THE COMMONWEALTH OF MASSACHUSETTS
WATER RESOURCES COMMISSION

EIR Scope for Communities Seeking

APPROVAL FOR A WASTEWATER TRANSFER
TRIGGERED BY DEVELOPMENT OF A WATER SUPPLY

Under the Interbasin Transfer Act

This scope replaces the WRC application form (1986/1992) "*Application for Approval of an Action to Increase Over the Present Rate of Interbasin Transfer*" and is required for transfers considered "significant" under the Act. The information requested here should be incorporated into the EIR required by the MEPA regulations, 301 CMR 11.03. Wherever possible, the applicant should provide this information in an electronic format.

This scope is only for that portion of the EIR that pertains to the INTERBASIN TRANSFER ACT. There may be other issues which need to be addressed in the EIR for a particular project. The MEPA program should be contacted to determine a comprehensive scope.

The Interbasin Transfer Act governs the transfer of water and wastewater between river basins within the Commonwealth. Any water transferred out of a river basin, either for water supply or wastewater treatment purposes, is no longer available to replenish the "donor" basin's rivers, aquifers, lakes or wetlands. The purpose of the Act is to assure that if an interbasin transfer does occur, the resources of the donor basin are not adversely impacted.

The Interbasin Transfer Act can be triggered by development of a water supply, to be used in the "donor" basin, but transported out of basin for treatment and disposal as wastewater. The following scope outlines issues to be addressed in the EIR for these types of transfers. Consultation with DCR's Office of Water Resources (617-626-1366) is strongly recommended to tailor this scope to a specific proposal.

SUMMARY OF PROJECT

- Project Name
- Location
- Proponent's Name, Address, Phone Number
- Primary Contact's Name, Address, Phone Number, Fax Number, Email Address

DESCRIPTION OF THE PROPOSED INTERBASIN TRANSFER

- Describe and explain the reasons for the proposed interbasin transfer.
- Provide the approximate timetable for construction of the proposed transfer, including the estimated commencement date and the estimated completion date.
- Describe the existing transfer system including existing water supply sources, storage capacity, withdrawal constraints or other limiting factors and the wastewater conveyance system.
- Describe, in detail, the proposed interbasin transfer, including the maximum capacity, in millions of gallons per day (mgd) of the transfer facilities and the expected average daily transfer. Provide supporting information showing how the capacity was determined. Describe any proposed changes in existing structures and/or changes in operating rules of the water supplier or changes in transfer constraints.
- Describe the operating schedule of the proposed interbasin transfer, including the time periods, amounts to be transferred and the duration of the transfer.
- Provide the name, exact location and river basin of the source(s) of the proposed transfer of water, including the subbasin(s).
- List the communities, sections of communities, water districts or other areas that will use the water proposed to be transferred.
- Provide a precise description of the location, including river basin location, of the wastewater discharge point.
- List the known users of this and associated resources, including agricultural operations and nurseries, whose use could be affected by the proposed transfer.
- Include a map of appropriate scale that clearly and accurately illustrates the information requested in this section. Wherever possible, MASSGIS data layers should be used.

OTHER PERMITS REQUIRED

- List the local, State or Federal agencies/commissions from which permits have been obtained or will be sought

INFORMATION NEEDED TO EVALUATE THIS PROJECT AGAINST THE EIGHT CRITERIA OF THE INTERBASIN TRANSFER REGULATIONS, 313 CMR 4.05

Below, in **bold** the criteria for approval of an interbasin transfer are listed, as they appear in the regulations (313 CMR 4.05). Where appropriate, interpretations of some of the terminology in the regulations approved by the WRC to apply to wastewater transfers, in order to evaluate specific criteria within the "spirit" of the Act, appear in *italics*. Unless otherwise noted, the applicant must respond to all points listed under each criterion.

1. That an environmental review pursuant to M.G.L. c. 30, §§61 and 62H, inclusive, has been complied with for the proposed increase.

- Information needed for Interbasin Transfer review should be provided within the context of the EIR.

- Provide a copy of the ENF, including copies of comments received.
- When issued, provide a copy of the Secretary of Environmental Affairs certificate stating that the EIR properly complies with MEPA and its regulations.

2. That all reasonable efforts have been made to identify and develop all viable water supply sources in the receiving area of the proposed water supply interbasin transfer
Because this transfer is considered a wastewater transfer, a viable local source is defined as a cost-effective, technologically feasible, environmentally sound **wastewater treatment system** which treats and discharges wastewater within the basin of origin, and has been approved for general use by DEP. Such systems can include, but are not limited to, conventional Title 5 systems, groundwater discharge systems, NPDES-regulated surface water discharge systems, alternative/innovative on-site systems or package treatment plants. **Receiving area is the community(ies) or portion of community(ies) whose wastewater is collected for discharge out of basin via an interbasin transfer.**

Describe in detail the efforts made to identify and develop all viable sources in the receiving area. Discuss water supply alternatives considered, but rejected. State reasons for rejection. The discussion should include:

- Discussion of the DEP-approved facilities plan[1]. A copy should be submitted to WRC Staff. This plan should evaluate potential in-basin sources of disposal, including Title 5, groundwater and surface water discharges, as described in DEP's Comprehensive Wastewater Management Planning[2] Guidance. Submit copies of any other relevant studies and reports which evaluated in-basin wastewater disposal. The proponent should also discuss the feasibility of implementing DEP's wastewater reuse policy.
- Describe the costs of developing in-basin wastewater disposal facilities in the receiving area.
- If cost is a reason given for rejection of an inbasin source, compare these costs with the production costs recently incurred elsewhere in the Commonwealth for similar wastewater disposal facilities. Refer to the Performance Standards, available from DCR's website: http://www.mass.gov/eea/docs/dcr/watersupply/intbasin/finalps.pdf.
- Describe the impact on in-basin streamflow that would result from the development of any viable in-basin wastewater disposal facilities in the receiving area, as defined above for this criterion. Refer to 313 CMR 4.05 (5)(a) through (j).
- Discuss the feasibility of joining a regional or neighboring in-basin wastewater disposal facility in cities, towns or districts within the same basin as the receiving area. Are interconnections in place? If not, are such interconnections feasible?
- Discuss the wastewater disposal options considered but rejected. State the reasons for rejection.

[1] Facilities Plans are also known as Comprehensive Water Management Plans, Comprehensive Water Resources Management Plans, and Integrated Water Resources Management Plans.
[2] See Footnote #1

- Provide documentation of the program to eliminate sources of inflow and infiltration (I/I). This program must meet the standards described under the Performance Standards for wastewater, available from DCR's website: http://www.mass.gov/eea/docs/dcr/watersupply/intbasin/finalps.pdf. Discuss the potential for eliminating enough I/I to mitigate the interbasin transfer.

3. That all practical measures to conserve water have been taken in the receiving area

This transfer involves both water supply and wastewater. Because both water conservation and Infiltration/Inflow (I/I) removal minimize the transfer out of basin, the applicant must address both of these issues.

- Provide an updated Water Conservation Questionnaire (available from DEP's Division of Watershed Permitting or at DEP's website: http://www.state.ma.us/dep/brp/wtrm/files/con-wrc.doc, or DCR's Office of Water Resources or at DCR's website: http://www.mass.gov/eea/docs/dcr/watersupply/intbasin/consp.pdf). If a Conservation Plan or Questionnaire is on file with DEP, provide a copy, updated to the present. Refer to Water Conservation Standards for the Commonwealth of Massachusetts (WRC, 2006), available from DCR's website: http://www.mass.gov/eea/docs/dcr/watersupply/intbasin/waterconservationstandards.pdf, and the Interbasin Transfer Performance Standards (1999).
- Describe the current leak detection and system repair program. Discuss the methodology used. (refer to the Interbasin Transfer Act Performance Standards, available from DCR's website: http://www.mass.gov/dcr/waterSupply/intbasin/docs). What was the date of the most recent leak detection survey? What is the date of the next scheduled leak detection survey?
- Describe the on-going meter installation, maintenance, and replacement program. State the percentage of the system that is metered. Provide documentation of the annual master meter calibration program and a description of that program. Provide data to show that all permanent water supply services in the receiving area are metered (including public buildings).
- Describe the amount of unaccounted-for water (in gallons and percent) in the receiving area for the past five (5) years. Refer to the Interbasin Transfer Act Performance Standards for the definition of "Unaccounted-for Water". Describe on-going programs to reduce or keep the amount of unaccounted-for water at reasonable levels (less than 10%).
- Describe the current rate structure. Refer to Appendix D of the Performance Standards, available from DCR's website: http://www.mass.gov/eea/docs/dcr/watersupply/intbasin/finalps.pdf: (1) Does the rate structure reflect the cost of operation, proper maintenance, proposed capital improvements and water conservation? Does it encourage water conservation? If so, how? (2) Is the rate flat, increasing or decreasing? Is it charged according to water use, or some other method? (3) Are the funds dedicated in an enterprise account or is some other accounting procedure used? Describe.
- How often are customers billed? Is billing based on actual meter readings? Provide an example of the bill sent to customers.

- Provide the existing contingency plans for adequately handling water supply emergencies, such as contamination of water supply sources or seasonal or drought related shortages of water supply. (See 313 CMR 4.02(4) for a definition of 'contingency plan'.) Explain, if not stated in the plan, how and when water use will be curtailed, when trigger points require action, which water users will be reduced by what measures, and over what period of time, what emergency sources will be utilized, such as interconnections with nearby communities, reactivated sources or new emergency sources.
- Do all public buildings under the control of the proponent have low flow plumbing fixtures? Describe the types of fixtures in these buildings.
- When was the last audit of public facilities? Provide a copy of the report. Has a system-wide water audit ever been conducted? When? Provide a copy of the report.
- Describe the program to supply low flow plumbing fixtures to residential customers. What is the residential gallons per capita per day (gpcd) figure for the water supply system? What is the overall gpcd for the system? Provide the Annual Statistical Reports, required by DEP, for the past five years.
- If residential gpcd is greater than 65, describe the comprehensive residential water conservation program that is or will be implemented to reduce this use. If the program is not in place, describe the timetable for implementation. Refer to the Performance Standards.
- Describe the current and proposed public information programs to promote water conservation, the use of water conserving devices, and industrial and commercial recycling and reuse. These programs should include a program which identifies, ranks and works with all commercial, industrial and institutional customers according to amount of use in order to determine areas where the greatest potential for water savings exists, should be in place. Are public education programs on-going or intermittent? Explain.
- Describe the measures in place to protect the water supply sources currently serving the receiving area that meet the requirements of the Department of Environmental Protection published in 310 CMR 22.20 and Wellhead Protection regulations 310 CMR 22.21. Include in this description all watershed or aquifer lands, even if not under the direct control of the water supply agencies.
- Is the plumbing code strictly enforced? By whom? Describe.
- Are there flow meters at location(s) sufficient to document wastewater flows out of basin? Provide a map of appropriate scale clearly showing the meter location(s). (Use of regional sewer meters which document wastewater flows out of basin is acceptable where these meters are in place.) Provide documentation on calibration of these meters.
- Provide at least two years of data on the components of existing wastewater flow (sanitary, inflow, infiltration).
- Are there any measures proposed to mitigate impacts from this transfer? (Such measures could be additional I/I reduction, impervious surface remediation, groundwater recharge, or stormwater management programs consistent with DEP stormwater guidance that keep water in the donor basin.)
- Provide a copy of the DEP-approved Operation and Maintenance plan for the wastewater system.

4. That a comprehensive forestry management program which balances water yields, wildlife habitat and natural beauty on watershed lands of surface water supply sources, presently serving the receiving area and under control of the proponent has been implemented.

- If the community does not have surface water sources, this criterion is not applicable. If the community does, describe existing and proposed watershed forestry management programs on watershed lands currently serving the receiving area and under the control of the proponent. Submit a copy of any applicable forestry watershed plans. Refer to the Interbasin Transfer Performance Standards for the information to be included in a Forestry Management Plan.

5. That reasonable instream flow in the river from which the water is transferred is maintained.

This part should describe the hydrologic characteristics of the river basin from which the water is to be diverted and any interdependent ground water regimen.

- Describe the proposed operating schedule for the interbasin transfer. This description should include variations throughout the seasons, the months, and the hours during a 24 hour period.
- Analyze and evaluate, in detail, the impact of the proposed interbasin transfer on water-dependent uses including:
  - (1) The drainage area above the withdrawal and the distance of the withdrawal point from the nearest surface water body (river, lake, wetland, etc.).
  - (2) Effect on the hydraulic characteristics in the stream below the point of withdrawal, including but not limited to flood flows, the aquatic base flow, the 7Q10 flow if used in a pollution abatement program, stage, velocity, sediment regimen, any flow values set for the donor basin by the WRC in DEM River Basin reports, etc.
  - (3) Change in the duration and frequency of the hydraulic characteristics.
  - (4) Effects on water levels of nearby reservoirs, lakes, and ponds and the impacts to the magnitude and duration of flow to associated outlet streams.
  - (5) Effect on anadromous fisheries, specifically alewives, searun brook and brown trout, smelt and American shad.
  - (6) Effect on resident fisheries.
  - (7) Effect on wetlands and dependent flora and fauna.
  - (8) Effects on water quality, recreational uses and aesthetic values, areas of critical environmental concern, areas protected under Article 97 of the Amendments to the Massachusetts Constitution, and designated scenic rivers.
  - (9) Effect on existing and planned future water-dependent uses in the donor basin.
  - (10) Effect on hydropower production.
  - (11) Effect on rare and endangered species of plants and animals
  - (12) Effect on water use by agricultural operations, including nurseries.
- Provide:
  1) A daily hydrograph for an appropriate period of record showing the potential changes induced by the transfer for representative drought, normal and wet years.

These years are to be determined in consultation with DCR's Office of Water Resources.

2) Available information concerning resources named in the regulations (313 CMR 4.04(5)(h)7.c.iii to vii) that could be affected by the proposed transfer. This data should also include any site specific information that may be requested by the EOEA agencies.
3) A table showing daily streamflow for the representative years listed above, the streamflow resulting from this transfer and the percent reduction in streamflow resulting from this transfer.

6. In the case of groundwater withdrawals, the results of pumping tests will be used to indicate the impact of the proposed withdrawal on static water levels, the cone of depression, the potential impacts on adjacent wells and lake and pond levels, and the potential to affect instream values as listed in 313 CMR 4.05(5)(a) through (j).

- If the proposed source is a ground water source, the pumping test should be used to collect site-specific data to evaluate the effects of the project on instream-flow related resources. Provide the DEP-approved pumping test report to WRC Staff.
- If not included in the pumping test report, the following information should also be provided:
  - A map of appropriate scale of the site clearly the site showing test wells, observation wells, and the location of geological cross-sections
  - Pre-pumping test groundwater elevation contour map
  - End of pumping test groundwater elevation contour map
  - Geologic cross-sections including pre- and end of pumping test groundwater levels
  - Documentation of the groundwater model, if used, describing input and output data, model calibration, water balance data, characterization of water sources to the pumping wells.

7. That the communities and districts in the receiving area have adopted or are actively engaged in developing a local water resources management plan.

- Provide the Local Water Resources Management Plan, or draft of the plan under development and the timeline for completion. Refer to the Interbasin Transfer Performance Standards for the information to be included in a Local Water Resources Management Plan.

8. The Commission shall consider the impacts of all past, authorized or proposed transfers on streamflows in the donor basin.

- List and describe the impact of all past, authorized and other proposed transfers on the streamflow in the donor basin. This would include analysis of any water supply sources or sewer systems that have been recently developed or approved and therefore not captured by the historic hydrographs, consideration of any water supply sources in the new source approval or Water Management Act permitting processes, sewering plans under development, etc.

MITIGATION

- Describe any proposed flow augmentation provisions, flow protection thresholds, or other measures proposed to protect instream flow. This should include incorporation of any known stream flow threshold(s) (for example, from a DEM basin plan, federal or state law, previous IBT decision, or DEP requirement) into the proposed operating regimen.
- To the extent the EIR/IBT process identifies impacts that may need to be mitigated, the proponent should propose measures to mitigate these impacts. Proponents should consider such measures as additional I/I reduction, impervious surface remediation, groundwater recharge, or stormwater management programs consistent with DEP stormwater guidance that keep water in the donor basin.

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Provide information to demonstrate that this proposal seeks to minimize unnecessary loss or depletion of environmental quality and resources.

Electronic copies (unless otherwise specified) of all Interbasin Transfer EIRs should be sent to the following people. This is only a listing of those people who will be reviewing the EIR specifically under the Interbasin Transfer Act and is not meant to be all inclusive.

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The Public Libraries
of the affected communities
in both the donor and
receiving basin
One bound copy each