APPENDIX 5
Suggested Notice of Intent Format

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY - REGION 1
FIVE POST OFFICE SQUARE SUITE 100
BOSTON, MASSACHUSETTS 02109-3912

Request for General Permit Authorization to Discharge Noncontact cooling Water
Notice of Intent (NOI) to be covered by the General Permit

Noncontact Cooling Water General Permit (NCCWGP)
NPDES General Permits No. MAG250000 and NHG250000

A. Facility Information

1. Indicated applicable General Permit for discharge: MAG250000 ☒
   NHG250000 ☐

2. Facility Information/Location:
   Facility Name OFS Fitel, LLC
   Street/PO Box 50 Hall Road City Sturbridge
   State MA Zip Code 01566
   Latitude 42-06-32 Longitude 72-04-10
   Type of Business Optical Fiber Manufacturer
   SIC Codes(s) 3229

3. Facility Mailing address (if different from Location Address):
   Facility Name _____
   Street/PO Box _____ City _____
   State _____ Zip Code _____

4. Facility Owner:
   Name OFS Fitel, LLC
   E-mail pcwatson@ofsoptics.com
   Street/PO Box 50 Hall Road City Sturbridge
   State MA Zip Code 01566
   Contact Person Paul Watson Tel 508-347-6090
   Owner is (check one): Federal _____ State _____ Tribal _____ Private X
   Other (describe) _____

5. Facility Operator (if different from above):
   Legal Name _____
   E-mail _____
   Street/PO Box _____ City _____
   State _____ Zip Code _____
   Contact Person _____ Tel _____

6. Current permit coverage: yes☒ no☐
   a) Has a prior NPDES permit (individual or general permit coverage) been granted for the discharge that is listed on the NOI? yes☒ no☐ If Yes, permit number MAG250003
   b) Is the facility covered by an individual NPDES permit for other discharges? yes☐ no☒
      If yes, Permit Number: _____

c) Is there a pending NPDES application on file with EPA for this discharge? yes☐ no☒
If yes, date of submittal: _____ and permit number, if available _____

7. Attach a topographic map indicating the location of the facility and the outfall(s) to the receiving water.
Map attached? ☒

B. Discharge Information (attach additional sheets as needed):

1. Name of receiving water into which discharge will occur: Hobbs Brook
Freshwater ☒ Marine Water ☐
State Water Quality Classification Class B
Type of Receiving Water Body (e.g., stream, river, lake, reservoir, estuary, etc.) stream

2. Attach a line drawing or flow schematic showing water flow through the facility including sources of intake water, operations contributing to flow, treatment units, outfalls, and receiving water(s). **Line drawing or flow diagram attached**? ☒

3. Describe the discharge activities for which the owner/applicant is seeking coverage (e.g., building cooling, process line cooling, etc.) Non-contact cooling water

4. Number of Outfalls 2 Latitude and Longitude to the nearest second for each Outfall. See EPA's siting tool at http:/www.epa.gov/tri/reporting/siting_tool. Attach additional pages if necessary.

Outfall # Latitude 42-06-32 Longitude 72-04-10
Outfall # Latitude 42-06-32 Longitude 72-04-10
Outfall # Latitude _____ Longitude _____

5. For each Outfall provide the following discharge information:

Outfall # 1
a) Maximum Daily Flow 0.007 MGD Average Monthly Flow 0.0065 MGD
NOTE: EPA will use the flow reported here as the facility's permitted effluent flow limit.
b) Maximum Daily Temperature 70 °F Average Monthly Temperature 60 °F
c) Maximum Monthly pH 8.3 s.u. Minimum Monthly pH 6.5 s.u.
d) Outfall's discharge is: continuous ☐ intermittent ☒ seasonal ☐

Outfall # 2
a) Maximum Daily Flow 0.007 MGD Average Monthly Flow 0.0065 MGD
NOTE: EPA will use the flow reported here as the facility's permitted effluent flow limit.
b) Maximum Daily Temperature 70 °F Average Monthly Temperature 60 °F
c) Maximum Monthly pH 8.3 s.u. Minimum Monthly pH 6.5 s.u.
d) Outfall's discharge is: continuous ☐ intermittent ☒ seasonal ☐

Outfall # _____
a) Maximum Daily Flow _____ MGD Average Monthly Flow _____ MGD
NOTE: EPA will use the flow reported here as the facility's permitted effluent flow limit.
b) Maximum Daily Temperature _____ °F Average Monthly Temperature _____ °F
c) Maximum Monthly pH _____ s.u. Minimum Monthly pH _____ s.u.
d) Outfall's discharge is: continuous ☐ intermittent ☐ seasonal ☐

6. Is the source of the NCCW potable water? yes☒ no☐
   If yes, EPA will calculate a Total Residual Chlorine effluent limit for your facility.

7. Provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water _0.00840_ MGD
   Attach any calculation sheets used to support stream flow and/or dilution calculations.

8. **For facilities that discharge to Massachusetts surface waters:**
   a) Submit the completed engineering calculation of the surface water temperature rise as shown in Attachment B of the General Permit. Calculation attached? ☒
   b) Does the discharge occur in an Area of Critical Environmental Concern (ACEC)? yes☐ no☒
      If yes, provide the name of ACEC _____
      Note: See Part 3.4 and Appendix 1 of the General Permit for more information on ACEC.

C. Chemical Additives

1. Are any non-toxic neutralization and/or dechlorination chemicals used in the discharge(s)? yes☐ no☒

2. If yes, attach a listing of each chemical used. Include the chemical name and manufacturer; maximum and average daily quantity used on a monthly basis, as well as the maximum and average daily expected concentrations (mg/l) in the discharge, and the vendor's reported aquatic toxicity (NOAEL and/or LC_{50} in percent for typically acceptable aquatic organism).

3. Was the listing submitted with the facility's 2008 NCCWGP NOI? yes☐ no☐

D. NCCW Source Water Information

1.State the source of the NCCW (e.g., municipal water supply, private well, surface water withdrawal, etc.).
   Source Municipal Water Supply Name of Source Water Sturbridge, MA

2. Is the source water registered/permitted under MA Water Management Act or NHDES User Registration Rule (ENV WQ 2202)? yes☐ no☐ If yes, registration number _____

3. If the source water is groundwater (non-municipal well water), see Appendix 9 of the General Permit and submit effluent (and receiving water hardness) test results, as required in Part 5.4 of the General Permit.
   Test results attached? ☐

4. Does the facility use both a primary and backup source of NCCW? yes☐ no☒ If yes, **attach information** that identifies and explains the primary and backup sources of NCCW and how often the backup supply was used in the past three years.

E. Best Technology Available for Cooling Water Intake Structures (CWISs)

If the facility's discharge is covered by this General Permit and the facility **withdraws non-contact cooling water from a surface water**, you are subject to the BTA requirements at Part 4.2 of the General Permit.

1. Are you subject to the BTA requirements of the General Permit? yes☐ no☒
   a) If no, explain Not Applicable and skip to F.
   b) If yes, was the facility-specific BTA description submitted with the facility's 2008 NCCW GP NOI? yes☐ no☐
   c) If yes, does that description accurately describe the facility current operations and practices? yes☐ no☐

2. If the facility is subject to the General Permit's BTA requirements and is requesting coverage under the NCCWGP for the first time, or if you answered "No" to question E.1.c. above, attach the facility-specific BTA description as required in Part 4.2 of the General Permit. For additional information and guidance, see Section IV of the Fact Sheet.

Include in your description:

a) Measures to meet the General Permit Part 4.3.a general BTA requirements, including documentation that describes the facility's monitoring program for impinged fish and/or invertebrate; or the required alternative monitoring plan frequency and/or protocol.
b) A characterization of the source water body's aquatic life habitat in the vicinity of each CWIS during the seasons when the CWIS may be in use.
c) The attributes of the current CWIS.
d) The design measures of the CWIS.
e) The operation measures of the CWIS.
f) The historical occurrence of impinged fish for the past five years.
g) If applicable, a demonstration that the facility's intake rate is commensurate with a closed-cycle recirculation system.
h) Other components to reduce impingement and/or entrainment of aquatic life.

3. Provide the following information for each CWIS to support your attached facility-specific BTA description:

a) The design capacity of the of the CWIS _____MGD
b) Maximum monthly average intake of the CWIS during the previous five years _____MGD
c) The month in which this flow reported in 3.b. occurred _____
d) The maximum through-screen design intake velocity _____feet/second (fps)

4. For facilities where the CWIS is located on a freshwater river or stream, provide the following information:

a) The source water's annual mean flow in MGD as available from USGS or other appropriate source _____ MGD
b) The design intake flow as a % of the source water's annual mean flow _____ % Attach calculations if equal to or less than 5% of annual mean flow.
c) The source water's 7Q10 _____ MGD
d) The design intake flow as a percent of the source water's 7Q10 _____%

5. Provide a map showing the location of each cooling water intake structure; NCCW Outfall(s) and CWIS features referred to in the BTA description. **Map attached?** ☐

F. Endangered Species Act Eligibility Information

Using the instructions in Appendix 2 of the NCCW GP, which of the following criteria apply to your facility? USFWS Criteria: A ☒ B ☐ C ☐

1. If you selected USFWS criteria B, has consultation with the U.S. Fish and Wildlife Service been completed?
yes☐ no☐

2. If consultation with US Fish & Wildlife Service and/or NOAA Fisheries Service was completed, was a written concurrence finding that the discharge is "not likely to adversely affect" listed species or critical habitat received?
yes☐ no☐

3. Attach documentation of ESA eligibility for USFWS as required at Part 3.4 and Appendix 2 of the General Permit.
Documentation attached? _____

4. Please indicate if your facility **directly intakes water for non-contact cooling** from any of the following waterbodies:
   - ☐ Merrimack River
   - ☐ Connecticut River
   - ☐ Piscataqua River
   - ☐ Taunton River

EPA will consult with the National Marine Fisheries Service on cooling water intakes covered under this permit in areas (in the above waterbodies) of the endangered Shortnose Sturgeon and Atlantic Sturgeon.

G. National Historic Properties Act Eligibility

1. Are any historic properties listed or eligible for listing on the National Register of Historic Places located on the facility site or in proximity to the discharge? yes☐ no☒

2. Have any State or Tribal Historic Preservation Officers been consulted in this determination? yes☐ no☒
   If yes, attach the results of the consultation(s).

3. Which of the three National Historic Preservation Act scenarios listed in Appendix 3, Section C have you met?
   ☒ 1 ☐ 2 ☐ 3

H. Supplemental Information

Please provide any supplemental information, including antidegradation review information applicable to new or increased discharges. Attach any analytical data used to support the application. Attach any certification(s) required by the General Permit.

I. Signature Requirements

The NOI must be signed by the operator in accordance with the signatory requirements of 40 CFR § 122.22 (see below) including the following certification:

> I certify under penalty of law that (1) no biocides or other chemical additives except for those used for pH adjustment and/or dechlorination are used in the noncontact cooling water (NCCW) system; (2) the discharge consists solely of NCCW (to reduce temperature) and authorized pH adjustment and/or dechlorination chemicals; (3) the discharge does not come in contact with any raw materials, intermediate product, water product (other than heat) or finished product; (4) if the discharge of noncontact cooling water subsequently mixes with other wastewater (i.e. stormwater) prior to discharging to the receiving water, any monitoring provided under this permit will be only for noncontact cooling water; (5) where applicable, the facility has complied with the requirements of this permit specific to the Endangered Species Act and National Historic Preservation Act; and (6) 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, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I certify that I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature  Date Feb. 1, 2015

Printed Name and Title Paul Watson, Environmental Regulatory Compliance Engineer

Federal regulations require this application to be signed as follows: ·

1. For a corporation, by a principal executive officer of at least the level of vice president;
2. For a partnership or sole proprietorship, by a general partner or the proprietor, respectively, or,
3. For a municipality, State, Federal or other public facility, by either a principal executive officer or ranking elected official.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Watershed Permitting Program
BRP WM 11
Request for General Permit Coverage
Surface Water Discharge Of Non-Contact Cooling Water

W 060105
Transmittal Number

Date Received

A. Facility Information

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.

1. Project owner:

OFS FITEL, LLC
Name

50 HALL RD.
Street Address/PO Box

STURBRIDGE
City

MA
State

01566
Zip Code

BUD MASTALERZ
Contact Person

508-347-8514
Telephone Number

2. Project operator (if different from above):

SAME
Name

Street/PO Box:

City

State

Zip Code

Contact Person

Telephone Number

3. Facility data (attach topographic map or other map showing facility location):

OFS FITEL, LLC
Name

50 HALL RD
Street/ PO Box

BMASTALE@OFSOPTICS.COM
Email address (optional)

STURBRIDGE
City

508-347-8514
Telephone Number

MA
State

01566
Zip Code

BUD MASTALERZ
Contact Person

4. Standard Industrial Codes (SIC) and description:

3229
Standard Industrial Code (SIC)

Description

OPTICAL FIBER MFG.

B. Effluent Characteristics

Refer to general permit in Federal Register Volume 65, Number 80, April 25, 2000, page 24195-24211:

	Average Monthly	Maximum Daily
Flow, gpd [< 1 MGD]	0.0864 MGD	0.096 MGD

– 2008 REAPPLICATION –
MA DEP COPY

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Watershed Permitting Program
BRP WM 11
Request for General Permit Coverage
Surface Water Discharge Of Non-Contact Cooling Water

W060105
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B. Effluent Characteristics (cont.)

	Average Monthly	Maximum Daily
Temperature [Warm water fishery must be <83°F (28.3°C)] [Cold water fishery effluents must be < 68°F (20°C)]	60°F	70°F
pH (freshwater 6.5-8.3, saltwater 6.5-8.5)	6.5	8.3

Latitude/ Longitude:
72-04-10/42-06-32

Total Residual Chlorine (for potable water supply source only):
0.5 PPM

Water source of non-contact cooling water (e.g., municipal, stream withdrawal):
TOWN OF STURBRIDGE MUNICIPAL SYSTEM

Receiving waterbody:
UNNAMED BROOK TRIBUTARY OF HOBBS BROOK

C. Certifications

1. The applicant certifies that the discharge consists solely of non-contact cooling water to reduce temperature, and does not come in direct contact with any raw materials, intermediate product, waste product (other than heat), or finished product.

   ☒ Yes ☐ No

2. The applicant certifies that no biocides or other chemical additives for any purpose are used in the non-contact cooling water.

   ☒ Yes ☐ No

I certify that the discharge for which I am seeking coverage under the general permit consists solely of non-contact cooling water. 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 inquiry of the persons or persons directly responsible for gathering the information, I certify that the information is, to the best of my knowledge and belief, true, accurate, and complete. I certify that I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature

BOGDAN MASTALERZ
Printed Name and Title

9/29/08
Date

Enter your transmittal number → W060105
Transmittal Number

Your unique Transmittal Number can be accessed online: http://www.mass.gov/dep/counter/trasmfrm.shtml or call DEP's InfoLine at 617-338-2255 or 800-462-0444 (from 508, 781, and 978 area codes).

Massachusetts Department of Environmental Protection

Transmittal Form for Permit Application and Payment

1. Please type or print. A separate Transmittal Form must be completed for each permit application.

2. Make your check payable to the Commonwealth of Massachusetts and mail it with a copy of this form to: DEP, P.O. Box 4062, Boston, MA 02211.

3. Three copies of this form will be needed.

Copy 1 - the original must accompany your permit application. **Copy 2** must accompany your fee payment. **Copy 3** should be retained for your records

4. Both fee-paying and exempt applicants must mail a copy of this transmittal form to:

DEP
P.O. Box 4062
Boston, MA
02211

* **Note:** For BWSC Permits, enter the LSP.

A. Permit Information

BRP WM 11
1. Permit Code: 7 or 8 character code from permit instructions

Request for GEneral Permit Coverage: Surface Water Discharge of Non-Contact Cooling Water

Non-Contact cooling water discharge
3. Type of Project or Activity

B. Applicant Information – Firm or Individual

OFS Fitel, LLC
1. Name of Firm - Or, if party needing this approval is an individual enter name below:

2. Last Name of Individual	3. First Name of Individual	4. MI

50 Hall Road
5. Street Address

6. City/Town	7. State	8. Zip Code	9. Telephone #	10. Ext. #
Sturbridge	MA	01566	508-347-8514	

Bogdan Mastalerz
11. Contact Person

12. e-mail address (optional)

C. Facility, Site or Individual Requiring Approval

OFS Fitel, LLC
1. Name of Facility, Site Or Individual

50 Hall Road
2. Street Address

3. City/Town	4. State	5. Zip Code	6. Telephone #	7. Ext. #
Sturbridge	MA	01566	508-347-8514	

8. DEP Facility Number (if Known)	9. Federal I.D. Number (if Known)	10. BWSC Tracking # (if Known)

D. Application Prepared by (if different from Section B)*

Josti Associates
1. Name of Firm Or Individual

77 Indian Head Road
2. Address

3. City/Town	4. State	5. Zip Code	6. Telephone #	7. Ext. #
Framingham	MA	01701	508-872-6114	

John J. Josti
8. Contact Person

9. LSP Number (BWSC Permits only)

E. Permit - Project Coordination

1. Is this project subject to MEPA review? ☐ yes ☒ no
If yes, enter the project's EOEA file number - assigned when an Environmental Notification Form is submitted to the MEPA unit:

EOEA File Number

F. Amount Due

DEP Use Only

Permit No:

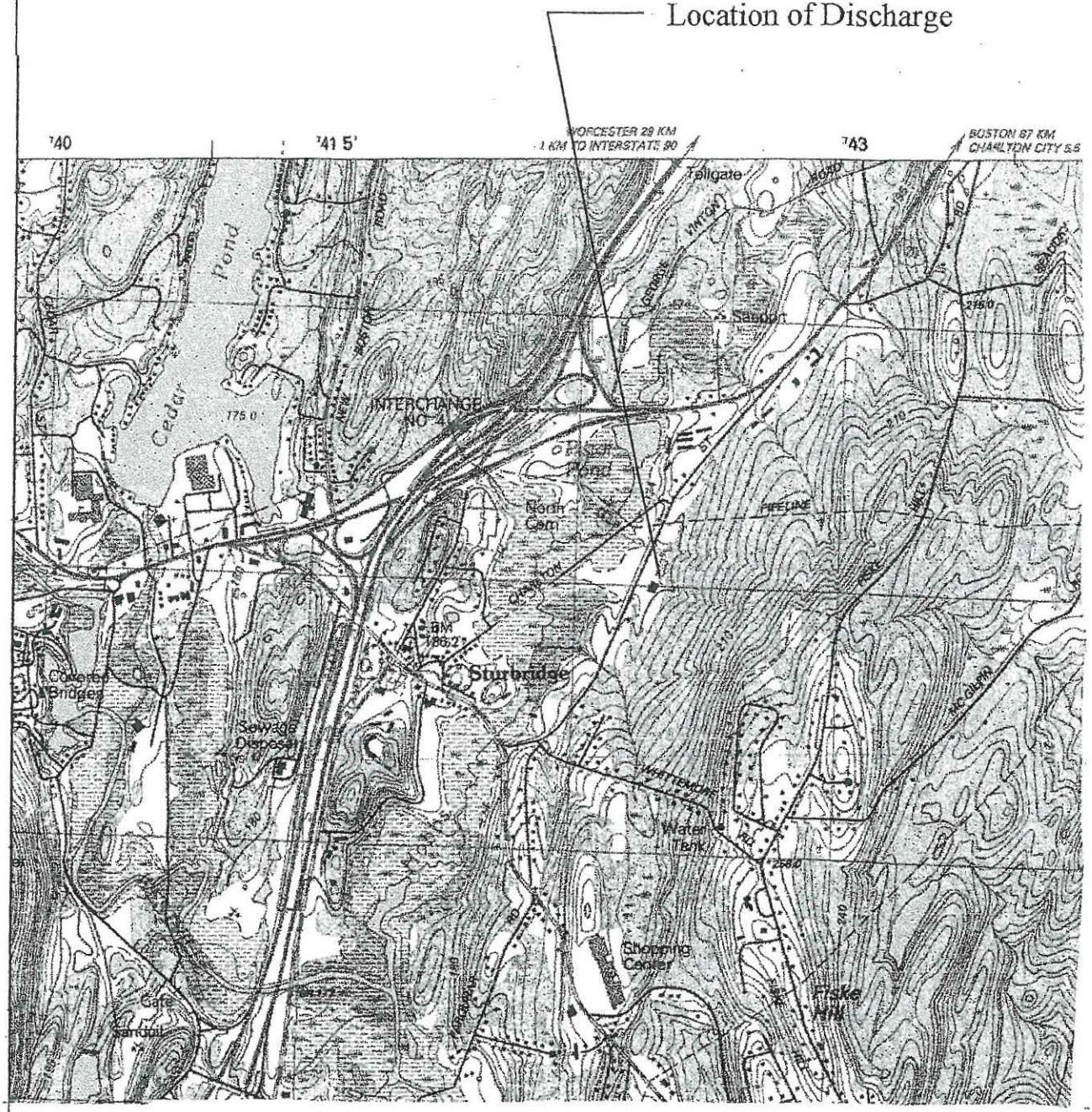
Rec'd Date:

Reviewer:

Special Provisions:

1. ☐ **Fee Exempt (city, town or municipal housing authority)(state agency if fee is $100 or less).** *There are no fee exemptions for BWSC permits, regardless of applicant status.*
2. ☐ Hardship Request - payment extensions according to 310 CMR 4.04(3)(c).
3. ☐ Alternative Schedule Project (according to 310 CMR 4.05 and 4.10).
4. ☐ Homeowner (according to 310 CMR 4.02).

Check Number	Dollar Amount	Date
099863	385.00	2/17/05



OFS Fitel, LLC
Sturbridge, Massachusetts

Location Plan

Josti Associates
Framingham, Massachusetts

OFS Fitel
Noncontact Cooling Water Discharge
Engineering Calculations for Temperature

ATTACHMENT A.

1. Maximum temperarure differential would occur in the winter, Hobb Brook temperature is 36 F
2. Maximun discharge temperature 70 f
3. minimun air Temperature 40 f

Discharge flows through a small pond before discharge to Hobbs Brook.
Heat loss in the pond by natural convection and radiation is calculated below:

Convection: Btu/sq ft hr=C(ΔT)^1.266/(d)^0.2(Tavg)^0.181

C: shape factor, 1.79 for horizontal surface
d: width of surface in inches 12 inches
Tavg: average of the absolute surface and ambient air temperature in degrees R, 515

Btu/sq ft hr 26.07445

Radiation: Btu/sq ft = 0.173*e*((T1/100)^4-(T2/100)^4)

e: Emissivity ratio, Assumed 0.90
T1: Temperature water degrees Rankine
T2: Temperature air degrees Rankine

Btu/sq ft hour 25.54229

Total heat loss: 51.61674

Area of pond: 12,000 sqft 12375

Heat dissipated in pond: Btu/hr 619400.9

Heat in discharge Btu/hr = C*M*T

C: Heat capacity of water, 1.0 F*Btu/lb
M: Mass of discharge in lbs, 60 gpm
T: temperature of discharge, 70 F

Btu/hr 70*60*8.34*60 = 2,101,680

Temperature of discharge after heat dissipated in pond

T=(Hpl-Hpd)/(C*M)

C: Heat capacity of water: 1.0F*Btu/ib
M: Mass of plant discharge in lb/hr, 30,024 lbs/hr
T: Temperature of plant discharge after pond
Hpl: Heat in plant discharge, 2,101,680 Btus/hr
Hpd; Heat lost in pond, 619,400 Btus/hr

Plant discharge temperature after pond: (2101680-619400)/30024 = 49.4 F

Hobbs Brook temperatue after mixing of discharge: Tba = (Tb*Mb + Tp*Mp)/(Mb +Mp)

Tba: Temperatue in Brook after mixing
Tb: Temperature in Brook before mixing, assumed 36.0 F
Mb: Mass of plant discharge in lbs/hr, 30,024 lbs/hr
Mb: Mass of brook flow 7Q10, 29,203 lbs/hr

Temperature in brook after mixing = (36*29203+49.4*30024)/(29203+30024) = 42.8 F

Change in Brook Temperature = Tb- Tba

Change in Brook temperature: 42.8- 36.0= 6.8 degrees F

StreamStats

Streamflow Statistics Report

Hobbs Brook

Date: Thu Aug 14 2008 10:49:39
Site Location: Massachusetts
Drainage Area: 5.45 mi2
Latitude (NAD83): 42.1125 (42 06 44)
Longitude (NAD83): -72.0712 (-72 04 16)

Low Flow Basin Characteristics			
100% Statewide Low Flow (5.45 mi2)			
Parameter	**Value**	**Min**	**Max**
Drainage Area (square miles)	5.45	1.61	149
Mean Basin Slope from 250K DEM (percent)	3.95	0.32	24.6
Stratified Drift per Stream Length (square mile per mile)	0.052	0	1.29
Massachusetts Region (dimensionless)	0	0	1

Streamflow Statistics					
Statistic	**Flow (ft^3/s)**	**Prediction Error (percent)**	**Equivalent years of record**	**90-Percent Prediction Interval**	
				Minimum	**Maximum**
D50	5.38	18		2.72	10.6
D60	3.59	20		0.2	65
D70	1.9	24		0.16	22.6
D75	1.41	26		0.14	14.3
D80	1.08	28		0.44	2.62
D85	0.79	32		0.31	1.98
D90	0.55	37		0.21	1.45
D95	0.33	46		0.11	0.93
D98	0.2	60		0.0582	0.65
D99	0.15	65		0.0402	0.5
Low-Flow Statistics					
M7D2Y	0.34	50		0.11	1.01
AUGD50	0.82	33		0.32	2.06
M7D10Y	0.13	71		0.0323	0.47

ATTACHMENT B

OFS Fitel

NCCW NOI

Dilution Calculations

Dilution Factor

Qr +(QpX1.55)/QpX1.55

Qr = 7Q10 Flow = 0.13 cfs = 0.00840 million gal./day

Qp = Plant NCCW Discharge = 0.086 mgd

0.13 +(0.086X1.55)/0.086X1.55 = 1.98 Dilution Factor