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 Oakdale Power Station
   Street/POBox River Road City West Boylston
   State MA Zip Code 01539
   Latitude 42o 23' 12" Longitude 71o 48' 09"
   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: MAG250025
b. Is the facility covered by an individual NPDES permit? Yes ____ No X
   If Yes, Permit Number ____
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: MAG250025

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 1 Combined turbine discharge (installed capacity): maximum output, cfs 500 and
minimum output, cfs 155

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: Quinapoxet River
   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 the Quinapoxet River

Equipment-related cooling water

1.Quinapoxet River Outfall

Equipment and floor drain water

1.Quinapoxet River Outfall

Maintenance-related water

1.Quinapoxet River Outfall

Facility maintenance-related water during flood/high water events

Not Applicable

Equipment-related backwash strainer water

Not Applicable

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.Quinapoxet River Outfall

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.
Quinapoxet River Outfall: 42º 23' 13" north latitude and 71o 48' 09" 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 and lube. water, misc. equipment and floor drain water: combined average discharge flow: 100,000 gpd; treatment through an oil-water separator of all discharges except non-contact cooling water.*

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. *intermittently and seasonally: generally during non-winter months and approximately 200 days per year*

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
Oakdale Power Station, River Road, West Boylston, MA
Attachment 1

Section E: Supplemental Information

The Oakdale Power Station is located near the mouth of the Quinapoxet River in West Boylston, Massachusetts at the terminus of the Quabbin Aqueduct, a deep-rock tunnel that connects the Quabbin and Wachusett Reservoirs, MWRA's two primary drinking water reservoirs. Water is discharged from the aqueduct through the facility and into the Quinapoxet River. The facility is equipped with hydroelectric generating equipment consisting of a 5,000-hp turbine and a 4,375-KVa generator. Hydroelectric energy is generated with this equipment during water transfer operations between the Quabbin and Wachusett Reservoirs. The aqueduct has a capacity of 500 million gallons per day (MGD). Water can be discharged from the aqueduct through the hydroelectric turbine via an 84-inch main that connects the top of the outlet shaft to the turbine and/or through a 72-inch main that bypasses the turbine. The hydroelectric turbine runs only when water is being transferred from the Quabbin Aqueduct to the Wachusett Reservoir and typically operates at between 100 MGD and 320 MGD. These transfers occur as needed based on demand, water quality and reservoir elevations and average 200 days per year over six to ten months.

The turbine contains an upper and lower main bearings. The upper bearing is oil-lubricated and water cooled at a flow rate of approximately seven to 11 gallons per minute (gpm). The upper bearing surrounds the turbine shaft and is contained in a torus-shaped structure containing 50 gallons of turbine hydraulic oil. A 3/4-inch copper cooling line coils through the center of the bearing housing. The cooling water at no time comes into contact with the oil. The cooling water effluent is discharged directly to the short outlet channel leading to the Quinapoxet River. The source of the cooling water as well as all other water needs at the facility is drawn from the 84-inch main in the basement of the building. The flow rate of the cooling water in both bearings is dependent on a number of factors including the amount of water being sent through the turbine and to a lesser extent on the elevation of the Quabbin Reservoir.

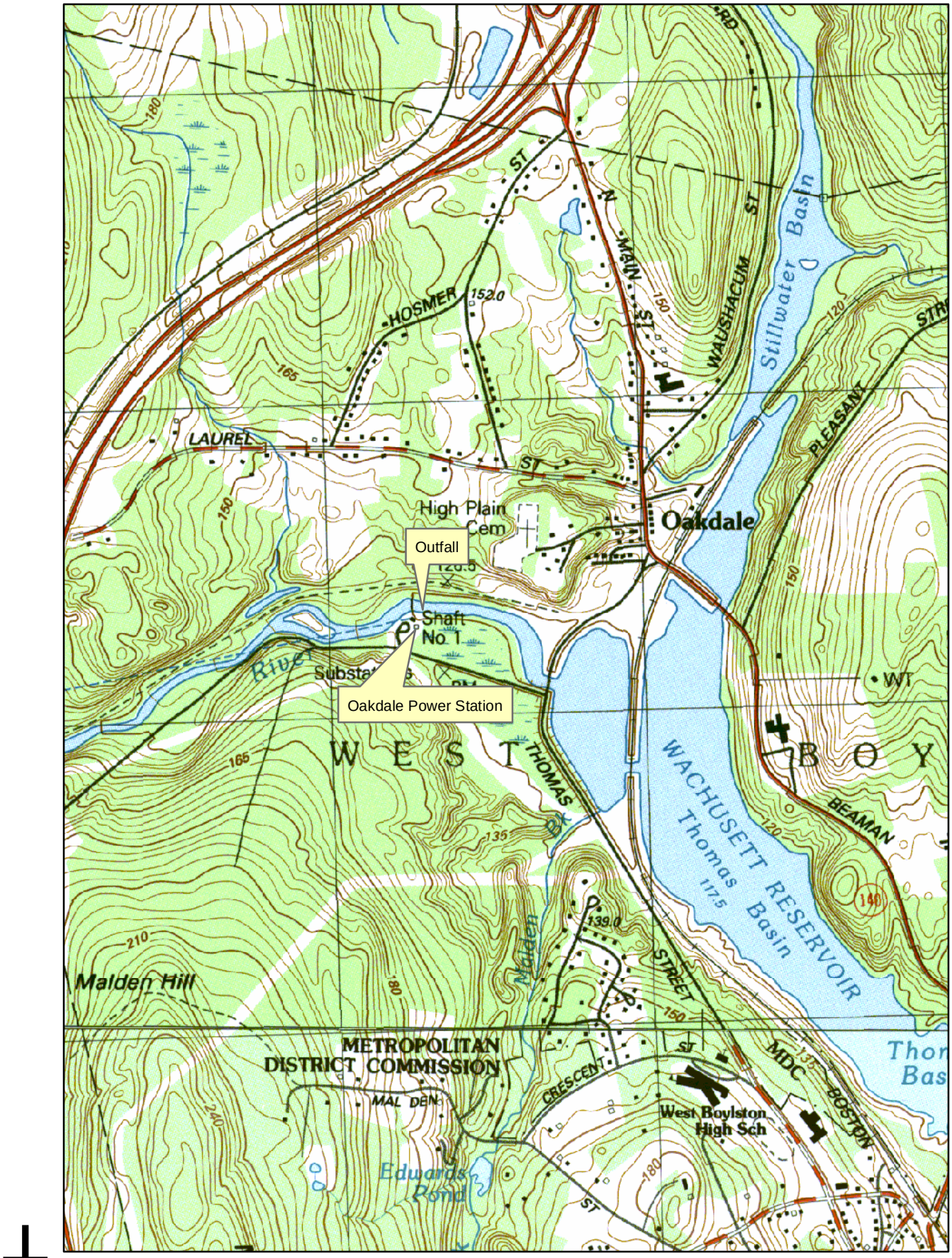
The lower bearing of the turbine is fiber-based and is water-lubricated and cooled at an approximate flow rate of 40 to 70 gpm. The lower bearing cooling and lubrication water pressurizes a packing box containing the bearing material that surrounds the shaft. A majority of this water leaks down through the bottom seal of the packing box and is discharged to the river with the outgoing turbine water flow. The remainder of the water leaks upward from the packing box and drains to a sump at the bottom level of the building. The lower bearing cooling and lubrication water flow is constant throughout the year, however the cooling water flow to the upper bearing is typically stopped when the turbine is not operational.

In addition to the excess cooling and lubrication water from the lower bearing, there is a small amount of additional water from misc. equipment that reaches the sump and is discharged to the river. This includes air compressor blowdown, a hose bib, an emergency eye wash, several sample taps on water pipes, groundwater infiltration, and condensation off of the large-diameter water pipes. Water in the sump is in turn pumped to a 300-gallon oil-water separator located on the main floor which drains by gravity to the river. All outgoing water from the facility is discharged to a short outlet channel leading to the river, which empties into the Wachusett Reservoir approximately 750 feet downstream.

Due to the volume of oil present in the hydroelectric and electrical transmission equipment the facility has a Spill Prevention Control and Countermeasures (SPCC) Plan as required by 40 CFR 112. Through spill prevention and inspection requirements this plan provides protection against oil spills from the facility to the Quinapoxet River and Wachusett Reservoir. Included in the periodic inspections is a quarterly inspection of the oil water separator. In addition, the oil water separator is equipped with a remotely monitored alarm to notify staff that oil is present. An interlock is also present in the sump pumps that would stop the pumps from operating if oil is detected in the oil water separator.

Based on the minimum hydroelectric turbine flow of 100 MGD the approximately 100,000 gallons per day discharge of cooling, lubrication, and misc. equipment and floor drain water that has potential contact with pollution sources represents a maximum of 0.1% of the total flow through the facility. Both the Quabbin and Wachusett Reservoirs including their tributary waters such as the Quinapoxet River are Class A water bodies and Outstanding Resource Waters. The water quality of the Quabbin Reservoir tends to be higher than that of the Wachusett Reservoir and its tributaries. Therefore the discharge of water through the Oakdale Power Station improves the water quality of the Wachusett Reservoir. Based on these facts there is very little potential for degradation of the receiving waters as a result of this discharge.

Figure 1: Site Location Map
Oakdale Power Station, West Boylston, MA



Schematic of Water Flow
Oakdale Power Station
West Boylston, Massachusetts