STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION

MUNICIPAL NPDES PERMIT

Issued to

Permittee:
Town of Windham
P.O. Box 257
Willimantic, Connecticut 06226

Location Address:
Town of Windham WPCF
2 Main Street
Willimantic, Connecticut 06226

Facility ID: 163-001 **Permit ID:** CT0101001 **Permit Expires:** March 14, 2010

Receiving Stream: Shetucket River **Design Flow Rate:** 5,500,000 gpd

SECTION 1: GENERAL PROVISIONS

(A) This permit is **reissued** in accordance with Section 22a-430 of Chapter 446k, Connecticut General Statutes ("CGS"), and Regulations of Connecticut State Agencies ("RCSA") adopted thereunder, as amended, and Section 402(b) of the Clean Water Act, as amended, 33 USC 1251, et. seq., and pursuant to an approval dated September 26, 1973, by the Administrator of the United States Environmental Protection Agency for the State of Connecticut to administer a N.P.D.E.S. permit program.

(B) **The Town of Windham**, ("permittee"), shall comply with all conditions of this permit including the following sections of the RCSA, which have been adopted pursuant to Section 22a-430 of the CGS and are hereby incorporated into this permit. Your attention is especially drawn to the notification requirements of subsection (i)(2), (i)(3), (j)(1), (j)(6), (j)(8), (j)(9)(C), (j)(10)(C), (j)(11)(C), (D), (E), and (F), (k)(3) and (4) and (l)(2) of Section 22a-430-3. To the extent this permit imposes conditions which are more stringent than those found in the regulations, this permit shall apply.

Section 22a-430-3 General Conditions

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

Section 22a-430-4 Procedures and Criteria

- **(a)** Duty to Apply
- **(b)** Duty to Reapply
- **(c)** Application Requirements
- **(d)** Preliminary Review
- **(e)** Tentative Determination
- **(f)** Draft Permits, Fact Sheets
- **(g)** Public Notice, Notice of Hearing
- **(h)** Public Comments
- **(i)** Final Determination

(j) Public Hearings
(k) Submission of Plans and Specifications. Approval.
(l) Establishing Effluent Limitations and Conditions
(m) Case by Case Determinations
(n) Permit issuance or renewal
(o) Permit Transfer
(p) Permit revocation, denial or modification
(q) Variances
(r) Secondary Treatment Requirements
(s) Treatment Requirements for Metals and Cyanide
(t) Discharges to POTWs - Prohibitions

(C) Violations of any of the terms, conditions, or limitations contained in this permit may subject the permittee to enforcement action including, but not limited to, seeking penalties, injunctions and/or forfeitures pursuant to applicable sections of the CGS and RCSA.

(D) Any false statement in any information submitted pursuant to this Section of the 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-157b of the CGS.

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

(F) No provision of this permit and no action or inaction by the Commissioner shall be construed to constitute an assurance by the Commissioner that the actions taken by the permittee pursuant to this permit will result in compliance or prevent or abate pollution.

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

(H) An annual fee shall be paid for each year this permit is in effect as set forth in Section 22a-430-7 of the RCSA. As of August 20, 2003 the annual fee is **$ 2557.50**

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, except for "Composite", "No Observable Acute Effect Level (NOAEL) " and "Grab Sample Average" which are redefined below.

(B) In addition to the above, the following definitions shall apply to this permit:

"——" in the limits column on the monitoring tables in Attachment 1 means a limit is not specified but a value must be reported on the DMR, MOR, NAR, and/or the ATMR.

"Average Monthly Limit" means the maximum allowable "Average Monthly Concentration" as defined in Section 22a-430-3(a) of the RCSA when expressed as a concentration (e.g. mg/l); otherwise, it means "Average Monthly Discharge Limitation" as defined in Section 22a-430-3(a) of the RCSA.

"Bi-Weekly" means once every two weeks.

"Composite" or **"(C)"** means a sample consisting of a minimum of eight aliquot samples collected at equal intervals of no less than 30 minutes and no more than 60 minutes and combined proportionally to flow over the sampling period provided that during the sampling period the peak hourly flow is experienced.

"Critical Test Concentration" or **"(CTC)"** means the specified effluent dilution at which the permittee is to conduct a single-concentration Aquatic Toxicity Test.

"Daily Composite" or **"(DC)"** means a composite sample taken over a full operating day consisting of grab samples collected at equal intervals of no more than sixty (60) minutes and combined proportionally to flow; or, a composite sample continuously collected over a full operating day proportionally to flow.

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

"Daily Quantity" means the quantity of waste discharged during an operating day.

"Geometric Mean" is the "n"th root of the product of "n" observations.

"Grab Sample Average" means the arithmetic average of all grab sample analyses.

"Infiltration" means water other than wastewater that enters a sewer system (including sewer system and foundation drains) from the ground through such means as defective pipes, pipe joints, connections, or manholes. Infiltration does not include, and is distinguished from, inflow.

"Inflow" means water other than wastewater that enters a sewer system (including sewer service connections) from sources such as, but not limited to, roof leaders, cellar drains, yard drains, area drains, drains from springs and swampy areas, cross connections between storm sewers and sanitary sewers, catch basins, cooling towers, storm waters, surface runoff, street wash waters, or drainage. Inflow does not include, and is distinguished from, infiltration.

"Instantaneous Limit" means the highest allowable concentration of a substance as measured by a grab sample, or the highest allowable measurement of a parameter as obtained through instantaneous monitoring.

"In stream Waste Concentration" or **"(IWC)"** means the concentration of a discharge in the receiving water after mixing has occurred in the allocated zone of influence.

"Maximum Daily Limit" means the maximum allowable "Daily Concentration" (defined above) when expressed as a concentration (e.g. mg/l), otherwise, it means the maximum allowable "Daily Quantity" as defined above, unless it is expressed as a flow quantity. If expressed as a flow quantity it means "Maximum Daily Flow" as defined in Section 22a-430-3(a) of the RCSA.

"Monthly Minimum Removal Efficiency" means the minimum reduction in the pollutant parameter specified when the effluent average monthly concentration for that parameter is compared to the influent average monthly concentration.

"NA" as a Monitoring Table abbreviation means "not applicable".

"NR" as a Monitoring Table abbreviation means "not required".

"No Observable Acute Effect Level" or **"(NOAEL)"** means any concentration equal to or less than the critical test concentration in a single concentration (pass/fail) toxicity test, conducted pursuant to Section 22a-430-3(j)(7)(A)(i) of the RCSA, demonstrating greater than 90% or greater survival of test organisms at the CTC.

"Quarterly" in the context of a sampling frequency, means aquatic toxicity sampling is required in the months of February, May, August, November and sludge sampling is required in the months of March, June, September, and December.

"Range During Sampling" or **"(RDS)"** as a sample type means the maximum and minimum of all values recorded as a result of analyzing each grab sample of; 1) a Composite Sample, or, 2) a Grab Sample Average. For those permittees with pH meters that provide continuous monitoring and recording, Range During Sampling means the maximum and minimum readings recorded with the continuous monitoring device during the Composite or Grab Sample Average sample collection.

"Range During Month" or **"(RDM)"** as a sample type means the lowest and the highest values of all of the monitoring data for the reporting month.

"MGD" means million gallons per day.

"Sanitary Sewage" means wastewaters from residential, commercial and industrial sources introduced by direct connection to the sewage collection system tributary to the treatment works including non-excessive inflow/infiltration sources.

"ug/l" means micrograms per liter.
"Work Day" in the context of a sampling frequency means, Monday through Friday excluding holidays.

SECTION 3: COMMISSIONER'S DECISION

(A) The Commissioner of Environmental Protection ("Commissioner") has issued a final decision and found that continuance of the existing system to treat the discharge will protect the waters of the state from pollution. The Commissioner's decision is based on application #200300359 for permit reissuance received on February 24, 2003 and the administrative record established in the processing of that application.

(B) The Commissioner hereby authorizes the Permittee to discharge in accordance with the provisions of this permit, the above referenced application, and all approvals issued by the Commissioner or his 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, if required after Public Notice, in order to establish any appropriate effluent limitations, schedules of compliance, or other provisions which may be authorized under the Federal Clean Water Act or the CGS or regulations adopted thereunder, as amended. The permit as modified or renewed under this paragraph may also contain any other requirements of the Federal Clean Water Act or CGS or regulations adopted thereunder which are then applicable.

SECTION 4: GENERAL LIMITATIONS AND OTHER CONDITIONS

(A) The Permittee shall not accept any new sources of non-domestic wastewater conveyed to its POTW by any means other than its sanitary sewage system unless the generator of such wastewater; (a) is authorized by a permit issued by the Commissioner under Section 22a-430 CGS (individual permit), or, (b) is authorized under Section 22a-430b (general permit), or, (c) has been issued an emergency or temporary authorization by the Commissioner under Section 22a-6k. All such non-domestic wastewaters shall be processed by the POTW via receiving facilities at a location and in a manner prescribed by the permittee, which are designed to contain and control any unplanned releases.

(B) No new discharge of domestic sewage from a single source to the POTW in excess of 50,000 gallons per day may be authorized by the permittee until the discharger has registered the discharge under the general permit for domestic sewage reissued by the Commissioner on June 12, 2002 pursuant to Section 22a-430b of the CGS.

(C) The permittee shall maintain a system of user charges sufficient to operate and maintain the POTW (including the collection system) and replace critical components.

(D) The permittee shall maintain a sewer use ordinance that is consistent with the Model Sewer Ordinance for Connecticut Municipalities prepared by the Department of Environmental Protection. The Commissioner of Environmental Protection alone may authorize certain discharges, which may not conform to the Model Sewer Ordinance.

(E) No discharge shall contain, or cause in the receiving stream, a visible oil sheen or floating solids; or cause visible discoloration or foaming in the receiving stream.

(F) No discharge shall cause acute or chronic toxicity in the receiving water body beyond any Zone Of Influence (ZOI) specifically allocated to that discharge in this permit.

(G) The permittee shall maintain an alternate power source adequate to provide full operation of all pump stations in the sewage collection system and to provide a minimum of primary treatment and disinfection at the water pollution control facility to insure that no discharge of untreated wastewater will occur during a failure of a primary power source.

(H) The average monthly effluent concentration shall not exceed 15% of the average monthly influent concentration for BOD_5 and Total Suspended Solids, for all daily composite samples taken in any thirty calendar day period.

(I) Any new or increased amount of domestic sewage discharge to the sewer system is prohibited where it will cause a dry weather overflow or exacerbate an existing dry weather overflow.

(J) Sludge Conditions

(1) The permittee shall comply with all existing federal and state laws and regulations that apply to sewage sludge use and disposal practices, including but not limited to 40 CFR Part 503.

(2) If an applicable management practice or numerical limitation for pollutants in domestic sewage sludge more stringent than existing federal and state regulations is promulgated under Section 405(d) of the Clean Water Act (CWA), this permit shall be modified or revoked and reissued to conform to the promulgated regulations.

(3) The permittee shall give prior notice to the Commissioner of any change(s) planned in the permittee's sludge use or disposal practice. A change in the permittee's sludge use or disposal practice may be a cause for modification of the permit.

(K) The 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 exceedence of permit limits will be considered non-compliance.

(L) When the arithmetic mean of the average daily flow from the POTW for the previous 180 days exceeds 90% of the design flow rate, the permittee shall develop and submit for the review of the Commissioner within one year, a plan to accommodate future increases in flow to the plant. This plan shall include a schedule for completing any recommended improvements and a plan for financing the improvements.

(M) When the arithmetic mean of the average daily BOD_5, or TSS loading into the POTW for the previous 180 days exceeds 90% of the design load rate, the permittee shall develop and submit for the review of the Commissioner within one year, a plan to accommodate future increases in load to the plant. This plan shall include a schedule for completing any recommended improvements and a plan for financing the improvements.

(N) On or before July 31st of each calendar year the main flow meter shall be calibrated in accordance with the manufacturers' specifications. The actual record of the calibration shall be retained onsite and, upon request, the permittee shall submit to the Commissioner a copy of that record.

(O) The permittee shall operate and maintain all processes as installed in accordance with the approved plans and specifications and as outlined in the associated operation and maintenance manual. The permittee shall operate all process equipment at all times in such a manner as to reduce discharges to the maximum extent possible. This includes but is not limited to all recycle pumping systems, aeration equipment, aeration tank cycling, mixing equipment, anoxic basin, chemical feed systems, effluent filters or any other process equipment necessary for the optimal removal of pollutants. The permittee shall not bypass or fail to operate any of the approved equipment or processes without the written approval of the Commissioner.

(P) The permittee is hereby authorized to accept septage at the treatment facility; or other locations as approved by the Commissioner.

(Q) The temperature of any discharge shall not increase the temperature of the receiving stream above 85°F, or, in any case, raise the normal temperature of the receiving stream more than 4°F.

SECTION 5: SPECIFIC EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

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

(B) The Permittee shall monitor the performance of the treatment process in accordance with the Monthly Operating Report (MOR) and the Nutrient Analysis Report (NAR) incorporated in this permit as Attachment 2, Tables A and B, respectively.

SECTION 6: SAMPLE COLLECTION, HANDLING and ANALYTICAL TECHNIQUES

(A) Chemical Analysis

(1) Chemical analyses to determine compliance with effluent limits and conditions established in this permit, shall be performed using the methods approved pursuant to the Code of Federal Regulations, Part 136 of title 40 (40 CFR 136) unless an alternative method has been approved in writing pursuant to 40 CFR 136.4 or as provided in Section 22a-430-3-(j)(7) of the RCSA. Chemicals, which do not have methods of analysis, defined in 40 CFR 136 or the RCSA shall be analyzed in accordance with methods specified in this permit.

(2) All metals analyses identified in this permit shall refer to analyses for Total Recoverable Metal, as defined in 40 CFR 136 unless otherwise specified.

(3) Grab samples shall be taken during the period of the day when the peak hourly flow is normally experienced.

(4) Samples collected for bacteriological examination shall be collected between the hours of 11 a.m. and 3 p.m. or at that time of day when the peak hourly flow is normally experienced.

(5) The Minimum Levels specified below represent the concentrations at which quantification must be achieved and verified during the chemical analyses for the parameters identified in Attachment 1, Table B. Analyses for these parameters must include check standards within ten percent of the specified Minimum Level or calibration points equal to or less than the specified Minimum Level.

Parameter	Minimum Level
Arsenic, Total	0.005 mg/l
Beryllium, Total	0.001 mg/l
Chlorine, Total Residual	0.050 mg/l
Chromium, Hex	0.010 mg/l
Mercury, Total	0.0002 mg/l
Silver, Total	0.002 mg/l

(6) The value of each parameter for which monitoring is required under this permit shall be reported to the maximum level of accuracy and precision possible consistent with the requirements of this Section of the permit.

(7) Effluent analyses for which quantification was verified during the analysis at or below the minimum levels specified in this Section and which indicate that a parameter was not detected shall be reported as "less than x" where 'x' is the numerical value equivalent to the analytical method detection limit for that analysis.

(8) Results of effluent analyses which indicate that a parameter was not present at a concentration greater than or equal to the Minimum Level specified for that analysis shall be considered equivalent to zero (0.0) for purposes of determining compliance with effluent limitations or conditions specified in this permit.

(B) Acute Aquatic Toxicity Test

(1) Samples for monitoring of Aquatic Toxicity shall be collected and handled as prescribed in "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms" (EPA/600/4-90/027F).

(a) Composite samples shall be chilled as they are collected. Grab samples shall be chilled immediately following collection. Samples shall be held at 0-6°C until Aquatic Toxicity testing is initiated.

(b) Samples shall be taken of the final effluent for Aquatic Toxicity unless otherwise approved in writing by the Commissioner for monitoring at this facility.

(c) Chemical analyses of the parameters identified in Attachment 1, Table B shall be conducted on an aliquot of the same sample tested for Aquatic Toxicity.

(i) At a minimum, pH, specific conductance, total alkalinity, total hardness, and total residual chlorine shall be measured in the effluent sample and, during Aquatic Toxicity tests, in the highest concentration of the test and in the dilution (control) water at the beginning of the test and at test termination. Dissolved oxygen, pH, and temperature shall be measured in the control and all test concentrations at the beginning of the test, daily thereafter, and at test termination.

(d) Tests for Aquatic Toxicity shall be initiated within 36 hours of sample collection.

(2) Monitoring for Aquatic Toxicity to determine compliance with the permit condition on Aquatic Toxicity (invertebrate) shall be conducted for 48 hours utilizing neonatal (less than 24 hours old) *Daphnia pulex*.

(3) Monitoring for Aquatic Toxicity to determine compliance with the permit condition on toxicity (vertebrate) shall be conducted for 48 hours utilizing larval (1 to 14-day old with no more than 24 hours range in age) *Pimephales promelas*.

(4) Tests for Aquatic Toxicity shall be conducted as prescribed for static non-renewal acute tests in "Methods for measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms" (EPA/600/4-90/027F), except as specified below.

(a) For Aquatic Toxicity limits, and for monitoring only conditions, expressed as a NOAEL value, Pass/Fail (single

concentration) tests shall be conducted at a specified Critical Test Concentration (CTC) equal to the Aquatic Toxicity limit, (100% in the case of monitoring only conditions), as prescribed in Section 22a-430-3(j)(7)(A)(i) of the RCSA.

(b) Organisms shall not be fed during the tests.

(c) Synthetic freshwater prepared with deionized water adjusted to a hardness of 50±5 mg/L as $CaCO_3$ shall be used as dilution water in the tests.

(d) Copper nitrate shall be used as the reference toxicant.

(5) For monitoring only conditions compliance shall be demonstrated when the results of a valid pass/fail Aquatic Toxicity Test indicates 90% or greater survival in the effluent at the CTC (100%).

SECTION 7: RECORDING AND REPORTING REQUIREMENTS

(A) The results of chemical analyses and any aquatic toxicity test required above in Section 5 and the referenced Attachment 1 shall be entered on the Discharge Monitoring Report (DMR) and reported to the Bureau of Water Management. The report shall also include a detailed explanation of any violations of the limitations specified. The DMR must be received at the following address by the 15th day of the month following the month in which samples are collected.

ATTN: Municipal Wastewater Monitoring Coordinator
Connecticut Department of Environmental Protection
Bureau of Water Management, Planning and Standards Division
79 Elm Street
Hartford, Connecticut 06106-5127

(1) For composite samples, from other than automatic samplers, the instantaneous flow and the time of each aliquot sample collection shall be recorded and maintained at the POTW.

(B) Complete and accurate test data, including percent survival of test organisms in each replicate test chamber, LC_{50} values and 95% confidence intervals for definitive test protocols, and all supporting chemical/physical measurements performed in association with any aquatic toxicity test, shall be entered on the Aquatic Toxicity Monitoring Report form (ATMR) and sent to the Bureau of Water Management at the address specified above in Section 7 (A) of this permit by the 15th day of the month following the month in which samples are collected.

(C) The results of the process monitoring required above in Section 5 shall be entered on the Monthly Operating Report (MOR) and Nutrient Analysis Report (NAR) forms, included herein as Attachment 2, Tables A and B, respectively, and reported to the Bureau of Water Management. The MOR report shall also be accompanied by a detailed explanation of any violations of the limitations specified. The MOR and NAR must be received at the address specified above in Section 7 (A) of this permit by the 15th day of the month following the month in which the data and samples are collected.

SECTION 8: RECORDING AND REPORTING OF VIOLATIONS, ADDITIONAL TESTING REQUIREMENTS

(A) If any sample analysis indicates toxicity, or that the test was invalid, a second sample of the effluent shall be collected and tested for Aquatic Toxicity and associated chemical parameters, as described above in Section 5 and Section 6, and the results reported to the Bureau of Water Management (Attn: Aquatic Toxicity) via the ATMR form (see Section 7 (B)) within 30 days of the previous test. These test results shall also be reported on the next months DMR report pursuant to Section 7 (A). The results of all toxicity tests and associated chemical parameters, valid and invalid shall be reported.

(B) If any two consecutive test results or any three test results in a twelve month period indicates toxicity, the permittee shall immediately take all reasonable steps to eliminate toxicity wherever possible and shall submit a report, to the Bureau of Water Management (Attn: Aquatic Toxicity), for the review and written approval of the Commissioner in accordance with Section 22a-430-3(j)(10)(c) of the RCSA describing proposed steps to eliminate the toxic impact of the discharge on the receiving water body. Such a report shall include a proposed time schedule to accomplish toxicity reduction and the permittee shall comply with any schedule approved by the Commissioner.

(C) Section 22a-430-3(k) of the RCSA shall apply in all instances of bypass including a bypass of the treatment plant or a component of the sewage collection system planned during required maintenance. The Department of Environmental Protection, Bureau of

Water Management, Planning and Standards Division (860) 424-3704, the Department of Public Health, Water Supply Section (860) 509-7333 and Recreation Section (860) 509-7297, and the local Director of Health shall be notified within 2 hours by telephone during normal business hours and a written report submitted to the Commissioner within five days of each occurrence, or potential occurrence, of an emergency diversion or bypass of untreated or partially treated sewage.

The written report shall contain:

(a) The nature and cause of the diversion, bypass or treatment component failure,

(b) the time the incident occurred and the anticipated time which it is expected to continue or, if the condition has been corrected, the duration,

(c) the estimated volume of the bypass or discharge of partially treated domestic sewage,

(d) the steps being taken to reduce or minimize the effect on the receiving waters, and

(e) the steps that will be taken to prevent reoccurrence of the condition in the future.

(D) Section 22a-430-3(j) of the RCSA shall apply in the event of any noncompliance with a maximum daily limit and/or any noncompliance that is greater than two times any permit limit. The permittee shall notify in the same manner as in paragraph C of this Section, the Department of Environmental Protection, Bureau of Water Management, Planning and Standards Division except, if the failure occurs outside normal working hours (8:30 a.m. to 4:30 p.m. Monday through Friday) the permittee may wait to make the verbal report until 10:30 am of the next business day.

(E) Section 22a-430-3(j) of the RCSA shall apply in all instances of monitoring equipment failures. In the event of any failure of the monitoring equipment including, but not limited to, loss of refrigeration or loss of flow proportion sampling ability, the permittee shall notify in the same manner as in paragraph C of this Section, the Department of Environmental Protection, Bureau of Water Management, Planning and Standards Division except, if the failure occurs outside normal working hours (8:30 a.m. to 4:30 p.m. Monday through Friday) the permittee may wait to make the verbal report until 10:30 am of the next business day.

(F) In addition to the reporting requirements contained in Section 22a-430-3(i), (j), and (k) of the Regulations of Connecticut State Agencies, the permittee shall notify in the same manner as in paragraph C of this Section, the Department of Environmental Protection, Bureau of Water Management, Planning and Standards Division, Municipal Facilities Section (860) 424-3704 concerning the failure of any major component of the treatment facilities which the permittee may have reason to believe would result in an effluent violation. If the failure occurs outside normal working hours (8:30 a.m. to 4:30 p.m. Monday through Friday), notification shall be made within 2 hours of learning of the event to the Emergency Response Unit at (860) 424-3338 and the Department of Public Health at (860) 509-8000.

This permit is hereby issued on 3/15/05

Gina McCarthy
Commissioner

ATTACHMENT 1

Tables A through F

TABLE A

Discharge Serial Number (DSN): **001-1**	Monitoring Location: **1**
Wastewater Description: **Sanitary Sewage**	
Monitoring Location Description: **Final Effluent**	
Allocated Zone of Influence (ZOI): **43.7 cfs**	In stream Waste Concentration (IWC): **16.31%**

PARAMETER	Units	FLOW/TIME BASED MONITORING				INSTANTANEOUS MONITORING			REPORT FORM	Minimum Level Analysis See Section 6
		Average Monthly Limit	Maximum Daily Limit	Sample Freq.	Sample Type	Instantaneous Limit or Required Range	Sample Freq.	Sample Type		
Alkalinity	mg/l	NA	NA	NR	NA	------	Monthly	Grab	MOR	
Biochemical Oxygen Demand (5 day)	mg/l	30mg/l and 15% of Influent [1]	50	3 per week	Daily Composite	NA	NR	NA	DMR/MOR	
Chlorine, Total Residual, May 1st through September 30th [4]	mg/l	0.05[3]	0.10[3]	4/ Work Day	Grab	0.20	4/ Work Day	Grab	DMR/MOR	*
Fecal Coliform, May 1st through September 30th	Per100 ml	NA	NA	NR	NA	see remarks (a) and (b) below	3 per week	Grab	DMR/MOR	
Flow, Average Daily	MGD	5.5	------	Continuous[2]	Daily Flow	NA	NR	NA	DMR/MOR	
Nitrogen, Ammonia (total as N)	mg/l	NA	------	Monthly	Daily Composite	NA	NR	NA	NAR	
Nitrogen, Nitrate (total as N)	mg/l	NA	------	Monthly	Daily Composite	NA	NR	NA	NAR	
Nitrogen, Nitrite (total as N)	mg/l	NA	------	Monthly	Daily Composite	NA	NR	NA	NAR	
Nitrogen, Total Kjeldahl	mg/l	NA	------	Monthly	Daily Composite	NA	NR	NA	NAR	
Nitrogen, Total	mg/l	NA	------	Monthly	Daily Composite	NA	NR	NA	NAR	
PH	S.U.	NA	NA	NR	NA	6 - 9	Workday	Grab	DMR/MOR	
Phosphate, Ortho	mg/l	NA	------	Monthly	Daily Composite	NA	NR	NA	NAR	
Phosphorus, Total	mg/l	NA	------	Monthly	Daily Composite	NA	NR	NA	NAR	
Solids, Settleable	ml/l	NA	NA	NA	NA	------	Workday	Grab	MOR	
Solids, Total Suspended	mg/l	30mg/l and 15% of Influent [1]	50	3 per week	Daily Composite	NA	NA	NA	DMR/MOR	
Temperature	°F	NA	NA	NR	NA	------	Workday	Grab	MOR	

Turbidity	NTU	NA	NA	NA	NA	------	Workday	Grab	MOR	
UV Dose, May 1st through September 30th [5]	$mW,s/cm^2$	NA	NA	NA	NA	≥30,000	4/Work Day	Grab	MOR	
UV Transmittance, May 1st through September 30th [5]	%	NA	NA	NA	NA	------	4/Work Day	Grab	MOR	

TABLE A - CONDITIONS

Footnotes:

[1] The discharge shall meet the more stringent of 30 mg/l or 15% of the average monthly influent BOD_5 and 30 mg/l or 15% of the average monthly suspended solids (Table D, Monitoring Location G).

[2] The permittee shall record and report on the MOR the minimum, maximum and total flow for each day of discharge. The permittee shall report, on the discharge monitoring report, the average daily flow for each sampling month.

[3] The Maximum Daily Concentration to be reported shall be determined by mathematically averaging the results of the four grab samples required above. The Average Monthly Concentration shall be determined by mathematically averaging the results of the Maximum Daily Concentrations required above.

[4] During the period beginning at the date of issuance of this permit and lasting until the initiation of ultraviolet disinfection and decommissioning of chlorine disinfection at the Water Pollution Control Facility, the discharge shall not exceed and shall otherwise conform to specific terms and conditions listed.

[5] During the period beginning after the initiation of ultraviolet disinfection at the Water Pollution Control Facility, lasting until expiration, the discharge shall also not exceed and shall otherwise conform to the specific terms and conditions listed.

Remarks:

(a) The geometric mean of the fecal Coliform bacteria values for the effluent samples collected in a period of thirty (30) consecutive days shall not exceed 200 per 100 milliliters.

(b) The geometric mean of the fecal Coliform bacteria values for the effluent samples collected in a period of seven (7) consecutive days shall not exceed 400 per 100 milliliters.

(c) The Average Weekly discharge Limitation for BOD_5 and Total Suspended Solids shall be 1.5 times the Average Monthly Limit listed above.

TABLE B

Discharge Serial Number (DSN): **001-1**

Monitoring Location: **T**

Wastewater Description: **Sanitary Sewage**

Monitoring Location Description: **Final effluent prior to chlorination (before completion of UV)**
Final effluent after disinfection (after completion of UV)

Allocated Zone of Influence (ZOI): **43.7 cfs**

In stream Waste Concentration (IWC): **16.31%**

PARAMETER	Units	Maximum Daily Limit	Sampling Frequency	Sample Type	Reporting form	Minimum Level Analysis See Section 6
Antimony, Total	mg/l	----	Quarterly	Daily Composite	ATMR	
Aquatic Toxicity, *Daphnia pulex* [1]	%	----	Quarterly	Daily Composite	ATMR/DMR	
Aquatic Toxicity, *Pimephales promelas* [1]	%	----	Quarterly	Daily Composite	ATMR/DMR	
Arsenic, Total	mg/l	----	Quarterly	Daily Composite	ATMR	*
Beryllium, Total	mg/l	----	Quarterly	Daily Composite	ATMR	*
Cadmium, Total	mg/l	----	Quarterly	Daily Composite	ATMR	
Chromium, Hexavalent	mg/l	----	Quarterly	Daily Composite	ATMR	*
Chromium, Total	mg/l	----	Quarterly	Daily Composite	ATMR	
Chlorine, Total Residual	mg/l	----	Quarterly	Daily Composite	ATMR	*
Copper, Total	mg/l	----	Quarterly	Daily Composite	ATMR	
Cyanide, Amenable	mg/l	----	Quarterly	Daily Composite	ATMR	
Cyanide, Total	mg/l	----	Quarterly	Daily Composite	ATMR	
Lead, Total	mg/l	----	Quarterly	Daily Composite	ATMR	
Mercury, Total	mg/l	----	Quarterly	Daily Composite	ATMR	*
Nickel, Total	mg/l	----	Quarterly	Daily Composite	ATMR	
Nitrogen, Ammonia (total as N)	mg/l	----	Quarterly	Daily Composite	ATMR	
Nitrogen, Nitrate, (total as N)	mg/l	----	Quarterly	Daily Composite	ATMR	
Nitrogen, Nitrite, (total as N)	mg/l	----	Quarterly	Daily Composite	ATMR	
Phenols, Total	mg/l	----	Quarterly	Daily Composite	ATMR	
Selenium, Total	mg/l	----	Quarterly	Daily Composite	ATMR	
Silver, Total	mg/l	----	Quarterly	Daily Composite	ATMR	*
Thallium, Total	mg/l	----	Quarterly	Daily Composite	ATMR	
Zinc, Total	mg/l	----	Quarterly	Daily Composite	ATMR	

Remarks: [1]The results of the Toxicity Tests are recorded in % survival, however, the permittee shall report pass/fail on the DMR based on criteria in Section 6(B) of this permit.

TABLE C

Discharge Serial Number: **001-1**	Monitoring Location: N
Wastewater Description:	**Secondary treatment**
Monitoring Location Description:	**Each Aeration Unit**

PARAMETER	INSTANTANEOUS MONITORING		REPORTING FORM
	Sample Frequency	Sample Type	
Oxygen, Dissolved	WorkDay	Grab	MOR
Sludge Volume Index	WorkDay	Grab	MOR
Mixed Liquor Suspended Solids	WorkDay	Grab	MOR

TABLE D

Discharge Serial Number: **001-1**	Monitoring Location:: **G**
Wastewater Description: **Sanitary Sewage**	
Monitoring Location Description: **Influent**	

PARAMETER	Units	FLOW/TIME BASED MONITORING		INSTANTANEOUS MONITORING		REPORTING FORM
		Sample Frequency	Sample Type	Sample Frequency	Sample Type	
Biochemical Oxygen Demand (5 day)	mg/l	3 per week	Daily Composite	NA	NA	DMR/MOR
Nitrogen, Ammonia (total as N)	mg/l	Monthly	Daily Composite	NA	NA	NAR
Nitrogen, Nitrate (total as N)	mg/l	Monthly	Daily Composite	NA	NA	NAR
Nitrogen, Nitrite (total as N)	mg/l	Monthly	Daily Composite	NA	NA	NAR
Nitrogen, TKN	mg/l	Monthly	Daily Composite	NA	NA	NAR
Nitrogen, Total	mg/l	Monthly	Daily Composite	NA	NA	NAR
pH	S.U.	NA	NA	work day	Grab	MOR
Solids, Total Suspended	mg/l	3 per Week	Daily Composite	NA	NA	DMR/MOR
Temperature	F	NA	NA	work day	Grab	MOR

TABLE E

Discharge Serial Number:	**001-1**	Monitoring Location:	**P**
Wastewater Description:	**Primary Effluent**		
Monitoring Location Description:	**Primary Sedimentation Basin Effluent**		

PARAMETER	Units	TIME/FLOW BASED MONITORING		INSTANTANEOUS MONITORING		REPORTING FORM
		Sample Frequency	Sample Type	Sample Frequency	Sample type	
Alkalinity, Total	mg/l	NA	NA	Weekly	Grab	MOR
Biochemical Oxygen Demand (5 day)	mg/l	Weekly	Composite	NA	NA	MOR
Nitrogen, Ammonia (total as N)	mg/l	Monthly	Composite	NA	NA	NAR
Nitrogen, Nitrate (total as N)	mg/l	Monthly	Composite	NA	NA	NAR
Nitrogen, Nitrite (total as N)	mg/l	Monthly	Composite	NA	NA	NAR
Nitrogen, TKN	mg/l	Monthly	Composite	NA	NA	NAR
Nitrogen, Total	mg/l	Monthly	Composite	NA	NA	NAR
pH	S.U.	NA	NA	Weekly	Grab	MOR
Solids, Total Suspended	mg/l	Weekly	Composite	NA	NA	MOR

TABLE F			
Discharge Serial Number: 001-1	Monitoring Location: S		
Wastewater Description: Dewatered Sludge			
Monitoring Location Description: dewatered sludge			
PARAMETER	INSTANTANEOUS MONITORING		REPORTING FORM
	Units	Grab Sample Freq.	
Arsenic, Total	mg/kg	Quarterly	DMR
Beryllium, Total	mg/kg	Quarterly	DMR
Cadmium, Total	mg/kg	Quarterly	DMR
Chromium, Total	mg/kg	Quarterly	DMR
Copper, Total	mg/kg	Quarterly	DMR
Lead, Total	mg/kg	Quarterly	DMR
Mercury, Total	mg/kg	Quarterly	DMR
Nickel, Total	mg/kg	Quarterly	DMR
Nitrogen, Ammonia *	mg/kg	Quarterly	DMR *
Nitrogen, Nitrate (total as N) *	mg/kg	Quarterly	DMR *
Nitrogen, Organic *	mg/kg	Quarterly	DMR *
Nitrogen, Nitrite (total as N) *	mg/kg	Quarterly	DMR *
Nitrogen, Total *	mg/kg	Quarterly	DMR *
pH *	S.U.	Quarterly	DMR *
Polychlorinated Biphenyls	mg/kg	Quarterly	DMR
Solids, Fixed	%	Quarterly	DMR
Solids, Total	%	Quarterly	DMR
Solids, Volatile	%	Quarterly	DMR
Zinc, Total	mg/kg	Quarterly	DMR

(*) required for composting or land application only

ATTACHMENT 2

MONTHLY OPERATING REPORT FORM
AND
NUTRIENT ANALYSIS REPORT

The MOR form must include lines for Primary Effluent and Final Effluent Alkalinity and a Statement of Acknowledgement block for signature. See attached DEP form as an example.

TABLE B

Nutrient Analysis Report

WINDHAM WPCF Permit # CT0101001 Flow Rate _____mgd Sampling Date __/__/__

Parameter	Raw Influent		Primary Effluent		Final Effluent		Plant Efficiency
	mg/l	lbs/day	mg/l	lbs/day	mg/l	lbs/day	%
Ammonia							
Nitrite							
Nitrate							
TKN							
Total Nitrogen = TKN + nitrite + nitrate							
Orthophosphates							
Total Phosphorus							

Notes: lbs/day = 8.34 x flow (mgd) x mg/l of pollutant
Flow = Total daily flow on sampling date (mgd)
Plant Efficiency = 100% x (raw influent – final effluent) / raw influent

DATA TRACKING AND TECHNICAL FACT SHEET

Permittee: Town of Windham **PAMS Company ID**: 92490

PERMIT, ADDRESS, AND FACILITY DATA

PERMIT #: CT0101001 **APPLICATION #:** 200300359 **FACILITY ID.** 163-001

Mailing Address:	Location Address:
Street: P.O. Box 257	Street: 2 Main Street
City: Willimantic ST: CT Zip: 06226	City: Willimantic ST: CT Zip: 06226
Contact Name: Dave Garand	Contact Name: Dave Garand
Phone No.: 860-465-3078	Phone No.: 860-465-3078

PERMIT INFORMATION

DURATION 5 YEAR _X_ 10 YEAR __ 30 YEAR

TYPE New _ Reissuance _X_ Modification

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

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

NPDES MAJOR **(MA)** _X_
NPDES SIGNIFICANT MINOR or PRETREAT SIU **(SI)**
NPDES or PRETREATMENT MINOR **(MI)**

COMPLIANCE SCHEDULE YES_ NO _X_
POLLUTION PREVENTION __ TREATMENT REQUIREMENT__ WATER QUALITY REQUIREMENT ____OTHER

OWNERSHIP CODE
Private __ Federal __ State __ Municipal (town only) _X_ Other public

DEP STAFF SENIOR ENVIRONMENTAL ANALYST III Joseph F. Nestico

PERMIT FEES

Discharge Code	DSN Number	Annual Fee
111000d	001-1	$2557.50

FOR NPDES DISCHARGES
Drainage basin Code: 3800 Present/Future Water Quality Standard: SB/SB

NATURE OF BUSINESS GENERATING DISCHARGE
Domestic Sewage Treatment

PROCESS AND TREATMENT DESCRIPTION (by DSN)
DSN 001-1 upon completion of the proposed Facility Plan, the Windham WPCF will consist of Advanced Waste Biological Treatment (Nitrification), UV Disinfection, Solids that are thickened and incinerated (offsite municipal incinerator),

construction of additional septage and grease receiving and odor control.

RESOURCES USED TO DRAFT PERMIT

X_ *Federal Effluent Limitation Guideline* *40CFR 133*
Secondary Treatment Category

__ *Performance Standards*

_ *Federal Development Document* _____
name of category

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 *Secondary Treatment*

_ *Case by Case Determination (See Other Comments)*

X_ *Section 22a-430-4(r) of the Regulations of Connecticut State Agencies*

X_ *In order to meet in-stream water quality (See General Comments)*

_ *Anti-degradation policy*

GENERAL COMMENTS

The need for inclusion of water quality based discharge limitations in this permit was evaluated consistent with Connecticut Water Quality Standards and criteria, pursuant to 40 CFR 122.44(d). Each parameter was evaluated for consistency with the available aquatic life criteria (acute and chronic) and human health (fish consumption only) criteria, considering the zone of influence allocated to the facility where appropriate. The statistical procedures outlined in the EPA Technical Support Document for Water Quality-based Toxics Control (EPA/505/2-90-001) were employed to calculate the need for such limits. Comparison of monitoring data and its inherent variability with the calculated water quality based limits indicated no statistical probability of exceeding such limits. Therefore, water quality based limits for metals were not included in the permit at this time.

WQB LIMITS: Windham

Discharger:	Windham		by: thaze, 8/16/2004, 11:13
Receiving Water:	Willimantic River	CURRENT CONDITIONS	
Design Flow:	5.500 MGD	Avg. Flow:	2.100 MGD
Allocated ZOI:	43.70 CFS	Max. Flow:	2.700 MGD
Samples/Month:	4	IWC:	16.31 %

WQB Limits - Site Specific

Compound	C.V.	AML ug/l	MDL ug/l	AML kg/d	MDL kg/d	LIMIT? ML?
Ammonia	0.6	7.18E+03	1.44E+04	1.50E+02	3.00E+02	
Antimony	0.6	8.04E+03	1.61E+04	1.67E+02	3.36E+02	
Arsenic	0.5	2.10E-02	3.87E-02	4.38E-04	8.07E-04	ML
Beryllium	0.6	7.98E-01	1.60E+00	1.66E-02	3.33E-02	ML
Cadmium	1.8	4.11E+00	1.24E+01	8.57E-02	2.58E-01	
Chlorine	0.6	5.53E+01	1.11E+02	1.15E+00	2.31E+00	
Chromium (hex)	0.8	4.28E+01	9.82E+01	8.93E-01	2.05E+00	ML
Chromium (tri)	1.0	1.87E+02	4.71E+02	3.89E+00	9.81E+00	
Copper	0.5	8.55E+01	1.58E+02	1.78E+00	3.28E+00	
Cyanide (amen)	0.4	2.79E+01	4.67E+01	5.81E-01	9.73E-01	
Lead	0.6	6.03E+00	1.21E+01	1.26E-01	2.52E-01	
Mercury	1.7	3.13E-01	9.31E-01	6.52E-03	1.94E-02	ML
Nickel	0.8	1.36E+02	3.13E+02	2.84E+00	6.51E+00	
Phenol	2.1	6.73E+03	2.71E+04	1.82E+02	5.64E+02	
Selenium	0.7	2.43E+01	5.25E+01	5.07E-01	1.09E+00	
Silver	0.5	3.39E+00	6.26E+00	7.07E-02	1.30E-01	ML
Thallium	0.4	3.87E+01	6.47E+01	8.05E-01	1.35E+00	
Zinc	0.3	2.66E+02	3.99E+02	5.54E+00	8.31E+00	

Current Conditions

Compound	# DETECTS	AMC ug/l	MMC ug/l	AMM kg/d	MMM kg/d
Ammonia	18	9.93E+00	2.00E+01		
Antimony	0	6.10E+00	1.00E+01	4.85E-02	1.02E-01
Arsenic	0	3.60E+00	1.00E+01	2.86E-02	1.02E-01
Beryllium	0	1.70E+00	4.00E+00	1.35E-02	4.09E-02
Cadmium	0	2.00E+01	2.50E+00	1.59E-01	2.56E-02
Chlorine				0.00E+00	3.07E+00
Chromium (hex)	1	2.43E+01	5.00E+01	1.93E-01	5.11E-01
Chromium (tri)	2	2.90E+00	1.00E+01	2.31E-02	1.02E-01
Copper	14	8.60E+00	2.00E+01	6.84E-02	2.05E-01
Cyanide (amen)	0	1.28E+01	2.00E+01	1.02E-01	2.05E-01
Lead	12	2.40E+00	5.70E+00	1.91E-02	5.83E-02
Mercury	1	4.00E-01	2.90E+00	3.18E-03	2.97E-02
Nickel	3	3.20E+00	1.00E+01	2.55E-02	1.02E-01
Phenol	4	6.11E+01	5.40E+02	4.86E-01	5.52E+00
Selenium	0	5.90E+00	1.00E+01	4.69E-02	1.02E-01
Silver	2	1.60E+00	4.00E+00	1.27E-02	4.09E-02
Thallium	0	2.20E+00	5.00E+00	1.75E-02	5.11E-02
Zinc	17	6.21E+01	1.10E+02	4.94E-01	1.13E+00

FINAL PERMIT CONDITIONS

Final WQB Limits

	AML (kg/d)	MDL (kg/d)

Interim WQB Limits

	AML (kg/d)	MDL (kg/d)

Minimum Levels

Silver	0.002 mg/L
Mercury	0.0002 mg/L
Chromium (hex)	0.010 mg/L
Beryllium	0.001 mg/L
Arsenic	0.005 mg/L

Effluent Chemistry: Windham WPCF

as of Tuesday, June 22, 2004

Design Flow 5.5 MGD

Avg. Monthly Flow: 2.1 MGD
Max. Monthly Flow: 2.7 MGD

Receiving Waterbody: Willimantic River
Allocated ZOI: 43.7 cfs
Database IWC: 16.3%

Date	BOD	TSS	NH3	NO2	NO3	CNT	CNA	BE	AS	CD	CR6	CR3	CU	PB	TH	NI	AG	ZN	AN	SE	PHEN	HG
2/3/1999	9.40	7.20	6.80	< 0.100	1.20	< 20.0	< 20.0	< 2.0	< 2.0	< 2.0	< 20.0	< 2.0	8.6	< 2.0	< 2.0	< 3.0	< 2.0	< 50.0	< 2.0	< 2.0	< 30.0	< 0.2
8/4/1999	4.00	6.00	6.80	1.200	2.90	< 20.0	< 20.0	< 2.0	< 2.0	< 2.0	< 20.0	< 2.0	5.7	4.3	< 2.0	< 3.0	< 2.0	67.0	< 2.0	< 2.0	540.0	< 0.2
11/10/1999	19.00	10.00	5.60	0.300	0.21	< 20.0	< 20.0	< 1.0	< 2.0	< 2.0	< 50.0	< 2.0	14.0	< 2.0	< 2.0	< 3.0	< 2.0	87.0	< 3.0	< 2.0	280.0	< 0.2
2/2/2000	39.00	9.00	13.00	< 0.100	0.45	< 20.0	< 20.0	< 2.0	< 2.0	< 2.0	< 50.0	5.2	< 4.0	< 2.0	< 2.0	< 3.0	< 2.0	73.0	< 3.0	< 2.0	< 27.0	< 0.2
5/3/2000	13.00	10.00	16.00	< 0.100	< 0.10	< 20.0	< 20.0	< 2.0	< 2.0	< 2.0	< 50.0	< 2.0	< 4.0	3.2	< 2.0	< 3.0	< 2.0	< 50.0	< 2.0	< 2.0	< 30.0	< 0.2
8/2/2000	53.00	9.00	17.00	0.710	2.00	< 10.0	< 10.0	< 1.0	< 2.0	< 2.0	< 50.0	< 2.0	7.2	2.8	< 2.0	< 3.0	< 2.0	91.0	< 3.0	< 2.0	< 30.0	2.9
11/8/2000	29.00	5.00	11.00	0.160	2.40	< 10.0	< 10.0	< 1.0	<10.0	< 20.0	< 50.0	<10.0	<10.0	5.7	< 5.0	< 10.0	< 4.0	110.0	< 10.0	< 10.0	31.0	< 0.2
2/7/2001	< 12.00	5.00	14.00	0.011	0.24	< 10.0	< 10.0		< 2.0	< 2.0	< 50.0	<10.0	<10.0	< 4.0		< 10.0	< 2.0	50.0			33.0	< 0.2
5/16/2001	26.00	12.00	13.00	0.210	18.00	< 10.0	< 10.0	< 4.0	< 4.0	< 5.0	< 10.0	< 5.0	10.0	1.0	< 2.0	< 5.0	3.0	68.0	< 5.0	< 5.0	< 15.0	< 0.2
8/9/2001	9.20	27.00	0.22	0.120	2.30	< 10.0	< 10.0	< 4.0	< 4.0	< 5.0	30.0	< 5.0	8.0	3.0	< 2.0	< 5.0	< 1.0	78.0	< 5.0	< 5.0	< 15.0	< 0.2
2/13/2002	14.00	13.00	1.40	0.290	1.90	< 10.0	< 10.0	< 1.0	< 4.0	< 1.0	< 10.0	< 1.0	9.0	2.0	< 2.0	< 1.0	< 1.0	53.0	< 10.0	< 10.0	< 15.0	< 0.2
5/1/2002	8.00	8.00	0.14	< 0.010	< 0.10	< 10.0	< 10.0	< 1.0	< 4.0	< 0.5	< 10.0	< 1.0	9.0	1.0	< 2.0	2.0	< 1.0	57.0	< 10.0	< 10.0	< 15.0	< 0.2
8/7/2002	8.50	13.00	20.00	<10.000	80.00	< 10.0	< 10.0	< 1.0	< 4.0	< 0.5	< 10.0	< 1.0	7.0	1.0	< 2.0	< 1.0	< 1.0	29.0	< 10.0	< 10.0	< 15.0	< 0.2
11/13/2002	13.00	27.00	17.00	< 0.010	0.08	< 10.0	< 10.0	< 1.0	< 4.0	< 1.0	< 1.0	< 1.0	20.0	3.0	< 2.0	2.0	< 1.0	43.0	< 10.0	< 10.0	< 15.0	< 0.8
2/5/2003	21.00	10.00	12.00	< 0.010	0.10	< 10.0	< 10.0		< 4.0	< 0.2	< 10.0	1.0	11.0	< 1.0		3.0	1.0	57.0			< 15.0	< 0.2
5/7/2003	17.00	7.00	10.00	0.050	2.60	< 10.0	< 10.0		< 4.0	< 0.2	< 10.0	< 1.0	7.0	< 1.0		< 1.0	< 1.0	76.0			< 15.0	< 0.2
8/6/2003	< 2.00	7.00	0.73	< 0.010	1.90	< 10.0	< 10.0	< 1.0	< 4.0	< 0.2	< 10.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	59.0	< 10.0	< 10.0	< 15.0	< 0.2
11/5/2003	13.00	12.00	14.00	0.260	0.83	< 10.0	< 10.0		< 4.0	< 0.2	< 10.0	< 1.0	11.0	3.0		< 1.0	< 1.0	39.0			< 15.0	< 0.2
12/12/2003						14.0			< 4.0	< 0.2	< 10.0	< 1.0	6.0	2.0		< 1.0	< 1.0	43.0			< 10.0	< 0.2

	BOD	TSS	NH3	NO2	NO3	CNT	CNA	BE	AS	CD	CR6	CR3	CU	PB	TH	NI	AG	ZN	AN	SE	PHEN	HG
count	18	18	18	18	18	19	18	14	19	19	19	19	19	19	14	19	19	19	14	14	19	19
# detected	16	18	18	10	16	1	0	0	0	0	1	2	14	12	0	3	2	17	0	0	4	1
average	17.23	10.96	9.93	0.758	6.52	12.8	12.8	1.7	3.6	2.5	24.3	2.9	8.6	2.4	2.2	3.2	1.6	62.1	6.1	5.9	61.1	0.4
maximum	53.00	27.00	20.00	10.000	80.00	20.0	20.0	4.0	10.0	20.0	50.0	10.0	20.0	5.7	5.0	10.0	4.0	110.0	10.0	10.0	540.0	2.9
CV	0.7	0.6	0.6	3.1	2.9	0.3	0.4	0.6	0.5	1.8	0.8	1.0	0.5	0.6	0.4	0.8	0.5	0.3	0.6	0.7	2.1	1.7