OFFICE OF ADJUDICATIONS

IN THE MATTER OF : APPLICATION NO.200600475

WESTPORT/WESTON FAMILY Y : FEBRUARY 23, 2007

PROPOSED FINAL DECISION

I
SUMMARY

The Westport/Weston Family Y (WWFY or applicant) has filed an application with the Department of Environmental Protection[1] (DEP or staff) for a permit to discharge wastewaters from its planned new YMCA to be constructed on property it owns on Sunny Lane in Westport. General Statutes §22a-430; Regs., Conn. State Agencies §§22a-430-3 and 22a-430-4. Specifically, the WWFY has applied for a permit to construct and operate a subsurface wastewater renovation system to treat wastewaters discharged from the planned facility and from a day camp it also operates at the site.

The DEP published a tentative determination to approve this application, and staff has prepared a draft permit that would authorize the discharge. Hearings were held in Westport for the receipt of public comment and were continued at the DEP in Hartford. The parties are the applicant, DEP staff and Y Downtown, Inc. as an intervening party.

I have reviewed the evidence[2] and applicable statutory and regulatory criteria and find that this application complies with §22a-430 and the applicable provisions of the implementing regulations. §§22a-430-1 through 22a-430-8. If constructed and operated as proposed, this wastewater treatment system would protect the waters of the state from pollution. I therefore recommend issuance of the draft permit (Attachment A).

II

[1] Bureau of Materials Management and Compliance Assurance, Water Permitting and Enforcement Division.

[2] I have reviewed the entire contents of the extensive record, including public comments made at or submitted after the September 14, 2006 hearing in Westport. I have also examined written documents offered as evidence at or after the hearing. While I have given all comments and materials my general consideration, I cannot grant evidentiary status to non expert or irrelevant comments or documents, or to materials that were offered as evidence but not corroborated at the hearing or those that were offered at a time when due process could not be afforded to all parties regarding the admission of that information.

DECISION

A
FINDINGS OF FACT

1
Procedural History

1. The WWFY submitted its application for a discharge permit on or about February 27, 2006. The first selectman of the Town of Westport was advised that this application had been filed and, on March 1, 2006, a Notice of Permit Application was published in The Westport News. §22a-6g. In a letter dated April 13, 2006, the DEP informed the applicant that its application was complete and would be forwarded to staff for technical review. (Exs. APP-1 – 5; test. 9/21/06, M. Bartos, p. 242.)

2. Following its review of the application, including supplemental materials submitted to staff, the DEP determined that the application met its design requirements and issued a tentative determination to approve the permit application on May 10, 2006. DEP staff has prepared a draft permit authorizing the proposed discharge. This draft permit would allow a maximum daily flow of 34,000 gallons per day of wastewater, and provides that this discharge is restricted by and shall be monitored in accordance with the requirements set out in the permit. Violations of any of the terms, conditions or limitations of the permit would subject the applicant to enforcement action. The applicant has indicated that it would comply with the draft permit as written and there are no apparent obstacles to this intention. (Exs. APP-6, 7, 15, DEP-1, 4, 6, 8-10; test. 9/19/06, R. Halstead, pp. 24-25; 9/25/06, C. Attra, pp. 395-396, A. Daha, p. 426.)

3. A petition requesting a public hearing was received by the DEP on June 7, 2006. On July 11, 2006, Y Downtown, Inc. was granted status as an intervening party pursuant to §22a-19(a). Y Downtown, Inc. is a Connecticut non-stock corporation, incorporated to "promote programs for the betterment of local communities"; the applicant and Y Downtown are not affiliated and there is no corporate relationship between the two. (Exs. DEP-2; INT-1, 2; test. 9/19/06, R. Halstead, p.25; 9/25/06, D. McGinley, p. 468.)

4. Following timely notice, the hearing began with an evening session conducted on September 14, 2006 in Westport for the receipt of public comment. The hearing was continued at the DEP in Hartford on September 19, 21, and 25, 2006. (Exs. DEP-3, 12.)

5. The applicant presented the following witnesses: Rosemary Halstead, the current president of the applicant's board of directors; Michael Bartos, a senior associate at Land-Tech Consultants; Chuck Miller, a vice president at Smith & Loveless; Russell Slayback, a consulting hydrogeologist for Leggette, Brashears & Graham, Inc.; and Cory Attra, the project manager for the applicant. Land-Tech Consultants designed the infrastructure to support the proposed system, including the storm drainage system, water supply system, parking lots, roads and the septic system. Smith & Loveless is the manufacturer of the FAST system, which is part of the proposed treatment system for this project; Mr. Slayback conducted a standard subsurface investigation of the site, which was compiled into a report; Mr. Attra oversaw the design of the proposed system on behalf of the applicant. (Ex. APP-15; test. 9/19/06, R. Halstead, p. 12, M. Bartos, pp. 38- 41, C. Miller, pp. 71- 73, 77; 9/21/06, R. Slayback, pp.318-324; 9/25/06, C. Attra, pp. 388-393.)

6. Antoanela Daha, a sanitary engineer for the DEP Bureau of Materials Management and Compliance Assurance, testified on behalf of staff. (Exs. DEP-5, 6; test. 9/25/06, A. Daha, pp. 420-467.)

7. The witnesses for Y Downtown were: Debbie McGinley, a founder and incorporator of Y Downtown and a resident of Rice's Lane, a road adjacent to the applicant's property, and Elizabeth Flint, the owner/occupant of 38 Rice's Lane/38 River Lane, a property abutting the applicant's property to the southeast. Neither of these witnesses was qualified as an expert in matters relevant to this application. Y Downtown did not present testimony by two other witnesses it had offered as experts, Messrs. Gary Dufel and Richard Harris, and made no request to continue the hearing to call these witnesses. (Exs. INT-1, 3, 12, 13, 14; test. 9/25/06, D. McGinley, pp. 468-486, E. Flint, pp. 503-515; see tr. 9/25/06 pp. 497, 501-503, 515.)

8. The applicant has not been convicted in any jurisdiction of a criminal violation of environmental law; has not suffered the imposition of any civil penalty in any state or federal

administrative proceeding; and has not been issued any order or adverse judgments by any state or federal court or any state or federal administrative agency. (Ex. APP-1; test. 9/19/06, R. Halstead, pp. 23-24.)

2
The Proposed Facility

9. The subsurface wastewater renovation system (treatment system) would serve the proposed new full-service YMCA facility to be built on property owned by the applicant at Sunny Lane in Westport. This facility would replace the current YMCA in downtown Westport. The new facility would provide a fitness center and fitness activities and include two pools, a gymnastic center, courts for basketball, volleyball and racquetball, a child care facility, dance studio, supporting facilities (e.g., locker rooms) and administrative offices. (Exs. APP-7, 17; test. 9/19/06 R. Halstead, pp. 13-15, 33 –35.)

10. The wastewater treatment system would also serve the Camp Mahackeno day camp for children owned and operated by the applicant on the Sunny Lane property. The camp would remain in operation when the new facility is constructed. The new facility and the system have been located to insure that the camp would continue to operate with its associated outdoor recreational activities. (Test. 9/19/06, R. Halstead, pp. 17-19; 9/25/06, C. Attra, pp. 390-391, R. Halstead, p. 530.)

3
The Site

11. The site consists of approximately thirty-two acres owned by the applicant and is adjacent to the Merritt Parkway to the north, Rice's Lane to the south and Lee's Pond, part of the Saugatuck River, to the east. The applicant owns the property under Lee's Pond, which is an additional eight acres. The surrounding land uses are predominantly suburban-residential. Poplar Plains Brook runs through the top third of the property; the new facility would be north of the Brook. The site is not located in an aquifer protection area. (Exs. APP-7, 17, 18, INT-6; test. 9/19/06, R. Halstead, pp. 14, 16, 30-32; 9/21/06, M. Bartos, pp. 236-237, R. Slayback, pp. 352-353; 9/25/06, A. Daha, pp. 441-442.)

12. The existing facilities on the site support the camp. Two buildings are north of Poplar Plains Brook, an arts and crafts building and one for meetings and camp activities. These would be torn down and replaced south of the Brook, where most of the camp activities presently take place. The swimming pool and locker rooms are in the southern part of the site, as are a lodge for meetings, an administrative building and all the athletic fields. The camp would maintain its outdoor activities and its use of Lee's Pond. (Ex. APP-9; test. 9/19/06, R. Halstead, pp. 17-20; 9/25/06, C. Attra, pp.390-391.)

4
Proposed Discharges

13. The discharges to the proposed wastewater treatment system would be domestic wastewater, resulting from toilets, showers, sinks and ordinary house keeping. There is no plan for a laundry or kitchen for food preparation. No wastewater associated with the swimming pools would be discharged to the new treatment system.[3] The draft permit sets out effluent limitations, and includes specific terms and conditions of these restrictions. No additional water would be added to the system to dilute effluent concentrations in the discharge. (Ex. DEP-4; test. 9/19/06, R. Halstead, pp. 29-30, M. Bartos, pp. 46-47; 9/21/06, M. Bartos, pp. 249, 290; 9/25/06, C. Attra, pp. 398-399.)

14. The current discharges from Camp Mahackeno go to a septic system that has no denitrification system or removal of biological oxygen demand (BOD) or Total Suspended Solids (TSS). These discharges contain nitrogen at levels two to three times what would be discharged from the proposed system. The three existing septic systems for the camp's discharges would be removed or abandoned; camp wastewater would combine with the wastewater from the new building. Stormwater discharges from the site would not be discharging to the new system.[4] (Exs. APP-7, 9, DEP-10; test. 9/19/06, R. Halstead, pp. 17-18, 20, M. Bartos, pp. 48-50; 9/21/06, M. Bartos, pp. 258-259, 288; 9/25/06, C. Attra, p.390, M. Bartos pp. 517-521.)

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[3] Filter backwash from all swimming pools would be conveyed to a dedicated treatment and disposal system on the property, which is subject to a separate general permit issued by the DEP. The pools are also subject to a separate DEP general permit for draining. (Test. 9/19/06, M. Bartos, 46-48.)

[4] Stormwater discharges would be the subject of a separate permit. (Test. M. Bartos, 9/19/06, p. 48.)

15. The applicant would implement practices and facilities that would generate the minimum amount of wastewater to the maximum extent practicable. The applicant anticipates its final design plan would include water conservation efforts and building design features such as low-flow water devices for showers and toilets and control systems to provide automatic shutoff if a pipe is left running. The DEP would review and approve final plans and specifications as they relate to the building design and operations. (Test. 9/21/06, M. Bartos, pp. 248-249; 9/25/06, C. Attra, p. 398.)

5
Discharge Volume

16. The maximum volume of wastewater discharge would be 34,000 gallons per day (gpd).[5] This would reflect a peak day, plus 10,000 gallons as a safety factor. This discharge number controls the design of the treatment system and the analysis of the ability of the site to accept the discharge. This peak flow is not anticipated to occur on a daily basis, but would be, at most, an infrequent occurrence. To insure the adequacy of the projected peak design, a comparison of the proposed discharge to similar YMCA facilities was undertaken. (Exs. APP-1, 7; test. M. Bartos, 9/19/06, pp. 43- 44, 53, 9/21/06, pp. 210 - 218.)

17. The volume of discharge was calculated based upon an evaluation of water company records from the existing Y in downtown Westport. That facility uses an average of 8664 gpd of water in the summer and 12,265 gpd in the winter. The day of highest discharge for the downtown facility, 13,521 gpd, was used as the base discharge and was adjusted for a projected growth rate of fifteen percent. The wastewater generation rate from the new facility is therefore projected to be 15,525 gpd. (Ex. APP-7; test. M. Bartos, 9/19/06, pp. 42-44.)

18. The size of the system was based on growth projections for the Y in terms of projected increases in membership units. There is no direct correlation between the square footage of a facility, which might allow for an increase in the number of membership units paying to belong to a Y, and the number of gallons of wastewater flowing through a wastewater treatment system at a given time (i.e., the number of people using the facility). As part of its business planning for

[5] A permit is required for a discharge of more than 5000 gallons per day. § 22a-430(g).

the new facility, the applicant calculated its projected growth of membership by studying its past and present growth rates, the populations that are served by Y facilities, assessing the market for the new facility, and evaluating the rates of growth at other Y facilities that serve a similar market and have recently upgraded their facilities. This showed the highest growth could be 20%. (Ex. APP-7; test. 9/25/06, C. Attra, pp. 402- 405, 415-418, R. Halstead, pp. 530-533.)

19. The meter readings from 2005 for Camp Mahackeno show a water use of 5500 gpd,[6] with a total population of 420. The camp is expected to grow from 420 campers per day to 600 campers per day, a forty-three percent increase, which converts to approximately 7865 gpd of wastewater discharge. (Ex. APP-7; test. 9/19/06 M. Bartos, pp. 43, 52-53, 9/21/06, p. 216; 9/25/06, C. Attra, pp. 408-409, M. Bartos, pp. 517-519.)

20. The combined average population projected for the new facility and camp would be 1704 persons and 13.7 gallons per capita per day (gpcd). The total projected discharge from the new facility and camp was projected to be 24,000 gpd to which a safety factor of an additional 10,000 gpd was added. The peak design discharge is therefore 34,000 gpd, a flow that is not anticipated to occur frequently, if ever. To further insure the adequacy of the projected peak design, the applicant also compared the proposed discharge to similar Y facilities. (Ex. APP-7; test. M. Bartos, 9/19/06, pp. 44, 53, 9/21/06, pp. 210-212, 217-218.)

6
The Wastewater Treatment System
a
Overview of the System

21. The proposed treatment system includes two septic tanks, an equalization tank, two Fixed Activated Sludge Treatment (FAST) reactors, a denitrification filter and six leaching beds. The entire system is below ground except for the control building, the system's hatches manholes and ancillaries, and the forced main pipe when it crosses Poplar Plains Brook. A pump operates to

[6] Current leaks in Camp Mahackeno's pool artificially inflate its 5500-gpd water usage; it is likely that at least 1000 less gpd of wastewater is being discharged to the three existing on-site septic systems. (Test. M. Bartos, 9/19/06, p. 52.)

move the wastewater through the pipe. (Exs. APP-7, 9, test. M. Bartos, 9/19/06, pp. 57-58, 70, 9/21/06, p. 230.)

22. The system would direct wastewater flows to a 23,000-gallon baffled septic tank and then to another 11,000-gallon baffled septic tank. The septic tanks would provide primary settling to remove the larger solids and floatables from the wastewater so that only liquids would continue through the system, reducing the likelihood of blockages.[7] (Exs. APP-7, 9; test. 9/19/06, M. Bartos, p. 55.)

23. After leaving the septic tanks, the wastewater would flow into a wet well. A chemical feed pump located in the control building would add sodium bicarbonate (baking soda) to the wastewater in the wet well to adjust the alkalinity of the waste stream. The control building would house the pump station, control panels for the system's various pump controls, and alarms. (Exs. APP-7, 9; test. 9/19/06, M. Bartos, pp. 55-56.)

24. The pump station would release wastewater in slugs of 340 gallons per minute for several minutes at a time. An operator would also be able to control that flow by overriding the functioning of the pump station. There would also be a backup generator in the building in case of a power failure. (Test. M. Bartos, 9/19/06, pp. 56, 58, 9/21/06, p. 230.)

25. The discharge would then flow in the underground pipe that would surface and run under a bridge crossing over Poplar Plains Brook. The pipe, which would be wrapped in insulation (heat tape) to prevent the sludge from freezing as it runs above ground, would be attached to the underside of a bridge crossing over Poplar Plains Brook. The bridge is a conventional steel bridge; two steel I-beams rest on concrete abutments on each end. (Test. M. Bartos, 9/19/06, pp. 56-59, 67-68, 9/21/06, p.308.)

26. After crossing Poplar Plains Brook, the discharge pipe would run underground again to an underground 34,000-gallon flow equalization tank. This tank would equalize the flow from the pump station so it would discharge a constant stream to the FAST system. The flow passes

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[7] With a FAST system, a septic tank is used initially to remove the larger solids. (Test. 9/19/06, C. Miller, p. 91.)

through the FAST system where the wastewater receives treatment for nitrogen, biological oxygen demand (BOD) and Total Suspended Solids (TSS). (Ex. APP-8, test. 9/19/06, M. Bartos, p. 58-60, C. Miller, pp. 90, 106.)

27. After leaving the FAST system, the wastewater would enter a gravity sand filter for further treatment. Nitrate nitrogen from the FAST system is treated and converted to nitrogen gas in the filter and the limit of 10 mg/l for total nitrogen is achieved. The sand is a media similar to the FAST honeycomb media. In this process, the bacterial media require and feed on the nitrogen that has been enhanced with a carbon source called MicroC. MicroC has been approved by the DEP and is currently in use in Connecticut. The flow through the filter and the flow of MicroC are continuous. The filter is rated at 24 gpm but a safety factor is built in so it would handle greater flows. (Exs. APP-7, 9, 13, 14; test. 9/19/06, M. Bartos, pp. 61, 158 -160, 162, 165, C. Miller, p. 109; 9/21/06, M. Bartos, p. 220.)

28. The treated wastewater would then be pumped and concurrently released to six leaching beds. The proposed location and sizing of the beds were based on the Long Term Acceptance Rate (LTAR) of the underlying soil, which measures how quickly the effluent could be expected to move through the leaching field to the underlying soil. The acceptable rate for this movement is 1.2 gpd per square foot, which is based on soil permeability (hydraulic conductivity) and wastewater strength. The most restrictive value for hydraulic conductivity was used in the calculations and, on the recommendation of DEP, the applicant based its calculations on a projected discharge of waste directly to the beds without treatment to design a leaching field to meet this standard. (Exs. APP-7, DEP-11; test. M. Bartos, 9/19/06, pp. 61, 170, 173, 180, 9/21/06, pp.204, 206, 239; 9/25/06, R. Slayback, p. 338.)

29. The leaching beds would contain an infiltrator within a foot of crushed stone to move the wastewater evenly into and through the stone. The wastewater would infiltrate to soil on the site and travel generally vertically downward until it encounters the water table, fifteen to twenty feet below ground. The bottom of a bed would be forty inches below ground surface; the top would be eighteen inches below ground. The beds would be covered with fill, topsoil and grass; a roadway or vehicles traversing a bed would not affect it. The wastewater would then combine with the water table and groundwater on site and travel east toward the Saugatuck River

approximately 400 feet from the closest leaching bed. (Exs. APP-7, 9, DEP-11; test. 9/19/06, M. Bartos, pp. 61-62, 172, 173, 175, 176, 178; 9/21/06 R. Slayback, pp. 355-356.)

30. There would be no bypass system; the only way effluent would move from the building would be through the system. All flows from the facility to the treatment system would be constant. If one component of the system became entirely filled up (e.g., the equalization tank), it would not alter the discharge to the leaching beds. The entire system and component tanks would provide various protections against overflow. (Test. M. Bartos, 9/19/06, pp. 68-69, 9/21/06, p. 248.)

31. When a septic system fails, it fails by breaking out as disparate seepage of untreated sewage at ground level. A system failure would not result in sewage bursting uncontrollably out of the ground. The majority of problems with this system would be minor, routine and predictable; this does not change according to which side of Poplar Plains Brook a component is on. In addition, this system has monitoring requirements, operation and maintenance requirements and a licensed operator to run it. The applicant would also control the nature of the wastewater at its source. (Test. 9/21/06, M. Bartos, pp. 226-228, 265, R. Slayback, p. 359.)

32. The applicant plans to develop a stand-alone spill plan for the wastewater treatment system unless the new building requires a spill plan, in which case the stand-alone plan would be subsumed within a facility-wide plan. No hazardous or toxic substances would be used in the system except MicroC, which may be considered hazardous because it has some methanol; nonetheless, the spill plan would be designed for such chemicals. (Test. 9/21/06, M. Bartos, pp. 249-250.)

b
The FAST System

33. The FAST system is a hybrid fixed film and activated sludge system. The technology facilitates a biological process in which bacterial microbes that have attached to a honeycomb media submerged in the wastewater feed on that wastewater as it is circulated through the media. An aeration process provides air to the bacteria and circulates the wastewater through the media. As the bacteria consume the waste, the solids settle out, cleaning the water. The FAST system

produces effluent quality similar to a municipal type plant. (Ex. APP-8, test. 9/19/06, C. Miller, pp. 77, 78, 80, 86-89, 93, 100.)

34. FAST systems are used by organizations that shut down periodically, such as schools because the bacterial microbes can continue to survive without a new food surface. Therefore, if a temporary shutdown occurs, the FAST system can be restored faster than some other systems because the microbes remain alive. (Test. 9/19/06, C. Miller, p. 105.)

35. As the bacterial mass grows, it becomes thicker and eventually sloughs off, falling down through the media into a lower section. FAST systems do not require a full time operator. An operator would regularly evaluate the sludge buildup and periodically remove the sludge in the lower section. FAST systems provide a stable environment for wastewater as the biological media does not wash out of the system. (Ex. APP-8; test. 9/19/06, C. Miller, pp. 87-89, 104, 132.)

36. The FAST concept and system was first developed for barges in the 1960s; land-based systems were developed in the 1970s. The modular version of FAST, a pre-engineered system that would be installed for the applicant, was produced in the 1990s when regulations concerning leach field disposal drove the technology. FAST systems are used in schools, botanical gardens, restaurants, golf clubs, housing developments, strip malls and hotels. The modular FAST system, the system that would be used by the applicant, is used when wastewater is discharged to a leach field. (Ex. APP-8; test. 9/19/06, C. Miller pp. 77-82, 90, 92, 104.)

37. The capacity of modular FAST systems range from 2000 to 12,000 to 100,000 gpd. Approximately 140 modular FAST systems have been sold; eighty systems are in operation in New England. Five installations are in Connecticut, varying in size from seven to 8000 gallons per day to 30,000 gallons a day.[8] All FAST systems in Connecticut work on the same principle. The largest FAST system in the world processes 1,000,000 gpd. There are several thousand

[8] The Westbrook Y's FAST system is approximately 10,000 gpd and was shipped in January 2002. The FAST at the Gunnery School in Simsbury handles 30,000 gpd and was installed in 2002. Other FAST systems are used at a Stop & Shop, a Wal-Mart and a marina. (Test. 9/19/06, C. Miller, pp. 101-103, 144.)

micro FAST residential systems that exist in New England. (Test. 9/19/06, C. Miller, pp. 81-83, 90-93,100–103.)

38. The FAST system would be installed in a concrete tank with an inlet pipe from the equalization tank. The equalization tank effluent would enter the FAST reactor where it would be circulated by an airlift throughout the FAST media, which is a plastic block of honeycombs. The first of the two FAST reactors would fill up first, followed by the second; the two tanks would then function together in discharging wastewater. (Exs. APP-10, 12; test. 9/19/06, C. Miller, pp. 85-87, 94-96, 98, 100.)

39. The FAST system does not produce any significant odors and produces minimal noise. In addition, the blowers would be placed underground in a vault to further lessen any noise impacts. The blowers (air compressors) would supply oxygen for the bacteria to grow and multiply and are the only moving mechanical parts of the FAST system. (Ex. APP-8; test. 9/19/06, C. Miller, pp. 107-108; 9/21/06, M. Bartos, p. 255.)

40. The FAST system "upsets" when something enters the system that inhibits the ability of the microbes to function. Quaternary ammonia, which is found in floor strippers and some fabric softeners, would be such a substance. Because the WWFY would be a single discharge that would controls what goes into its system, it would be able to prevent quaternary ammonia – or any other inhibiting substance – from entering the system. The FAST manufacturer would also provide a list of chemicals that should not be used. Should a failure of the FAST system occur, the wastewater in the system would be pumped out and the system "re-seeded" with new microbes to start again. (Test. 9/19/06, C. Miller, pp. 110-113, 115-117, 131, 137.)

41. Temperature plays a role in the nitrification process; however with the FAST system and a relatively long sludge age (due to an effective surface area of media through which wastewater passes), the system can operate at lower temperatures for longer periods of time. Freezing is not a concern; the underground FAST system would be insulated, which would control for constant temperature. Above-ground travel would be limited to the bridge crossing where the pipe would be wrapped in insulation and "heat tape" to prevent heat loss. The wastewater would also travel a short distance so it would not cool off before entering the reactors. Even if the WWFY closed

for a while or a line was frozen in the ground, the FAST tanks would stay full, providing long-term storage capacity in the event of a shut down of the system. Interruptions in flow are not likely as constant flows are expected from the new Y and the camp; in addition, the system can manage expected ranges of high to low flows. (Test. 9/19/06, M. Bartos, p. 68, C. Miller, pp. 116, 125-127, 139-140.)

42. The goal of the FAST system is to convert ammonia and organic nitrogen into nitrate nitrogen in order to denitrify it in the filter. Therefore, the system was sized based on the pounds of nitrogen entering the system. The proposed system can treat 60,000 gpd of wastewater and remove BOD and TSS. The system could treat to the nitrification limits for flows of 36,000 gpd, which is 2,000 gpd more than the proposal if the DEP permit allowed such a flow. (Test. 9/19/06, C. Miller, pp. 109-110, 142-143, 146-147.)

c
Operation and Maintenance

43. The permit would require the applicant to obtain the services of a licensed operator and DEP approval of the operator. Factors that the applicant would use to select a qualified licensed operator would include references, the level of licensure, proximity to the facility, experience with the proposed FAST technology and wastewater treatment systems in general. Full time operators (i.e., 24-hours per day) are not needed to operate or maintain the system. (Ex. DEP-4; test. 9/19/06, C. Miller, p. 93; 9/25/06, C. Attra, p. 394.)

44. The selected operator would be involved in the construction of the facility and would also work collaboratively with the project engineers and manufacturer's representatives, including FAST technology representatives, during the startup and commissioning phases. (Test. 9/19/06, C. Miller, p. 117; 9/25/06, C. Attra, p. 395.)

45. The entire system, including the FAST system, would require some periodic minimal inspections, adjustments, tests and repairs; components would be readily accessed and/or viewed for inspection (of parts and operation) and maintenance. Most problems with this system would be minor, routine and predictable. The system has few moving parts. The parts that would require maintenance are pumps and air compressors, which are universally available and readily repaired and replaced. The septic tanks would be inspected quarterly and, if necessary, pumped

out annually. The equalization tank would also be inspected quarterly and, if needed, annually. A licensed hauler would transport sludge from the tank to a treatment facility; the sludge could be removed every three years. There would be an emergency generator in the new building with fuel supply to ensure uninterrupted power to the pumps, alarms, blowers, chemical feeds and other equipment needed to operate the entire system. (Exs. APP-7, 10, 14; test. 9/19/06, C. Miller, pp. 93-100, 117-120, 123, 132, 139-142; M. Bartos, 9/19/06, pp. 163-165, 9/21/06, pp. 222-234, 266-267.)

46. The system would be alarmed at key points to notify the system operator of possible problems. Where necessary, there would be redundancies, such as extra pumps and backups in the system, such as power generators. The operator, who would be fully trained in all aspects of the system, including the FAST technology, can also override and control parts of the system. (Exs. APP-7, 10; test. 9/19/06, C. Miller, pp. 98, 99, 112-113, 117-118, 137, 141-142, 148-149; M. Bartos, 9/19/06, pp. 56, 165, 9/21/06, pp. 223-224, 228, 262-263, 266-267.)

47. The applicant currently operates and maintains standard operating procedures regarding the various chemicals it uses at its existing facility. The applicant would maintain an operation and maintenance manual including a separate manual for the FAST system, a separate manual for the filter, separate manuals for chemical feed operations and a separate book for pump stations, the septic tanks, and the remainder of the system. The applicant would coordinate its chemical list with FAST system operational requirements so as to restrict chemical compounds that should not be discharged into the FAST system. (Test. 9/19/06, C. Miller, pp. 110-115, 131, 137; 9/21/06, M. Bartos, pp. 229, 246-247; 9/25/06, C. Attra, p. 395-397.)

d
Monitoring

48. The draft permit requires monitoring and establishes an inspection, operation, and maintenance schedule. The applicant must maintain a record of the total flow for each day of discharge and report the total flow and number of hours of discharge for the day of sampling collection and the average daily flow for each sampling month. Any additional inspections would be reported to DEP. The operational manual and all monitoring results would be reported to DEP; they would also be available to the public. (Ex. DEP-4; test. 9/21/06, M. Bartos, pp. 246-247, 316-317; 9/25/06, A. Daha, p. 425.)

49. In the draft permit, the DEP requires the monitoring of the effluent at various points along the line, for example, the flows from the equalization tank, the denitrification filters and the FAST system. The compliance point for sampling to ensure the effluent achieves the 10 mg/l nitrogen standard would be after the flow leaves the sand (denitrification) filter, before it reaches the leaching field. Standards are also set in the permit for various constituents such as biological oxygen demand (BOD) and Total Suspended Solids (TSS) and nitrogen and the analytical results must be reported to DEP. (Ex. DEP-4; test. M. Bartos, 9/19/06, pp.63-65, 167, 9/21/06, pp. 243-244; 9/25/06, A. Daha, p. 429.)

50. Groundwater monitoring is also required in the draft permit. In addition to examining the quality of the groundwater, this would provide a check on the performance of the system. Groundwater would be analyzed for fecal coliform bacteria, a full nitrogen series, pH and phosphorous. (Ex. DEP-4; test. 9/19/06, M. Bartos, pp. 182-183, 9/21/06, p. 247.)

7
Site Testing
a
Soil Conditions

51. Soil tests were performed for purposes of determining soil permeability and to measure hydraulic conductivity. Fourteen test pits were dug to evaluate whether the shallow materials in which a leaching field might be placed were suitable to accept septic effluent. (Exs. APP-15, DEP-11; test. 9/21/06, R. Slayback, pp. 323-324, 328, 331, 333-334; 9/25/06, A. Daha, p. 427.)

52. The tests revealed that the soil is of excellent quality to handle the discharge. The soils on the lower terrace, with their coarse grade sediments, provide exceptionally appropriate soil conditions for the leaching beds. The soils beneath and downgradient of the leaching field have adequate hydraulic capacity to transmit the effluent as well as enough renovating capacity to remove pollutants of concern for water quality standards. (Exs. APP-15, DEP-11, HO-1; test. M. Bartos, 9/19/06, pp. 180-181, 9/21/06, pp. 207-208, 332, 9/25/06, pp. 424-425; 9/21/06, R. Slayback, pp. 323-324, 332.)

b
Groundwater Flows

53. As part of the soil and hydrogeologic study of the site, ten monitoring wells were dug to determine the subsurface conditions and the groundwater conditions above the bedrock. The wells also determined groundwater flow and direction on the site. Groundwater on the property is approximately fifteen to twenty feet below ground, although at certain locations it is deeper. At the camp, groundwater is very deep and is not connected to the surface water. Groundwater flows west to east on the site with a slight northern bend to Lee's Pond, a water body. (Exs. APP-15, DEP-11, HO-1; test. M. Bartos, 9/19/06, p. 62, 9/25/06, p. 522; 9/21/06, R. Slayback, pp. 320, 326, 329, 335-336, 342, 346, 362, 365; 9/25/06, A. Daha, pp. 450-451.)

54. A minor or major topographic perturbation (i.e., a hill or a mountain) would not influence the direction of groundwater flow. At Camp Mahackeno, the topography is undulating with steep slopes, but the groundwater table is somewhat flat. The hydraulic gradient over the portion of the property south of Poplar Plains Brook show relatively low hydraulic gradients of an average of .0048 (0.48%), which means the water is "flat". (Exs. APP-6, 15, DEP-11; test. 9/21/06, R. Slayback, pp. 365, 369; 9/25/06, A. Daha, p. 450, 456, M. Bartos, pp. 502, 522-523.)

55. Stormwater infiltration from heavy rains does not change groundwater flow. Stormwater patterns are therefore not relevant to the measured groundwater depths and flow observed. (Ex. DEP-11; test. 9/21/06, R. Slayback, pp. 365-368, 371-372; 9/25/06, A. Daha, pp. 437-439.)

c

Travel Time

56. In addition to nitrogen dilution, the second element of subsurface wastewater renovation for this site is the time of travel between the leaching field and the point of natural discharge, Lee's Pond. Travel time depends on the hydraulic conductivity of the soil, the hydraulic gradient of the water table and the effective porosity of the soil. The DEP requires a twenty-one day travel distance. Therefore, travel time is determined by calculating the average groundwater velocity by twenty-one days. A conservatively high value of hydraulic conductivity was used. Conductivity values based on disturbed samples do not represent site conditions. (Exs. APP-15, DEP-11; test. M. Bartos, 9/21/06, pp. 206-207, 9/25/06, p. 522; 9/21/06, R. Slayback, pp. 337-338; 9/25/06, A. Daha pp. 422, 458-460.)

57. The discharge rate for the site was calculated to be 4800 cubic feet per day; the twenty-one-day travel time was a distance of forty to sixty-five feet, with forty feet in the northern part of the site and sixty-five feet in the south. The renovation analysis shows that the travel time between the leaching field and the point of natural discharge (the Lee's Pond reach of the Saugatuck River) for the maximum volume of discharge for this site (34,000 gpd) satisfies the required minimum twenty-one-day effluent travel time. (Exs. APP-6, 15; test. M. Bartos, 9/19/06, pp. 169, 181, 9/21/06, p.265; 9/21/06, R. Slayback, pp. 338-339, 343, 345-346, 349, 369-370; 9/25/06, A. Daha, p 456.)

d
Mounding

58. Mounding is the rise in the groundwater level beneath a leaching field caused by adding sewage flow to the natural groundwater flow. Pursuant to the DEP preference, a mounding analysis was performed by adding flow to the high water table conditions that occur in the spring. There must be at least two feet of separation between the bottom of the leaching beds and the top of the seasonal (mounded) high water table. (Ex. APP-11; test. 9/21/06, M. Bartos, pp. 207-208, R. Slayback, p. 342.)

59. Based on a groundwater discharge of 34,000 gpd, the mounding is about two and one-half feet, more than the required two feet between the bottom of the leaching beds and the top of the water table. This analysis also used a conservatively low value of the hydraulic conductivity, producing a worst-case approach and projecting more mounding than is likely. (Test. 9/21/06, M. Bartos, pp. 207-208, R. Slayback, pp. 343-334, 344.)

8
Water Quality

60. The proposed facility would be located in the Saugatuck River Watershed. The ground water classification on the property is GA, which refers to water that would, at a minimum, be suitable for drinking or other domestic uses without treatment. Discharges to GA areas are specifically authorized as long as such discharges pose no threat to pollution of groundwater and if they are treated domestic sewage and consist generally of predominantly human and natural origin. The DEP, in accordance with its Water Quality Standards, therefore required the

applicant to show that the wastewater would be treated to a level to prevent pollution of groundwater and to maintain a high water quality. (Exs. APP-15, DEP- 6, 7, 10; test. 9/21/06, M. Bartos, p. 265; 9/25/06, A. Daha, pp. 421-423, 431.)

61. In compliance with the goals and policies set out in the Water Quality Standards, the applicant has shown that the wastewater that would be generated by the proposed facility would be treated to at least drinking water standards at the point of environmental concern for the pollutants that are considered likely to present in domestic sewage. The point of discharge is Lee's Pond, which is the direction of groundwater flow and the resulting environmental receptor. The four major contaminants that are regulated are: bacteria, viruses, phosphorous and nitrogen. All these pollutants would be removed or renovated. (Exs. APP-15, DEP-6, 7, 10, HO-1; test. M. Bartos, 9/19/06, p. 62, 9/21/06, p. 265; 9/21/06, R. Slayback, pp. 345-346, 349; 9/25/06, A. Daha, pp. 422-425.)

62. Because the site would be suitable for accepting raw sewage directly, the standards for all of the pollutants except nitrogen would be satisfied without the wastewater treatment system. With the treatment for nitrogen, the standard for this pollutant would be achieved. (Ex. DEP-11; test. 9/21/06, R. Slayback, pp. 353-354, 359; 9/25/06, A. Daha, pp. 422-423, 428.)

63. As required for **bacteria**, the applicant has demonstrated that the discharge from the leaching area would travel through the soil on the property for more than twenty-one days without encountering a property line or an environmental receptor or sensitive area, e.g., a wetland, brook or well. The distance to the closest environmental receptor that is downgradient from the point where wastewater contacts the groundwater is significantly greater than sixty-five feet. The distance from the leaching field to Lee's Pond, the closest receptor in the direction of groundwater flow, is over 400 feet. (Exs. APP- 15, DEP- 6, 10; test. M. Bartos, 9/19/06, pp. 62-63, 9/21/06, p. 207; 9/19/06, C. Miller, p. 81; 9/21/06, R. Slayback, pp. 339, 349, 355-356, 339; 9/25/06, A. Daha, p. 422.)

64. In order to renovate **viruses**, a minimum of two feet of unsaturated soil must exist between the bottom of the leaching bed and the top of the groundwater. In this case, there is approximately thirteen feet of natural soils (i.e., unsaturated lime) between the bottom of the

leaching beds and the top of the water table. (Test. M. Bartos, 9/19/06, p. 63, 9/21/06, pp. 207-208; 9/21/06, R. Slayback, pp. 343-344; 9/25/06, A. Daha, pp. 422-423.)

65. UV disinfection systems are used for additional treatment to kill bacteria and viruses. Because compliance is achieved, no such systems are necessary. (Test. 9/21/06, M. Bartos, p. 209.)

66. Phosphorous would be present in the discharges due mainly to its presence in cleaning products. To renovate **phosphorous**, the soil on the property must be capable of adsorbing[9] six months of production of phosphorous without encountering any environmental receptor (i.e., the Saugatuck River) or property line. (Ex. APP-15, test. 9/19/06, M Bartos, p. 63; 9/21/06, R. Slayback, pp. 349-351; 9/25/06, A. Daha. p. 423.)

67. Six months of phosphorous production would be adsorbed in the soils within forty-eight feet of the leaching field. The distance from the leaching field to the Saugatuck River in the direction of groundwater flow is over 400 feet. The distance of the closest leaching bed to the Flint property in the direction of groundwater flow is about 250 feet; compliance would be reached within sixty-five feet of that bed. Phosphorous would be adsorbed in the soils well before the effluent reaches any environmental receptor. The phosphorous standard would be achieved. (Exs. APP-9, 15; test. 9/21/06, R. Slayback, pp. 350-358; 9/25/06, A. Daha, p. 423.)

68. **Nitrogen** must be treated to meet a numerical standard of ten milligrams per liter (mg/l) before it reaches an environmental receptor. The treatment system would discharge at that standard when the wastewater flows out of the sand filter, before it reaches the leaching field. Groundwater recharge occurring on the groundwater flow path would further dilute the discharge to 5.1 milligrams per liter before leaving the property. If the daily volume of effluent discharge were less than the volume on which the design of the system is based, further dilution would result. The discharge from the proposed system would be cleaner than a residential discharge because of the nitrogen removal. (Exs. APP- 15, DEP-10; test. M. Bartos, 9/19/06, pp. 63-66,

[9] Adsorption is an ionic-charge attachment to the outside of soil particles, as contrasted with absorption, which implies penetrating the fabric of a material. (Ex. APP-15, test. 9/21/06, R. Slayback, pp. 349-350.)

9/21/06, pp. 245, 262; 9/21/06, R. Slayback, pp. 346-348, 373; 9/25/06, A. Daha, pp. 423-424, 428-429.)

9
Alternatives

69. Expanding the WWFY downtown Westport location is not a feasible option as the applicant's existing facility is an 83-year old building that is no longer capable of allowing the WWFY to fulfill its mission for the people of Westport, Weston and the surrounding areas. In addition, the downtown facility will be sold. (Test. R. Halstead, 9/19/06, pp. 14, 34, 9/25/06, p. 533.)

70. The applicant cannot connect to the municipal sanitary sewer, as the Sunny Lane site is located outside the sewer district for the Town of Westport. Not only is the site outside the Town's "blue line" or sewer district, the municipal system is too far away from the site for a connection to even be possible. (Ex. APP-19; test. M. Bartos, 9/19/06, p. 41, 9/21/06, pp. 235-237.)

71. Several alternatives to the proposed FAST system were considered, including: Zenon, Bioclere, constructed wetlands packages and re-circulating sand filters. None of the alternative systems was determined to be appropriate for the site. The alternative systems were evaluated on the basis of whether the alternative (1) could meet the discharge standards; (2) was compatible with the continued operation of the camp; (3) was simple to operate; and (4) was reliable. Comparative cost was not a factor as costs were estimated after technical decisions were made. (Test. 9/19/06, C. Miller, pp. 120-124; M. Bartos, 9/21/06, pp. 287-288, 9/25/06, pp. 523-525; 9/25/06, C. Attra, p. 410.)

72. The Zenon system or a similar membrane biological reactor made by Smith & Loveless were not preferred alternatives as they are more complicated systems to operate and maintain than the FAST system. The Bioclere system cannot be built underground so it is not compatible with the ongoing operations of the camp. Also, at the time the decision on the FAST system was made, there were no known Bioclere installations in Connecticut. A constructed wetland is not

feasible for the continued camp operation as it would be an "attractive nuisance"[10] to the children at the camp. A constructed wetland would require a liner that would take up a significant amount of property and has no known successful operations in Connecticut. The re-circulating sand filter requires land and could not be installed underground, so it was not compatible with maintaining camp operations. This alternative would also be labor intensive, as its sand surface requires weekly hand raking. (Test. 9/19/06, C. Miller, pp. 120-124; 9/25/06, M. Bartos, pp. 523-525.)

73. The FAST was chosen for this application because it can be installed entirely underground, requires a reasonable amount of maintenance, has a record of success in similar situations, and can tolerate changes in flow rate and strength. The system also offers the fewest risks, has few moving parts, would be easy and reliable to operate, would meet discharge standards, includes parts that are easy to replace and repair, and would be compatible with the continued camp operation. (Ex. APP-7; test. 9/19/06, C. Miller, pp. 123-124; 9/21/06, M. Bartos, p. 266; 9/25/06, C. Attra, pp. 391-393.)

10
Potential Off-Site Impacts

74. An Aquarian Water Company well field, the Canal Street Well Field, is located south of Camp Mahackeno and runs along the Saugatuck River. This well field is 3100 feet from the nearest leaching bed. This field has excellent water quality due to induced infiltration by the sand from the river; the addition of any possible effluent from the WWFY site would not impact the well water quality. Aquarian agrees that, if approved as proposed, the WWFY facility would not pose a significant threat to the water quality of its well field. (Exs. APP-16, 20; test. 9/21/06, R. Slayback, pp. 351-352, 373-375.)

75. As is common to almost every surface water body in the State, the Saugatuck River has high coliform bacteria levels. The River is also impacted by effluent from other sources (e.g., animal waste, other septic systems) that flow in the River past the well field. (Test. 9/21/06, R. Slayback, p. 352.)

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[10] An "attractive nuisance" is a dangerous condition that may attract children onto land, thereby causing a risk to their safety. Black's Law Dictionary, 7th Ed. 1999.

76. Groundwater flowing from Camp Mahackeno may cross the Flint property at 38 Rice's Lane in an area close to the Saugatuck River. The Flint property is not the closest environmental receptor given the direction of groundwater flow. Topographical features or stormwater flows do not affect the nearly flat hydraulic gradient of the site; stormwater infiltration from heavy rains does not change groundwater flow. In addition, stormwater impacts would not influence the groundwater system as there is a vertical separation of twenty feet or more between the land surface and the water table on the site. (Test. 9/21/06, R. Slayback, pp. 339-340, 349, 365, 371-372; 9/25/06, E. Flint, p. 503, A. Daha, pp. 437-439, 450, M. Bartos, p. 502.)

77. The leaching beds are 125 feet to 200 feet from the Flint property, two to two and one-half times the twenty-one-day travel distance of sixty-five feet. Therefore, even if the discharge flowed toward the Flint property, the flow would cross the property after having achieved the twenty-one-day travel time. The Flint property does not have an on-site drinking water well, however, the effluent would meet drinking water standards by the time it would reach the Flint property. (Ex. APP-6; test. 9/21/06, R. Slayback, pp. 339-340, 355; 9/25/06, A. Daha, pp. 445-446, 454-455, E. Flint, pp. 506, 513.)

78. The McConaughy property is the closest residential property to the leaching field; it is elevated approximately thirteen feet higher, with a fifty-foot separation. The McConaughy property would not be impacted at all from the discharge from the applicant's facility. The groundwater and effluent is flowing away from the McConaughy property and not toward it. Also, groundwater would also have to flow uphill to reach the McConaughy property and there is nothing in the application to indicate the water would flow uphill. (Test. 9/21/06, M. Bartos, pp.260-261, R. Slayback, pp. 357-358.)

79. Other properties bordering the site to the south, west and north would not be impacted from the discharge from the applicant's facility. Properties on the opposite side of Lee's Pond would not be affected as the effluent would be treated before it reaches Lee's Pond. (Ex APP-17; test. 9/21/06, R. Slayback, pp. 372-373.)

CONCLUSIONS OF LAW

1
THE APPLICATION AND THE DRAFT PERMIT COMPLY WITH THE PROVISIONS OF GENERAL STATUTES §22a-430 AND ITS IMPLEMENTING REGULATIONS

A
REGS, CONN. STATE AGENCIES §22a-430-3

Section 22a-430-3 provides certain general conditions for water discharge permits. Section 22a-430-3(b) provides that a permit must incorporate all applicable regulatory provisions, either expressly or by reference, including that section and §22a-430-4. § 22a-430-3(b)(1)(C). A review of the draft permit, attached hereto, indicates compliance with this requirement. Section 22a-430-3(e) provides that once the permit is issued, the applicant is under a duty to comply with its terms and conditions. The applicant has indicated its intent and ability to comply with all terms of the draft permit.

Section 22a-430-3(f) provides that a permit must provide for proper operation and maintenance of all wastewater treatment facilities and systems. The draft permit requires the employment of a licensed operator, approved by the DEP, who would be responsible for treatment plant operations to ensure that the wastewater management operates within the limits of the permit. This operator would work closely with project engineers and FAST representatives with respect to the construction and operation of the facility.

The draft permit also sets forth an inspection and maintenance schedule with which the applicant (permittee) must comply. All inspections, including any conducted by the applicant more frequently than as provided in the permit, must be reported to the DEP. Section 22a-430-3(c) also provides that the DEP may also enter the property to conduct an inspection or to review records.

The applicant would operate and maintain standard operating procedures concerning the chemicals used at its existing facility and would maintain an operation and maintenance manual including separate manuals for the various components of the proposed system including FAST,

filter treatment, chemical feed operations, pump stations, septic tank and remainder of the system. Additionally, the applicant intends to coordinate its chemical list with the FAST system requirements for operation of the facility so as to restrict the use of compounds (e.g., quaternary ammonia) that may adversely the affect the proper operation of the system.

The permit requires ongoing monitoring and testing and sets forth a schedule. As part of ongoing testing, the applicant would conduct groundwater monitoring. The applicant shall maintain a record of the total flow for each day of discharge and shall report on a discharge monitoring report the total flow and number of hours of discharge for the day of sampling collection and the average daily flow for each sampling month. The applicant's operational manual and all monitoring results are reported to DEP and would be available to the public.

B
REGS., CONN. STATE AGENCIES 22a-430-4

Section 22a-430-4(c) of the Regulations of Connecticut State Agencies sets forth the requirements for a complete application for a water discharge permit. Consistent with the finding made by the DEP on April 13, 2006 that the application was complete, the record shows that the application includes all of the relevant required information. See *Commission on Hospitals and Health Care v. The Stamford Hospital,* 208 Conn. 663 (1988) (agency has authority to determine when application complete).

The permit would satisfy the following relevant provisions of §22a-430-4(e)(1):

> *The effluent limitations and conditions listed in subsection (l) of this section, including any case-by-case determinations made under subsection (m) of this section. § 22a-430-4(e)(1)(A).*

The draft permit sets out the applicable limitations and/or conditions. Although no treatment would be required for bacteria, viruses and phosphorus to achieve compliance with DEP standards, the system, which is designed to achieve the nitrogen standard of 10 mg/l, would treat all pollutants of concern to acceptable levels. Continuous and periodic inspection, monitoring and maintenance are required, and the permit includes sampling and recording of the effluent quality of its wastewaters for BOD, TSS, pH and nitrogen before they are discharged. The draft permit compels reporting to the DEP to ensure compliance with the effluent limitations

in the permit. The permit also sets forth certain conditions restricting the substances that may be discharged to the wastewater management system.

The sludge disposal requirements listed in subsection (g) of section 22a-430-3 of the Regulations of Connecticut State Agencies. § 22a-430-4(e)(1)(D).

Subsection (g) requires that the applicant "dispose of screenings, sludges, chemicals and oils and any solid or liquid wastes resulting from the wastewater treatment processes at locations approved by the commissioner for disposal of such materials, or by means of a waste hauler licensed under the provisions of the Connecticut General Statutes". The WWFY would dispose of sludge wastes resulting from wastewater treatment processes to a treatment facility by means of a licensed waste hauler.

The resource conservation requirements of subsection (o) of section 22a-430-3 of the Regulations of Connecticut State Agencies § 22a-430-4(e)(1)(F).

As required by the resource conservation provisions, the applicant would implement and maintain practices and facilities that would produce the minimum amount of wastewater to the maximum extent practicable and prohibit the addition of water to dilute effluent concentrations in the discharge. No additional water would be added at any time to the proposed wastewater management system to dilute effluent concentrations in the discharge. Subject to DEP review, the WWFY would implement water conservation efforts that would result in the minimum amount of wastewater to the maximum extent practicable. There would also be no discharge of any on-site storm sewers or draining of pool water into the proposed wastewater management system.

The spill prevention and control requirements of subsection (p) of section 22a-430-3 of the Regulations of Connecticut State Agencies. § 22a-430-4(e)(1)(G).

Subsection (p) requires a spill plan to prevent, minimize and control leaks or other unplanned releases of all toxic and hazardous substances, however, no spill prevention and control plan is required for applications to discharge from domestic sewage treatment facilities. Nonetheless, the applicant would develop a stand-alone spill plan for the system unless the new building requires a spill plan, in which case the stand-alone plan would be subsumed within a larger plan for the entire facility.

The instrumentation and related requirements of subsection (q) of section 22a-430-3 of the Regulations of Connecticut State Agencies. § 22a-430-4(e)(1)(H).

This provision does not apply to this application because the proposed system would discharge domestic and not process wastewater. Nevertheless, the record reflects various measures proposed for controlling, monitoring and reporting the system functioning and characteristics of the discharge. The system would contain locations for visual inspection, instrumentation, recorder and alarm mechanisms, operation and maintenance requirements, strict operator requirements, and control over the wastewater generated by the facility. Designed to require minimal operator attention and care, the system would include built-in points of override. Therefore, notwithstanding the inapplicability of this provision, the proposed system would be controlled, inspected, and monitored as set forth in the draft permit.

The equalization requirements of subsection (r) of section 22a-430-3 of the Regulations of Connecticut State Agencies. § 22a-430-4(e)(1)(I).

Subsection (r) requires all treatment facilities be designed to "prevent upsets, malfunctions or instances of noncompliance resulting from variations in wastewater strength or flow rate, and shall include…equalization facilities separate from the treatment facilities." Regs. Conn. Agencies § 22a-430-3(r). The proposed system includes an equalization tank to provide constant flow to the FAST system. The system provides various protections against overflow. There are virtually no moving parts in the system. The likelihood of an upset, malfunction or instance of noncompliance due to variations in wastewater strength or flow rate is unlikely.

THE PROPOSED TREATMENT SYSTEM WOULD PROTECT THE WATERS OF THE STATE FROM POLLUTION

Under the provisions of §22a-430, the Commissioner may not issue a permit for any discharge of water, substance or material into the waters of the state unless the Commissioner determines that a "proposed system to treat such discharge will protect the waters of the state from pollution." 22a-430(b). Because the ground water classification for the property on which this proposed wastewater treatment facility would be built and operated is GA, the DEP, in accordance with its Water Quality Standards, required the applicant to show that the wastewater

would be treated to a level to prevent pollution of groundwater and to maintain a high water quality.

The hydraulic and hydrologic characteristics of the site would accommodate and satisfactorily treat the bacteria, viruses and phosphorous to meet water quality standards. The proposed treatment system, including the FAST technology, would treat nitrogen to meet the required standard at the point when the water flows out of the sand filter, before it would even reach the leaching field, and well before it would reach the property line or point of environmental concern. Regs. Conn. Agencies § 19-13b-102(e)(2).

The permit would require monitoring and reporting to the DEP and establishes an inspection, operation and maintenance schedule. In addition to the monitoring of effluent at various points throughout the system, groundwater monitoring would also be required.

The entire system is below ground except for the control building and the forced main pipe, which would be insulated, when it crosses Poplar Plains Brook. Backed up by a standby power generator, pumps in the control building would move the wastewater through the pipe first to septic tanks, which provide primary settling and then to a wet well where sodium bicarbonate (baking soda) would be added to the wastewater to adjust the alkalinity of the waste stream. The discharge would flow to an underground flow equalization tank, where the flow from the pump station would be equalized to send a constant stream to the FAST system.

The FAST system is an established technology. First developed in the 1960s, the system facilitates a biological process in which wastewater, the food source for the bacteria attached to a submerged media, passes through that filter where the bacteria consume the waste and clean up the water. Except for the aeration process, which provides air to the bacteria and circulates the wastewater throughout the FAST media, the operation of the system is minimal and requires only occasional maintenance. The FAST system converts ammonia and organic nitrogen into nitrate nitrogen in order to denitrify it when it reaches the gravity sand filter. Through a process similar to the FAST system, the nitrate nitrogen is converted to nitrogen gas to achieve the limit of 10 mg/l for total nitrogen when it leaves the filter.

Treated wastewater would then be pumped and concurrently released to six leaching beds, where it would infiltrate downward through the soil, eventually combining with the water table and groundwater on site, traveling east toward the Saugatuck River approximately 400 feet away. Groundwater flows on the site would further dilute the discharge. The design of the proposed system is such that effluent from the leach field would meet drinking water quality standards at the Lee's Pond entry to the Saugatuck River, for the pollutants of concern (i.e., bacteria, viruses, phosphorus and nitrogen). Therefore, all wastewater that would be discharged from the proposed system would be at a level to prevent pollution of groundwater and to maintain a high water quality.[11]

The system, including the FAST treatment technology and the leaching fields, are superior to other alternatives considered by the applicant. Routine and regular operator attention, including monitoring and maintenance, would be provided, but constant care is not necessary. When necessary, parts for the system, including the FAST system, are easy to replace or repair. Access to the components of the system would provide for inspection and maintenance of the few moving parts such as blowers, pumps and air compressors. The system would be alarmed at key points of operation and would include redundancies and backup sources of power.

The maximum volume of wastewater discharge to be permitted would be 34,000 gallons per day, a peak flow that includes a safety factor of 10,000 gpd and that is not anticipated to occur on a daily basis or even frequently. The size and design of the treatment system, and the analysis of the site to accept this discharge, was based on this maximum rate. The applicant's calculations for this volume, including projected growth in membership and use of the new Y were conservative.

The effluent would have no impacts to surrounding properties. Even if the effluent were to flow in the direction of the Flint property, there would be no impacts to public health, as the Flint property is not served by an on-site drinking water supply well. It is impossible for

[11] Contrary to the intervenor's assertion, the applicant need not comply with the WQS applicable to municipal sewage treatment plants (POTWs) because it is not proposing such a treatment system.

groundwater flow in the direction of the McConaughy property. Due to their distance downstream on the Saugatuck River, the Aquarian well fields would not be impacted. Even if they were in the direction of flow, the well field receives excellent water quality due to induced infiltration by the river sand.

Finally, the law requires the applicant to submit plans and specifications to the DEP and to agree to certain permit conditions so that the proposed system would treat the discharge so as to protect the waters of the state from pollution. §22a-430-4(k). The proposed wastewater treatment system would prevent pollution to the waters of the state and maintain a high water quality, the treatment goals of the WQS and the Public Health Code.

3

THE DISCHARGE IS NOT REASONABLY LIKELY TO UNREASONABLY POLLUTE, IMPAIR OR DESTROY THE PUBLIC TRUST IN THE WATER AND OTHER NATURAL RESOURCES OF THE STATE

Y Downtown, which intervened under the provisions of General Statutes § 22a-19, alleges that the proposed wastewater management system "involves conduct which has, or which is reasonably likely to have, the effect of unreasonably polluting, impairing or destroying the public trust in the air, water or other natural resources of the state." Specifically, Y Downtown maintains that that the proposed project would result in pollution of the groundwater and surface water. Whether pollution is unreasonable in any given instance is an issue to be determined by the trier of fact based on the evidentiary record. *Gardiner v. Conservation Commission*, 222 Conn. 98 (1992).

Y Downtown, which has the burden of proof under §22a-19, did not demonstrate that the applicant's proposed wastewater management system would create and cause unreasonable pollution or would be even reasonably likely to create or cause unreasonable pollution. *Manchester Environmental Coalition v. Stockton,* 184 Conn. 51 (1981). Y Downtown did not present any evidence to establish unreasonable impairment "through the lens" of the statutory and regulatory schemes under § 22a-430 and §§ 22a-430-1 through 22a-430-8. See *Waterbury v. Washington*, 260 Conn. 506, 549-51 (2002) (claim of unreasonable impairment reviewed and

evaluated through the lens of the entire statutory scheme, if any, that the legislature has created to regulate the conduct underlying the impairment).

Y Downtown offered no fact or expert testimony to rebut the applicant's various witnesses concerning any aspects of the testing and characterization of the site, the preparation of the application, the design and operation of the proposed system, or the potential discharge to that system. Y Downtown did not produce any evidence or expert testimony to counter the facts and opinions presented by the applicant and DEP; none of its exhibits or non-expert witnesses established sufficient proof that the proposed project would cause unreasonable pollution or be reasonably likely to cause pollution.

Even if I were to consider the question, it is evident that the proposed regulated activity would not cause unreasonable pollution. There is no evidence that the proposed regulated activity would be inconsistent with statutory and regulatory requirements or with any policies that protect the environment. For all pollutants of concern except nitrogen, the site itself would provide sufficient treatment of the wastewater. The treatment system has been designed and would be operated to effectively treat nitrogen and all pollutants to prevent the discharge of pollutants to the waters of the state. The water quality in the groundwater and in Lee's Pond would be maintained. The discharges from the system would meet the criteria for discharges to GA areas, ensuring consistency with the state's goal of maintaining a GA groundwater quality of the area.

4
THERE ARE NO FEASIBLE AND PRUDENT ALTERNATIVES

Subsection (b) of § 22a-19(a) provides that no conduct shall be authorized or approved that does have or is reasonably likely to cause unreasonable pollution if there exists, considering all the relevant surrounding circumstances and factors, "a feasible and prudent alternative consistent with the reasonable requirements of the public health, safety and welfare." Even though it is not necessary to assess alternatives in this instance, the record reflects the applicant's consideration of the following options instead of the proposed subsurface wastewater treatment system.

Expanding the applicant's facilities at its downtown location is not an option given the age of the building and its physical limitations. Connecting to Town of Westport public sewer system is not possible since the site is not served by the municipal sewer system, the sewer is physically distant from the site, and the Town would not permit a connection to the existing system.

The WWFY also evaluated various types of wastewater discharge treatment and control technologies but ultimately found the proposed system superior based on one or more of the following: ability to meet discharge standards; the ability of the system to function underground, compatibility with continuing operation of the facility; ease of operations and maintenance; system simplicity and reliability.

THE PERMIT WOULD NOT CONSTITUE STATE SUPPORT FOR AN ADVANCED TREATMENT TECHNOLOGY WITHIN THE MEANING OF THE STATE PLAN OF CONSERVATION AND DEVELOPMENT

Contrary to the assertions of Y Downtown, the issuance of this permit would not constitute state support for any advanced treatment technology within the meaning of the State Plan of Conservation and Development. State agencies must consider the Plan when they prepare an *agency* plan or when *they* undertake certain actions. General Statutes §§16a-31(a) and (e). The following actions, when undertaken by any state agency with state or federal funds, must be consistent with the Plan:

a. The acquisition of real property when the acquisition costs are in excess of one hundred thousand dollars;
b. The development or improvement of real property when the development costs are in excess of one hundred thousand dollars;
c. The acquisition of public transportation equipment or facilities when the acquisition costs are in excess of one hundred thousand dollars; and
d. The authorization of any state grant for an amount in excess of one hundred thousand dollars for the acquisition, development, or improvement of real property or for the acquisition of public transportation facilities.

General Statutes § 16a-31(a).

This application is neither an agency plan nor an agency action as contemplated under § 16a-31. The only agency action here is the review of a permit application, an application that

was received and reviewed by the DEP in the exercise of its daily and routine regulatory authority.

The reasoning of Y Downtown would subject virtually every permit application reviewed by the DEP to the Plan's requirements. Clearly the legislature did not contemplate such a scheme given the plain language of the statute. It would therefore be entirely inappropriate to consider the Plan in rendering a decision on the applicant's request for a permit.

III
CONCLUSION

The application complies with applicable statutory and regulatory standards. Statutes §22a-430; Regs. Conn. State Agencies §§ 22a-430-1 through 22a-430-8. The terms and conditions of the draft permit, with which the applicant has demonstrated it would comply, are consistent with the provisions of §22a-430 and its implementing regulations. The proposed wastewater treatment system would treat the wastewater to a level to prevent pollution of groundwater and maintain a high water quality, as required by DEP Water Quality Standards. The requested permit for a discharge of wastewater from the applicant's facility would not cause pollution to the waters of the state. §22a-430.

The discharge that would result from the issuance of the permit would not be reasonably likely to cause unreasonable pollution. In addition, although an alternatives analysis is not necessary, the applicant has demonstrated that it did consider options to the proposed system and no feasible or prudent alternatives exist. Finally, the issuance of this permit would not constitute state support for an advanced treatment technology within the meaning of the State Plan of Conservation and Development.

IV
RECOMMENDATION

The applicant should be permitted to present construction plans and specifications to construct the proposed wastewater treatment system to the DEP Bureau of Materials

Management and Compliance Assurance, Water Permitting and Enforcement Division. Once the DEP has verified that the system has been constructed in conformance with the approved plans and specifications, the draft water discharge permit should be finalized and issued to the applicant.

__/s/ Janice B. Deshais_____
Janice B. Deshais, Director
Hearing Officer

APPENDIX A

P A R T Y L I S T

In the Matter of Westport Weston Family Y
Application No. 200600475

PARTY	REPRESENTED BY
The Applicant	
Westport/Weston Family Y 59 Post Road East Westport, CT 06881	Lawrence Weisman, Esq. Halloran and Sage 315 Post Road West Westport, CT 06880 Anne Catino, Esq. Halloran and Sage One Goodwin Square 225 Asylum Street Hartford, CT 06103
Department of Environmental Protection	
Bureau of Materials Mgt and Compliance Assurance Water Permitting and Enforcement Division 79 Elm Street Hartford, CT 06106	Antoanela Daha
Intervening Party	
Y Downtown, Inc.	Frank B. Cochran, Esq. Cooper, Whitney, Cochran & Francois P.O. Box 1898 (51 Elm St) New Haven, CT 06508-1898
Petitioner	
Donald L. Bergmann 32 Sherwood Drive Westport, CT 06880	

ATTACHMENT A

UIC PERMIT

issued to

Weston/Westport Family Y
59 Post Road East
Westport, CT-06881

Location Address:
Camp Mahackeno
20 Sunny Lane
Westport, CT-06880

Facility ID: 158-113 **Permit ID:** UI000436 **Permit Expire**

Watershed: Saugatuck River **Basin Code:**

SECTION 1: GENERAL PROVISIONS

(A) This permit is issued in accordance with Section 1421 of ederal Drinking Water Act 42 USC et. seq. and section 22a-430 of Chapter 446k, ticut eral S ("CGS"), and Regulations of Connecticut State Agencies ("RCSA") adopt der, a ended

(B) Weston/Westport Family Y rm to all c ly with all conditions of this permit including the fo section he R ich h been adopted pursuant to Section 22a-430 of th are h y inco ra into this permit. Your attention is especially drawn to the ica requ ents on (i)(2), (i)(3), (j)(1), (j)(6), (j)(8), (j)(9)(C), (j)(C), (E), (F), and (4) and (l)(2) of section 22a-430-3.

Se 22a -3 Ge Conditions

(a)
(b)
(c) on and Entry
(d) ct 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

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 (hereinafter "the 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 Regulations of Connecticut State Agencies.

(I) The Permittee shall, within seven days of the issuance of this permit, record a copy thereof on the land records, in the Town of Westport.

(J) The Permittee shall, within seven days of the issuance of this permit, record on the land records, of the Town of Westport, a document indicating the location of the zone of influence created by the subject discharge, as reflected in the application for this permit. The Applicant shall obtain the Commissioner's written approval of such document before recording it.

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:

"Annual" in the context of a sampling frequency, shall mean the sample must be taken in the month of February.

"Bi-weekly", in the context of a sampling frequency shall mean the sample must be taken twice per month.

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

"Semi-Annual" in the context of a sampling frequency, shall mean the sample must be taken in the months of May 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.

"Average Monthly Limit" shall mean the average concentration of a substance as measured by the average of all grab samples taken during any calendar month.

"Maximum Daily Limit" shall mean the maximum concentration as measured by all grab samples taken during the monitoring period.

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. 200600475** for permit received on February 28, 2006 and the administrative record established in the processing of that application.

(B) The Commissioner hereby authorizes the Permittee to discharge 34,000 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 Connecticut General Statutes, are prohibited unless such additive is registered with the Commissioner in accordance with section 22a-462-3 of the Regulations of Connecticut State Agencies. 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 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 discharge shall not exceed and shall otherwise conform to specific terms and conditions listed below. The discharge is restricted by, and shall be monitored in accordance with, the tables below.

TABLE A		
Discharge Serial No. 301-2		Monitoring Location: EQ Tank
Wastewater Description: Domestic Sewage		
Monitoring Location Description: Equalization Tank		
Average Daily Flow: 24,000 gallons per day		Maximum Daily Flow: 34,000 gallons per day
PARAMETER	**INSTANTANEOUS MONITORING**	
	Sample frequency	**Sample Type**
Biochemical Oxygen Demand	Bi-weekly	Grab
Total Suspended Solids	Bi-weekly	Grab
Ammonia	Bi-weekly	Grab
Nitrate Nitrogen	Bi-weekly	Grab
Nitrite Nitrogen	Bi-weekly	Grab
Total Kjeldahl Nitrogen	Bi-weekly	Grab
Total Phosphate	Bi-weekly	Grab
Alkalinity	Bi-weekly	Grab
pH	Bi-weekly	Grab

TABLE B				
Discharge Serial No. 301-2		Monitoring Location: FE		
Wastewater Description: Domestic Sewage				
Monitoring Location Description: F.A.S.T. System effluent				
Average Daily Flow: 24,000 gallons per day		Maximum Daily Flow: 34,000 gallons per day		
PARAMETER	**INSTANTANEOUS MONITORING**			
	Average Monthly Limit	Maximum Daily Limit	Sample Frequency	Sample Type
Biochemical Oxygen Demand	20 mg/l	30 mg/l	Bi-weekly	Grab
Total Suspended Solids	20 mg/l	30 mg/l	Bi-weekly	Grab
Ammonia			Bi-weekly	Grab
Nitrate Nitrogen			Bi-weekly	Grab
Nitrite Nitrogen			Bi-weekly	Grab
Total Kjeldahl Nitrogen			Bi-weekly	Grab
Total Phosphate			Bi-weekly	Grab
Alkalinity			Bi-weekly	Grab
pH			Bi-weekly	Grab

TABLE C				
Discharge Serial No. 301-2		Monitoring Location: DF		
Wastewater Description: Domestic Sewage				
Monitoring Location Description: CentraFlo Denitrification Filter Effluent				
Average Daily Flow: 24,000 gallons per day		Maximum Daily Flow: 34,000 gallons per day		
PARAMETER	**INSTANTANEOUS MONITORING**			
	Average Monthly Limit	Maximum Daily Limit	Sample Frequency	Sample Type
Biochemical Oxygen Demand	20 mg/l	30 mg/l	Bi-weekly	Grab
Total Suspended Solids	20 mg/l	30 mg/l	Bi-weekly	Grab
Ammonia			Bi-weekly	Grab
Nitrate Nitrogen			Bi-weekly	Grab
Nitrite Nitrogen			Bi-weekly	Grab
Total Kjeldahl Nitrogen			Bi-weekly	Grab
Total Nitrogen		10 mg/l	Bi-weekly	Grab
Total Phosphate			Bi-weekly	Grab
Alkalinity			Bi-weekly	Grab
pH			Bi-weekly	Grab
Fecal Coliform			Bi-weekly	Grab
Micro - C			Bi-weekly	Grab

(1) The pH of the discharge shall not be less than 6 nor greater than 9 Standard Units at any time and shall be monitored on a bi-weekly basis. The Permittee shall report pH values, for each day of sample collection.

(2) 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.

(3) All samples shall be comprised of only those wastewaters described in this schedule; therefore, samples shall be taken prior to combination with wastewaters of any other type and after all approved treatment units, if applicable. All samples taken shall be representative of the discharge during standard operating conditions.

(4) The Permittee shall employ a licensed operator who will be responsible for the treatment plant operations.

(5) In cases where limits and sample type are specified but sampling is not required, the limits specified shall apply, to all samples which may be collected and analyzed by, the Department of Environmental Protection personnel, the Permittee, or other parties.

(6) 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.

(F) The treatment facilities shall be monitored, inspected and maintained in accordance with the following schedule:

TABLE D

INSPECTION, MONITORING, or MAINTENANCE	**DISCHARGE SERIAL NO.**	**MINIMUM FREQUENCY**
Mechanical inspection of pump stations	301-2	Monthly
Mechanical inspection of FAST system blower	301-2	Monthly
Mechanical inspection of Micro-C feed system	301-2	Monthly
Mechanical inspection of denitrification filter blowers	301-2	Monthly
Mechanical inspection of septic tank baffles	301-2	Quarterly
Visual inspection of FAST system	301-2	Monthly
Visual inspection of denitrification filter	301-2	Monthly
Visual inspection of surface condition of leaching fields	301-2	Quarterly
Depth of sludge in septic tanks	301-2	During pump-out
Water meter readings of water usage	301-2	Weekly
Test run of emergency generator	301-2	Quarterly
Pump out septic tanks	301-2	Annually
Pump out sludge from FAST system	301-2	Annually
Pump out pump chamber	301-2	Every 3 years
Depth of ponding in leachfield	301-2	Quarterly
Mow grass over leachfield	301-2	3 times per year

NOTE:
The Weston/Westport 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 Weston/Westport Director of Health.

(G) The Permittee shall perform the following groundwater monitoring in accordance with the monitoring plan approved by the Commissioner.

TABLE D (GROUNDWATER MONITORING)			
DISCHARGE SERIAL NO. 301 A.		**MONITORING LOCATION:** W-downgradient	
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	mg/l	Quarterly	Grab

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 Materials Management and Compliance Assurance Bureau, at the following address, by the end of the month following the month in which the samples are taken.

Bureau of Materials Management and Compliance Assurance (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.

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

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

This permit is hereby issued on

Gina McCarthy
Commissioner

GM/ald

cc: Westport/Weston Health Department
Westport/Water Pollution Control Authority
Michael Bartos, Land-Tech Consultants, Inc.

p:\working\adaha\permits\Westport Weston Family Y

DATA TRACKING AND TECHNICAL FACT SHEET

PERMIT #: UI0000436 APPLICATION 200600475
DEP/WPC#:158-113

DISCHARGER NAME AND ADDRESS DATA

Permittee: Westport/Weston Family Y

Mailing Address: Westport/Weston Family Y	**Location Address:** Camp Mahackeno
Street: 59 Post Road East	Street: 20 Sunny Lane
City: Westport ST: CT Zip: 06881	City: Westport St. CT Zip: 06880
Contact Name: James Hardin	**Contact Name:** James Hardin

PERMIT DURATION

5 YEAR ( ) 10 YEAR (X) 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 ___ NO X

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

PERMIT STEPS ( ) WATER QUALITY REQUIREMENT( ) REMEDIATION( ) 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 **Antoanela Daha**

PERMIT TYPE

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

NATURE OF BUSINESS GENERATING DISCHARGE

The proposed Westport/Weston Family Y is a full-service recreational facility containing fitness and exercise facilities, swimming pools, gymnasium, etc., with associated locker rooms facilities. Camp Mahackeno is an existing summer day camp with associated facilities.

PROCESS AND TREATMENT DESCRIPTION (by DSN)

DSN 301-2 represents the a subsurface wastewater renovation system consisting of collection system, pump stations, septic tanks, modular Fixed Activated Sludge Treatment and "Centra-Flo" fluidized bed continuous backwash filter for pretreatment, followed by a pressurized dosed leaching bed consisting of standard Infiltrator leaching chambers.

RESOURCES USED TO DRAFT PERMIT

__ Federal Effluent Limitation Guideline 40CFR _____
__ Performance Standards

__ Federal Development Document
name of category

__ Treatability Manual

X Department File Information

X Connecticut Water Quality Standards

__ Anti-degradation Policy

__ Coastal Management Consistency Review Form

__ Other - Explain

BASIS FOR LIMITATIONS, STANDARDS OR CONDITIONS

X Case by Case Determination (See Other Comments)

OTHER COMMENTS

- February 28, 2006 Application received
- May 5, 2006 Tentative determination issued
- May 10, 2006 Tentative determination published
- June 7, 2006 Petition requesting a public hearing received
- July 11, 2006 Status conference
- August 2, 2006 Notice for public hearing issued
- August 7, 2006 Notice for public hearing published