

Interbasin Transfer Act Proposed Revisions to Regulations



**MASSACHUSETTS WATER RESOURCES
COMMISSION**

MARCH 13, 2014

Presentation Outline



- Why are changes needed?
- Proposed changes under Insignificance Review
 - New category for very small transfers
 - New screening criteria for small transfers
 - New criteria for reservoirs and other impoundments
 - New criteria for streamflow
- Addition of a Consolidated Donor Basin Process
- Separating Applicability and Insignificance Procedures
- Other proposed changes and next steps

Why are changes needed?

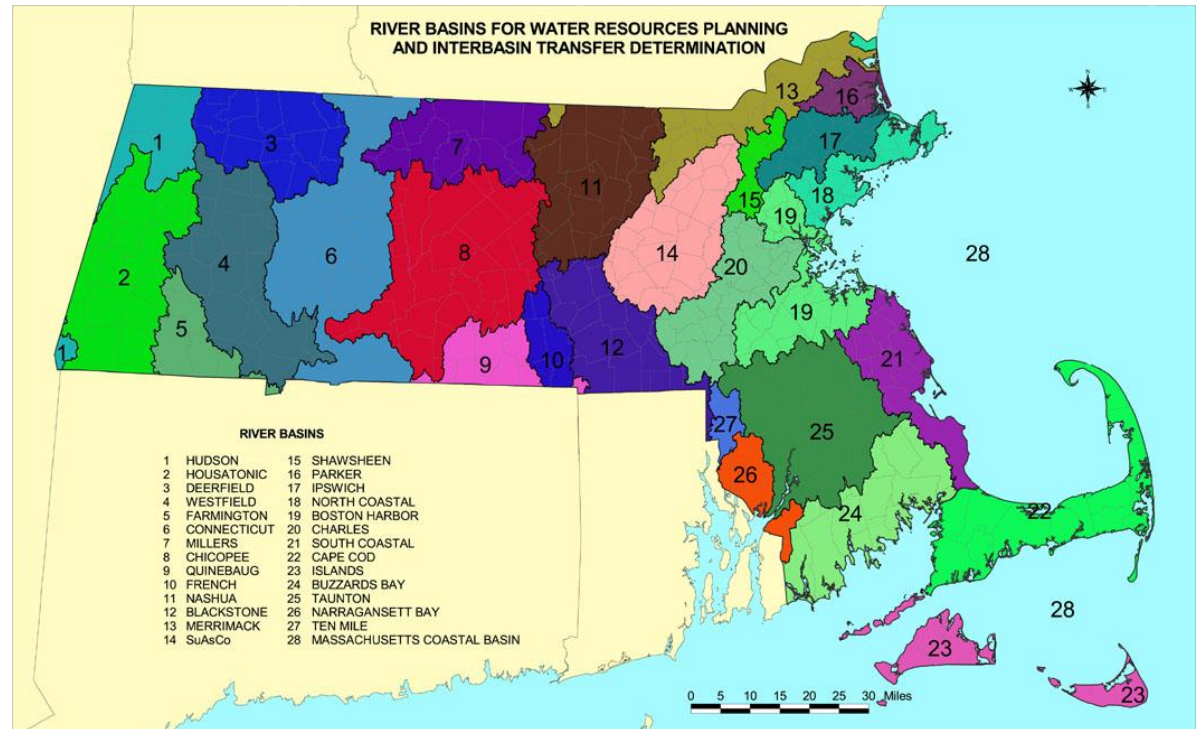
Incorporate 30 years of experience

Incorporate the latest science

Bring the regulations into the 21st century

Incorporate policy and practice into regulation where appropriate

Streamline where possible



Insignificance



SUMMARY OF PROPOSED CHANGES

Insignificance- our goals



- To explore better options for extremely small transfers
- To tailor required information to type of transfer:
 - Wastewater
 - Groundwater
 - Lake or reservoir (transfer primarily derived from)

(These 3 are currently treated the same, which creates problems)
- To improve our review criteria to better evaluate different types of transfers
- To use the latest science and tools

Overview of Proposed Insignificance



	Insignificance Criteria		
Transfer Type / Amount	Wastewater	Ground Water /River Intake	Surface Water
Less than 10,000 gpd	Insignificant	Insignificant	Insignificant
10,000 to X gpd	Less than 3% increase in Aug Net GW Depletion	Doesn't change GWC And Within donor basin WMA Authorization	Less than 1% annual rainfall And Less than 5% Drought Year Inflow
X gpd to less than 1 MGD	Less than 5% of Annual 95 th percentile flow	Less than 5% of Annual 95 th percentile flow	Less than 1% annual rainfall And Less than 5% Drought Year Inflow

Examples of very small transfers we've reviewed



Project	Gallons per day (gpd)	Millions of gallons per day (mgd)
Sager/Perrone (2002)	2,475	0.002
105 Research Road (2012)	3,311	0.003
Funways/Christina's (2007)	12,350	0.01
Avalon (2007)	16,120	0.02
Shattuck Well (2008)	36,000	0.04

CONCERNS:

- Applicant has little or no means to do offsets
- Can result in large costs to the applicant if full review required
- Large amount of staff time for a small amount of water

Insignificance- Very Small Transfers



- “any increase over present rate” requires WRC approval
- Can establish separate insignificance criteria for very small transfers

Proposal:

Under 10,000 gallons per day (.01 mgd) considered insignificant*

*WRC retains discretion to require additional review

Insignificance- screening criteria for small transfers



Proposal:

Small transfers between 10,000 gallons per day (gpd) and xx,xxx* could be determined insignificant if:

- For **Wastewater transfers** when area on septic is being sewerred
 - Loss of recharge results in less than 3% change in August flow**
- For **Groundwater transfers**
 - Amount is within donor basin WMA authorized volume
 - Amount doesn't cause a change in Groundwater Withdrawal Category (GWC)

*considering range of 20,000 to 40,000 gpd, looking for WRC guidance

**still looking at the best flow metric

Wastewater Examples--Insignificance



	Requested Gallons per day (gpd)	Change in subbasin August Net Ground Water Depletion Criteria = <3%	Change in Ground Water Withdrawal Category?
Funways/Christina's Foxborough	12,350	0.54%	No

Insignificance (over xx,xxx gpd but less than 1mgd) - New Criteria for Surface Waters



- Reservoirs are currently subject to streamflow criteria—difficult to apply and not reflective of system's capacity
- Tested multiple criteria on 35 water supply reservoir systems and 4 ground water withdrawals near impoundments

Proposal: Transfer must be

- less than 5% of drought year inflow, and
- less than 1% of annual rainfall on drainage area
- Where appropriate, flow augmentation and/or protection measures will be considered.
- Rationale: The first 2 criteria best reflect ecological capacity of the donor system. The last criterion can be used in appropriate situations (such as Cohasset's water sale to Erickson Retirement Community)

Insignificance- (over xx,xxx gpd but less than 1mgd) New Criteria for Groundwater/Direct River Intakes



- Current criteria very difficult to meet, very conservative, often tripped in 1960's drought conditions
- Staff tested criteria on past Insignificance requests

Proposal: transfer must be less than 5% of 95th percentile flow

- Rationale: still very conservative, but allows more reasonable opportunity for insignificance
- Scalable: locations with larger drainage areas can tolerate more IBT

Insignificance- New Criteria for Groundwater






Statistics Considered	What it means	notes
5% of Instantaneous (daily) flow	5% of a flow that occurs 1 day in 40 years	Least accurate measurement, extremely conservative
5% of Annual 99 th Percentile flow	5% of a flow that occurs on average 3 to 4 days per year	Just slightly higher than instantaneous
5% of Annual 95 th Percentile flow	5% of a flow that occurs on average 18 days per year	More accurate measurement, corresponds with very small transfers
3% of August median flow	3% of a flow that occurs on average 50 to 90 days per year	Relates to SWMI, most accurate measurement

New Criteria for Ground Water/Direct River Intakes

Insignificance 5% of 95th percentile flow



	Requested Gallons per day (gpd)	% of 95 th percentile flow (< 5%)
Woodlands Laurel Hill	15,800	< 1%
Avalon Sharon	16,120	1 - 2 %
Charlton/Oxford	84,000	39% 
Groton Baddacook Well	288,000	68% 
Groton Shattuck Well	36,000	> 100% 

Other Proposed Changes



CONSOLIDATED DONOR BASIN

**SEPARATING APPLICABILITY AND
INSIGNIFICANCE**

ADDITIONAL PROPOSED CHANGES

Consolidated Donor Basin- Special Procedure



- Streamlined option for large regional supplier (donor) that will sell to more than one purchaser (receiver)
- Review criteria split between donor and receiving
 - Donor shows no unacceptable impact on streamflow and resources in donor basin
 - Receiving shows they can meet water management criteria
- Option for approval of consolidated volume
- Receiving communities can apply separately and non-concurrently

Additional Proposed Changes



- Separating Applicability and Insignificance Procedures
- Eliminating requirement for Local Water Resources Management Plan
- Basin Numbering

IBT Regulations Revision- Next Steps



- April WRC meeting: vote on redline of regulations
- April/May: Governor's Office review
- May-July: Draft regulations issued for public comment
- Fall- WRC vote on final regulations