APPENDIX F – SUMMARY OF NPDES PERMITTING INFORMATION
FRENCH AND QUINEBAUG RIVER BASINS

Table F1. French and Quinebaug River Basins- Commercial and Industrial NPDES Permits

Permitee	NPDES#	Receiving Water (segment)
American Polymers, Oxford	MA0029050	Buffum Pond (MA42004)
American Polymers, Inc. (API) of Oxford was authorized (permit effective September 1999) to discharge 0.8 MGD of contact cooling water to Buffum Pond from the extrusion process and/or non-contact cooling water from the reactors and gyrol drives via Outfall 001 from its facility located in Oxford MA. The temperature limit (83ºF) for the discharge was to be applied at the edge of their mixing zone (DT=3ºF), defined as 50 feet from the end of the discharge pipe. The facility was required to conduct a temperature study to document their actual mixing zone. A modified acute and chronic whole effluent toxicity test of the effluent (report only) was also required. Based on the results of the test the facility may be required to do additional toxicity testing. Modified acute and chronic whole effluent toxicity tests were required to be conducted using both *C. dubia* and *P. promelas* as test species in March of each year. No whole effluent toxicity testing limits were included in the permit however. NOTE: This facility ceased manufacturing operations in January 2008 but continued to withdraw and discharge noncontact cooling water for their sprinkler system. The NPDES permit was terminated by EPA in August 2008.		
Hyde Manufacturing Company, Southbridge	MAG250024	Cohassee Brook, a tributary of the Quinebaug River (MA41-09)
Hyde Manufacturing Company of Southbridge is now permitted under the NPDES General Permit for Non-Contact Cooling Water Discharges, which specifies discharge limitations of 1 MGD of flow and a maximum daily temperature of 83F (28.3C) for warm water fisheries. The facility's previous permit number was MA0001651.		
Masonic Home Inc., Charlton	MA0025178	Unnamed tributary to the Quinebaug river (MA41-03)
The facility was connected to the Charlton Wastewater Treatment Plant as of 23 July 2003. At the time of connection the Home was still small but was under construction for expansion. This NPDES permit was terminated by EPA 12/17/03.		
Bethlehem Steel Corp., Webster	MA0034924	Artificial pond (Mill Brook)
Discharge terminated 1/10/03		
Mass. Turnpike Service Station, Charlton	MA0036757	Unnamed tributary to wetlands
The Mass. Turnpike Service Station in Charlton has been tied in with the Charlton WWTP since 9/1997. The permit was previously shared with the Exxon Service Station #3-5943, which, as noted below, is now covered under a NPDES Remediation General Permit.		
Exxon Service Station #3-5943, Charlton	MAG910003	Unnamed tributary to wetlands
The Exxon Service Station #3-5943 of Charlton is now permitted under the NPDES Remediation General Permit (issued 9/26/05), which specifies discharge limitations specifically related to petroleum cleanup. The facility's previous permit number was MA0036757.		
Brimfield Sunoco Gas Station (Xtra Mart), Brimfield	MAG910017	East Brook
The Brimfield Sunoco Gas Station (Xtra-Mart) of Brimfield is now permitted under the NPDES Remediation General Permit (issued 10/17/05), which specifies discharge limitations specifically related to petroleum cleanup. The facility's previous permit number was MA0032352.		

Table F2: French and Quinebaug River Basins - Municipal and Sanitary Surface Wastewater Discharges

Permitee	NPDES#	Receiving Water (segment)
Charlton WWTP, Charlton	MA0101141	Cady Brook (MA41-06)

The Town of Charlton WWTP is permitted (permit issued 11/6/02) to discharge 0.45 MGD (average monthly flow) of treated municipal wastewater via outfall 001 to Cady Brook. The facility is not authorized to use chlorine as a method of disinfection. The average monthly discharge limitations for ammonia are 8 mg/l for April, 3.6 mg/l for May, 1.42 mg/l for June through October and 8 mg/l for November through March. The facility is required under the current permit to conduct quarterly whole effluent toxicity tests using *Ceriodaphnia dubia*. The facility's maximum daily permit limits for whole effluent toxicity are LC_{50}=100% and CNOEC≥93%.

The permit includes seasonal limits on BOD, total suspended solids (TSS), fecal coliform bacteria, total ammonia-nitrogen (NH3-N), and total phosphorus (TP), as well as limits on total copper and total aluminum.

Parameter	Avg. monthly limit April	Avg. Monthly Limit May	Avg. monthly limit From June 1-October 31	Avg. monthly limit from 1 April to 31 October	Avg. monthly limit from 1 November to 31 May
BOD				14 mg/L (53 lbs/day)	21 mg/L (80 lbs/day)
TSS				14 mg/L (53 lbs/day)	21 mg/L (80 lbs/day
Fecal coliform bacteria				200 cfu/100 mL	
TP				1.0 mg/L *	Report
NH3-N	8.0 mg/L	3.6 mg/L	1.42		8.0 mg/L
Total Copper				6.5 ug/L	6.5 ug/L
Total Aluminum				93 ug/L	93 ug/L

* This is an interm limit. The final limit will be 0.2 mg/L or the “highest and best pratical” treatment” as determined by a phosphorus removal optimization study conducted by the permitee to be submitted and implemented by May 1, 2003. If the permitted limit is determines the facility can not consistently met the permitted limit, and then a feasibility study will be conducted to determine options for meeting the limit.

Leicester Water Supply District, Leicester	MA0101796	Dutton Pond (MA42015)

Leicester Water Supply District is permitted (permit issued 6/22/05) to discharge 0.35 MGD (average monthly) of treated municipal wastewater via outfall 001 to the French River (Note: the outfall currently discharges to Dutton Pond (Segment MA42015) but is to be relocated to Town Meadow Brook -- downstream from Dutton Pond Dam. The permit incorrectly states the discharge is to the French River. The facility is required to do acute whole effluent toxicity quarterly and chronic whole effluent toxicity twice a year using *Ceriodaphnia dubia*. The facility's maximum daily permit limits for whole effluent toxicity are LC50≥100% and CNOEC>62%. A wastewater treatment facility upgrade is being planned for the facility according to an Environmental Notification Form (ENF) filed in December 2008. The ENF (#14352) indicates that a draft CWMP has been developed and an expansion and upgrade of the facility was recommended (0.732 MGD). I/I estimates at the facility were estimated to account for 42% of the total flow.

The permit includes seasonal limits on BOD, total suspended solids (TSS), fecal coliform bacteria, total residual chlorine, total ammonia-nitrogen (NH3-N), total phosphorus (TP), as well as limits on total copper.

Parameter	Avg. monthly limit April	Avg. Monthly Limit May	Avg. monthly limit From June 1-October 31	Avg. monthly limit from 1 April to 31 October	Avg. monthly limit from 1 November to 31 May
BOD				12 mg/L (35 lbs/day)	30 mg/L (88 lbs/day)
TSS				12 mg/L (35 lbs/day)	30 mg/L (88 lbs/day)
Fecal coliform bacteria				200 cfu/100 mL	
Total Residual Chlorine				18 ug/L	
TP				0.1 mg/L *	
NH3-N	10.0 mg/L	5 mg/L	2.0		8.0 mg/L
Total Copper				11.1 ug/L	11.1 ug/L

*The total phosphorus limit applies to the current discharge location [Dutton Pond] and will be effective three years from the effective date of the permit. The interim limit will be 0.5 mg/L from 1 April to 31 October. If the discharge location is moved to below Dutton Pond or the dam at Dutton Pond is breached then the permit limit will be 0.2 mg/L. An Administrative Order (AO) was issued to the District in September 2008 in response to a request from the District for additional time to achieve compliance with the final total phosphorus limit contained in the Permit. The AO established an average monthly interim phosphorus limit of 0.32 mg/L TP between 1 April and 31 October and requires that construction to relocate the outfall pipe downstream from Dutton Pond begin by 31 April 2009 and be completed by 28 February 2010.

Oxford-Rochdale Sewer District, Oxford	MA0100170	French River (MA42-03)

Oxford-Rochdale Sewer District is permitted (permit issued 6/22/05) to discharge 0.5 MGD (average monthly) of treated municipal wastewater via outfall 001 to the French River. The facility is required under the current permit to conduct quarterly whole effluent toxicity tests using *Ceriodaphnia dubia*. The facility's maximum daily permit limits for whole effluent toxicity are LC50≥100% and CNOEC≥17%.

The permit includes seasonal limits on CBOD, total suspended solids (TSS), fecal coliform bacteria, total residual chlorine, total ammonia-nitrogen (NH3-N), total phosphorus (TP), as well as limits on total copper.

Parameter	Avg. monthly limit April	Avg. Monthly Limit May	Avg. monthly limit From June 1-October 31	Avg. monthly limit from 1 April to 31 October	Avg. monthly limit from 1 November to 31 May
BOD				10 mg/L (42 lbs/day)	30 mg/L (88 lbs/day)
TSS				10 mg/L (42 lbs/day)	30 mg/L (88 lbs/day
Fecal coliform bacteria				200 cfu/100 mL	
Total Residual Chlorine				66 ug/L	
TP				0.2 mg/L*	
NH3-N	10.0 mg/L	5 mg/L	2.0		8.0 mg/L
Total Copper				28 ug/L	11.1 ug/L

*The total phosphorus limit is effective April 1, 2009. Until that point an average monthly limit of 1.0 mg/L is in effect during the 1 April to 31 October period.

Southbridge WWTP, Southbridge	MA0100901	Quinebaug River (MA41-03)

The Town of Southbridge WWTP is permitted (permit issued 9/27/06) to discharge 3.77 MGD (average monthly) of treated municipal wastewater via outfall 001 to the Quinebaug River. The facility is required under the current permit to conduct quarterly whole effluent toxicity tests using *C. dubia* and *P. promelas*. The facility's maximum daily permit limits for whole effluent toxicity are LC50>100% and CNOEC>32%.

The permit includes seasonal limits on BOD, total suspended solids (TSS), fecal coliform bacteria, total residual chlorine, total ammonia-nitrogen (NH3-N), total phosphorus (TP), as well as limits on dissolved oxygen, total copper and total aluminum.

Parameter	Avg. monthly limit April	Avg. Monthly Limit May	Avg. monthly limit From June 1-October 31	Avg. monthly limit from 1 April to 31 October	Avg. monthly limit from 1 November to 31 May
BOD				10 mg/L (315 lbs/day)	20 mg/L (629 lbs/day)
TSS				13 mg/L (409 lbs/day)	20 mg/L (629lbs/day
Fecal coliform bacteria				200 cfu/100 mL	
Total Residual Chlorine				35 ug/L	
Dissolved oxygen				>/=6 mg/L	>/=6 mg/L
TP				0.2 mg/L*	
NH3-N	10.0 mg/L	5 mg/L	1.3		8.0 mg/L
Total Aluminum				0.28 mg/L	
Total Copper				16 ug/L	16 ug/L

*The total phosphorus limit is effective three years from the issuance of the permit. Until that point an average monthly limit of 1.0 mg/L is in effect during the 1 April to 31 October period.

Sturbridge WPCF, Sturbridge	MA0100421	Quinebaug River (MA41-02)

The Town of Sturbridge WPCF is permitted (permit issued 9/28/06) to discharge 0.75 MGD (average monthly) of treated municipal wastewater via outfall 001 to the Quinebaug River. The facility is required under the current permit to conduct quarterly whole effluent toxicity tests using *Pimephales promelas*. The facility's maximum daily permit limits for whole effluent toxicity are LC50≥100% and CNOEC≥15%.

The permit includes seasonal limits on CBOD, BOD, total suspended solids (TSS), fecal coliform bacteria, total residual chlorine, total ammonia-nitrogen (NH3-N), total phosphorus (TP), as well as limits on dissolved oxygen and total copper in addition to reporting dissolved ortho-phosphorus, TKN, total nitrate, and total nitrite concentrations.

Parameter	Avg. monthly limit From June 1-October 31	Avg. monthly limit from 1 April to 30 September	Avg. monthly limit From October 1 to March 31	Avg. monthly limit from 1 April to 31 October	Avg. monthly limit from 1 November to 31 May
CBOD		10 mg/L (63 lbs/day)			
BOD			20 mg/L (125 lbs/day)		
TSS		10 mg/L (63 lbs/day)	20 mg/L (125 lbs/day		
Fecal coliform bacteria				200 cfu/100 mL	
Total Residual Chlorine				75 ug/L	
Dissolved oxygen				>/=6 mg/L	>/=6 mg/L
TP				0.2 mg/L*	1.0
NH3-N	1.5 mg/L (9.4 lbs/day)				Report
Total Copper				25 ug/L	25 ug/L

* No later than four years from the effective date of the permit does compliance with limit become effective. During the interim period the total phoshorus limit will be 1.0 mg/L.

Town of Webster Sewer Department, Webster	MA0100439	French River (MA42-06)

The Town of Webster Sewer Department is permitted (permit issued 3/24/06) to discharge 6 MGD (average monthly) of treated municipal wastewater via outfall 001 to the French River. The facility is required under the current permit to conduct quarterly whole effluent toxicity tests using *Ceriodaphnia dubia*. The facility's maximum daily permit limits for whole effluent toxicity are LC50≥100% and CNOEC≥37%.

The permit includes seasonal limits on CBOD, BOD, total suspended solids (TSS), fecal coliform bacteria, total residual chlorine, total ammonia-nitrogen (NH3-N), total phosphorus (TP), as well as limits on dissolved oxygen, total lead, total copper in addition to reporting dissolved ortho-phosphorus, TKN, total nitrate, and total nitrite concentrations. The average monthly discharge limitations for ammonia are 10 mg/l for April, 5 mg/l for May and 2 mg/l for June through September

Parameter	Avg. monthly limit from 1 April to 30 September	Avg. monthly limit From October 1 to March 31	Avg. monthly limit from 1 April to 31 October	Avg. monthly limit from 1 November to 31 May
CBOD	10 mg/L (500 lbs/day)			
BOD		30 mg/L (1500 lbs/day)	10 mg/L (315 lbs/day)	20 mg/L (629 lbs/day)
TSS	15 mg/L (750 lbs/day)	30 mg/L (1500 lbs/day)	13 mg/L (409 lbs/day)	20 mg/L (629lbs/day
Fecal coliform bacteria			200 cfu/100 mL	
Total Residual Chlorine			29.7 ug/L	
Dissolved oxygen			>/=6 mg/L	>/=6 mg/L
TP			0.2 mg/L*	1.0 mg/L
NH3-N				8.0 mg/L
Total Lead			5.1 ug/L	
Total Copper			17.8 ug/L	17.8 ug/L

* For complete permit compliance schedule see permit. Until the compliance schedule outlined in the permit is completed the interim limit for total phosphorus is 1.0 mg/L.

STORMWATER

The NPDES Phase II General Permit program requires NPDES permit coverage for stormwater discharges from small municipal separate storm sewer systems (MS4s), and construction activity disturbing one acre or more of land in a mapped "urbanized area" defined and delineated by the US Bureau of Census in 2000 http://www.epa.gov/npdes/pubs/fact2-2.pdf. Large and medium MS4s (populations over 100,000) were permitted during Phase I of the NPDES stormwater program. Under EPA's Phase II program, the definition of "municipal" includes Massachusetts communities, U.S. military installations, state or federal owned facilities such as hospitals, prison complexes, state colleges or universities and state highways. An MS4 is a system that: discharges at one or more a point sources; is a separate storm sewer system (not designed to carry combined stormwater and sanitary waste water); is operated by a public body; discharges to the Waters of the United States or to another MS4; and, is located in an "Urbanized Area". The NPDES Phase II General Permit requires operators of regulated MS4s to develop and implement a stormwater management program that prevents harmful pollutants from being washed or dumped directly into the storm sewer system which is subsequently discharged into local waterbodies. The NPDES Stormwater Phase II General Permit requires operators of regulated small municipal separate storm sewer systems (MS4s) to develop a stormwater management program that prevents harmful pollutants from being washed or dumped directly into the storm sewer system, and then discharged into local waterbodies. Certain Massachusetts communities were automatically designated (either in full or part) by the Phase II rule based on the urbanized area delineations from the 2000 U.S. Census.

As a result of the census mapping, all 10 communities in the French River Watershed were located either totally or partially in the regulated Urbanized Area (table F3). Municipalities that are totally regulated must implement the requirements of the Phase II permit in the entire town, while communities that are partially regulated need to comply with the Phase II permit only in the mapped Urbanized Areas. All French River drainage area communities applied to EPA and MassDEP for coverage under the Phase II stormwater general permit, issued on 1 May 2003. EPA issued stormwater general permits to all 10 French River Watershed municipalities after administrative review and, in coordination with MassDEP, will complete a thorough review of the communities' stormwater management program during the five-year permit term. Phase II stormwater general permits will expire on 1 May 2008 (Domizio 2004). For detailed community maps see http://www.epa.gov/region01/npdes/stormwater/ma.html.

Table F3: NPDES Phase II stormwater permit information for the French and Quinebaug River Watershed communities.

Community	Permit #	Permit Issued	Mapped Regulatory area in community
AUBURN	MAR041088	8/28/2003	Partial
CHARLTON	MAR041100	9/2/2003	Partial
DOUGLAS	MAR041106	9/8/2003	Partial
DUDLEY	MAR041108	3/10/2004	Partial
LEICESTER	MAR041202	10/1/2003	Partial
MILLBURY	MAR041136	9/29/2003	Partial
OXFORD	MAR041147	9/22/2003	Partial
SPENCER	MAR041162	2/11/2004	Partial
SUTTON	MAR041241	1/30/2004	Partial
WEBSTER	MAR041170	10/28/2003	Partial
STURBRIDGE	MAR041240	9/9/2003	Partial
SOUTHBRIDGE	MAR041161	10/3/2003	Partial