UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND - REGION I
5 POST OFFICE SQUARE, SUITE 100
BOSTON, MASSACHUSETTS 02109-3912

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

Hydroelectric Generating Facilities (HYDROGP)
NPDES General Permits No. MAG360000 and NHG360000

A. Facility Information

1. Indicate applicable General Permit for discharge: MAG360000 X
   NHG360000 ____

2. Facility Name, Location, and Data:
   Name Cosgrove Intake Facility
   Street/POBox 301 Boylston Street City Clinton
   State MA Zip Code 01570
   Latitude 42o 23' 55" Longitude 71o 41' 18"
   Type of Business public water supply facility & hydroelectric generating station
   SIC Code(s) 4941 & 4911

3. Facility Mailing Address (if different from Location Address):
   Name Mass. Water Resources Authority
   Street/PO Box 100 First Ave., CNY City Charlestown
   State MA Zip Code 02129

4. Facility Owner:
   Name Mass. Water Resources Authority e-mail (optional) ____
   Street/PO Box 100 First Avenue City Charlestown
   State MA Zip Code 02129
   Contact Person John Nelson Telephone Number 617-788-2555
   Owner is (check one): 1. Federal ____ 2. State X 3. Tribal ____ 4. Private ____
   Other (Describe) ____

5. Facility Operator (if different from above):
   Legal Name Mass. Water Resources Authority e-mail (optional) ____
   Street/PO Box 260 Boston Road City Southboro
   State MA Zip Code 01772
   Contact Person David Coppes Telephone Number 508-872-4388

6. Current permit status (please check Yes or No):

a. Has a prior NPDES permit (individual or general permit coverage) been granted for the discharge that is listed on the NOI? Yes X No ____ If Yes, Permit Number: MA0040134

b. Is the facility covered by an individual NPDES permit? Yes X No ____
   If Yes, Permit Number MA0040134

c. Is there a pending NPDES application on file with EPA for this discharge? Yes X No ____ If Yes, date of submittal: September 26, 2008 and permit number if available: MA0040134

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

8. Provide the number of turbines and the combined turbine discharge (installed capacity) at maximum and minimum output, in cubic feet per second (cfs). Number of turbines 2 Combined turbine discharge (installed capacity): maximum output, cfs 620 and minimum output, cfs 93

9. Is the hydroelectric generating facility operated as a pump storage project? No

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

1. Name of receiving water into which discharge will occur: Tributary wetlands to North Brook
   Freshwater: X Marine Water: _____

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

3. List each outfall under the following categories and number sequentially: equipment-related cooling water; equipment and floor drain water; maintenance-related water; facility maintenance-related water during flood/high water events, and equipment-related backwash strainer water (see Parts I.A.1, 2, 3, and 4; or Parts I.B.1, 2, 3, and 4). Attach additional sheets to identify outfalls as needed. *All discharges to a single outfall on North Brook wetlands*

Equipment-related cooling water

1.North Brook Wetlands

Equipment and floor drain water

1.North Brook Wetlands

Maintenance-related water

1.North Brook Wetlands

Facility maintenance-related water during flood/high water events

Not Applicable

Equipment-related backwash strainer water

1.North Brook Wetlands

4. List each outfall discharging any combination of the following to identify the combined discharges: equipment-related cooling water, equipment and floor drain water, maintenance-related water, equipment-related backwash strainer water, and facility maintenance-related water during flood/high water events (see Parts I.A.5 and B.5) and continue the sequential numbering. Attach additional sheets to identify outfalls as needed. *1.North Brook Wetlands*

5. Provide for each outfall the following:

a. Latitude and longitude to the nearest second (see EPA's siting tool at: http://www.epa.gov/tri/report/siting_tool/) and the name(s) of the receiving water(s) into which the discharge will occur.
North Brook Wetlands Outfall: 42º 23' 42" north latitude and 71o 41' 03" west longitude

b. The operations contributing flow and the treatment received by the discharge. Indicate the average flow from each operation. *Hydroelectric turbine bearing cooling & lube. water, misc. equipment and floor drain water; condensation; intake screen washing; foundation leakage; and water quality flow-though cell test effluent. Average flow: 9,000 gpd.*

c. Indicate if the discharge can be sampled at least once per year or can be sampled using the representative outfall sampling provisions (see Parts I.A.6 or B.6 and III.E). *Yes*

d. Note if the outfall discharges intermittently or seasonally. *Outfall discharges on a daily basis.*

C. Chemical Additives

Are any non-toxic neutralization chemicals used in the discharge(s)? Yes ____ No X If so, 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).

D. Endangered Species Act Eligibility Information

A facility, with a previous ESA Section 7 consultation with the National Marine Fisheries Service (NMFS), seeking coverage under the Massachusetts general permit and discharging to the Connecticut River or Merrimack River should provide one of the following, if available. *Not Applicable*

1. A formal certification indicating consultation with the National Marine Fisheries Service (NMFS) resulted in either a no jeopardy opinion or a written concurrence on a finding that the discharges are not likely to adversely affect the shortnose sturgeon or critical habitat. Information should also be provided indicating the hydroelectric facility's previous ESA Section 7 consultation with NMFS covered the discharges to be authorized under this general permit and demonstrating no significant changes in the discharges have occurred since the previous consultation.

2. Another operator's certificate of the ESA eligibility for those discharges to be authorized under this general permit.

E. Supplemental Information

Please provide any supplemental information, including antidegradation review information applicable to new or increased discharges. Attach any certification(s) required by the general permit.

See Attachment 1 for supplemental information.

F. Signature Requirements

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

I certify under penalty of law that no chemical additives are used in the discharges to be authorized under this general permit except for those used for pH adjustment and (2) 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 02/04/10

Printed Name and Title Michael Hornbrook, Chief Operating Officer

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 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.

Hydroelectric General Permit Notice of Intent
Cosgrove Intake, 301 Boylston Street, Clinton, MA
Attachment 1

Section E: Supplemental Information

The Cosgrove Intake Facility is located on the shore of the Wachusett Reservoir in Clinton. The facility serves as the main intake for transferring water from the Wachusett Reservoir into the Cosgrove Tunnel where it flows toward the MWRA treatment plant in Marlborough and from there to the metropolitan Boston drinking water service area. The facility contains two 2,240 HP turbines with 1,600 KW generators.

In its current configuration an approximate average of 6 gallons per minute (gpm) of flow from the following sources drains to a 10 foot long by 5 foot wide by 53.5 foot deep sump located below the turbine floor of the facility which is located 48 feet below the ground floor level of the facility.

1. foundation leakage from reservoir,
2. intake screen washing
3. continuous sample stream from pH, turbidity, conductivity, and UV254 (amount of organic matter) testing of raw water. Of these analyzers only the UV254 uses an added reagent. Muratic acid, used at a concentration of approximately 2.6% is continuously fed into the sample stream to keep the internal parts of the instrument at the required cleanliness. Approximately 33ml of this 2.6% solution is used per day.
4. condensation and leakage to floor and trench drains from valve chambers and other areas near the turbines,
5. excess lubrication and cooling water from the lower-most bearing on each turbine.

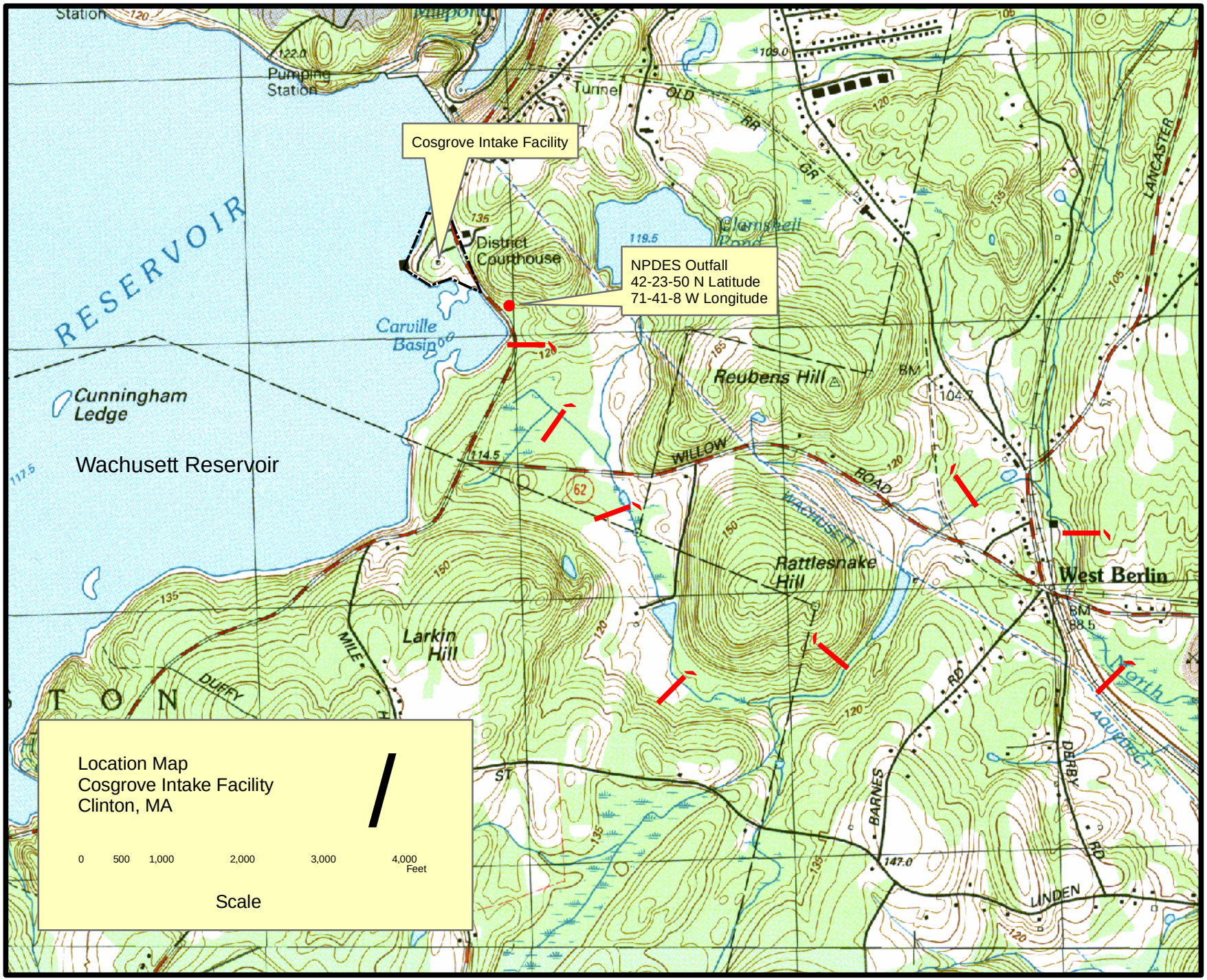
The average daily flow is approximately 9,000 gallons. The individual flows contributing to this flow rate can not be individually measured. The largest contributor to the total daily flow is intake screen washing which occurs on a daily basis. The water source of all these flows is raw Wachusett Reservoir water. MWRA maintenance staff are in the process of installing a flow metering device on this sump.

This sump contains two float-operated sump pumps that pump the facility sump discharge to an 8,000-gallon concrete storage tank located beneath the driveway of the facility. Catch basins for the intake facility parking lot and building roof drains are connected to this tank. Water from this tank is pumped at a rate of 1,100 gpm to a distribution manhole located along the reservoir shoreline adjacent to the facility to the west. Roof drains and parking area catch basins from the former Cosgrove Disinfection Facility, located west of the intake building, drain directly to this distribution manhole.

Drainage into this distribution manhole flows by gravity into a 7,000 cubic foot (52,360-gallon) storage capacity wet well of the pump station which has 1,100 gpm primary and backup pumps. The pump station pumps the accumulated facility sump discharge and facility stormwater approximately 860 feet via a 10-inch diameter force main to an outfall

located in a wetland on the eastern side of Route 70. This approximately 14.5-acre wetland drains via an approximately 300-foot long 3-foot diameter pipe conduit from the downstream end of this wetland to the upper tributary wetlands of North Brook. The drainage area of the Cosgrove facility that discharges into the pump station including both the intake building and disinfection building areas is approximately 3.22 acres.

The expected non-stormwater flow has an average daily flow of approximately 9,000 gpd. During precipitation events stormwater runoff from the 3.22-acre facility would also discharge to the pump station. The pump station pumps the combined stormwater and non-sanitary flows from the intake building to the wetland outfall at the primary pump flow rate of 1,100 gpm. For design storms greater than a 10-year frequency both the primary and backup pumps would operate at a combined flow rate of 2,200 gpm. The maximum daily flow from the pump station has been measured to be 238,005 gallons. This value includes the combined from the intake building as well as the stormwater from the grounds.


Cosgrove Intake Facility
NPDES Outfall
42-23-50 N Latitude
71-41-8 W Longitude
Wachusett Reservoir
Location Map
Cosgrove Intake Facility
Clinton, MA
0 500 1,000 2,000 3,000 4,000
Feet
Scale

Schematic of Water Flow
Cosgrove Intake
Clinton, Massachusetts