

Merrimack Premium Outlets

Merrimack,
New Hampshire

Prepared for **Chelsea Property Group**
Roseland, New Jersey

Prepared by **VHB/Vanasse Hangen Brustlin, Inc.**
Bedford, New Hampshire

Revised September 16, 2008

Merrimack Premium Outlets

Merrimack,
New Hampshire

Prepared for **Chelsea Property Group**
Roseland, New Jersey

Prepared by **VHB/Vanasse Hangen Brustlin, Inc.**
Bedford, New Hampshire

Revised September 16, 2008

This plan is part of the Site Plan for the Monahan/Chelsea Property Group application, Tax Map Parcels 3C/191-1 through 191-6, 3D/028 and 3D/034.

Approved by Merrimack Planning Board

Chairman

Date

Secretary

Date

1

Operations & Maintenance Plan

General Premium Outlet Center Operations

It is anticipated that hours of operation will be generally limited to 10:00 AM to 9:00 PM, Monday through Saturday, and 10:00 AM to 7:00 PM on Sundays. This represents the “baseline” condition during normal operations. There will be a limited number of special sale days where the operating hours may be extended. In other locations, Chelsea operates a “Midnight Madness” sale period the day after Thanksgiving, opening at 12:00 AM and operating throughout the day. It has not been determined whether such a sale event will be desirable at the Merrimack facility, although Chelsea wishes to reserve the ability to modify operating hours as business requirements indicate.

Deliveries to the site, including trash pick-up will be scheduled between 7:00 AM and 10:00 PM, Monday through Saturday. During the initial stocking of the stores, and for the period immediately after opening, the center is anticipated to experience very high demand for delivery vehicle access. During this period (approximately 3 months prior to and 2 months after opening), and during heavy sales periods as indicated above, the applicant requests that deliveries have no restriction.

Resource Conservation

Conservation of resources is an important operating issue for Chelsea Property Group. To that end, conservation of potable water resources is proposed by using low-flow fixtures in all restrooms. The applicant is examining alternatives for further reducing water consumption by use of flushless urinals. Irrigation of landscape areas is proposed for limited portions of the property. These are primarily in the courtyard areas and landscape areas directly adjacent to buildings. The applicant has proposed using a new well for irrigation water supply, located outside of the contributing area for the Merrimack Village District wells. As a part of the well construction, a flow meter that provides a continuous and permanent record of the pumped water rates and the volume of groundwater withdrawn, will be installed that will provide data



on groundwater withdrawal. Logs of flows and groundwater levels will be collected continuously and provided to the Town on a monthly basis

Recycling of trash is another resource conservation measure to be undertaken at the site. Bins for separation of recyclables will be provided in the service areas for tenant use, and compactors for cardboard will be provided. This is significant, since cardboard packing materials are a significant portion of the projected waste stream from the property.

Traffic Management

Chelsea Property Group understands the need for a well planned Traffic Management Plan (TMP) to accommodate peak retail conditions and is committed to preparing such a plan for the Merrimack site. Like the TMP's currently in place at other existing Chelsea facilities, Chelsea proposes to develop a TMP for Merrimack in concert with all necessary parties including local fire and police departments, state police, and NHDOT, which would be updated and modified annually to improve upon past experiences.

Whereas an important aspect of managing traffic during the peak conditions is to provide adequate on-site parking, it is important to keep in mind that the project is proposed to be constructed in two phases. Under the Phase I development plan (438,000 square feet GLA), we anticipate approximately 3,000 parking spaces being provided on site to handle peak conditions. This presents a parking ratio of 6.8 spaces per 1,000 square feet, which far exceeds the retail industry standard that ranges from 4 to 5 spaces per 1,000 square feet. Under this Phase I condition, the applicant will monitor on-site peak conditions and determine what, if any, adjustments to the parking supply will be needed under Phase II for the peak events. This monitoring will include monitoring of "Black Friday" conditions, as well as two additional heavy parking demand days, either during the pre-Christmas sale season or other special sale event. Under the full build out scenario approximately 3,100 spaces will be provided for 558,000 square feet. This equates to a parking ratio of 5.6 spaces per 1,000 square feet, which again remains about industry standard for retail uses. In the event that the parking demands under Phase I suggest that this parking supply will not be adequate for Phase II peak events, the applicant will develop an event management plan that addresses peak parking demand.

Prior to opening of Phase 1 of the development, the applicant proposes to implement a TMP that will include the following measures:

Develop a specialized signal coordination plan that progresses traffic to/from the site and Turnpike during the Black Friday sales event. The focus of the plan will be to maintain traffic flow on the off-ramps, keeping traffic from backing up on the highway. In addition, a toll capacity analysis will be performed to insure that the processing rates can adequately accommodate the anticipated



demands. The signal coordination plan and supporting analysis will be submitted to the NHDOT and the Town for review and approval.

Facilitate a meeting with the Merrimack Fire and Police Departments, Merrimack Planning and Engineering Staff, NH State Troopers, and NHDOT to discuss traffic/plan traffic control measures and specific needs/concerns of each group. Chelsea Site Managers will attend the meeting to share past experiences on which measures work well and which ones do not.

Identify and contract for use of off-site employee/overflow parking areas as needed.

Prepare and submit a draft TMP that outlines all agreed upon measures for review by above noted agencies.

Prepare and submit a final TMP.

During the sales event, collect traffic count data to assess on-site parking needs and determine what, if any, additional parking will be needed for future events.

Facilitate a post-event meeting with the Merrimack Fire and Police Departments, Merrimack Planning and Engineering Staff, NH State Troopers, and NHDOT to discuss how the TMP can be modified or adjusted to address any specific issues identified in the field.

Prepare and submit an updated TMP to the above noted parties prior to the next Black Friday sales event.

The development and maintenance of an effective TMP is an important part of Chelsea's overall site management program. Their experience shows that the key component in developing successful plans relates directly to working with local and state law enforcement, and emergency response professionals. The continual dialogue before and after each event insures the open flow of communication to address issues/concerns which will undoubtedly continue to change over time. Chelsea's documented history of maintaining their TMP's in other communities demonstrates their commitment to working with the Town on this matter.

Water Quality

As indicated in the Site Plans and the Construction Management Plans, Chelsea Property Group plans to construct erosion and sedimentation controls consistent with State of New Hampshire and Town requirements. The general plan is to construct and stabilize the perimeter of the construction site prior to significant clearing and grubbing of existing vegetation. CPG will locate and define the limits of construction with appropriate silt fencing or other approved controls prior to significant construction activity, so that limits of clearing are in accordance with approved plans, and buffer areas are maintained.



Water Quality Sampling

Water Quality Sampling Procedure

The following outlines the sampling locations and procedures that will be used during the duration of the monitoring program. This program was developed to utilize the same sample collection, handling, analytical and reporting procedures during the pre-construction (i.e., baseline), construction and post-construction monitoring periods. The program addresses both water quality sampling and water level monitoring in the groundwater monitoring wells, and water quality sampling at the surface water stations.

Sampling Stations

Figure WQ-1 shows the established locations of the surface water stations (SS-1 to SS-5) and groundwater monitoring wells around the site. Sampling locations were selected to collect representative surface water and groundwater samples within the primary flow paths and discharge points throughout the site and, particularly, around the site perimeter. Five (5) surface water sampling stations and eighteen(18) groundwater monitoring wells have been established.

Surface Water Sampling Stations

The following lists the five (5) surface water sampling stations:

- SS-1: outlet to natural wetland draining north through adjacent power line;
- SS-2: intermittent stream draining into 24" culvert beneath Everett Turnpike
- SS-3: groundwater seepage flow from or adjacent to existing artesian well.
- SS-4: vernal pool at head of natural wetland complex near Well MW-5;
- SS-5: outlet of existing detention basin at base of Commerce Drive;

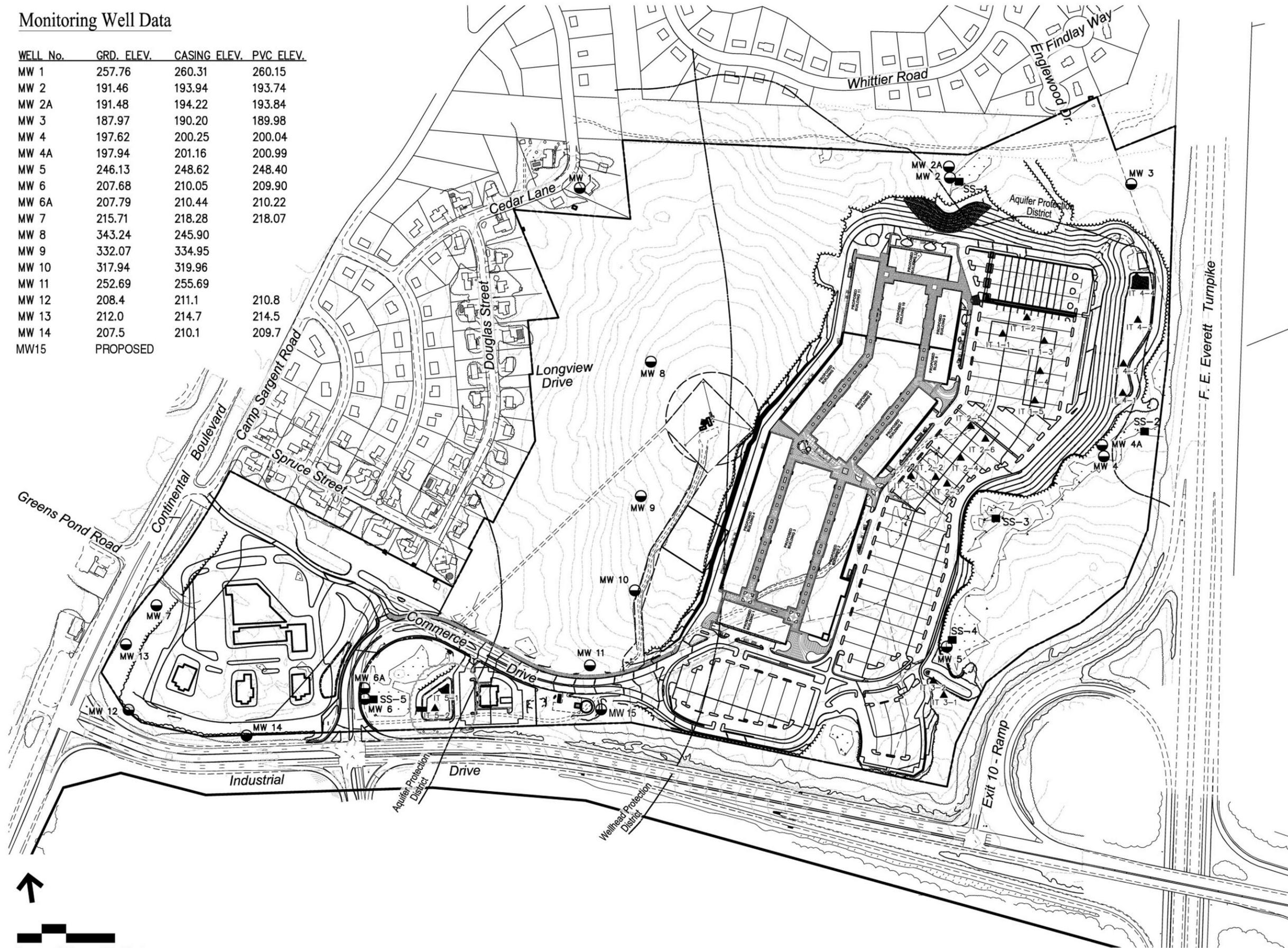
Groundwater Monitoring Wells

The following lists the eighteen (18) groundwater monitoring well locations:

- MW-1: At the northwest corner of site near the entrance to emergency access road and inside Wellhead Protection District
- MW-2/MW-2A: At the bottom of the northerly slope embankment and at the upslope edge of wetland draining to power line.
- MW-3: At the northeast corner of the site as ground water flows to the north and east toward Everett Turnpike.
- MW-4/MW-4A: At base of eastern slope embankment adjacent to wetland draining to 24" culvert.

Monitoring Well Data

WELL No.	GRD. ELEV.	CASING ELEV.	PVC ELEV.
MW 1	257.76	260.31	260.15
MW 2	191.46	193.94	193.74
MW 2A	191.48	194.22	193.84
MW 3	187.97	190.20	189.98
MW 4	197.62	200.25	200.04
MW 4A	197.94	201.16	200.99
MW 5	246.13	248.62	248.40
MW 6	207.68	210.05	209.90
MW 6A	207.79	210.44	210.22
MW 7	215.71	218.28	218.07
MW 8	343.24	245.90	
MW 9	332.07	334.95	
MW 10	317.94	319.96	
MW 11	252.69	255.69	
MW 12	208.4	211.1	210.8
MW 13	212.0	214.7	214.5
MW 14	207.5	210.1	209.7
MW15	PROPOSED		



- MW ● Existing Monitoring Well Locations
- SS ■ Proposed Surface Water Sampling Locations
- IT ▲ Proposed Infiltration Test Locations

Vanasse Hangen Brustlin, Inc.

Figure WQ-1 June, 2007
 Water Quality (Rev. 8/18/08)
 Sampling Plan (Surveyed)
 Merrimack, New Hampshire

MW-5:	Adjacent to proposed detention basin and upper end of existing wetland / vernal pool complex.
MW-6/MW-6A:	Adjacent to existing detention basin at base of Commerce Drive, and within Wellhead Protection District.
MW-7:	At western end of site downstream of proposed hotel/ restaurant area, adjacent to Continental Blvd, and within Wellhead Protection District.
MW-8:	On western side of the hill below the existing cell tower location, and within Wellhead Protection District.
MW-9	On western side of the hill below the existing cell tower location, south of MW-8, and within Wellhead Protection District.
MW-10	On western side of the hill below the existing cell tower location, south of MW-9, and within Wellhead Protection District.
MW-11	Adjacent to proposed access drive, westerly of proposed site construction area and water storage tank location, and within Wellhead Protection District.
MW-12	Adjacent to the intersection of Industrial Drive and Continental Boulevard, and within Wellhead Protection District.
MW-13	Adjacent to Continental Boulevard between MW-12 and MW-7, and within Wellhead Protection District.
MW-14	Adjacent to Industrial Drive between MW-12 and the main site entry drive, and within Wellhead Protection District.
MW-15	Adjacent to proposed entrance drive, down gradient of the blasting area, and within Wellhead Protection District.

Sampling Schedule

Water Quality Sampling

Table 1.1 presents a summary of the proposed sampling frequency, timing and duration for the pre-construction period, construction period, and the post-construction period. The pre-construction period will be conducted up to one year prior to construction while the post-construction period will continue for five (5) years following issuance of a certificate of occupancy. If the testing results following construction indicate a significant ongoing impact to water quality (i.e. exceeding notification levels) due to construction activities at one or more of the sampling



locations, some level of continued sampling will be proposed by the property owner for a specified period of time to be discussed and agreed upon by the Town, Merrimack Village District (MVD) and their consultants. The sampling schedule will not be modified without prior approval by the Town, MVD and their consultants.

Table 1.1

Summary of Proposed Sampling Frequency, Timing and Duration

Sample Period	Sample Frequency	Sample Timing	Duration
Pre-Construction	Twice per year Once in late spring and again early fall	Samples will be collected alternatively following both dry and wet-weather conditions	Initiated approximately one year prior to construction
Construction	Monthly	Same as Above	Initiated at least one month prior to construction and will continue until a certificate of occupancy is granted for the buildings.
Post-Construction	Twice per year	Same as above	Five years following issuance of a Certificate of Occupancy** (See Note)

Notes: * Dry weather sampling will be targeted for periods with at least 3 days (72 hours) with less than trace amounts of rainfall. Wet weather sampling will be targeted to start within four (4) hours following a rainfall event producing at least 0.5-inch of rain.

** If the testing results following construction indicate a significant ongoing impact to water quality (i.e. exceeding notification levels) due to construction activities at one or more of the sampling locations, some level of continued sampling will be proposed by the property owner for a specified period of time to be discussed and agreed upon by the Town, Merrimack Village District (MVD) and their consultants.

Surface water sampling dates will be targeted toward alternating dry and wet weather conditions. Dry weather sampling will be targeted for periods with as at least 3 days (72 hours) with less than trace amounts of rainfall. Wet weather sampling will be targeted to start within four (4) hours following a rainfall event producing at least 0.5-inch of rain. Efforts will be made to collect ground water and surface water samples within the same general time period and within a span of no more than 48 hours.

Water Level Monitoring

Water level monitoring will be conducted at the same eighteen (18) groundwater monitoring wells. The depth to water level in each well will be measured manually using an electronic water level meter (or equivalent). Water level monitoring will be conducted on a monthly basis from April through November beginning prior to construction, monthly during construction, and biannually for five years following construction. It should be noted that the water level at MW-11 will be monitored continuously with an automated data recorder to assess possible water level changes due to pumping of the proposed on-site irrigation well. The reader is referred to the Operations and Management Plan for further discussion of this matter.

Access Easements to Monitoring Wells and Stations

The property owner will provide easements to the Town and MVD to all surface water monitoring stations and groundwater monitoring wells located in the area west of the Wellhead Protection District boundary, to provide access for continued water level and water quality monitoring at the expense of the Town/MVD after the five year post-construction monitoring period is completed. These include 12 monitoring well locations: MW-1, 6, 6A, 7, 8, 9, 10, 11, 12, 13, 14 and 15; and one surface water sampling station, SS-5, as shown on Figure WQ-1.

Sample Collection Methods

The following sample collection methods will be used for the surface water and groundwater sampling.

Surface Water

Surface water samples will be collected by directly filling clean pre-labeled, and laboratory prepared, sample bottles or through transfer from clean, multiple rinsed (3 times) stainless steel sample ladle, or other equivalent sampling device.

Surface water samples will be collected from flowing water and at the natural outlet of targeted wetlands and ponds to the extent feasible.

Samples will be collected at approximately the mid-channel and mid-depth of the water column.

Samplers should be careful not to disturb bottom sediments with the sampling apparatus, sample bottle or in accessing the sample location, so as to prevent increasing the turbidity and suspended sediment in the water column.

- Samples will be collected at approximately the mid-channel and mid-depth of the water column.
- Samplers should be careful not to disturb bottom sediments with the sampling apparatus, sample bottle or in accessing the sample location, so as to prevent increasing the turbidity and suspended sediment in the water column.
- The sampler shall position themselves downstream of the sampling point and will collect samples in a sequence from downstream to upstream so as to avoid influencing the samples by disturbing bottom sediments.
- Measurements of water temperature, specific conductance, pH and turbidity shall be performed and recorded in the field using hand-held meters.
- Perchlorate samples will be field-filtered using a dedicated 0.2 um filter and syringe type apparatus, and collected in sterile containers.
- The estimated channel depth, width and flow velocity will be recorded in the field as well as observed physical water quality conditions such as increased turbidity, oil sheens, odors, foam, floating debris, algae growth, etc.
- Each bottle will be clearly marked with the sampling station, analysis parameter, and date on a waterproof label.
- A Chain of Custody Record will be prepared for all samples and will accompany each set of water samples to the testing laboratory.

Sample preservation and holding time will comply with the following:

- Sample containers will be placed immediately into an ice filled cooler or refrigerator until analyzed (At or below 4°C, do not freeze).
- Samples will be delivered within 24 hours of collection to an accredited laboratory.

Groundwater Sampling

Groundwater sampling will be performed by CPG's consultant.

- Groundwater samples will be collected following the methods described in Table 1 of Appendix B, including peristaltic pump (with dedicated tubing), dedicated bailer and dedicated submersible pumps.
- The depth to water will be recorded and the standing water volume will be estimated in each well prior to purging/sampling.
- A water volume consisting of 3 times the well volume will be purged from each well prior to sampling using the above-described sampling equipment. In the



case of wells that “purge dry,” the well will be sampled upon sufficient recharge.

- Samples will be transferred directly to clean, laboratory prepared and pre-labeled sample bottles following collection.
- Perchlorate sampling will be field-filtered using a 0.2 um dedicated filter and syringe apparatus.
- Each bottle will be clearly marked with the sampling station, analysis parameter, and date on a waterproof label.
- A Chain of Custody Record will be prepared for all samples and will accompany each set of water samples to the testing laboratory.

Sample preservation and holding time will comply with the following:

- Sample containers will be placed immediately into an ice filled cooler or refrigerator until analyzed (At or below 4°C, do not freeze).
- Samples will be delivered within 24 hours of sampling to an accredited laboratory.

Sampling Parameters

Analytical parameters and methods for surface water and groundwater for pre-construction, construction and post -construction sampling are indicated in Attachment B. In general, these parameters include: conductivity, total suspended solids (TSS), total phosphorus, nitrate and nitrite, TKN, chloride, sodium, TPH-DRO, perchlorate, VOCs and potentially SVOCs (PAHs). It should be noted that there is a distinction between notification levels and action levels. Where both are established, action levels are commonly higher.

Reporting

In general, CPG will send to the Town and to MVD a copy of groundwater and surface water quality results within 30 days of receiving the final analytical data report. These results will include tabulated water quality data with comparison to notification and action levels, tabulated groundwater level data, field sampling forms that document sampling events and include results of field screening parameters (as listed in Appendix B, Table 1), and analytical laboratory data reports. In addition, an annual report will also be provided which will include a summary of both the water quality data and the monthly water level data.

If notification or action levels as specified in Appendix B, Tables 2 and 3 are exceeded, Analytical results will be reported to the Town and to MVD in no more than 1 to 7 days as specified in these tables. Commonly, notification and/or action



levels are lower inside the Wellhead Protection District as compared to outside the Wellhead Protection District. Also, it should be noted that there is a distinction between notification levels and action levels. Where both are established, action levels are commonly higher.

Stormwater Management System

Introduction

The intent of this plan is to provide Chelsea Property Group with a list of procedures that document the inspection and maintenance requirements of the stormwater management system for this development.

The following inspection and maintenance program is necessary in order to keep the stormwater management system functioning properly. By following the enclosed procedures, Chelsea Property Group will be able to maintain the functional design of the stormwater management system and maximize its ability to remove sediment and other contaminants from site generated stormwater runoff.

STORMWATER MANAGEMENT SYSTEM COMPONENTS

The stormwater management system is designed to mitigate both the quantity and quality of site-generated stormwater runoff. As a result, its design includes the following elements:

Non-Structural BMP's

Non-structural best management practices (BMP's) are designed to minimize and/or remove contaminants before they enter the stormwater collection system. Several of these BMP's have been incorporated into the Stormwater Management System including pavement sweeping, reduced use of road salt, and litter/trash removal. These types of BMP's are a highly effective initial treatment measure for reducing stormwater pollutant loading.

Structural BMP's

Structural best management practices (BMP's) are designed to minimize and/or remove contaminants and sediments from stormwater that is conveyed through the stormwater collection system. These BMP's, which have been incorporated into the site's stormwater management system, include catch basins with sumps, ADS Water Quality Units, two subsurface infiltration/detention basins, and three surface infiltration/detention basins.



Gravel Wetlands

Gravel wetlands are designed as a series of horizontal, flow through treatment cells, preceded by a sediment forebay. The device is designed to retain and filter the entire water quality volume (WQV), (ten) 10 percent in the forebay and forty-five (45) percent in each of the treatment cells. For small frequent storms, each treatment cell filters one hundred (100) percent of its WQV. Any storm exceeding the WQV overflows into the adjacent existing detention basin for treatment by detention and infiltration.

The treatment removes pollutants, provides subsurface anaerobic treatment and reduces flow volume through evapotranspiration and infiltration. Biological treatment of water quality occurs through plant uptake and soil microorganism activity. Physical and chemical treatment occurs in the soil through filtering and absorption with organic matter and mineral complexes.

OPERATIONS & MAINTENANCE PLAN

By implementing the following procedures, Chelsea Property Group will be able to maintain the functional design of the stormwater management system and maximize the system's ability to remove sediment and other contaminants from site generated stormwater runoff.

Pavement Sweeping: Sweep driveways, roadways, and parking areas on a bi-annual basis (fall and spring), or more frequently if necessary.

Litter/Trash Removal: Routinely inspect all dumpster locations for spillage and clean as necessary.

Routinely empty all outside waste receptacles provided for public use.

Deicing Agents: Use of sand as the primary agent for parking lot safety during ice and snow conditions.

Minimize the use of road salt (sodium chloride) during the winter.

Use de-icing or anti-caking agents, added to enhance performance and application characteristics of sand mixtures, only as necessary and at minimum application rates.



Closed Drainage

System: Inspect all catch basins once annually in the spring and remove accumulated sand, sediment, and floatable products.

Inspect all drain manholes and drainage pipes once every two years in the spring and remove accumulated sediment.

ADS Water Quality

Units: Inspect ADS Water Quality Units two times the first year (spring and fall) and remove accumulated sand, sediment, and floatable products if required. After the first year, the inspection schedule should be reviewed and modified according to the extent of accumulated sediment encountered.

Subsurface

Detention Basins: Inspect the subsurface detention basin system annually in the spring for floating debris, sediment buildup and accumulated petroleum products.

Inspect the inlets and the outlet control structures annually in the spring and remove obstructions and accumulated sediment/debris around and within the structures and the storage pipes. Remove sediment from the storage pipes when it exceeds 2" sediment depth and dispose materials in accordance with all applicable State regulations.

Surface

Detention Basin: Inspect surface detention basin(s) and surrounding area once in the spring every year for failure or erosion of side slopes. Repair and revegetate all damaged areas.

Inspect the basin bottom once every year in the spring and remove accumulated sediment.

Inspect riprap stone aprons, stone checkdam, and overflow spillway once every year in the spring for erosion and stone displacement. Repair erosion as necessary.

Inspect the discharge headwall, pipe, and stone apron at the outlets once every year in the spring for erosion, sediment, debris, and stone displacement. Repair erosion and remove accumulated sediment/debris as necessary.



Gravel Wetlands: Pipe inlets and outlets should be inspected a minimum of one (1) time per year in the spring for clogging and sediment build up. Any sediment build up at these locations should be removed.

Inspect the surface vegetation of the gravel wetlands at a minimum of one (1) time per year in the spring and revegetate any bare spots immediately.

Inspect gravel wetland forebays at a minimum of one (1) time every year in the spring for sediment build up, erosion and vegetative conditions. Any sediment build up should be removed immediately.

Inspect the gravel wetlands second and third cells at a minimum of one (1) time every year in the spring for sediment build up, erosion and vegetative conditions. Any sediment build up should be removed at a minimum of one (1) time every two (2) years.

Inspect the gravel wetlands surrounding areas and side slopes at a minimum of one (1) time in the spring every year for failure or erosion of side slopes. Repair and revegetate all damaged areas as necessary.

Test the pH levels of the soils within the gravel wetland bottoms at a minimum of one (1) time per year. If the pH is below 5.2, limestone should be applied to increase it; if the pH is above 8.0, iron sulfate and sulfur should be added to reduce it.

Gravel wetlands should not be mowed.

INSPECTION & MAINTENANCE CHECKLIST/LOG

Appendix A contains an Inspection & Maintenance Checklist and a blank copy of the Stormwater Management System's Inspection & Maintenance Log. The Maintenance Log shall be completed for each inspection. These forms are provided to assist the Chelsea Management Group's Site Manager with the inspection and maintenance of site's stormwater management system. These logs shall be maintained for the life of the stormwater management system and made available to NHDES Water Division personnel upon request.

Buffer Maintenance

The majority of the undeveloped portion of the property, including buffer area will be placed in a conservation easement to the benefit of the Town of Merrimack. Acceptance of this easement will require action by the Merrimack Town Council. It is the intention of the applicant to delineate buffer areas, and other areas of the site that are to remain undisturbed prior to commencement of construction in adjacent areas. Part of this delineation will also be to locate and mark the boundary of the property adjacent to residential areas so that the limit of the Outlet Village Shops property can be clearly understood, and the location of the property line in the case of assessment of any impacts at the property line can be clearly ascertained. Cutting of live trees in buffer areas shall be prohibited, except as shown on the plans, or as permitted as a part of a regular forest management plan adopted by the Town.

Buffers will be inspected on a yearly basis, and any material changes to the buffer areas affecting the screening function of the buffers will be reported to the Town, and a plan will be developed for restoration of an effective landscape screen.

Landscape Maintenance

The landscape plan includes limited areas that will be developed as lawn areas. Intensive landscaping is limited to areas immediately adjacent to the entry road and the building and parking areas. The remainder of the site will be either kept in a natural state, or restored using natural plantings. Slope areas to the east and north of the development area, as well as the cleared future development areas to the west of the property will be planted with a natural, "no mow" seed mix. Adjacent to the buffer areas, this mix will include up to 10% shrub and tree seeds to foster landscape succession to forest.

Because intensively landscaped areas are limited, application of typical landscape chemicals is anticipated to be minimized. Landscape chemicals will be applied by licensed applicators consistent with Town and NHDES standards. Fertilizers used on site will be either slow release or organic in nature.

The irrigation system is anticipated to be supplied by an on site well located east of the Wellhead Protection District boundary. A flow meter that provides a continuous and permanent record of pumped water rates and volume of groundwater withdrawn, will be installed on this well, and withdrawals shall not exceed 6,600 gallons per day. Pumping flow records and water level readings from MW-11 as described above will be submitted to the Town and to MVD on a monthly basis.



licensed applicators consistent with Town and NHDES standards. Fertilizers used on site will be either slow release or organic in nature.

The irrigation system is anticipated to be supplied by an on site well located east of the Wellhead Protection District boundary. A flow meter that provides a continuous and permanent record of pumped water rates and volume of groundwater withdrawn, will be installed on this well, and withdrawals shall not exceed 6,600 gallons per day. Pumping flow records and water level readings from MW-11 as described above will be submitted to the Town and to MVD on a monthly basis.

Parking Lot Maintenance

Snow plowing and removal will be done consistent with area standards. Snow will be stockpiled in areas as indicated in the plans, and to the degree that snow stockpiles become larger than the areas indicated, snow will be removed from the site and disposed of in a legal manner. Snow will be stockpiled east of the Wellhead Protection District boundary. Because snow removal is dependent on weather conditions, and is a life safety issue, there shall be no restriction on hours of operation for snow removal activities.

The Merrimack Fire Department requires that a minimum clearance radius of three (3) feet be maintained around fire hydrants. Regular maintenance shall include snow removal and tree/shrub pruning to maintain the required clear area.

The Merrimack Fire Department requires that the Emergency Access Zone as shown on the plans be maintained year around. Regular maintenance shall include snow removal and periodic mowing.

OPERATIONAL NOISE MONITORING

Operational Noise Impact Criteria

Typically, city/town, state, and/or federal noise criteria are evaluated to determine if there are any noise impacts. The Town of Merrimack and the New Hampshire Department of Environmental Services (DES) have not established noise criteria. However, the New Hampshire Department of Transportation (DOT) has developed noise criteria and guidance in evaluating noise impacts.

Town

The Town of Merrimack has not established specific numerical noise criterion.

**Table 1.2
Noise Abatement Criteria (NAC)
One-Hour, A-Weighted Sound Levels
in Decibels (dBA)**

Activity Category	$L_{eq}(h)^1$	Description of Activity Category
A	57 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purposes.
B	67 (Exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.
C	72 (Exterior)	Developed lands, properties, or activities not included in Categories A or B above.
D	--	Undeveloped lands
E	52 (Interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

1. $L_{eq}(h)$ is an energy-averaged, one-hour, A-weighted sound level in decibels (dBA).

Source: 23 CFR Part 772 - *Procedures for Abatement of Highway Traffic Noise and Construction Noise.*

Operational Noise Monitoring Program

The purpose of the noise monitoring program is to demonstrate that the operation of the Merrimack Premium Outlets project (Project) will not result in excessive sound levels. A noise monitoring program will be conducted to demonstrate that the Project’s operation meets the noise criteria established for the proposed Project.

Procedures:

- 1) The Developer has committed to conducting noise monitoring during the operation of the Project to demonstrate compliance with the noise criteria established for the project. While additional noise monitoring may be conducted or requested at future times by the town, the Developer will conduct an initial noise monitoring program is outlined below:
 - a. **Monitoring Locations** – Noise monitoring is to be conducted at three residential areas surrounding the Project. The Town may request different noise monitoring locations. Every effort will be made to use the same locations where measurements were taken prior to construction as listed below:
 - M1 – Located at the cul-de-sac at the end of Englewood Drive
 - M2 – Located near the center of the frontage of Whittier Road adjacent to the Chelsea property
 - M3 – Located at the intersection of Douglas Street and Spruce Street

- b. **Duration** – Noise monitoring will be conducted during the daytime and nighttime (after 10 PM).
- c. **Day of week** – The noise monitoring will be conducted during a weekday and/or weekend day based upon the request of the town.
- d. **Frequency** – The noise monitoring program will be undertaken within 6 months of the opening of the Project. Additional noise monitoring may be conducted at the request of the Town.
- e. **Reporting** – The project proponent will submit a memorandum documenting the results within two weeks of the completion of the noise monitoring.
- f. **Process** – If the monitoring data indicates that the project is not in compliance with the noise criteria, as measured at the property line receptor locations, then the project proponent will have 14 days to prepare a report that identifies the reason for the exceedances, identifies the mitigation measures to be implemented to reduce sound levels, and provides a schedule for implementation. (e.g., quieter equipment, quieter procedures, noise shielding, etc.) Mitigation measures will be implemented, and additional noise monitoring will be conducted within 14 days of the implementation to demonstrate their effectiveness.
- g. **Operation Criteria** – The Project’s operation noise impact criteria is presented in Table 1.3.

Table 1.3 – Project Operation Noise Impact Criteria

Monitoring Location	A-Weighted Sound Level in Decibels (dBA)	
	Leq	Leq
	Daytime	Nighttime
Areas Within 750 feet of F.E. Everett Turnpike	65	55*
All Other Areas	60	50

*Note: Noise measurements are intended to include sound levels from the Project. Every effort should be made to minimize F.E. Everett Turnpike sound levels.



Appendix A

Stormwater Management

**Stormwater Management System
Inspection & Maintenance Checklist**

BMP/System Component	Minimum Inspection Frequency	Minimum Inspection Requirements	Maintenance/Cleanout Threshold
Pavement Sweeping	2 times per year – Fall & Spring	N/A	N/A
Litter/Trash Removal	Routinely	Inspect dumpsters, outdoor waste receptacles areas for spillage.	Clean as required.
Closed Drainage System			
Catch Basins	1 time per year	Check for sediment accumulation. Check for floatable contaminants.	2 ft. sediment depth. 3 in. floatable depth.
Drain Manholes	1 time per 2 years	Check for sediment accumulation.	3 in. sediment depth.
Drainage Pipes	1 time per 2 years	Check for sediment accumulation/clogging.	2 in. sediment depth.
ADS Units	2 times the first year Modify frequency after first year as required	Check for sediment accumulation.	6 in from dry-weather water level
Subsurface Detention Basins			
Drainage Pipes	1 time per year	Check for sediment accumulation.	2 in. sediment depth.
Outlet Control Structure	1 time per year	Check for sediment accumulation/clogging	Clean/repair as needed.
Surface Detention Basin			
Side Slopes/Vegetation	1 time per year	Inspect for failure, erosion, and bare soil areas.	Repair and reseed any damaged areas. Consult Engineer if problems persist.
Basin Bottom/Forebay	1 time per year	Check sediment accumulation.	Clean as needed.
Riprap Stone Aprons/Checkdam/ Overflow Spillway	1 time per year	Inspect for stone displacement, erosion, etc.	Repair as needed.
Discharge Headwall/Outlet Pipes	1 time per year	Inspect Headwall/Pipes and surrounding area for erosion, sediment accumulation, stone displacement, debris, and clogging.	Clean/repair as needed.
Gravel Wetland			
Pipe Inlets & Outlets, Forebays	1 time per year	Inspect for clogging and sediment accumulation	2 in. sediment depth.
Surface and sideslope vegetation	1 time per year	Inspect for bare spots and erosion	Repair as needed
Test pH levels	1 time per year	Test pH level of water	Adjust as needed to achieve pH 5.2 to 8.0



Appendix B

Groundwater & Surface Water Monitoring Program

TABLE 1
Summary of Groundwater and Surface Water Sampling Methods and Frequency
Merrimack Premium Outlets
Merrimack, New Hampshire

Locations		Sampling Technique/ Equipment Used	Frequency	Estimated # of Rounds***	Weather Conditions During Sampling	Field Parameters	
Monitoring Wells	MW-1 MW-2 MW-2A MW-3 MW-4 MW-4A MW-5 MW-6 MW-6A MW-7 MW-8 MW-9 MW-10 MW-11 MW-12 MW-13 MW-14 MW-15	Water Level Meter	Pre-Construction: Monthly (April - Nov), two concurrent with groundwater / surface sampling rounds	Approx. 1 to 2 additional rounds prior to construction	Alternately following both wet and dry weather conditions	Groundwater Level Measurements	
	During Construction: Monthly (concurrent with groundwater / surface water sampling rounds)		19				
	Post-Occupancy: Twice per year for 5 years (concurrent with groundwater / surface water sampling rounds)		10				
	MW-1 MW-2/2A* MW-3 MW-4/4A* MW-5 MW-6/6A* MW-7	Bailer / Peristaltic Pump	Pre-Construction: Twice per year - Late Spring and Early Fall **	Approx. 1 additional round prior to construction	Alternately following both wet and dry weather conditions	Temperature Specific Conductivity pH	
			During Construction: Monthly, initiated one month prior to construction	19			
		Dedicated submersible pump	Post-Occupancy: Twice per year for 5 years	10			
			MW-8 MW-9 MW-10 MW-11 MW-15	Bailer / Peristaltic Pump			Pre-Construction, During Construction, and Post-Occupancy: Twice per year - late Spring and early Fall. If TPH-DRO remains below 50 ug/l in two consecutive rounds, subsequent monitoring can be reduced to once per year
	MW-12 MW-13 MW-14						
	Surface Water Sampling Locations	SS-1 SS-2 SS-3 SS-4 SS-5	Directly into laboratory-provided containers	Pre-Construction: Twice per year - Late Spring and Early Fall	Approx. 1 additional round prior to construction.	Alternately following both wet and dry weather conditions	Temperature Specific Conductivity pH Turbidity
				During Construction: Monthly, initiated one month prior to construction	19		
				Post-Occupancy: Twice per year for 5 years	10		

TABLE 1
Summary of Groundwater and Surface Water Sampling Methods and Frequency
Merrimack Premium Outlets
Merrimack, New Hampshire

Notes:

1. "*" indicates that monitoring wells MW-2, MW-4 and MW-6 will be sampled if sufficient water is present in these wells. If not, then the deeper companion/replacement well(s) (MW-2A, MW-4A, MW-6A) will be sampled instead.

"**" indicates that both shallow and deep wells at each of the well couplets (MW-2/MW-2A, MW-4/MW-4A, MW-6/MW-6A) will be sampled/analyzed during the pre-construction time frame, so as to establish baseline conditions for groundwater from these wells.

2. In general, wells will be sampled by first removing (purging) three well volumes of groundwater prior to sample collection. In the event that a monitoring well is purged dry (as is likely with MW-8 and MW-10), the well will be sampled upon sufficient recharge.

3. "****" indicates that the number of sampling rounds going forward is an estimate based on our current understanding of the schedule, scope, and duration of construction. Monthly (during construction) sampling will continue until a certificate of occupancy is issued for the Site.

In addition, the following pre-construction monitoring rounds have already been completed as of August 2008:

- 10 rounds of groundwater level measurements (1 to 3 rounds for MW-2A, MW-4A, MW-6A, MW-8 to MW-14).

- 2 rounds of groundwater quality monitoring (MW-2A, MW-4A, MW-6A, MW-8 to MW-11 as yet to be sampled; MW-15 still needs to be installed; MW-12, MW-13, MW-14 - monitored once [VOCs, RCRA 8 metals, sodium, chloride and TPH by EPA Method 8100] as part of the hydrogeologic study of the southwestern portion of the Site).

- 2 rounds of surface water quality monitoring

4. Dry weather sampling will be targeted after periods with at least 72 hours of less than trace amounts of rain. Wet weather sampling will be targeted to start within four hours after a rainfall event producing at least 0.5 inch of rain.

5. Groundwater and surface water samples will be submitted for laboratory analysis for the compounds listed on Tables 2 and 3.

6. If analytical results at five years following construction indicate a significant ongoing impact to water quality (i.e., exceeding notification/action levels) due to the construction activities at one or more of the sampling locations, some level of continued monitoring will be proposed by the property owner for a specified period of time to be discussed and agreed upon by the Town, Merrimack Village District (MVD) and their consultants.

TABLE 2
Summary of Groundwater Analytical Program, Action Levels, and Notification Requirements
Merrimack Premium Outlets
Merrimack, New Hampshire

Location		Laboratory Parameters	Analytical Method	Units	NHDES AGQS / GW-1	NHDES / USEPA MCL/ DWEL	Background as of December 2007	Inside Wellhead Protection District Only		Outside Wellhead Protection District Only		Action Level (All Wells Unless Otherwise Noted)	Action / Timing Requirements
Inside Wellhead Protection District	Outside Wellhead Protection District							Notification Level	Notification Timing	Notification Level	Notification Timing		
MW-1 MW-6/6A MW-7 MW-8 MW-9 MW-10 MW-11 MW-12 MW-13 MW-14 MW-15	MW-2/2A MW-3 MW-4/4A MW-5	Conductivity	SM 2510B / USEPA Method 120.1	µmhos/cm	NA	NA	≤ 670	700		NA (No AGQS/ GW-1)	NA (No AGQS/ GW-1)	NA	
		Total Suspended Solids	SM 2540D / USEPA Method 160.2	mg/L	NA	NA	≤ 320	NA		NA (No AGQS/ GW-1)	NA (No AGQS/ GW-1)	NA	
		Total Phosphorus	SM 4500 PE‡	mg/L	NA	NA	< 0.30	0.5		NA (No AGQS/ GW-1)	NA (No AGQS/ GW-1)	NA	
		Nitrate + Nitrite	USEPA Method 353.2	mg/L	10	10	≤ 1.4	2.5		10 (see Action Level)	5 (Inside Wellhead Protection District Only)	Notify MVD & Town <i>within 7 days</i> . Also submit mitigation/remediation plan <i>within 7 days</i> , focusing on reducing/eliminating additional nitrate introduction to groundwater. Plan and schedule of implementation to be approved by MVD/Town and carried out by property owner.	
		TKN	USEPA Method 351.3‡	mg/L	NA	NA	≤ 0.6	5		NA (No AGQS/ GW-1)	NA (No AGQS/ GW-1)	Notify MVD & Town <i>immediately</i> upon receiving results from lab; <i>immediate</i> submittal of a mitigation/remediation plan. Depending on the severity and perceived threat to the Town's water supply, the MVD/Town reserves the right to shut down construction operations.	
		Chloride	USEPA Method 9251‡	mg/L	NA	250†	≤ 140	150	Notify MVD and Town within 7 days of receiving the results from the analytical laboratory.	NA (No AGQS/ GW-1)	200 (Inside Wellhead Protection District Only)	Notify MVD & Town <i>within 7 days</i> . Also submit mitigation/remediation plan <i>within 7 days</i> , focusing on reducing/eliminating additional chloride introduction to groundwater. Plan and schedule of implementation to be approved by MVD/Town and carried out by property owner.	
		Sodium	USEPA Method 6010B‡	mg/L	NA	100 - 250†	≤ 110	125	Pending results, MVD or Town may require a mitigation / remediation plan within 30 days.	NA (No AGQS/ GW-1)	NA (No AGQS/ GW-1)	NA	
		TPH-DRO	ME Method 4.1.25‡ (reporting limit ≤ 50 µg/L)	µg/L	NA	NA	< 320	50 / 250 (see action requirements for explanation)	Plan and schedule for implementation to be approved by MVD/Town, and then carried out by property owner.	50 / 250 (see action requirements for explanation)	50 / 250	If greater than 50 µg/L, but less than 250 µg/L, copy of gas chromatogram to be sent to MVD <i>within 72 hours</i> of receiving lab report. If greater than 250 µg/L, analyze sample for SVOCs (PAHs) <i>within 7 days</i> of receiving lab report with TPH-DRO exceedance.	
		Perchlorate	Method 332‡, after field filtration with a 0.2-micron filter and collection into sterile container	µg/L	NA	24.5	< 0.3	2		NA (No AGQS/ GW-1)	NA (No AGQS/ GW-1)	NA	
		VOCs	USEPA Method 8260B** (NHDES Full List, Feb 2008 revisions)	µg/L	Varies by Analyte	Varies by Analyte	BDL	Any Detection		AGQS/GW-1 (see Action Level)	50% of NHDES Drinking Water Standards / USEPA MCLs - varies by analyte†† (Inside Wellhead Protection District Only)	Notify MVD & Town <i>within 48 hours</i> . Submit mitigation/remediation plan describing corrective actions <i>within 7 days</i> . Also, resample and resubmit for analysis <i>within 7 days</i> . Depending on results of second analysis, MVD/Town may require immediate mitigation / remediation.	
		SVOCs (PAHs)*	USEPA Method 8270**	µg/L	Varies by Analyte	Varies by Analyte	NS	Any Detection		AGQS/GW-1 (see Action Level)	AGQS / GW-1 - Varies by analyte††	Notify MVD & Town <i>immediately</i> upon receiving results from lab; <i>immediate</i> submittal of a mitigation/remediation plan. Depending on the severity and perceived threat to the Town's water supply, the MVD/Town reserves the right to shut down construction operations.	

TABLE 2
Summary of Groundwater Analytical Program, Action Levels, and Notification Requirements
Merrimack Premium Outlets
Merrimack, New Hampshire

Notes:

1. Maximum Contaminant Levels (MCLs) are from the United States Environmental Protection Agency (USEPA) National Primary Drinking Water Standards (updated June 2003), and the New Hampshire Department of Environmental Services (NHDES) Env-Ws 310 Drinking Quality Standards including Secondary MCLs (effective November 30, 2005). The value listed for perchlorate is a drinking water equivalent level (DWEL), which was established by the USEPA on February 18, 2005. NHDES Ambient Groundwater Quality Standards (AGQS) were established in Env-Or 600 Contaminated Site Management, effective July 22, 2008. The AGQS are generally equivalent to GW-1 Groundwater Standards. GW-1 Groundwater Standards are listed in the NHDES Contaminated Sites Risk Characterization and Management Policy (RCMP) (January 1998, with 2000 through 2007 revisions/addenda).

2. "MVD" indicates Merrimack Village District.

"Town" indicates the Town of Merrimack.

"NA" indicates not applicable/not available.

"NS" indicates not sampled/analyzed.

"BDL" indicates below detection limit.

"µmhos/cm" indicates micromhos per centimeter.

"mg/L" indicates milligrams per liter.

"µg/L" indicates micrograms per liter.

"TKN" indicates total Kjeldahl nitrogen.

"TPH-DRO" indicates total petroleum hydrocarbons - diesel range organics.

"VOCs" indicates volatile organic compounds.

"SVOCs (PAHs)" indicates semi-VOCs (polycyclic aromatic hydrocarbons).

"*" indicates SVOCs (PAHs) will only be analyzed for from a given location / sampling round if TPH-DRO exceeds 250 µg/L for that location / sampling round. To be analyzed within 7 days of receiving lab report indicating TPH-DRO exceedance of 250 µg/L.

"**" indicates refer to attached example laboratory data reports for lists of VOC and SVOC (PAH) analytes and standard reporting limits.

We are not proposing to analyze the samples by the additional methods required to reach low detection limits (< 1 µg/L) for 1,4-dioxane; dibromochloropropane; and ethylene dibromide.

"‡" indicates the MCL listed is a non-enforceable secondary MCL (SMCL) based on aesthetic criteria (NHDES Part Env-Ws 316).

"‡‡" indicates refer to attached Table 4 for listing of NHDES Drinking Water (DW) Standards, USEPA MCLs, NHDES AGQS/GW-1 Groundwater Standards, and NHDES Surface Water Standards (Env-Wq 1700, adopted May 12, 2008) for VOCs and SVOCs (PAHs) to be analyzed for.

"‡‡" indicates that analytical methods have been updated based on correspondence with the analytical laboratory and EGGI in December 2009.

3. The Property Owner will send to the MVD and Town a copy of groundwater and surface water quality monitoring results within 30 days of receiving the relevant final analytical laboratory data report. These results will include: tabulated water quality data with comparison to notification and action levels, tabulated groundwater level/elevation data, Field Sampling Summary forms that document the sampling events and include the results of field screening parameters (refer to Table 1), and analytical laboratory data reports. Annual reports will also be submitted to the MVD and Town starting at end of year 2008, that include a summary discussion of the water quality data and water level data.

4. Reporting of exceedances of Notification and Action levels will be as follows:

For those items that require "immediate" notifications/submittals, the Property Owner will notify MVD/Town and their designated consultant of the analytical results (location, parameter, concentration) by email as soon as they become aware of the exceedance, but in no case, no more than 1 business day after receiving the final laboratory report from the analytical laboratory. The remediation/mitigation plan will be submitted by email within two business days after receiving the final laboratory report from the analytical laboratory. Hard copies of the analytical results and remediation/mitigation plan will be sent to the MVD/Town by overnight mail within the same time frames.

For "48-hour" notifications/submittals, the Property Owner will notify MVD/Town and their designated consultant of the analytical results (location, parameter, concentration) by email within 2 business days after receiving the final laboratory report from the analytical laboratory. Hard copies of the analytical results also will be sent to the MVD/Town by overnight mail within 2 business days.

For "72-hour" notification/submittal of the gas chromatograms for TPH-DRO results with concentrations greater than 50 ug/l but less than 250 ug/l, the Property Owner will notify/submit to MVD/Town and their designated consultant the analytical results (location, parameter, concentration) and chromatogram by email within 3 business days after receiving the final laboratory report/chromatogram from the analytical laboratory. Hard copies of the analytical results/chromatogram also will be sent to the MVD/Town by overnight mail within 3 business days.

For "7-day" notifications/submittals, the Property Owner will notify/submit to MVD/Town and their designated consultant the analytical results (location, parameter, concentration) and remediation/mitigation plan by email within 7 consecutive days after receiving the final laboratory report from the analytical laboratory. Hard copies of the analytical results and remediation/mitigation plan will be sent to the MVD/Town by USPS registered mail or overnight mail within 7 consecutive days.

TABLE 3
Summary of Surface Water Analytical Program, Action Levels, and Notification Requirements
Merrimack Premium Outlets
Merrimack, New Hampshire

Location		Laboratory Parameters	Analytical Method	Units	NH Surface Water Standards	NHDES / USEPA MCL/ DWEL	Background as of April 2008	Inside Wellhead Protection District Only		Outside Wellhead Protection District Only		Action Level	Action Requirements
Inside Wellhead Protection District	Outside Wellhead Protection District							Notification Level	Notification Timing	Notification Level	Notification Timing		
SS-5	SS-1 SS-2 SS-3 SS-4	Conductivity	SM 2510B / USEPA Method 120.1	µmhos/cm	NA	NA	≤ 116	250	Notify MVD and Town within 7 days of receiving the results from the analytical laboratory. Pending results, MVD or Town may require a mitigation / remediation plan within 30 days. Plan and schedule for implementation to be approved by MVD/Town, and then carried out by property owner.	Notify MVD and Town within 7 days of receiving the results from the analytical laboratory. Pending results, MVD or Town may require a mitigation / remediation plan within 30 days. Plan and schedule for implementation to be approved by MVD/Town, and then carried out by property owner.	NA (No NH SW Standard)	NA (No NH SW Standard)	NA
		Total Suspended Solids	SM 2540D / USEPA Method 160.2	mg/L	NA	NA	≤ 6	20			NA (No NH SW Standard)	NA (No NH SW Standard)	NA
		Turbidity	Field Screening	NTU	NA	NA	< 3.5	10			NA (No NH SW Standard)	NA (No NH SW Standard)	NA
		Total Phosphorus	SM 4500 PE‡	mg/L	NA	NA	< 0.2	0.5			NA (No NH SW Standard)	NA (No NH SW Standard)	NA
		Nitrate + Nitrite	USEPA Method 353.2	mg/L	10	10	≤ 0.9	2.5			10 (see Action Level)	5 (Inside Wellhead Protection District Only)	Notify MVD & Town within 7 days . Also submit mitigation/remediation plan within 7 days , focusing on reducing/eliminating additional nitrate introduction to surface water and groundwater. Plan and schedule of implementation to be approved by MVD/Town and carried out by property owner.
		TKN	USEPA Method 351.3‡	mg/L	NA	NA	< 1.0	5			NA (No NH SW Standard)	NA (No NH SW Standard)	Notify MVD & Town immediately upon receiving results from lab; immediate submittal of a mitigation/remediation plan. Depending on the severity and perceived threat to the Town's water supply, the MVD/Town reserves the right to shut down construction operations.
		Chloride	USEPA Method 9251‡	mg/L	230	250†	< 2	100			230	230	Notify MVD & Town immediately upon receiving results from lab; immediate submittal of a mitigation/remediation plan. Depending on the severity and perceived threat to the Town's water supply, the MVD/Town reserves the right to shut down construction operations.
		Sodium	USEPA Method 6010B‡	mg/L	NA	100 - 250†	≤ 3.5	25			NA (No NH SW Standard)	NA (No NH SW Standard)	NA
		TPH-DRO	ME Method 4.1.25‡ (reporting limit ≤ 50 µg/L)	µg/L	NA	NA	< 240	50 / 250			50 / 250 (see action requirements for explanation)	50 / 250	If greater than 50 µg/L, but less than 250 µg/L, copy of gas chromatogram to be sent to MVD within 72 hours of receiving lab report. If greater than 250 µg/L, analyze sample for SVOCs (PAHs) within 7 days of receiving lab report with TPH-DRO exceedance.
		Perchlorate	Method 332‡, after field filtration with a 0.2-micron filter and collection into sterile container	µg/L	NA	24.5	< 0.3	2			NA (No NH SW Standard)	NA (No NH SW Standard)	NA
		VOCs	USEPA Method 8260B**	µg/L	Varies per Analyte	Varies per Analyte	NS	Any Detection			NH SW Standard (see Action Level)	50% of NH SW Standard - varies by analyte†† (Inside Wellhead Protection District Only)	Notify MVD & Town within 48 hours . Submit mitigation/remediation plan describing corrective actions within 7 days . Also, resample and resubmit for analysis within 7 days . Depending on results of second analysis, MVD/Town may require immediate mitigation / remediation.
		SVOCs (PAHs)*	USEPA Method 8270**	µg/L	Varies per Analyte	Varies per Analyte	NS	Any Detection			NH SW Standard (see Action Level)	NH SW Standard - Varies by analyte††	Notify MVD & Town immediately upon receiving results from lab; immediate submittal of a mitigation/remediation plan. Depending on the severity and perceived threat to the Town's water supply, the MVD/Town reserves the right to shut down construction operations.

TABLE 3
Summary of Surface Water Analytical Program, Action Levels, and Notification Requirements
Merrimack Premium Outlets
Merrimack, New Hampshire

Notes:

1. Maximum Contaminant Levels (MCLs) are from the United States Environmental Protection Agency (USEPA) National Primary Drinking Water Standards, updated June 2003, and the New Hampshire Department of Environmental Services (NHDES) Env-WS 310 Drinking Quality Standards including Secondary MCLs (effective November 30, 2005). The value listed for perchlorate is a drinking water equivalent level (DWEL), which was established by the USEPA on February 18, 2005. NHDES Surface Water Standards are taken from Env-Wq 1700, adopted May 12, 2008.

2. "MVD" indicates Merrimack Village District.

"Town" indicates the Town of Merrimack.

"NA" indicates not applicable/not available.

"SW" indicates surface water.

"NS" indicates not sampled/analyzed.

"BDL" indicates below detection limit.

"µmhos/cm" indicates micromhos per centimeter.

"mg/L" indicates milligrams per liter.

"µg/L" indicates micrograms per liter.

"TKN" indicates total Kjeldahl nitrogen.

"TPH-DRO" indicates total petroleum hydrocarbons - diesel range organics.

"VOCs" indicates volatile organic compounds.

"SVOCs (PAHs)" indicates semi-VOCs (polycyclic aromatic hydrocarbons).

"*" indicates SVOCs (PAHs) will only be analyzed for from a given location / sampling round if TPH-DRO exceeds 250 µg/L for that location / sampling round. To be analyzed within 7 days of receiving lab report indicating TPH-DRO exceedance of 250 µg/L.

"**" indicates refer to attached example laboratory data reports for lists of VOC and SVOC (PAH) analytes and standard reporting limits. We are not proposing to analyze the samples by the additional methods required to reach low detection limits (< 1 µg/L) for 1,4-dioxane; dibromochloropropane; and ethylene dibromide.

"‡" indicates the MCL listed is a non-enforceable secondary MCL (SMCL) based on aesthetic criteria (NHDES Part Env-Ws 316).

"‡‡" indicates refer to attached Table 4 for listing of NHDES Drinking Water (DW) Standards, USEPA MCLs, NHDES AGQS/GW-1 Groundwater Standards, and NHDES Surface Water Standards for VOCs and SVOCs (PAHs) to be analyzed for.

"‡‡" indicates that analytical methods have been updated based on correspondence with the analytical laboratory and EGGI in December 2009.

3. The Property Owner will send to the MVD and Town a copy of groundwater and surface water quality monitoring results within 30 days of receiving the relevant final analytical laboratory data report. These results will include: tabulated water quality data with comparison to notification and action levels, tabulated groundwater level/elevation data, Field Sampling Summary forms that document the sampling events and include the results of field screening parameters (refer to Table 1), and analytical laboratory data reports. Annual reports will also be submitted to the MVD and Town starting at end of year 2008, that include a summary discussion of the water quality data and water level data.

4. Reporting of exceedances of Notification and Action levels will be as follows:

For those items that require "immediate" notifications/submittals, the Property Owner will notify MVD/Town and their designated consultant of the analytical results (location, parameter, concentration) by email as soon as they become aware of the exceedance, but in no case, no more than 1 business day after receiving the final laboratory report from the analytical laboratory. The remediation/mitigation plan will be submitted by email within two business days after receiving the final laboratory report from the analytical laboratory. Hard copies of the analytical results and remediation/mitigation plan will be sent to the MVD/Town by overnight mail within the same time frames.

For "48-hour" notifications/submittals, the Property Owner will notify MVD/Town and their designated consultant of the analytical results (location, parameter, concentration) by email within 2 business days after receiving the final laboratory report from the analytical laboratory. Hard copies of the analytical results also will be sent to the MVD/Town by overnight mail within 2 business days.

For "72-hour" notification/submittal of the gas chromatograms for TPH-DRO results with concentrations greater than 50 ug/l but less than 250 ug/l, the Property Owner will notify/submit to MVD/Town and their designated consultant the analytical results (location, parameter, concentration) and chromatogram by email within 3 business days after receiving the final laboratory report/chromatogram from the analytical laboratory. Hard copies of the analytical results/chromatogram also will be sent to the MVD/Town by overnight mail within 3 business days.

For "7-day" notifications/submittals, the Property Owner will notify/submit to MVD/Town and their designated consultant the analytical results (location, parameter, concentration) and remediation/mitigation plan by email within 7 consecutive days after receiving the final laboratory report from the analytical laboratory. Hard copies of the analytical results and remediation/mitigation plan will be sent to the MVD/Town by USPS registered mail or overnight mail within 7 consecutive days.

TABLE 4
Summary of Groundwater and Surface Water VOC and SVOC Standards and Reporting Limits
Merrimack Premium Outlets
Merrimack, New Hampshire

Analyte	CAS No.	Concentrations in µg/L					EAI's Typical Undiluted Reporting Limits
		Groundwater/Drinking Standards			Surface Water Standards		
		NHDES DW	USEPA MCLs	NHDES AGQS/GW-1	Fresh Water		
			Acute	Chronic			
VOCs							
AVOCs							
Benzene	71-43-2	5	5	5	5,300	–	1
Butylbenzene (n-)	104-51-8			260			1
Butylbenzene (sec-)	135-98-8			260			1
Butylbenzene (tert-)	98-06-6			260			1
Ethylbenzene	100-41-4	700	700	700	32,000	–	1
Isopropylbenzene (Cumene)	98-82-8			800			1
Isopropyltoluene (p-)	99-87-6			260			1
Naphthalene	91-20-3 (VOC)			20	2,300	620	5
Propylbenzene (n-)	103-65-1			260			1
Styrene	100-42-5	100	100	100			1
Toluene	108-88-3	1,000	1,000	1,000			1
Trimethylbenzene (1,2,4-)	95-63-6			330			1
Trimethylbenzene (1,3,5-)	108-67-8			330			1
Xylene (m,p-)	108-38-3, 106-42-3			NS			1
Xylene (o-)	95-47-6			NS			1
Total Xylenes *	95-47-6, 108-38-3, 106-42-3	10,000	10,000	10,000			
CVOCs							
Carbon Tetrachloride	56-23-5	5	5	5	35,200	–	2
Chlorobenzene (Monochlorobenzene)	108-90-7	100	100	100	250a	50a	2
Chloroethane	75-00-3			NS			5
Chloroform (Trichloromethane) e	67-66-3	80†	80†	70	28,900	1,240	2
Chloromethane (Methyl Chloride)	74-87-3			30	11,000f	–	2
Chlorotoluene (2-)	95-49-8			100			2
Chlorotoluene (4-)	106-43-4			NS			2
Dichlorobenzene (1,2-)	95-50-1 (VOC)	600	600	600	1,120b	763b	1
Dichlorobenzene (1,3-)	541-73-1 (VOC)			600	1,120b	763b	1
Dichlorobenzene (1,4-)	106-46-7 (VOC)	75	75	75	1,120b	763b	1
Dichloroethane (1,1-)	75-34-3			81			2
Dichloroethane (1,2-)	107-06-2	5	5	5	118,000	20,000	2
Dichloroethane (1,1-)	75-35-4	7	7	7	11,600c	–	1
Dichloroethane (cis-1,2-)	156-59-2	70	70	70	11,600c	–	2
Dichloroethane (trans-1,2-)	156-60-5	100	100	100	11,600c	–	2
Dichloropropane (1,2-)	78-87-5	5	5	5	23,000d	5,700d	2
Dichloropropane (1,3-)	142-28-9			NS	23,000d	5,700d	2
Dichloropropane (2,2-)	594-20-7			NS	23,000d	5,700d	2
Dichloropropene (1,1-)	563-58-6			NS	6,060e	244e	2
Dichloropropene (cis-1,3-)**	10061-01-5			0.5	6,060e	244e	2
Dichloropropene (trans-1,3-)**	10061-02-6			0.5	6,060e	244e	2
Hexachlorobutadiene	87-68-3 (VOC)			0.5	90	9.3	0.5
Methylene Chloride (Dichloromethane)	75-09-2	5	5	5	11,000f	–	5
Tetrachloroethane (1,1,1,2-)	630-20-6			70	9,320g	–	2
Tetrachloroethane (1,1,2,2-)	79-34-5			2	9,320g	2,400	2
Tetrachloroethane (PCE)	127-18-4	5	5	5	5,280	840	2
Trichlorobenzene (1,2,3-)	87-61-6			NS	250a	50a	1
Trichlorobenzene (1,2,4-)	120-82-1 (VOC)	70	70	70	250a	50a	1
Trichlorobenzene (1,3,5-)	108-70-3			40	250a	50a	1
Trichloroethane (1,1,1-)	71-55-6	200	200	200	18,000h	–	2
Trichloroethane (1,1,2-)	79-00-5	5	5	5	18,000h	9,400	2
Trichloroethane (TCE)	79-01-6	5	5	5	45,000	21,900	2
Trichloropropane (1,2,3-)	96-18-4			40			2
Vinyl Chloride	75-01-4	2	2	2	–	–	2
Other VOCs							
Acetone	67-64-1			6,000			10
Bromobenzene	108-86-1			NS			2
Bromochloromethane	74-97-5			NS			2
Bromodichloromethane (Dichlorobromomethane) e	75-27-4	80†	80†	0.6	11,000f	–	0.5
Bromoform e	75-25-2	80†	80†	4	11,000f	–	2
Bromomethane (Methyl Bromide)	74-83-9			10	11,000f	–	2
Butanone (2-) (MEK)	78-93-3			4,000			10
Carbon Disulfide	75-15-0			70			5
Dibromo-3-chloropropane (1,2-) #	96-12-8	0.2	0.2	0.2			2
Dibromochloromethane (Chlorodibromomethane) e	124-48-1	80†	80†	60	11,000f	–	2
Dibromoethane (1,2-) (Ethylene dibromide)	106-93-4	0.05	0.05	0.05			2
Dibromomethane (Methylene bromide)	74-95-3			NS			2
Dichlorodifluoromethane	75-71-8			1,000	11,000f	–	5
Diethyl Ether (Ethyl Ether)	60-29-7			1,400			5
Diisopropyl ether (DIPE)	108-20-3			120			5
Ethyl tertiary butyl ether (ETBE)	637-92-3			40			5
Hexanone (2-)	591-78-6			NS			10
Methyl-2-pentanone (4-) (MIBK)	108-10-1			2,000			10
Methyl-t-butyl Ether (MTBE)	1634-04-4	13		13			5
Tertiary amyl methyl ether (TAME)	994-05-8			140			5
Tertiary butyl alcohol (TBA) (tert-Butanol)	75-65-0			40			30
Tetrahydrofuran	109-99-9			154			10
Trichlorofluoromethane	75-69-4			2,000	11,000f	–	5

TABLE 4
Summary of Groundwater and Surface Water VOC and SVOC Standards and Reporting Limits
Merrimack Premium Outlets
Merrimack, New Hampshire

Analyte	CAS No.	Concentrations in µg/L					EAI's Typical Undiluted Reporting Limits		
		Groundwater/Drinking Standards			Surface Water Standards				
		NHDES DW	USEPA MCLs	NHDES AGQS/GW-1	Fresh Water		USEPA Method 8270C	USEPA Method 8270C-SIM	
			Acute	Chronic					
PAHs									
Acenaphthene	83-32-9			420	1,700	520	1	0.1	
Acenaphthylene	208-96-8			420			1	0.1	
Anthracene	120-12-7			2,100			1	0.1	
Benzo(a)anthracene	56-55-3			0.1			1	0.1	
Benzo(a)pyrene	50-32-8	0.2	0.2	0.2			1	0.1	
Benzo(b)fluoranthene	205-99-2			0.1			1	0.1	
Benzo(g,h,i)perylene	191-24-2			210			1	0.1	
Benzo(k)fluoranthene	207-08-9			0.5			1	0.1	
Chrysene	218-01-9			5			1	0.1	
Dibenz(a,h)anthracene	53-70-3			0.1			1	0.1	
Fluoranthene	206-44-0			280			1	0.1	
Fluorene	86-73-7			280			1	0.1	
Indeno(1,2,3-cd)pyrene	193-39-5			0.1			1	0.1	
Methylnaphthalene (2-)	91-57-6			280			1	0.1	
Naphthalene	91-20-3 (SVOC)			20	2,300	620	1	0.1	
Phenanthrene	85-01-8			210			1	0.1	
Pyrene	129-00-0			210			1	0.1	

Notes:

- "NHDES DW" Drinking Water Standards are Maximum Contaminant Levels as promulgated in New Hampshire Env-Ws 310 (November 30, 2005).
"USEPA MCLs" Drinking Water Standards are Maximum Contaminant Levels from the United States Environmental Protection Agency (USEPA) National Primary Drinking Water Standards (EPA 816-F-03-016, June 2003).
No VOCs or PAHs have NHDES- or USEPA-listed Secondary Maximum Contaminant Levels (SMCLs).
"NHDES AGQS/GW-1" Groundwater Standards are the New Hampshire Department of Environmental Services (NHDES) Ambient Groundwater Quality Standards (AGQSs) promulgated in Env-Or 600 (July 2008). AGQSs are equivalent to GW-1 Groundwater Standards as presented in the NHDES Contaminated Sites Risk Characterization and Management Policy (RCMP) (January 1998, with 2000 through 2007 revisions/addenda). The AGQS/GW-1 Groundwater Standards are intended to be protective of groundwater as a source of drinking water.
"Fresh Water Acute and Chronic" Surface Water Standards are for Protection of Aquatic Life as promulgated in New Hampshire Env-Wq 1703.21, Table 1703.1 (May 21, 2008).
"EAI's Typical Undiluted Reporting Limits" were provided by Eastern Analytical, Inc. (EAI) of Concord, New Hampshire for the analytes which will be reported for volatile organic compounds (VOCs) analyzed by USEPA Method 8260B, and polynuclear aromatic hydrocarbons (PAHs) analyzed by USEPA Method 8270C and USEPA Method 8270C in selective ion monitoring (SIM) mode. The SIM mode is typically applied to relatively uncontaminated samples.
- Concentrations are presented in micrograms per liter (µg/l) which are equivalent to parts per billion (ppb).
- "CAS No." indicates Chemical Abstract Service number.
"AVOCs" indicates aromatic VOCs.
"CVOCs" indicates chlorinated VOCs.
- "NS" indicates the analyte is not listed in the RCMP/Env-Or 600.
"*" indicates the standards shown are for total xylenes.
"***" indicates the NHDES AGQS/GW-1 Standards shown are for 1,3-dichloropropene (no isomer specified).
"#" indicates the NHDES AGQS/GW-1 Standards shown are for dibromochloropropane (no isomer specified).
"†" indicates the NHDES DW and USEPA MCL for total trihalomethanes (bromoform, bromodichloromethane, dibromochloromethane and chloroform) is 80 µg/l.
"ç" indicates the RCMP lists the AGQS for total trihalomethanes (bromoform, bromodichloromethane, dibromochloromethane and chloroform) shall be 80 µg/l if the groundwater is contaminated by chlorinated water supplies.
"a" indicates the Surface Water Standards are for chlorinated benzenes and the sum of the concentrations of each isomer/compound shall meet the appropriate aquatic life criteria.
"b" indicates the Surface Water Standards are for dichlorobenzenes and the sum of the concentrations of each isomer shall meet the appropriate aquatic life criteria.
"c" indicates the Surface Water Standards are for dichloroethylenes (dichloroethenes) and the sum of the concentrations of each isomer shall meet the appropriate aquatic life criteria.
"d" indicates the Surface Water Standards are for dichloropropanes and the sum of the concentrations of each isomer shall meet the appropriate aquatic life criteria.
"e" indicates the Surface Water Standards are for dichloropropenes and the sum of the concentrations of each isomer shall meet the appropriate aquatic life criteria.
"f" indicates the Surface Water Standards are for halomethanes and the sum of the concentrations of each isomer/compound shall meet the appropriate aquatic life criteria.
"g" indicates the Surface Water Standards are for tetrachloroethanes and the sum of the concentrations of each isomer shall meet the appropriate aquatic life criteria.
"h" indicates the Surface Water Standards are for trichlorinated ethanes and the sum of the concentrations of each isomer shall meet the appropriate aquatic life criteria.