completion of any corrective actions remaining.

Bureau of Materials Management and Compliance Assurance
Water Permitting and Enforcement Division (Attn: DMR Processing)
Connecticut Department of Environmental Protection
79 Elm Street
Hartford, CT 06106-5127

- (C) Copies of all DMRs shall be submitted concurrently to the local Water Pollution Control Authority (hereinafter "WPCA").
- (D) Copies of all DMRs shall be submitted concurrently to the local Health Department.

SECTION 6: COMPLIANCE SCHEDULE

- (B) On or before seven (7) days after issuance of this permit, the Permittee shall record on the land records of the Town of Old Saybrook a document indicating the location of the zone of influence created by the subject discharge, as reflected in the application and approved plans and specifications for this permit. On or before one (1) month after issuance of this permit, the Permittee shall submit written verification to the Commissioner that the approved document indicating the location of the zone of influence created by the subject discharge as reflected in the application for this permit has been recorded on the land records in the Town of Old Saybrook.
- (C) On or before seven (7) days after issuance of this permit, the Permittee shall record a copy thereof on the land records in the Town of Old Saybrook. On or before one (1) month after issuance of this permit, the Permittee shall submit written verification to the Commissioner that this permit has been recorded in the land records in the Town of Old Saybrook.

This permit modification is hereby issued on

Amey W. Marrella
Commissioner

cc: Local Health Dept.
DMR

DRAFT

ATTACHMENT I

TABLE A		
Discharge Serial No. 301-2		Monitoring Location:8
Wastewater Description: Domestic sewage		
Monitoring Location Description: Onsite wastewater renovation system		
Average Daily Flow Limit: 6,000 gallons per day		Maximum Daily Flow Limit: 9,000 gallons per day
INSPECTION, MONITORING OR MAINTENANCE REQUIREMENTS		
<u>INSPECTION, MONITORING, or MAINTENANCE</u>	<u>DISCHARGE SERIAL NO.</u>	<u>MINIMUM FREQUENCY</u>
Depth of sludge in septic tank	301-2	During pump-out
Pump out septic tank	301-2	Annually
Mechanical inspection of septic tank baffles	301-2	During pump-out
Mechanical inspection of septic tank effluent filter	301-2	During pump-out
Clean septic tank effluent filter	301-2	During pump-out
Mechanical inspection of pump station	301-2	Quarterly
Pump out pump chamber	301-2	Annually
Water meter readings of water usage	301-2	Monthly
Visual inspection of distribution chambers	301-2	Quarterly
Visual inspection of surface condition of leaching field	301-2	Quarterly
Depth of ponding in leaching field	301-2	Quarterly
Mow grass over leaching field	301-2	3 times per year
NOTE: The Connecticut River Area Health District Sanitarian shall be notified at least one week prior to pumping of septic tanks and grease traps. Verification of all pump outs shall be attached to the monitoring report and a copy of the report shall be sent to the Connecticut River Area Health District Director of Health.		

DRAFT

ATTACHMENT 2

TABLE B GROUNDWATER MONITORING			
DISCHARGE SERIAL NO. 301 A, 301 B, 301 C		MONITORING LOCATION: W	
GROUND WATER MONITORING WELL NO.: MW1, MW2, MW3		DESCRIPTION: Down gradient monitoring wells	
PARAMETER	UNITS	MINIMUM FREQUENCY OF SAMPLING	SAMPLE TYPE
Coliform, Fecal	col/100ml	Quarterly	Grab
Groundwater Depth (Standard depth below grade)	Ft. in	Quarterly	Instantaneous
Nitrogen, Ammonia	mg/l	Quarterly	Grab
Nitrogen, Nitrate	mg/l	Quarterly	Grab
Nitrogen, Nitrite	mg/l	Quarterly	Grab
Nitrogen, Total Kjeldahl	mg/l	Quarterly	Grab
Nitrogen, Total	mg/l	Quarterly	Grab
pH	S.U.	Quarterly	Instantaneous
Phosphorus, Total Dissolved	mg/l	Quarterly	Grab

DRAFT

ATTACHMENT 3

TABLE (C)

Onsite Wastewater Renovation System Quarterly Monitoring Report													
Facility: Eden Harbour	Contact:	Facility ID: 106-059	Discharge Serial No.: 301-2										
Town: Old Saybrook	Phone # :	Permit # : U10000328	Monitoring Location: 8										
	Monitoring frequency	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Inspection, monitoring or maintenance requirements													
Parameters													
Depth of sludge in septic tank	During pump-out												
Pump out septic tank	Annually												
Mechanical inspection of septic tank baffles	During pump-out												
Mechanical inspection of septic tank effluent filter	During pump-out												
Clean septic tank effluent filter	During pump-out												
Mechanical inspection of pump station	Quarterly												
Pump out pump chamber	Annually												
Water meter readings of water usage	Monthly												
Visual inspection of distribution chambers	Quarterly												
Visual inspection of surface conditions of leaching field	Quarterly												
Depth of ponding in leaching field	Quarterly												
Mow grass over leaching field	3 times per year												

Note: Indicate completion of required activity with an "X" in the appropriate space or write in the value of the reading (e.g. - water meter readings of water usage: _____ gallons per day (gpd)).

Note: The Connecticut River Area Health District Sanitarian shall be notified at least one week prior to pumping of septic tanks and grease traps. Verification of all pump outs shall be attached to the monitoring report and a copy of the report shall be sent to the Connecticut River Area Director of Health.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Authorized Official: _____ Signature: _____ Title: _____ Date: _____

TABLE (D)

Groundwater Monitoring Report									
Facility: Eden Harbour		Contact:		Facility ID: 106-059		Year: _____			
Town: Old Saybrook		Phone #:		Permit #: U10000328					
Discharge Serial No. : 301 -A Monitoring Location : W Groundwater Monitoring Well No.: MW1									
Parameter	Units	Feb	May	Aug	Nov				
Coliform, Fecal	col/100 ml								
Groundwater Depth (Standard depth below grade)	Ft, in								
Nitrogen, Ammonia	mg/l								
Nitrogen, Nitrate	mg/l								
Nitrogen, Nitrite	mg/l								
Nitrogen, Total Kjeldahl	mg/l								
Nitrogen, Total	mg/l								
pH	S.U.								
Phosphorus, Total Dissolved	mg/l								

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted.

Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Authorized Official: _____

Signature: _____

Title: _____

Date: _____

TABLE (E)

Groundwater Monitoring Report												
Year: _____		Facility ID: 106-059										
Facility: Eden Harbour		Contact:										
Town: Old Saybrook		Phone #:		Permit #: U10000328								
Discharge Serial No. : 301-B Monitoring Location : W Groundwater Monitoring Well No.: MW2												
Parameter	Units	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Coliform, Fecal	col/100 ml											
Groundwater Depth (Standard depth below grade)	Ft, in											
Nitrogen, Ammonia	mg/l											
Nitrogen, Nitrate	mg/l											
Nitrogen, Nitrite	mg/l											
Nitrogen, Total Kjeldahl	mg/l											
Nitrogen, Total	mg/l											
pH	S.U.											
Phosphorus, Total Dissolved	mg/l											

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Authorized Official: _____ Signature: _____ Title: _____ Date: _____

TABLE (F)

Groundwater Monitoring Report		Year: _____
Facility: Eden Harbour	Contact:	Facility ID: 106-059
Town: Old Saybrook	Phone #:	Permit #: UI0000328
Discharge Serial No. : 301 -C Monitoring Location : W Groundwater Monitoring Well No.: MW3		
Parameter	Units	Feb
Coliform, Fecal	col/100 ml	
Groundwater Depth (Standard depth below grade)	Ft, in	
Nitrogen, Ammonia	mg/l	
Nitrogen, Nitrate	mg/l	
Nitrogen, Nitrite	mg/l	
Nitrogen, Total Kjeldahl	mg/l	
Nitrogen, Total	mg/l	
pH	S.U.	
Phosphorus, Total Dissolved	mg/l	
		May
		Aug
		Nov

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted.

Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Authorized Official: _____

Signature: _____

Title: _____

Date: _____

DATA TRACKING AND TECHNICAL FACT SHEET

PERMIT #: UI0000328 APPLICATION #: 201003469 DEP/WPC#: 106-059

DISCHARGER NAME AND ADDRESS DATA

Permittee: Eden Harbour Condominium Association, Inc.

Mailing Address:

Location Address:

Street: c/o Platts Lane Property Management
P.O. Box 988

Street: 175 Ferry Road

City: Deep River ST: CT Zip: 06417

City: Old Saybrook St. CT Zip: 06475

Contact Name: Krista LaMonaca

Contact Name:

PERMIT DURATION

5 YEAR () 10 YEAR (XX) 30 YEAR ()

DISCHARGE CATEGORIZATION

POINT () NON-POINT (X) GIS # _____

NPDES () PRETREAT () GROUND WATER (UIC) (X) GROUND WATER (OTHER) ()

MAJOR () SIGNIFICANT MINOR () MINOR (X)

COMPLIANCE SCHEDULE YES X NO

POLLUTION PREVENTION () TREATMENT REQUIREMENT () WATER CONSERVATION ()

PERMIT STEPS () WATER QUALITY REQUIREMENT () REMEDIATION () AUDIT LANGUAGE ()

OTHER (X)

OWNERSHIP CODE

Private (X) Federal () State () Municipal (town only) () Other public ()

UIC PERMIT INFORMATION

Total Wells 1

Well Type 5W11

PERMIT FEES

DISCHARGE CODE 312000a REPRESENTING DSN 301-2 ANNUAL FEE \$

DEP STAFF ENGINEER/ANALYST

Jennifer Perry Zmijewski, P.E.

PERMIT TYPE

New() Reissuance() Modification() Subsection-e()

NATURE OF BUSINESS GENERATING DISCHARGE

Eden Harbour Condominium Association, Inc. is presently permitted to discharge 9,000 gallons per day of domestic sewage wastewaters to the groundwaters in the watershed of the Connecticut River from a 32-unit age restricted housing development after treatment by a sequencing batch reactor and a pressure-distributed leach field. The applicant proposes to discontinue the use of the sequencing batch reactor and convert the system to a conventional system.

PROCESS AND TREATMENT DESCRIPTION (by DSN)

DSN 301-2 represents the proposed modified conventional onsite wastewater renovation system consisting of septic tank and leach field.

RESOURCES USED TO DRAFT PERMIT

- Federal Effluent Limitation Guideline 40CFR
name of category
- Performance Standards
- Federal Development Document
name of category
- Treatability Manual
- Department File Information
- Connecticut Water Quality Standards
- Anti-degradation Policy
- Coastal Management Consistency Review Form
- Other - Explain

BASIS FOR LIMITATIONS, STANDARDS OR CONDITIONS

X Best Professional Judgement (See Other Comments)

X Case by Case Determination (See Other Comments)

OTHER COMMENTS

The original permit issued on 3/14/06 included a sequencing batch reactor with limits on BOD, TSS, Total Nitrogen and phosphates. The condominium association hired a professional engineering consultant to evaluate whether a conventional system could meet WQS, and allow them to discontinue use of the plant.

This is a community system and currently has a Developer's Agreement with the town of Old Saybrook. The Department received a copy of the original signed agreement between the Developer and the town of Old Saybrook and certification from the town's attorney that the agreement is legally sufficient, in March 2006.

This project is within a municipality currently under order from the Department and is not within the study areas of the municipal facility planning effort.

PROJECT HISTORY

Application received on May 20, 2010.