THE COMMONWEALTH OF MASSACHUSETTS
WATER RESOURCES COMMISSION

Request for Determination of Insignificance
Under the Interbasin Transfer Act
MGL Chapter 21 Sections 8b-8d

Town of Oxford Sewer Project

Water Resources Commission Decision
11 April 2002

Decision

On November 5, 2001, the Massachusetts Water Resources Commission (WRC) received a request for determination of insignificance under the Interbasin Transfer Act (M.G.L. Chapter 21 §§ 8B-8D) from the Town of Oxford. After review of the application, additional information was requested from the proponent in order to fully evaluate this request under the Act. The requested information was received on February 5, 2002.

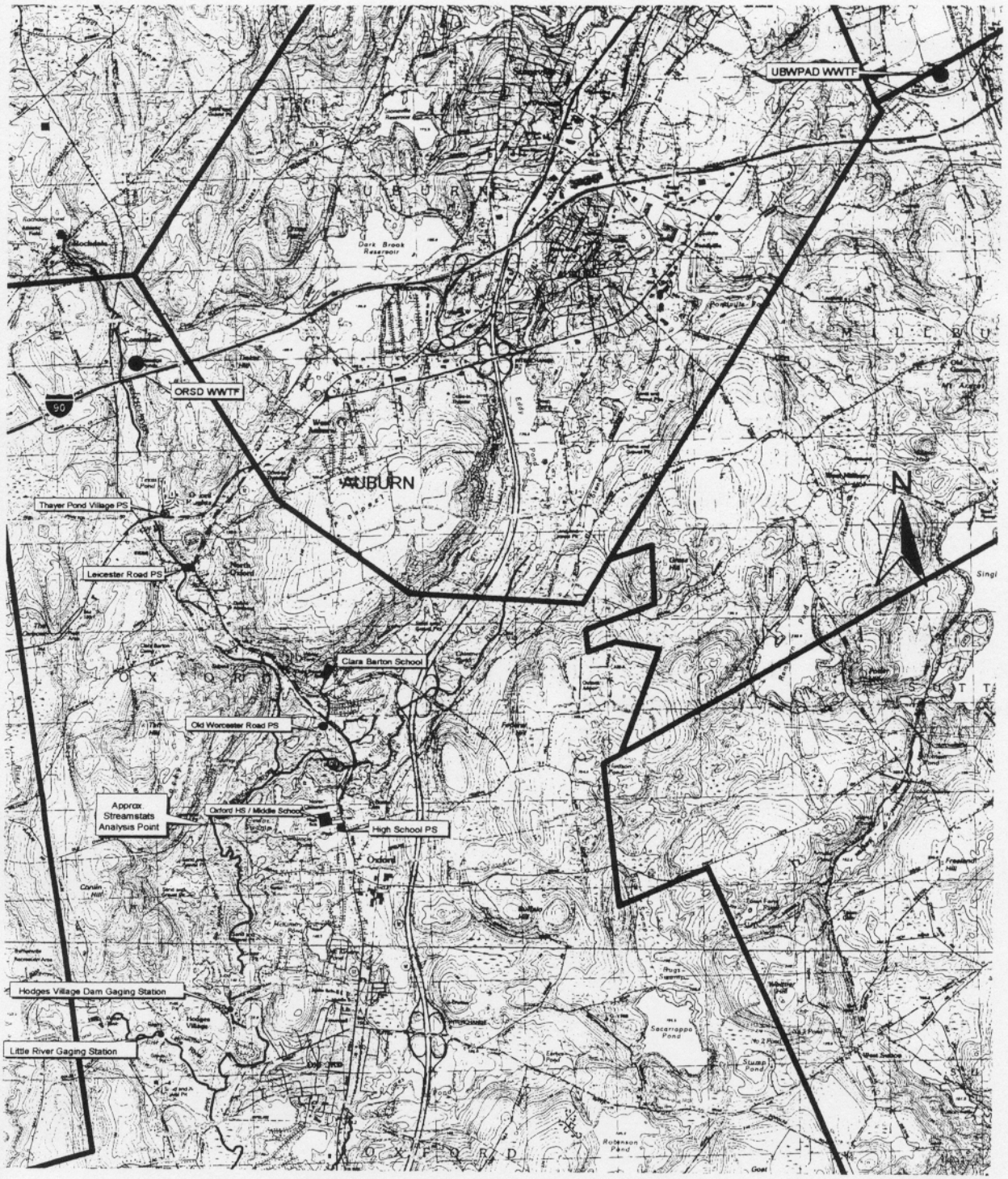
This proposal was discussed at the WRC's March 14, 2002 and April 11, 2002 meetings. At the April meeting, the WRC voted unanimously that the sewering project, as presented, was insignificant under the Act.

Project Description

Oxford is located in the French River basin and is proposing to construct an additional wastewater connection with the Town of Auburn to discharge up to an additional 60,000 gallons per day (0.06 mgd). The town's existing wastewater connection to Auburn has a capacity of 0.024 mgd. Auburn's wastewater is discharged to the Upper Blackstone Water Pollution Abatement District in the Blackstone River basin.

Oxford is proposing to extend its sewer system to serve the Oxford High School/Middle School complex, the Clara Barton School and the Plymouth Village Condominium Complex (see Figure 1). The project involves the construction of three pump stations and construction of force mains to the Auburn municipal sewer system which ultimately discharges to the Upper Blackstone Water Pollution Abatement District facility.

Oxford has an existing connection to Auburn via the Thayer Pond Village Pump Station, which has a capacity of 0.024 mgd (Figure 1). The new sewer increases the overall capacity of the Oxford wastewater connection to Auburn. The capacity of the new connection is limited by the Leicester Road Pump station, which has a maximum operating capacity of 0.06 mgd (Figure 1). Because the Pump Station capacity limits the



LEGEND

- PUBLIC WATER SUPPLY WELLS
- UBPAD WWTF
- GAGING STATION
- EXISTING PUMP STATION
- PROPOSED PUMP STATION
- SUB-BASINS

EXISTING SEWER
- FORCE MAIN
- GRAVITY SEWER

PROPOSED SEWER
- FORCE MAIN
- GRAVITY SEWER

TOWN OF OXFORD, MASSACHUSETTS
FIGURE 1
LOCATION MAP

Fay, Spofford & Thorndike January 2002

transfer, the amount of infilling which could occur is limited. Although not currently planned, it is possible that approximately 25 new service connections could potentially be added in the future, in the areas where gravity sewer connections are proposed.

Analysis

Oxford's Request for Determination of Insignificance was reviewed by staff from the Department of Environmental Management's Office of Water Resources, the Riverways Program, and the Department of Environmental Protection's Division of Watershed Permitting and Central Regional Office (CERO) and the Division of Marine Fisheries (DMF) against the criteria for insignificance listed in the Interbasin Transfer Act regulations, 313 CMR 4.04(4).

Synopsis of Criteria for Insignificance

Criterion	Oxford's Application
(a) Is not over 1 mgd	Meets
(b) Is less than 1 mgd on an annualized basis and is temporary, of short duration and for a purpose other than water supply use	Not Applicable
(c) Additional flow is less than 5% of the instantaneous flow	Meets
(d) The 95% exceedance flow, or the 7Q10 flow when relied in a program of pollution abatement, will not be diminished	Meets
(e) Special resource values will not be adversely affected	Meets
(f) The Commission shall consider the cumulative impacts of all past, authorized or proposed transfers on streamflows in the donor basin	Meets

A description of how the application addressed these criteria is found below and in Attachment 1.

Streamflow/Hydrologic Impacts

The Town of Oxford is located along the mainstem of the French River. Most of the community is served by a private water company (Mass. American Water Company)

which withdraws water from three wells located near the French River. Of the 0.75 mgd pumped for water supply, about 0.73 mgd (97%) is returned to the French River Basin via septic systems and the Oxford Rochdale sewer district treatment plant within town. The schools, the condominium complex and two of the water company wells are located in a subbasin with a drainage area of 29.2 square miles. However, a discontinued stream gage is located downstream on the French River, below Hodges Village Dam. This was used for the streamflow analysis to evaluate the criteria for determining insignificance. The drainage area for this gage is 31.2 square miles.

Two of the criteria for determining insignificance under the Interbasin Transfer Act regulations are that less than 5% of the instantaneous flow can be withdrawn (transferred) and that the 95% exceedance flow or, the 7Q10 flow when used in a program of pollution abatement, will not be diminished. Because a wastewater treatment plant is located in Webster downstream from the transfer, the 7Q10 for plant at that site has been evaluated here.

The streamflows for the French River below the Hodges Village Dam and at the Webster/Dudley treatment plant are shown in the table below. The 99% exceedance flow is being used as a surrogate for the instantaneous flow.

	Flow value in cubic feet per second (cfs)	Potential Reduction in flow in percent
Increased Transfer from the Basin in mgd = -0.06 mgd		
99% exceedance flow	3.8 cfs	2.4%
95% exceedance flow	5.9 cfs	1.6%
7Q10 flow as measured just upstream of the Webster/Dudley regional WWTF	16.0 cfs	0.58%

The proponent was also directed to provide a net inflow/outflow analysis to evaluate the potential impact of the loss of water to the subbasin. The current loss of water from the subbasin is 0.67 mgd due to withdrawals, which serve other parts of the community outside the subbasin. The proposed sewer project would increase that net loss from the subbasin to 0.73 mgd. This transfer represents a net increase in loss to the subbasin of 9%.

Special Resource Values

The proponent reviewed documents published by agencies responsible for protecting the special resource values named in the regulations (endangered species, ACECs, scenic rivers and areas protected by Article 97). This project does not impact any of these special resource values.

Cumulative Impacts

The town of Charlton is proposing to purchase 0.18 mgd from the Oxford – Mass. American Water Company. Forty-seven percent of Charlton's land area is in the French River basin; the other 53 percent is within the Quinebaug River basin. It is estimated that 0.08 mgd (47%) of this water will be returned to the French River basin, if Charlton's proposal is approved, via on-site septic systems, however the remaining 0.1 mgd will be transferred to the Quinebaug River basin. Preliminary analyses indicate that this cumulative loss will not have significant impacts.

The WRC notes that the Oxford – Mass. American Water Company has a water supply source within the Wellington Brook subbasin. This water is used within the town of Oxford and within the French River basin, and thus does not constitute an Interbasin Transfer. According to the Riverways Program, Wellington Brook in the vicinity of this well site is considered both a priority site and estimated rare and endangered species habitat. There are also certified vernal pools near the confluence of Wellington Brook and the French River downstream of the Mass. American well. In addition, the Wellington Brook subbasin upstream of the town well is considered Core Habitat. Operation of the well could impact these resources. The WRC directs staff to carefully consider this information when reviewing Charlton's Request for Determination of Insignificance and to work closely with DEP during the Water Management permitting process that will be required for the water company to sell water to Charlton.

WRC Decision

The WRC finds that the Oxford sewering project, as presented, is insignificant under the Interbasin Transfer Act based on the following facts:

1. The transfer is limited to 60,000 gallons per day (0.06 mgd) by the capacity of the Leicester Road Pump station. Any future proposed increases to this pumping station or other transfer facility(ies) which would result in an increase in the amount of wastewater transferred from the Oxford sewer system to the Auburn wastewater system, will require additional review under the Interbasin Transfer Act.
2. Reductions to instantaneous flow, based on the 99% flow duration, are less than 5% and are closer to 2.4%.
3. The reduction in the 7Q10 flow for the wastewater treatment plant in Webster is 0.58%, too small to have measurable effects.

4. The primary period during which most of the transfers will occur is outside the primary low flow period of the summer months.
5. Special resource values will not be adversely affected.
6. This transfer of wastewater represents only a small amount of water leaving the basin. Most of the water withdrawn for water supply use leaves the subbasin but remains within the basin.
7. The cumulative impacts of the Charlton and Oxford proposals, based on preliminary amounts of transfer for Charlton, would still be below 5% for the 99% flow duration. The 7Q10 flows at Webster would not be significantly diminished.

Executive Order 385

This decision is consistent with EO 385, which has the dual objective of resource protection and sustainable development. The decision does not encourage growth without adequate infrastructure, nor does it cause an unavoidable loss of environmental quality or resources.

Attachment 1
Request for Determination of Insignificance
Town of Oxford Sewering Project

Criterion	Proposal Meets	Explanation
(a) Is not over 1 mgd	Meets	Proposed increase in transfer is for a maximum of 0.06 million gallons per day of wastewater
(b) Is less than 1mgd on an annualized basis and is temporary, of short duration and for a purpose other than water supply use)	Not Applicable	Proposal is long-term for wastewater purposes.
(c) Additional flow is less than 5% of the instantaneous flow	Meets	This transfer is less than 5% of the instantaneous flow, based on the 99% flow duration.
(d) The 95% exceedance flow, or the 7Q10 flow when relied in a program of pollution abatement, will not be diminished	Meets	The reduction in the 7Q10 flow for the wastewater treatment plant in Webster is too small to be measurable.
(e) Special resource values will not be adversely affected	Meets	NHESP, MassGIS programs, were consulted to determine that special resource values will not be adversely affected by this project.
(f) The Commission shall consider the cumulative impacts of all past, authorized or proposed transfers on streamflows in the donor basin	Meets	Any additional cumulative losses from this and from the proposed Charlton transfer appear to be insignificant.