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JUN 23 2006

TOWN OF WESTON

DEPARTMENT OF PUBLIC WORKS
190 BOSTON POST ROAD BY-PASS
WESTON, MA 02493-0002
(781) 893-1263 *EXT. 15*
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STEPHEN R. FOGG, P.E.
TOWN ENGINEER

June 23, 2006

U. S. Environmental Protection Agency
Water Technical Unit
P.O. Box 8127
Boston, MA 02114

Massachusetts Department of Environmental Protection
Division of Watershed Management
627 Main Street
Worcester, MA 01608

Re: NPDES PII General Permit – Annual Report

Enclosed please find the Town of Weston Annual Report covering the year 3 (March 2005 to March 2006) period.

Sincerely,

Stephen R. Fogg, P.E.
Town Engineer

Municipality/Organization: Town of Weston

EPA NPDES Permit Number: MAR041068

MaDEP Transmittal Number: W- 035252

Annual Report Number & Reporting Period: **No. 3: March 05-March 06**

NPDES PII Small MS4 General Permit Annual Report

Part I. General Information

Contact Person: Stephen R. Fogg, P.E. Title: Town Engineer

Telephone #: 781-893-1263 x15 Email: fogg.s@westonmass.org

Certification:

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

Signature: Donna S. VanderClock

Printed Name: Donna VanderClock

Title: Town Manager

Date: June 5, 2006

Part II. Self-Assessment

The Town of Weston has completed the required self-assessment and has determined that our municipality is in compliance with all permit conditions, except for the following provisions:

Part II.B.1. BMP 1-6, Outreach to Private Ways, has not been completed as planned. An amendment to the Stormwater Regulations was passed at Town Meeting in May 2006, giving the Town authority over stormwater management on private ways. This correspondence and follow up will be scheduled for the fall of 2006.

Part II.B.2. BMP 2-2, Poster contest was not held. School will be contacted again in the fall of 2006 to encourage more participation.

Part II.B.2 BMP 2-3, Summit event not held as planned. Event will be planned for fall of 2006.

Part II.B.2 BMP 2-6, Stream survey not completed as planned, as GIS mapping was needed to aid in survey. Stream Team will be contacted again and maps provided.

Part II.B.4. BMP 4-1, Erosion and Sediment Control Bylaw, has been deferred until Annual Town Meeting in May of 2007. A committee is forming to establish the language of the bylaw and how it will be enforced.

Part II.B.5. BMP 5-1, Erosion and Sediment Control Bylaw, has been deferred until Annual Town Meeting in May of 2007. A committee is forming to establish the language of the bylaw and how it will be enforced.

Part II.F Failed to submit annual report on or before May 1, 2006. Submitted on June 23, 2006.

Part III. Summary of Minimum Control Measures

1. Public Education and Outreach

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 3 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 4
1-1	Flyer to residents	SUASCO WCC and SRF	Distribute to 75% of residents	Completed in year 1	
Revised					
1-2	Lesson Plan for Fifth Graders	SUASCO WCC and SRF	Lesson plan taught	Lesson plan provided to School Dept. and delivered to 4th grade students in the fall of 2005 and spring of 2006	Provide support as needed
Revised	Plan to be taught in 4th grade				
1-3	Media Campaign*	SUASCO WCC and SRF	Media packet given to press	Press packet provided to Weston Town Crier	Weston Town Crier running series of articles on stormwater management during the summer of 2006
Revised					
1-4	Flyer to Businesses*	SUASCO WCC and SRF	Distribute to 50% of businesses	None – planned for permit year 4	None – planned for permit year 4
Revised					
1-5	Video	SUASCO WCC and SRF	Show video at public meeting	None - planned for permit year 5	None – planned for permit year 5
Revised					

* BMPs reversed from last year's report.

1a. Additions

1-6	Outreach to Private Ways	DPW	Develop and send correspondence to road trusts and private way owners about stormwater issues	None	Send correspondence

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 3 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 4
2-1	Traveling Display	SUASCO WCC and SRF	3 months on display	None - Completed in year 1	Use display as opportunity arises
Revised					
2-2	Poster contest (5th grade)	SUASCO WCC and SRF	Hold contest	Contest rules provided to School Dept.	None
Revised					
2-3	Summit Event*	SUASCO WCC and SRF	Hold local stormwater summit meeting	Summit materials delivered to Weston by SUASCO	hold summit meeting
Revised					
2-4	Photo contest (High School)	SUASCO WCC and SRF	Hold contest	None – planned for year 4	None – planned for year 4
Revised					
2-5	Super—summit event	SUASCO WCC and SRF	Participate in regional "super-summit"	None – planned for year 5	None – planned for year 5
Revised					

* BMPs reversed from last year's report.

2a. Additions

2-6	Stream team survey of Seaverns Brook	SRF and stream team	Complete survey	None	Provide GIS mapping and complete survey

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 3 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 4
3-1	Stormwater System Mapping	DPW	Complete mapping of stormwater system over a 3 year period	GIS base mapping completed including locations of catch basins and drain manholes; outfalls located by GPS	Completion of stormwater system mapping using GPS to construct pipe network
3-2	Dry weather screening of outfalls	DPW	Visual inspection/report of known outfalls, 33% each year	310 outfalls inspected, 60 found flowing See Attachment A	Re-inspect outfalls and document changes from last inspection
3-3	Illicit Discharge Elimination	DPW, Board of Health	Trace non-stormwater flows and eliminate within 1 year		Sample flowing outfalls using IDDE protocol See Attachment A
3-4	Water Quality Monitoring	Cambridge Water Supply	Obtain results of regular monitoring	Water quality data summary from CWS - See Attachment B	Same as year 2
3-5	Amend Stormwater Regulations	DPW	Amended regulations adopted at 2003 Annual town Meeting	Goal met	Prepare amendment for 2006 ATM to incorporate Erosion and Sediment Control provisions
Revised			Amended regulations adopted at 2006 Annual Town Meeting	Goal met to expand coverage to include impacts from private ways and impacts to water bodies from construction	
3-6	Septic System Monitoring Program	Board of Health	Develop, implement and enforce septic pumping	BOH not planning to institute mandatory pumping	
Revised			System in place to identify frequent pumping	GIS program development task includes septic system database management tool	Database created and in use; frequent pumping locations are investigated
3-7	Dechlorination of New Water Mains	DPW - Water Div.	Use dechlorination tablets when flushing new mains	Done during installation of North Ave water main	As needed
3-8	Trench Dewatering Policy	DPW	Require siltation control on all trench dewatering projects	Siltation control specified on all capital projects; controls used on DPW projects	As needed

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 3 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 4
4-1	Erosion and Sediment Control Bylaw	Planning Board, Conservation Commission, DPW	Develop, implement and enforce bylaw	Bylaw deferred until ATM 2007 or special town meeting in the fall of 2006; committee forming to establish bylaw language	Amend stormwater regulations to incorporate erosion and sediment control provisions
Revised	*Incorporate provisions into Stormwater Regulations as policies*	DPW	All construction projects subject to Building Permit reviewed for compliance with policy	DPW inspector assigned to enforce policies	Same as year 3
4-2	Planning Board review of projects	Planning Board	All projects reviewed for compliance with runoff control measures	All applicants are required to demonstrate that they are addressing stormwater runoff control during construction	Same as year 3
4-3	Conservation Commission review of projects	Conservation Commission	All projects reviewed for compliance with runoff control measures	All applicants are required to demonstrate that they are addressing stormwater runoff control during construction	Same as year 3
4-4	Street Opening permit process	DPW	Inspections conducted for compliance with Stormwater Regulations	DPW inspector assigned to this task	Inspections documented and reported in annual report
4-5	Building Permit process	Building Dept.	Appropriate applicants referred to DPW for stormwater controls	Estimated that 100% of applicants are being referred to DPW for stormwater review	Implement permit tracking program to ensure compliance

5. Post-Construction Stormwater Management in New Development and Redevelopment

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 3 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 4
5-1	Erosion and Sediment Control ByLaw	DPW	Same as control measure 4-1	Bylaw deferred until ATM 2007 or special town meeting in the fall of 2006; committee forming to establish bylaw language	Amend stormwater regulations to incorporate erosion and sediment control provisions
Revised	*Incorporate provisions into Stormwater Regulations as policies*	DPW	All construction projects subject to Building Permit reviewed for compliance with policy	DPW inspector assigned to this task	Projects documented and reported in annual report
5-2	DPW Runoff Control Policy	DPW	Development / redevelopment projects required to handle stormwater on-site	Plan review and inspection procedure in place; estimated that 75% of potential projects are being reviewed	Goal is 100% of applicable projects are reviewed and inspected

6. Pollution Prevention and Good Housekeeping in Municipal Operations

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 3 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 4
6-1	Street Sweeping	DPW	Sweep all public streets annually	All public streets swept at least once per year	Same as year 3
6-2	Catch Basin Cleaning	DPW	Clean all public catch basins annually	All public catch basins cleaned at least annually	Same as year 3
6-3	Drainage Improvement Projects	DPW	Incorporate structural BMPs into each project	NA – no drainage improvement projects completed during permit year	Drainage improvement projects incorporate deep sump catch basins and oil/gas hoods
6-4	DPW Housekeeping	DPW	Conduct environmental audit, implement recommendations	Completed	
Revised	*Environmental Management System*	*DPW*	*Develop and Implement Environmental Management System*	*EMS implemented in February 2006, including several standard operating procedures and inspections to assure good housekeeping at DPW*	*Continual improvements to EMS and identification of new environmental aspects and impacts*
6-5	Roadway De-icing Program	DPW	Install computerized spreader controls; alt. dispensing equipment	Spreader controls in use on all but two sanders; measured reduction of salt application from over 1,000 lbs per lane mile, to under 600 lbs per lane mile	Install and place into operation on remainder of fleet; continue to track usage to achieve optimal application rate
6-6	Waterway Maintenance	DPW	Clear waterways of debris, 3 year rotating basis	Waterway maintenance work suspended due to lack of manpower	
Revised	*Ditch maintenance*	East Middlesex Mosquito Control Project	Clear sediment from ditches	Approx.1,000 to 1,500 l.f. of ditch clearing accomplished in several trouble spots	Identify and clean as time and budget allows

6a. Additions

6-7	Employee Training Program	DPW	Provide all departments with training	Done for DPW staff as part of EMS program	Training for other departments planned for fall '06

Part IV. Summary of Information Collected and Analyzed

A summary of water quality monitoring results from Cambridge Water Supply (CWS) is attached (Attachment B). In general the most recent data shows very low levels of fecal coliform bacteria compared to the range of concentrations measured at stream locations in prior sampling rounds. Weston has received no indication of specific water quality concerns from staff in the Watershed Protection Division of CWS. This agency has staff dedicated to monitoring water quality within the watershed on a daily basis.

Part V. Program Outputs & Accomplishments (OPTIONAL)

Programmatic

Stormwater management position created/staffed	(y/n)	Y
Annual program budget/expenditures	($)	$305,000

Education, Involvement, and Training

Estimated number of residents reached by education program(s)	(# or %)	200 households via 4th grade lesson plan
Stormwater management committee established	(y/n)	n
Stream teams established or supported	(# or y/n)	n
Shoreline clean-up participation or quantity of shoreline miles cleaned	(y/n or mi.)	n
Household Hazardous Waste Collection Days		
▪ days sponsored	(#)	1
▪ community participation	(%)	239 cars (est. 7% of pop.)
▪ material collected	(tons or gal)	3,130 lbs
School curricula implemented	(y/n)	y

Legal/Regulatory

	In Place Prior to Phase II	Under Review	Drafted	Adopted
Regulatory Mechanism Status (indicate with "**X**")				
▪ Illicit Discharge Detection & Elimination	X			
▪ Erosion & Sediment Control	X			
▪ Post-Development Stormwater Management	X			
Accompanying Regulation Status (indicate with "**X**")				
▪ Illicit Discharge Detection & Elimination		X		
▪ Erosion & Sediment Control		X		
▪ Post-Development Stormwater Management		X		

Mapping and Illicit Discharges

Outfall mapping complete	(%)	100
Estimated or actual number of outfalls	(#)	310
System-Wide mapping complete	(%)	100
Mapping method(s)		
▪ Paper/Mylar	(%)	
▪ CADD	(%)	
▪ GIS / GPS	(%)	100
Outfalls inspected/screened	(# or %)	100
Illicit discharges identified	(#)	0
Illicit connections removed	(#) (est. gpd)	NA
% of population on sewer	(%)	0.3*
% of population on septic systems	(%)	99.7

* residents at Regis College, which is sewered to the MWRA via private force main.

Construction

Number of construction starts (>1-acre)	(#)	32
Estimated percentage of construction starts adequately regulated for erosion and sediment control	(%)	100%
Site inspections completed	(# or %)	100%
Tickets/Stop work orders issued*	(# or %)	2
Fines collected	(# and $)	0
Complaints/concerns received from public	(#)	2
* letters sent to developers with corrective action requests re: stormwater management		

Post-Development Stormwater Management

Estimated percentage of development/redevelopment projects adequately regulated for post-construction stormwater control	(%)	50%
Site inspections completed	(# or %)	50%
Estimated volume of stormwater recharged	(gpy)	unknown

Operations and Maintenance

Average frequency of catch basin cleaning (non-commercial/non-arterial streets)	(times/yr)	1
Average frequency of catch basin cleaning (commercial/arterial or other critical streets)	(times/yr)	1
Number of drainage structures repaired or rebuilt	#	41
Total number of structures cleaned	(#)	587
Storm drain cleaned	(LF or mi.)	25 systems (length unk.)
Qty. of screenings/debris removed from storm sewer infrastructure	(lbs. or tons)	570 tons*
Disposal or use of sweepings (landfill, POTW, compost, recycle for sand, beneficial use, etc.)		landfill
Cost of screenings disposal (including trucking and disposal)	($)	$23/ton
*Total hauled off-site in early 2006 was 1,041 tons, including material accumulated from ½ of town in 2004, all of town in 2005 and 1/3 of town in 2006. Calculated amount from 2005 is 570 tons.		

Average frequency of street sweeping (non-commercial/non-arterial streets)	(times/yr)	2
Average frequency of street sweeping (commercial/arterial or other critical streets)	(times/yr)	2
Qty. of sand/debris collected by sweeping	(lbs. or tons)	2,200 tons*
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.)	(location)	landfill cover
Cost of sweepings disposal	($)	$9/ton
Vacuum street sweepers purchased/leased	(#)	0
Vacuum street sweepers specified in contracts	(y/n)	N
* 3,372 tons hauled out in late 2005, represented all of 2005 sweepings plus some from 2004. In 2004, only 1,000 tons of accumulated material was hauled off-site. Two year total estimated sweepings was 4,400 tons, therefore one year amount is half, or 2,200 tons.		

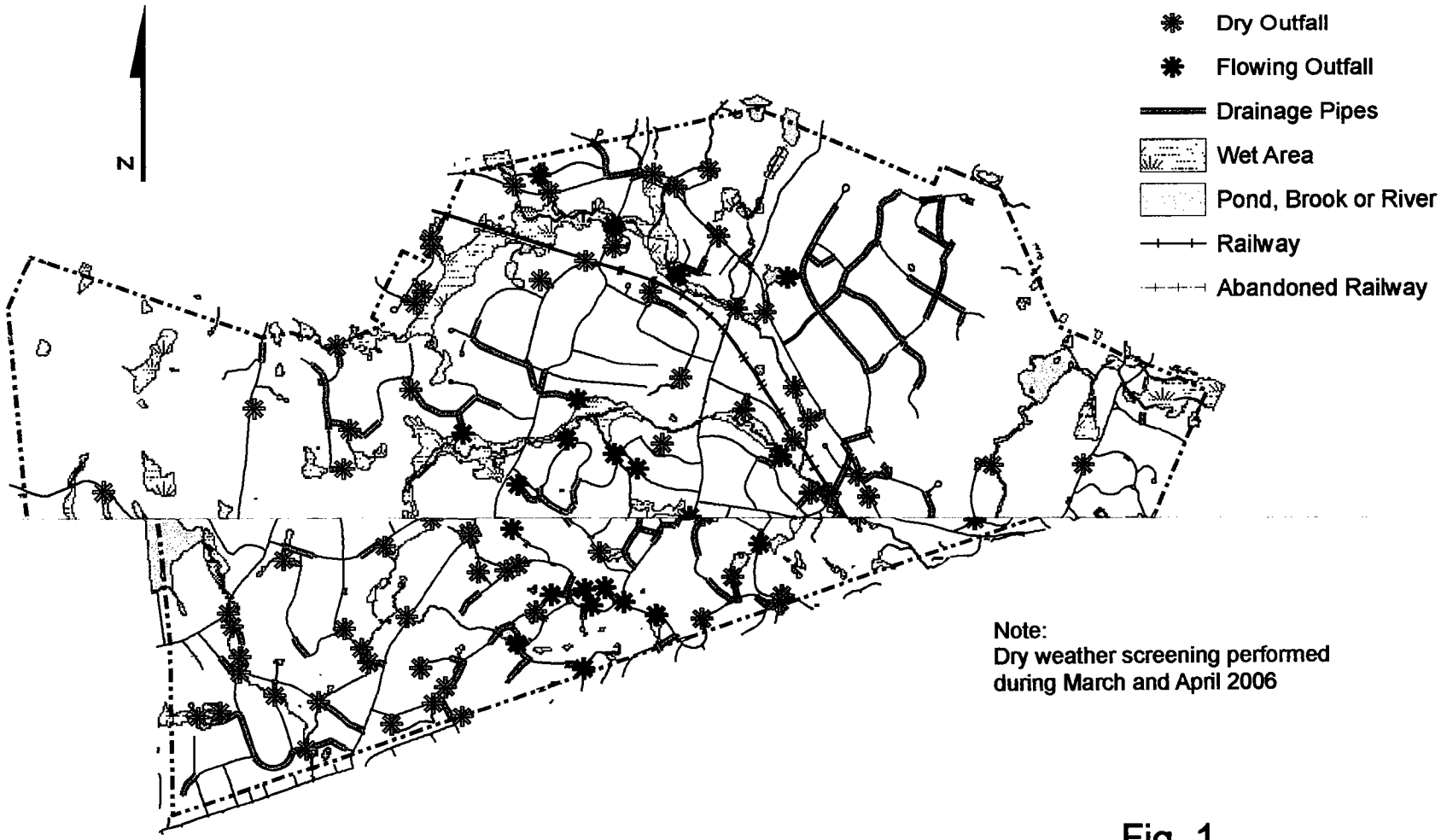
Reduction in application on public land of: ("N/A" = never used; "100%" = elimination)		
▪ Fertilizers (reductions on Recreation Dept. fields only)	(lbs. or %)	0%
▪ Herbicides (reductions on Recreation Dept. fields only)	(lbs. or %)	0%*
▪ Pesticides (reductions on Recreation Dept. fields only)	(lbs. or %)	0%*
* organic products being used at Memorial Pool		

Anti-/De-Icing products and ratios	% NaCl % $CaCl_2$ % $MgCl_2$ % CMA % Kac % KCl % Sand	25-50% 5% pre-wet 0 0 0 0 75-50%
Pre-wetting techniques utilized	(y/n)	Y
Manual control spreaders used	(y/n)	Y
Automatic or Zero-velocity spreaders used	(y/n)	Y
Estimated net reduction in typical year salt application	(lbs. or %)	33%
Salt pile(s) covered in storage shed(s)	(y/n)	Y
Storage shed(s) in design or under construction	(y/n)	NA

Attachment A
Stormwater System

The Weston Stormwater System mapping was completed during the summer and fall of 2005 using GIS and GPS technology. See Fig. 1 for overall system map.

The system consists of approximately 197,000 linear feet (37 miles) of drain pipe, with 310 outfalls. Of these, 60 outfalls (19%) were found to be flowing during dry weather inspections conducted during March and April 2006. By comparison, in 2005 78 (out of 299) outfalls, or 26%, were flowing. Weston's stormwater system includes piped brooks as well as stand alone drainage systems, and outfalls are defined as any piped outlet other than a culvert under a road. Consequently, many of the flowing outfalls were observed to be flowing due to the natural flow of perennial streams that are an integral part of the drainage system. A program of dry weather sampling will be implemented during 2006-2007 to screen the outfalls for evidence of contamination, using the IDDE protocols provided by the Charles River Watershed Association. Follow up investigations will then be conducted to determine the source of contamination.



Note:
Dry weather screening performed during March and April 2006

Fig. 1
Weston Stormwater System

Cambridge Water Dept.				
Water Quality Data Summary				
Sampling Site	period of record	range of fecal coli	latest value & date	
Summer Street	Feb 05 - May 06	0-660	2 (April 06)	
Industrial Brook, West Street	Feb 04 - May 06	0-850	2 (April 06)	
Hobbs Brook @ Kendal Green	Feb 04 - April 06	0-260	2 (April 06)	
Stony Brook @ Kendal Green	Feb 04 - April 06	15-680	15 (April 06)	
Secondary Streams*				
Quarry Brook	Oct. 00 - May 06	4-200	10 (Sept 05)	
Weston Brook	Oct. 00 - May 06	6-900	15 (Sept 05)	
Quarry Brook @ Church St.	May 05 - May 06	16	no flow (Sept 05)	
Cherry Brook @ Conant Rd	Oct. 00 - May 06	8-60	22 (May 05)	
Stony Brook @ Conant Rd	Oct. 00 - May 06	20-148	118 (May 05)	

* sampled for specific conductance, pH (field and lab), temperature, DO, turbidity (field and lab), NH3, TKN, Orthophosphate, color, fecal coliform, e-coli, total coliform, alkalinity, Al, Ca, Fe, Mn, Na, NO3, Cl, TOC