OFFICE OF ADJUDICATIONS

IN THE MATTER OF	***:***	***APPLICATION NO. 200602938***
MAX'S PLACE, LLC	***:***	***SEPTEMBER 9, 2008***

PROPOSED FINAL DECISION

I

SUMMARY

Max's Place, LLC (applicant) has applied to the Department of Environmental Protection for a permit to discharge to waters of the state pursuant to General Statutes § 22a-430. The draft permit would support the discharge of wastewater from a proposed commercial shopping plaza at the intersection of Spencer Plain Road and Boston Post Road in Old Saybrook within the South Central Shoreline Drainage Basin. The proposed discharge would be treated by an on-site wastewater renovation system to ensure that the applicant meets the applicable statutory and regulatory standards, including §22a-430, Regs., Conn. State Agencies §§ 22a-430-3 through 4, and the Connecticut Water Quality Standards. The DEP issued a notice of tentative determination to approve the permit application and staff has drafted a permit that would authorize the proposed activities.

The Chalker Beach Improvement Association, Inc. (petitioner) submitted a petition for a hearing on the application signed by more than 25 individuals to the department. An evening hearing was held in Old Lyme on March 18, 2008 for the purpose of receiving public comment. The hearing was continued on March 20, 2008 to collect additional evidence from the parties and additional testimony from the petitioner.

The applicant and the DEP are the only parties to this matter. On August 7, 2008, the parties jointly submitted an agreed draft decision (Attachment A) for my consideration. Regs.,

Conn. State Agencies § 22a-3a-6(l)(3). I have reviewed this submission and the hearing record, including documentary evidence, oral testimony, and public comment. Based on my review of the record, I find that the application and proposed draft permit meet the applicable statutory and regulatory standards. The agreed draft decision submitted by the parties sufficiently states, with detailed references to the record, the findings of fact and conclusions of law necessary to support this finding. Therefore, I accept the agreed draft decision and adopt it as my proposed final decision.

II

PUBLIC COMMENT

The petitioner's comments centered on its concern about the effect of the final discharge on downgradient water resources due to the hydrological connection between the on-site wetland area and Chalker Beach, an area already experiencing water quality issues due to antiquated septic systems.[1] The applicant provided ample evidence that the effluent will meet drinking water quality standards before it even enters the subsurface soil absorption system. The effluent will undergo further renovation for phosphorous and any remaining biological contaminants in the underground system. The permit requires the applicant to continuously monitor the system and report the monitoring results to the department. In addition to monitoring the advanced system's pre-treatment and post-treatment effluent, the proposed draft permit also requires installation of a groundwater monitoring well and regular evaluation of this well to ensure that the final effluent does not impact water quality. The petitioner has presented no direct evidence that the proposed system as designed will not protect the waters of the state from pollution. The applicant's presentation of evidence on the conservatively designed advanced treatment and subsurface soil absorption system and the monitoring and maintenance required by the permit to ensure overall system performance collectively addressed the petitioner's concern regarding impacts to water quality.

[1] These comments were generated both in writing and as testimony at the public hearing. At the March 20, 2008 hearing, Mr. Ronald Nault testified under oath to again present these concerns on behalf of the petitioner.

III

RECOMMENDATION

The applicant has met its burden and demonstrated that the on-site wastewater renovation system will protect the waters of the state from pollution by ensuring any discharge is compliant with applicable state water quality standards and that the proposed activity is consistent with the policies outlined in the Coastal Management Act, General Statutes § 22a-92. The applicant has demonstrated its understanding of and ability to comply with all monitoring and maintenance requirements. Therefore, I recommend that the applicant be authorized to submit plans and specifications for its proposed treatment system. Upon approval of those plans and specifications, I recommend issuance of the proposed draft permit (Attachment B).

/s/ Kenneth M. Collette
Kenneth M. Collette, Hearing Officer

PARTY LIST

In the matter of Max's Place LLC
Application No. 200602938

PARTY	REPRESENTED BY
The Applicant Max's Place, LLC	Robert E. Sonnichsen, P.E. Waldo & Associates, LLC 89 State Street Guilford, CT 06437 David M. Royston, Esq. Dzialo, Pickett & Allen, P.C. 15 Elm Street P.O. Box 779 Old Saybrook, CT 06475
Department of Environmental Protection Bureau of Materials Management and Compliance Assurance 79 Elm Street Hartford, CT 06106	Jennifer Perry Zmijewski
PETITIONER	
Chalker Beach Association	Jim Fritsche 46 Castlerock Lane Bolton, CT 06043

Attachment A

STATE OF CONNECTICUT

DEPARTMENT OF ENVIRONMENTAL PROTECTION

OFFICE OF ADJUDICATIONS

In the Matter of

Application No. 200602938

Max's Place LLC

August 4, 2008

AGREED DRAFT DECISION

FINDINGS OF FACT

Taking into consideration and giving due regard to all of the substantial evidence in the record, I make the following findings of fact:

A. Procedural History

1. On November 17, 2006, the Connecticut Department of Environmental Protection ("CTDEP") received an application (the "Application") from Max's Place LLC (the "Applicant") dated October 20, 2006, for a permit to discharge to the waters of the state, pursuant to Conn. Gen. Stat. § 22a-430 (APP-2)

2. Following a technical review of the Application and all supplemental material, CTDEP staff made a tentative determination to approve the Application and issue a permit to discharge. On December 7, 2007 the Commissioner published notice of Tentative Determination to issue a permit to discharge to the Applicant. (DEP-1)

3. On December 24, 2007 CTDEP received a petition signed by more than 25 persons requesting a hearing (DEP-2). The CTDEP staff submitted a request for a hearing to the Office of Adjudications. On December 27, 2007, the Office of Adjudications scheduled a status conference to be held on January 15, 2008.

4. On January 15, 2008 a status conference was held to discuss the public hearing process. A pre-hearing conference was scheduled for February 26, 2008. The public hearing was scheduled for March 18, 2008, with a site visit at 4:30 p.m. prior to the public hearing at 7:00 p.m. A second date for continuance of the public hearing was scheduled for March 20, 2008.

5. On February 26, 2006 the pre-hearing conference was held at which the parties submitted respective lists of issues, witnesses and proposed exhibits. There being no objection, all of the parties proposed exhibits were admitted into the record in this matter. The date and time for the site visit and hearing was confirmed as March 18, 2008 at 4:30 p.m. and 7:00 p.m., respectively.

Hearing Officer Collette conducted the scheduled site visit. All parties were represented at the site visit. Mr. Ronald J. Nault attended the site visit on behalf of the petitioners. The Public hearing was held on March 18, 2008 at 7:00 p.m. as publicly noticed. The parties, petitioners and members of the general public offered oral and written testimony. Robert E. Sonnichsen, P.E. offered testimony on behalf of the Applicant. Ms. Jennifer Perry Zmijewski, P. E. offered testimony on behalf of the CTDEP.

6. The hearing was continued on March 20, 2008 with additional testimony by Robert E. Sonnichsen, P.E. and Miles Sherman on behalf of the applicant, Jennifer Perry Zmijewski, P. E. on behalf of CTDEP and Mr. Ronald J. Nault, P.E. on behalf of the petitioner. No other professional testimony was offered.

B. Project Overview

7. The applicant proposes to develop a commercial plaza consisting of a 63,400 square foot supermarket and 72,500 square feet ("sf" or "ft^2") of additional retail space. (APP-2, Testimony Mr. Robert E. Sonnichsen, P.E.).

C. Subject Site

8. The subject site is comprised of 17.9 acres at the intersection of Boston Post Road (Rte. 1) and Spencer Plain Road (Rte. 166) in Old Saybrook, CT. The project site is essentially undeveloped except for three former home sites located on the lots fronting on Spencer Plain Road. There is no sewer system available to the project. (APP-2)

9. The site is located in the South Central Shoreline drainage basin, and has a surface water classification of SA. The groundwater classification for the site is GA, which represents groundwater that is suitable for human consumption without treatment. (APP-2)

10. The Water Quality Standards set objectives for existing and future water quality and establish a program based on a system of groundwater classifications to implement these objectives. (DEP-8). The proposed onsite wastewater renovation system ("OWRS") must be designed so that effluent from the OWRS will meet water quality standards prior to contacting any point of concern ("POC"), which may be a body of water, well, property line or other feature determined by the CTDEP to require protection from pollution. (DEP-10)

11. The nearest POC in this instance is the wetland to the northeast of the proposed system. (APP-2, Testimony of Robert E. Sonnichsen, P. E.)

D. Septic System Design

12. The CTDEP evaluates both the hydraulic capacity and the pollutant renovation capacity of a proposed site and OWRS. An applicant must be able to demonstrate that a selected site will be large enough to install an appropriately sized OWRS and that the system's location and extent adequately address both capacity thresholds. (DEP-10)

13. The site must have hydraulic capacity to move effluent below the ground for a sufficient distance to also meet the treatment criteria, which are based on the Water Quality Standards and applicable CTDEP regulations. The CTDEP also requires a pollution renovation analysis that addresses bacteria and viral removal, nitrogen reduction and the removal of phosphorus that is not naturally occurring. (APP-2, Testimony of Robert E. Sonnichsen, P.E., DEP-7). The soils must be able to move the effluent underground in the soil for at least 21 days, the travel time necessary to allow the system to successfully renovate bacteria from the waste stream. (APP-2, Testimony of Robert E. Sonnichsen, P.E., DEP-7). The CTDEP requires that a minimum of two feet of vertical separating distance be provided between the subsurface soil absorption system and the mounded seasonal high ground water table to renovate bacteria and viruses. (APP-2, DEP-7) Soils at the site must be able to accept the design flow discharge without premature breakout, and must be able to absorb at least six months volume of phosphate discharged in the effluent from the system that is not naturally occurring in the soil. Total nitrogen concentrations must be treated or diluted to 10mg/l or less at the point of concern and prior to it leaving the site. (APP-2, DEP-7)

1. Hydraulic Capacity

14. An evaluation completed by the Applicant indicates that a combined maximum wastewater flow of 11,750 gallons per day ("gpd") will be generated by the supermarket and the other retail facilities. (APP-2, DEP-7)

15. Through analysis of the existing conditions at the site, the Applicant has determined that the best means to effectively treat wastewater to meet the Water Quality Standards will be to build an alternative sewage treatment system and an engineered constructed fill section.

16. Based on data from supermarkets in the region, the applicant determined that the average flow rate for supermarkets is 0.465 gpd/ft ^{2}. For a 63,400 ft^2 supermarket the total flow rate is therefore, 2,950 gpd. To arrive at a system design flow rate a peak factor of 1.5 was applied. The final design flow rate for the supermarket is therefore 4,422 gpd. (APP-2)

17. To determine the flow rate for the other retail stores, design sewage flows accepted by the Connecticut Department of Public Health (CTDPH) and Connecticut Department of Environmental Protection (CTDEP) were utilized. The design flow allowance for retail stores is 0.10 gpd/ft^2. The resulting flow rate for 72,500 square feet of retail stores is 7,250 gpd. The resulting total maximum daily design flow to the alternative sewage treatment system is 11,672 gpd. A total discharge of 11,750 gpd was selected for the project. (APP-2)

18. Based on data provided and recommendations from ZENON, (the manufacturer of the alternative sewage treatment system), 80% of the total wastewater generated by the 72,500 square feet of "dry" retail space will be recycled. No recycling will take place at the supermarket. The recycling aspect of the system will reduce the design discharge for the retail space from 7,250 gpd to 1,450 gpd. (APP-2) The resulting total design wastewater discharge rate for the proposed supermarket and the retail stores is therefore 5,950 gpd to the subsurface soil absorption system. (APP-2, DEP-7)

19. The total maximum daily design flow to the pretreatment facility was utilized to calculate the hydraulic loading for the sizing of the grease traps, equalization and trash tanks. The total design wastewater discharge rate to the subsurface soil absorption system was utilized to design the subsurface soil absorption system. (APP-2)

2. Advanced Wastewater Pretreatment Process

20. The OWRS design incorporates a pretreatment facility that will remove the majority of solids and nitrogen prior to discharging the wastewater to the ground. The proposed wastewater treatment process will improve the quality of wastewater prior to its discharge into the subsurface soils. (APP-2)

21. A ZENON Z-MOD™–*S* wastewater treatment system will be utilized at Max's Place. It is a fully integrated wastewater treatment system that incorporates all biological processes, ultrafiltration membranes, and ancillary equipment into a single tank. (APP-2, Testimony of Miles Sherman)

Z-MOD™–*S* treats the wastewater through a combination of immersed, low-pressure ZENON ZeeWeed® ultrafiltration membranes and a suspended growth biological reactor. ZeeWeed® ultrafiltration membranes replace the solids separation function of secondary clarifiers and the polishing function of granular filter media that are found in conventional activated sludge systems. (APP-2, Testimony of Miles Sherman)

22. The Z-MOD™–*S* membrane system proposed for the Max's Place project is designed to treat an average daily flow (ADF) of 0.011 MGD (11,000 gpd).

The system can support a Maximum Daily Flow (MDF) of 0.022 MGD (22,000 gpd) for periods generally not exceeding 24 continuous hours. (APP-2, Testimony of Miles Sherman)

23. The ZENON wastewater treatment system can be adapted for denitrification, where nitrogen removal is required. The elevated levels of biomass become readily anoxic in the absence of aeration, ensuring high denitrification rates. An upstream anoxic zone is incorporated in the tank design to accommodate denitrification. (APP-2, Testimony of Miles Sherman)

24. The ZENON wastewater treatment system is also capable of phosphorus removal, where required. Through the addition of metal salts, such as alum or ferric chloride, to the raw wastewater or mixed liquor, soluble phosphorus in the waste stream can be precipitated. The ZeeWeed® membranes have a pore size that is intended to provide a barrier to the discharge of precipitated phosphorus. The phosphorus is retained in the mixed liquor and removed with the waste activated sludge. (APP-2, Testimony of Miles Sherman)

3. Subsurface Soil Absorption System Design

25. On December 14, 2004, six test pits were excavated throughout the northwestern portion of the site. Representatives of the Applicant and the CTDEP witnessed the test pits. The locations of the test pits are shown on the project engineering drawings. (APP-2, APP-5)

26. The test pits generally indicated six inches of topsoil underlain by light-brown to brown sandy and silty loam to a depth of approximately three to four feet below the existing ground surface. From four (4) to approximately eight (8) feet there was light-brown to brown firm fine sandy silty loam with gravel. (APP-2)

27. At the time of test pit excavation, groundwater was encountered in all test pits at depths ranging from six (6) feet to eight (8) feet below the existing ground surface. The presence of redoximorphic features, or “mottling” was identified in all of the test pits. The highest level of mottling in each test pit was used as an indication of seasonal high ground water in the subsurface soil absorption system design. The seasonal high ground water elevations established by using the mottling indications resulted in a ground water profile that matched well with the groundwater contours that had been established in previous evaluations of the northern portion of the property. Seasonal high groundwater levels utilized by the Applicant in the system design were reviewed and determined to be acceptable by the CTDEP. (APP-2, Testimony of Robert E. Sonnichsen, P.E.)

28. Using the results of a ground water analysis performed for a previous development proposal at the site and the test pit data obtained by the Applicant it was determined that the direction of ground water flow for the water table aquifer in the northern portion of the site is easterly. A groundwater elevation contour map was developed from the information. The map was used to confirm the hydraulic gradient at the site. (APP-2, Testimony of Robert E. Sonnichsen, P. E.)

29. The Applicant determined, based on their site investigation, that the existing soils do not have sufficient hydraulic capacity to effectively renovate the quantity of wastewater generated by the project. As a result an engineered constructed fill section will be constructed to provide the required hydraulic capacity. The engineered constructed fill section will be located under the proposed parking area in the northwest corner of the site. Since the parking area must be raised by 4-6 feet for site design reasons, incorporation of an engineered constructed fill section has been coordinated with the overall site grading plan. The engineered constructed fill section will utilize select fill with a permeability range of 20 to 28 feet per day and will extend downgradient to a point that wastewater renovation is complete. (APP-2, Testimony of Robert Sonnichsen, P.E., DEP-7)

30. The primary subsurface soil absorption system will consist of one stone leaching trench, 16.5 feet wide by 300 feet long. The trench will be covered with a non-woven geotextile, a minimum of four inches of granular fill, six inches of process aggregate and three inches of bituminous concrete.

31. Effluent from the ZENON wastewater treatment system will be pumped to the subsurface soil absorption system. Observation wells will be placed in each bed to allow for monitoring of ground water/leachate levels. The wells will extend to the surface of the pavement and will be equipped with locking covers. The layout of the proposed subsurface soil absorption system and select fill limits is shown on the project engineering drawings. (APP-2, APP-5, Testimony of Robert Sonnichsen, P.E.)

32. The Long Term Acceptance Rate (LTAR) can be adjusted depending upon the effluent concentrations from the wastewater treatment system for the total suspended solids (TSS) and five-day biochemical oxygen demand (BOD5). With the use of the pretreatment system, it is anticipated that the effluent will have TSS and BOD5 values of less than 30 mg/L. The CTDEP allows a maximum value of 1.2 gpd/ft^2 for a system installed in sandy soils. The system has been designed with an LTAR of 1.2 gpd/ft^2. (APP-2, DEP-7)

33. Given a discharge of 5,950 g.p.d. from the project, an effective subsurface soil absorption area of 5,000 ft^2 (5,950 gpd/1.2 gpd/ft^2.) is required. In this design, approximately 10,000 ft^2 are provided to include reserve area. (APP-2, DEP-7)

34. The design of the subsurface soil absorption system must satisfy the requirement of maintaining a minimum of two feet of unsaturated soil between the bottom of the subsurface soil absorption system and the ground water table. A two dimensional ground water analysis was utilized to model the ground water mound that would result from the design discharge of 5,950 gpd of pretreated wastewater to the subsurface soil absorption system. (APP-2, DEP-7)

The shape and height of the predicted ground water mound depends upon the recharge rate, size and shape of the subsurface soil absorption system and hydraulic characteristics of the soil. The hydraulic conductivity for the fill was designed to accommodate the wastewater design flow.

A range of hydraulic conductivities (permeabilities) has been specified ranging from 20 to 28 feet per day. An impermeable membrane will be placed under the system and vertically along its southern, western and northern limits. The groundwater elevation will increase to approximately 2.65 feet at the downgradient edge of the subsurface soil absorption system based on the applied wastewater. Two feet of unsaturated soil will be provided above the mounded ground water elevation and the system will be constructed above that point. The parking lot structure will be constructed above the subsurface soil absorption system. (APP-2, APP-4, Testimony of Robert Sonnichsen, P.E., DEP-7)

35. Pathogen renovation was examined to determine the minimum distance required between the subsurface soil absorption system and the property line and/or sensitive receptor areas (POC). (APP-2) A hydraulic conductivity value of 28 ft/day was used in the Applicant's pathogen removal analysis. A hydraulic gradient of 0.05 ft/ft was based upon previous hydraulic analysis performed at the site. The use of an impermeable membrane under the engineered constructed fill section placed at this slope will insure that a hydraulic gradient of .05 ft/ft will be maintained. For these parameters, the 21-day travel time distance is 98 feet. The proposed engineered fill section extends 98 feet downgradient from the reserve area which meets the travel time distance requirement. A groundwater intercepting drain will be located downgradient of the engineered constructed fill section. (APP-2, APP-4, Testimony of Robert Sonnichsen, P.E., DEP-7)

36. Groundwater will be conveyed by the drain to a location approximately 40 feet upgradient for the on-site wetlands where it will discharge over a 75 foot wide level spreader to assure that no point discharge results. (APP-2, APP-4, Testimony of Robert Sonnichsen, P.E.)

37. A CTDEP goal for systems to be permitted is to demonstrate that they have the capacity to absorb the quantity of phosphorus generated during a six-month period. Based on the Applicant's calculations, adequate phosphorus absorption will occur in the two foot unsaturated zone below the system. (APP-2, DEP-7)

38. The impact of nitrogen loading to ground water quality beneath a septic system is evaluated by dilution only as the means of lowering nitrate concentrations after water flows away from the septic system.

The nitrate concentration in ground water must be less than 10 mg/L at the downgradient property line, or at any receptor on the property (POC). The alternative sewage treatment system will reduce the nitrogen levels below 10 mg/L prior to entering the subsurface soil absorption system. (APP-2)

E. Coastal Area Management

39. As part of this Application, the Applicant was required to demonstrate consistency with the goals and policies of the Coastal Management Act since the entire town of Old Saybrook is within the coastal area as defined under the Act. However, since the project site is not within the coastal boundary, the Applicant is not required to provide a separate CAM site plan.

The Applicant must demonstrate that the proposed discharge will not significantly disrupt either the natural environment or sound economic growth, or negatively impact water-dependent uses. The site has no potential access to the water and is located in a developed commercial area. It has no effect on water dependent uses. (Testimony of Robert E. Sonnichsen, P. E.)

40. The specific coastal resources which could be impacted by the system discharge are the inland wetlands at the northeast corner of the project site and the downstream tidal wetlands at Chalker Beach. (Testimony of Robert E. Sonnichsen, P. E.)

41. Before the discharge reaches the inland wetlands at the northeast corner of the property, it has been both pretreated and treated in the subsurface soil absorption system to assure it meets drinking water standards. There is no recognized data to indicate that effluent meeting such drinking water standards has a negative effect upon inland wetlands or tidal wetland resources. There is no evidence that the Applicant's discharge will affect the natural environment. (Testimony of Robert E. Sonnichsen, P.E.)

F. Operation and Maintenance

42. The permit contains an enforceable compliance schedule which requires the applicant to: 1) verify in writing that the alternative sewage treatment system is operating in accordance with the approved plans and specifications and is achieving compliance with all permit limits and conditions: and 2) submit the results of a detailed permit compliance audit every two years. (DEP 1)

43. The Permittee shall ensure that the alternative sewage treatment system is operated by a person with a valid and effective certification in the State of Connecticut, at a minimum, as a facility Class III operator pursuant to C.G.S. 22a-416(d) and the regulations adopted thereunder. The Permittee shall ensure that the wastewater treatment facility is operated by such an operator with such qualifications throughout the entire life of the wastewater treatment facility. (DEP 5)

44. The permit requires the applicant to regularly monitor the untreated effluent and the treated effluent. The applicant must maintain records of the total flow for each day of discharge and must report on a discharge monitoring report (DMR) the total flow and number of hours of discharge for the day of sample collection and the average daily flow for each sampling month. Copies of all DMRs must be submitted to the CTDEP, the Old Saybrook Water Pollution Control Authority and the Connecticut River Area Health District. (DEP 5)

45. Groundwater monitoring is also required by the permit and must be conducted in accordance with a plan approved by the CTDEP. Groundwater monitoring wells will be located downgradient of subsurface soil absorption system. Quarterly samples from the wells will be analyzed for fecal coliform, various nitrogen compounds, pH and phosphorus. (DEP 5)

G. Proposed Conclusions Of Law And Decision

Before any person may discharge any substance into the waters of the state they must obtain a permit from the Commissioner pursuant to the provisions of Section 22a-430 of the Connecticut General Statutes ("CGS").

No such permit can be issued unless the Commissioner determines that the proposed system to treat such discharge will protect the waters of the state, from pollution. (CGS §22a-430(b)). The Commissioner may establish appropriate procedures, criteria and standards for determining if a discharge would cause pollution to the waters of the state and if a proposed treatment system is adequate to protect the waters of the state from pollution.(CGS § 22a-430(b)). See, Regulations of Connecticut State Agencies ("RCSA"), Sections 22a-430-1 though 22a-430-8.

The Commissioner must also consider whether the proposed discharge would be consistent with the standard set forth in the Water Quality Standards (WQS). Section 22a-430-4(I)(4)(E). The WQS specifically authorize certain discharges into Class A groundwater as long as such discharges pose no threat to pollution of groundwater. (Finding of Fact ("FOF") 9, 10)

The WQS and the applicable sections of the Connecticut Public Health Code set standards for the quality of the discharge and, in this case, the wastewater generated by the proposed facilities must be treated to drinking water standards at the nearest water body or property line (POC). (FOF 10, 11)

The Applicant proposes to treat 11,750 gallons per day and discharge approximately 5,950 gallons per day of domestic effluent to the groundwater within the South Central Shoreline drainage basin. (FOF 14, 16- 18)

The Applicant has demonstrated that the site will accommodate the proposed OWRS and will transport the treated effluent for sufficient distance below ground without surfacing or breakout so the bacteria will be removed before the effluent reaches a POC. The design of the subsurface soil absorption system will eliminate viruses from the effluent before it reaches a POC. The soils of the constructed fill system will absorb at least six months of phosphorus concentration and nitrogen will be treated by the Zenon treatment system, **t**o acceptable concentration levels prior to discharge. (FOF 13, 21-23, 34, 35, 37)

The proposed treatment and disposal system will protect the waters of the state from pollution. The system will satisfy the treatment goals of the WQS. The design of the system is such that effluent from the subsurface soil absorption system will meet drinking water quality standards prior to contacting any POC. The permit will require ongoing monitoring and regular maintenance to ensure that this treatment and disposal system operates within the limits of the permit. The evidence presented by the Applicant and supported by CTDEP staff demonstrates that any discharge will not threaten the waters of the State of Connecticut. (FOF 35, 38, 42-45)

The Applicant has demonstrated that the application is consistent with all applicable goals and policies in Section 22a-92 in that such activity incorporates all reasonable measures mitigating any adverse impacts of said actions on coastal resources**. (**FOF 39-41)

This application for a water discharge permit meets all relevant statutory and regulatory criteria and water quality standards. The proposed sewage treatment and disposal system will treat the discharge and protect the waters of the state from pollution.

G. Agreement

Based on the foregoing, the undersigned hereby agree that the Commissioner authorize staff to require the applicant to submit plans and specifications of the proposed system and such additional information as may be required to ensure protection of the waters of the state from pollution, and to review and approve the proposed system to treat the discharge. Once such system has been installed in full compliance with the approval, the Commissioner shall authorize staff to prepare discharge permit for her signature.

THE APPLICANT,
Max's Place LLC
Ron Lyman

By _____
Ron Lyman
716 Beaumont Highway
Lebanon, CT 06249

THE CONNECTICUT DEP

By _____
Oswald Ingles, Jr.
Director
Bureau of Materials Management and Compliance Assurance
Water Permitting and Enforcement Division

CERTIFICATE OF SERVICE

This is to certify that a copy of the foregoing has been mailed first class, postage prepaid this _____ to the following:

(Via Hand delivery)
Jennifer Perry Zmijewski
Bureau of Materials Management and Compliance Assurance
Water Permitting and Enforcement Division
79 Elm Street
Hartford, CT 06106-5127

_____
Ron Lyman

Attachment B

UIC PERMIT

issued to

Max's Place LLC
C/o Ron Lyman
716 Beaumont Highway
Lebanon, CT 06249

Location Address:
Spencer Plains Road and Boston Post Road
Old Saybrook, CT 06475

Facility ID: 106-074 **Permit ID:** UI0000445 **Permit Expires:**

Watershed: South Central Shoreline **Basin Code:** 5000

SECTION 1: GENERAL PROVISIONS

(A) This permit 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) Max's Place LLC, ("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

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) The Permittee shall comply with Section 22a-416-1 through Section 22a-416-10 of the RCSA concerning operator certification.

(F) 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.

(G) 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.

(H) Nothing in this permit shall relieve the Permittee of other obligations under applicable federal, state and local law.

(I) 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.

(J) 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:

"Average Monthly Limit" in the context of this permit is defined as the average of all daily composite samples or grab sample averages taken during any calendar month.

"Daily Concentration" means the concentration of a substance as measured in a daily composite sample, or, arithmetic average of all grab sample results defining a grab sample average.

"Maximum Daily Limit" in the context of this permit is defined as the maximum allowable "Daily Concentration" (defined above) when expressed as a concentration (e.g. mg/l).

"Maximum Concentration" in the context of this permit is defined as the maximum concentration at any time as determined by a grab sample.

"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.

"Twice per month" when used as a sample frequency shall mean two samples per calendar month collected no less than 12 days apart.

"Twelve Month Rolling Average" in the context of this permit is defined as the average of the current month's samples in pounds per day (the current month average) averaged with the average from the previous eleven months.

SECTION 3: COMMISSIONER'S DECISION

(A) The Commissioner has made a final determination and found that the system installed for the treatment of the discharge, will protect the waters of the state from pollution. The Commissioner's decision is based on **Application No. 200602938** for permit issuance received on November 17, 2006 and the administrative record established in the processing of that application.

(B) The Commissioner hereby authorizes the Permittee to discharge 5,950 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.

(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.

(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 Permittee shall operate and maintain all processes as installed in accordance with the approved plans and specifications and as outlined in the associated operation and maintenance manual. This includes but is not limited to all recycle pumping systems, aeration equipment, aeration tank cycling, mixing equipment, anoxic tanks, chemical feed systems, effluent filters, disinfection systems or any other process equipment necessary for the optimal removal of pollutants. The Permittee shall not bypass or fail to operate any of the approved equipment or processes without the written approval of the Commissioner.

(F) The discharge shall not exceed and shall otherwise conform to specific terms and conditions listed in this permit. The discharge is restricted by, and shall be monitored in accordance with, the Tables A through C, which are incorporated into this permit as Attachment 1.

(G) The pH of the discharge shall not be less than 6.0 nor greater than 9.0 Standard Units at any time and shall be monitored on a weekly basis. The Permittee shall report pH values, specifically maximum and minimum, for each day of sample collection.

(H) The Permittee shall maintain at the facility a record of the total flow for each day of discharge and shall report on the discharge monitoring report the total flow and number of hours of discharge for the day of sample collection and the average daily flow for each sampling month.

(I) The Permittee shall ensure that the wastewater treatment facility is operated by a person with a valid and effective certification in the State Of Connecticut, at a minimum, as a facility Class III operator pursuant to C.G.S. 22a-416(d) and the regulations adopted thereunder. The Permittee shall ensure that the wastewater treatment facility is operated by such an operator with such qualifications throughout the entire life of the wastewater treatment facility.

(J) The Permittee shall monitor, inspect and maintain the treatment facilities in accordance with Table D, which is incorporated into this permit as Attachment 2.

(K) The Permittee shall perform ground water monitoring in accordance with Table E, which is incorporated into this permit as Attachment 3.

(L) The Permittee shall monitor the performance of the treatment process in accordance with the Pretreatment Monthly Monitoring Report, the Onsite Wastewater Renovation System Quarterly Monitoring Report and the Groundwater Monitoring Reports incorporated into this permit as Attachment 4.

(M) The monitoring and sampling required within this permit is a minimum for reporting purposes only. More frequent monitoring and sampling of the treatment system may be required to operate the facility to obtain acceptable results for the parameters being monitored as required by the Operation and Maintenance Manual approved by the Commissioner.

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) If any sample analysis indicates that an effluent limitation specified in Section 4 of this permit has been exceeded, a second sample of the effluent shall be collected and analyzed for the parameter(s) in question and the results reported to the Commissioner within 30 days of the exceedance. Resampling for permit violations is in addition to routine required sampling.

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

(E) Copies of all DMRs shall be submitted concurrently to the local Health Department.

SECTION 6: COMPLIANCE SCHEDULE

(A) On or before three (3) months after issuance of this permit the Permittee shall verify in writing to the Commissioner that the alternative treatment technology is operating in accordance with the approved plans and specifications and is achieving compliance with all permit limits and conditions. The Permittee shall obtain written concurrence from the design engineer, the technology provider and the wastewater treatment facility operator who will be responsible for the operation of the wastewater treatment facility.

(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.

(D) Every two years, on or before the anniversary date of the issuance of this permit, the Permittee shall submit the results of a detailed permit compliance audit to the Commissioner. Such audits shall be performed within sixty (60) days prior to the anniversary date. The compliance audits shall be performed by a qualified professional engineer licensed to practice in Connecticut with the appropriate education, experience and training which is relevant to the work required.

Each audit shall evaluate compliance with all permit terms and conditions for the preceding two-year period. The evaluation shall review all pertinent records and documents as necessary, including Discharge Monitoring Reports (DMRs); laboratory reports; operations and maintenance plans and performance logs/records; equipment specifications and maintenance schedules; engineering drawings; and spare parts inventory.

Each audit report shall include a description of all records and documents used in the evaluation, a summary of compliance with permit terms and conditions, and detailed descriptions of all remedial actions taken or proposed to address each violation or deficiency discovery.

(E) A copy of each audit shall be submitted concurrently to the local WPCA and to the local Health Department.

This permit is hereby issued on

Gina McCarthy
Commissioner

cc: Connecticut River Area Health Dept.
DELTA Environmental Services, Inc.
DMR

ATTACHMENT 1

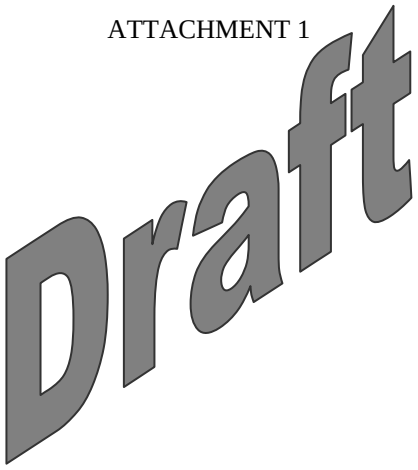


TABLE A		
Discharge Serial No. **301-2**	Monitoring Location: G	
Wastewater Description: Domestic sewage influent to Zenon system		
Monitoring Location Description: EQ Sump (raw influent)		
Average Daily Flow: 8,000 gallons per day	Maximum Daily Flow: 11,750 gallons per day	
PARAMETER	**INSTANTANEOUS MONITORING**	
	Sample Type	**Sample Frequency**
Biochemical Oxygen Demand	Grab	Twice per month
Total Suspended Solids	Grab	Twice per month
Total Nitrogen		
Ammonia		
Nitrate Nitrogen		
Nitrite Nitrogen		
Total Kjeldahl Nitrogen	Grab	Twice per month
Orthophosphate		
Total Phosphorus		
pH		
Oils & Grease		

TABLE B		
Discharge Serial No. **301-2**	Monitoring Location: P	
Wastewater Description: Domestic sewage influent to Zenon system		
Monitoring Location Description: Zenon Process tank		
Average Daily Flow: 8,000 gallons per day	Maximum Daily Flow: 11,750 gallons per day	
PARAMETER	**INSTANTANEOUS MONITORING**	
	Sample Type	**Sample Frequency**
Biochemical Oxygen Demand		
Total Suspended Solids		
Total Nitrogen		
Ammonia		
Nitrate Nitrogen		
Nitrite Nitrogen		
Total Kjeldahl Nitrogen		
Temperature	Grab	Twice per month
pH	Grab	Twice per month
Alkalinity	Grab	Twice per month
Turbidity	Grab	Twice per month

TABLE C						
Discharge Serial No. **301-2**			Monitoring Location: E			
Wastewater Description: Domestic sewage effluent from Zenon system						
Monitoring Location Description: Post - disinfection						
Average Daily Flow: 4,000 gallons per day			Maximum Daily Flow: 5,950 gallons per day			
PARAMETER	**FLOW / TIME BASED MONITORING**				**INSTANTANEOUS MONITORING**	
	Average Monthly Limit	Maximum Daily Limit	Sample frequency	Sample Type	Maximum Concentration	Sample Frequency
Biochemical Oxygen Demand	20 mg/l	30 mg/l				Twice per month
Total Suspended Solids	20 mg/l	30 mg/l				Twice per month
Total Nitrogen	10 mg/l(1)					Twice per month
Ammonia						Twice per month
Nitrate Nitrogen						Twice per month
Nitrite Nitrogen						Twice per month
Total Kjeldahl Nitrogen						Twice per month
Orthophosphate				Grab		Twice per month
Total Phosphorus				Grab	13 mg/l	Twice per month
pH						Weekly
Escherichia coli	4 col/100 ml					Weekly
Ethanol						Twice per month
Methanol						Twice per month
Alkalinity						Twice per month
Oils & Grease						Twice per month
Turbidity						Weekly

Footnote:

(1) Limit is based on a twelve month rolling average

ATTACHMENT 2

TABLE D
INSPECTION, MONITORING OR MAINTENANCE REQUIREMENTS

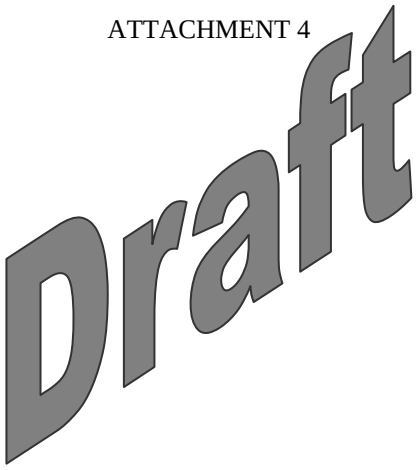
INSPECTION, MONITORING, or MAINTENANCE	**DISCHARGE SERIAL NO.**	**MINIMUM FREQUENCY**
Pump out grease trap	301-2	Quarterly
Mechanical inspection of grease trap baffles	301-2	During pump-out
Mechanical inspection of pump station	301-2	Quarterly
Pump out pump chamber	301-2	Quarterly
Pump out equalization tank	301-2	Annually
Test run of emergency generator	301-2	Monthly
Water meter readings of water usage	301-2	Weekly
Visual inspection of Zenon system	301-2	Monthly
Mechanical inspection of alarm conditions	301-2	As needed
Mechanical inspection of blowers	301-2	Monthly
Mechanical inspection of {ethanol/methanol/other carbon} feed system	301-2	Monthly
Mechanical inspection of alkalinity feed system	301-2	Monthly
Visual inspection of ozone disinfection system	301-2	Monthly
Pump out sludge from Zenon process tank	301-2	Annually or as needed
Mechanical inspection of valve chamber(s)	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
Visual inspection of level spreader	301-2	Quarterly

NOTE:
The Connecticut River Area Heath District Sanitarian shall be notified at least one week prior to pumping of equalization 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.

ATTACHMENT 3

TABLE E GROUNDWATER MONITORING			
DISCHARGE SERIAL NO. 301 A, 301 B		**MONITORING LOCATION:** W	
GROUND WATER MONITORING WELL NO:. *{as named on AS BUILT}*		**DESCRIPTION**: Downgradient monitoring wells	
PARAMETER	**UNITS**	**MINIMUM FREQUENCY OF SAMPLING**	**SAMPLE TYPE**
Coliform, Fecal	col/100ml	Quarterly	Grab
Groundwater Depth	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

ATTACHMENT 4



This and the following 3 pages have been left blank to reserve page numbers for the DMR forms you will be editing for the facility.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Draft

DATA TRACKING AND TECHNICAL FACT SHEET

PERMIT #:_UI0000445_ **APPLICATION #:**_200602938_ **DEP/WPC#:**_106-074_

DISCHARGER NAME AND ADDRESS DATA

Permittee: Max's Place LLC

Mailing Address:	**Location Address:**
Street: 716 Beaumont Highway	Street: Spencer Plains Road and Boston Post Road
City: Lebanon ST: CT Zip: 06249	City: Old Saybrook ST CT Zip: 06475
Contact Name: Ron Lyman	**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(X)

OTHER**( )**

OWNERSHIP CODE

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

UIC PERMIT INFORMATION

Total Wells **1** Well Type 5W12

PERMIT FEES

DISCHARGE CODE **312000a** REPRESENTING DSN **301-2** ANNUAL FEE $**885.00**

DEP STAFF ENGINEER/ANALYST Jennifer Perry Zmijewski

PERMIT TYPE

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

NATURE OF BUSINESS GENERATING DISCHARGE

Max's Place LLC proposes to treat a maximum wastewater flow of 11,750 gallons per day and discharge 5,950 gallons per day of domestic sewage wastewaters to the groundwater's in the watershed of the South Central Shoreline from a commercial plaza consisting of a supermarket and additional retail space.

PROCESS AND TREATMENT DESCRIPTION (by DSN)

DSN 301-2 represents the treatment process consisting of a grease trap, flow equalization tank and Zenon Municipal Systems wastewater treatment and recycling system. This system consists of aerobic and anoxic biological treatment processes, membrane filtration, phosphorus reduction, and disinfection. Treated effluent will be discharged to a constructed fill section with a portion of the total treated effluent being recycled for use as flush water.

RESOURCES USED TO DRAFT PERMIT

__ Federal Effluent Limitation Guideline 40CFR
name of category

__ Performance Standards

__ Federal Development Document
name of category

__ Treatability Manual

_X_ Department File Information

_X_ Connecticut Water Quality Standards

__ Anti-degradation Policy

_X_ Coastal Management Consistency Review Form

__ Other - Explain

BASIS FOR LIMITATIONS, STANDARDS OR CONDITIONS

__ Case by Case Determination (See Other Comments)

OTHER COMMENTS

Project will utilize a treatment plant, which will be required to meet limits on BOD, TSS, Total Nitrogen, Phosphorus and bacteria (the pollutants of concern in domestic wastewater) prior to discharge to a pressure-distributed leach field system. The leach field will be designed to renovate pathogens and provide additional polishing of the treated effluent. A portion of the treated wastewater will be recycled back to the retail buildings for use as flushwater.

This project is within the study areas of the Old Saybrook Facilities Planning effort conducted pursuant to a community pollution abatement order issued by the Department to the town of Old Saybrook. The permitting of this proposed facility would not be inconsistent with any future actions taken pursuant to such pollution abatement order.

This draft permit is written using a new, proposed permit format incorporating new language regarding operator requirements, audit language and system monitoring and maintenance requirements.

PROJECT HISTORY

Application received on November 17, 2006.
Tentative Determination signed ******, published *******.
Final Determination signed ******.
Approval(s) to construct issued on *******.