SUSTAINABLE WATER MANAGEMENT INITIATIVE
Advisory Committee Meeting
December 14, 2010 (10:00am – 12:30pm)
100 Cambridge Street, 2nd floor, Boston, MA

Meeting Objectives:

- Provide a status update
- Develop streamflow goals and the process of setting those goals

Meeting Agenda:

1. Welcome & Introductions — David Cash
(10:00 - 10:10)

2. Status Update of SWMI Process — Staff
(10:10 - 10:40)
    a. SWMI Schedule 2011
    b. Habitat and Water Supply Category Maps

3. Streamflow Goals Policy Discussion — Staff
(10:40 - 12:20)
    a. Goals Evaluations
    b. Goal Setting Process

4. Next Steps — David Cash
(12:20 - 12:30)

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Agenda Item 3a. Goals Evaluation

1. Improvement/Restoration – consider goal to manage to either Habitat Category 3 or Flow Level 3 (comment from several stakeholders)

Evaluation: GIS analysis (see accompanying map) to:

- Identify areas in a Habitat Category 4 or 5 and Flow Level 4 or 5 (estimated alteration of un-impacted August median flow is greater than 35%) based on data from USGS Mass Water Indicators study;
- Identify individual regulated groundwater sources in these areas;
- Summarize current impervious coverage and % reductions needed to improve to a Habitat Category 3; and
- Summarize the current water use efficiency as measured by the most recent Annual Statistical Report data on per capita use.

Preliminary Results

Public Water Supply Groundwater Sources in Biological Categories 4 or 5 and Flow Levels 4 or 5
88 small subbasins identified, located in 17 major basins
Drainage area: range 0.7-14.7 sq mi; cumulative range 1.8-102 sq mi; total: 540 sq mi (~ 5% of state)
Percent impervious area: range 3 to 38%
91 communities w/ public water supply groundwater sources
~ 437 individual groundwater sources (1-12 per community)
~ 22 subbasins have a designated cold water fishery
Note: Water use in 91 communities: range = 39 to 97 gpcd, average = 61 gpcd, 22 communities > 65 gpcd, 10 communities > 70 gpcd (source: 2008 ASRs)

Example 1 (Subbasin Unique ID 11006) – Conclusion: impervious cover would need to be reduced by 50%

Flow Level	1
Impervious Level	5
August Alteration (AA)	2.4
% Impervious Cover (IC)	6.6

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% IC needed to get to Habitat Category 3 (per model)	3.3

Example 2 (Subbasin Unique ID 23096) – Conclusions: Scenario A: Impervious cover would need to be reduced by 90% and August alteration by 70%; Scenario B: even with 100% reduction of August alteration by 100%, with current impervious cover, still results in Habitat Category 5

Example 2 Results					
	%Imp Cover	% Imp Cover Reduction	%August Alteration	% August Alteration Reduction	Resulting Habitat Category
Existing Conditions	20	---	100	---	5
Improvement Scenario A	2	90%	30	70%	3
Improvement Scenario B	20	0%	0	100%	5

2. No Backsliding

How to define "no backsliding"?

Is it….. No movement down within a Habitat Category?

Movement down within Habitat Category and within Flow Level?

Movement down within Habitat Category, but drop in Flow Level?

Other?

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Should the definition of “No Backsliding” differ by Habitat Category?

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Agenda Item 3b. Goal Setting Process Discussion

1. Definition of goals

How should goals be defined?

2. Determination of goals

What process should be used for determining goals?

Should goals be established based on use? on Habitat Category?
How and when to prioritize needs of habitat and water suppliers?
Should there be a "governing use" for each basin?

3. Assignment of goals

What process should be used for assigning goals?

a. Assignment of goal classes by algorithm

Algorithm could determine primary use(s) and priorities based on indicators such as habitat category, flow level, presence of coldwater fisheries and existing water supplies

b. Basin or subbasin-specific goal classes determined by Water Resources Commission

i. 18-24 months prior to WMA permit renewal/5-year review, WRC considers requests for re-categorization of habitats, water supplies or other considerations (i.e. cold water fisheries)

ii. Latest studies (i.e. USGS, DFW, site specific studies) and other materials presented to WRC

iii. Public input via 1-2 public hearings per major basin (27 in total) and written comment period

iv. WRC deliberation and adoption of amendments according to protocol or amendment criteria

v. Possible development of mini-basin plans reflecting goals and science by WRC for each basin

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c. **Hybrid: Automated assignment of goal classes, with adjustments by WRC in specific basins over time**

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Appendix

Impervious Cover Levels

Impervious Cover Level	Cumulative Impervious Cover (5)	Number of Subbasins	Percent of Subbasins
1	< 1.3	84	6%
2	1.3 – 2	121	9%
3	2 – 3.3	204	15%
4	3.3 – 5.6	250	18%
5	> 5.6	736	53%

Flow Levels

Habitat Category	Flow Level (% alteration of August median flow)								
	1	2	3	4a	4b	4c	5a	5b	5c
	0-5	5-15	15-35	35-45	45-55	55-65	65-75	75-85	85-100
1	81								
2	101	1							
3	194	6	1						
4	175	31	11	1					
5	214	195	173	36	24	25	13	14	78

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