Beyond Technical Analysis - Overcoming Internal & External Obstacles to Maine's Urban Stream TMDL's-

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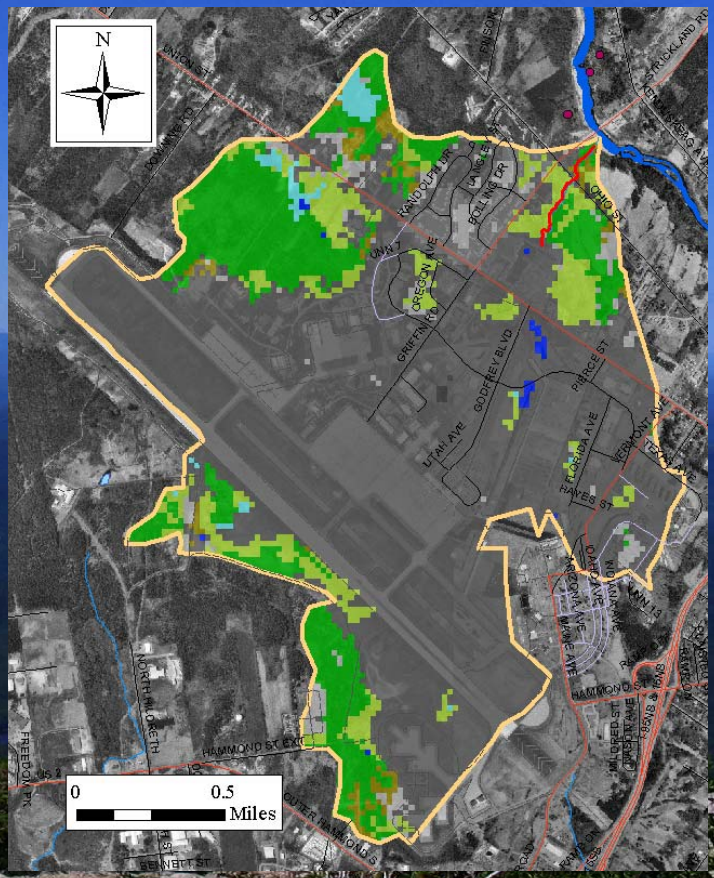
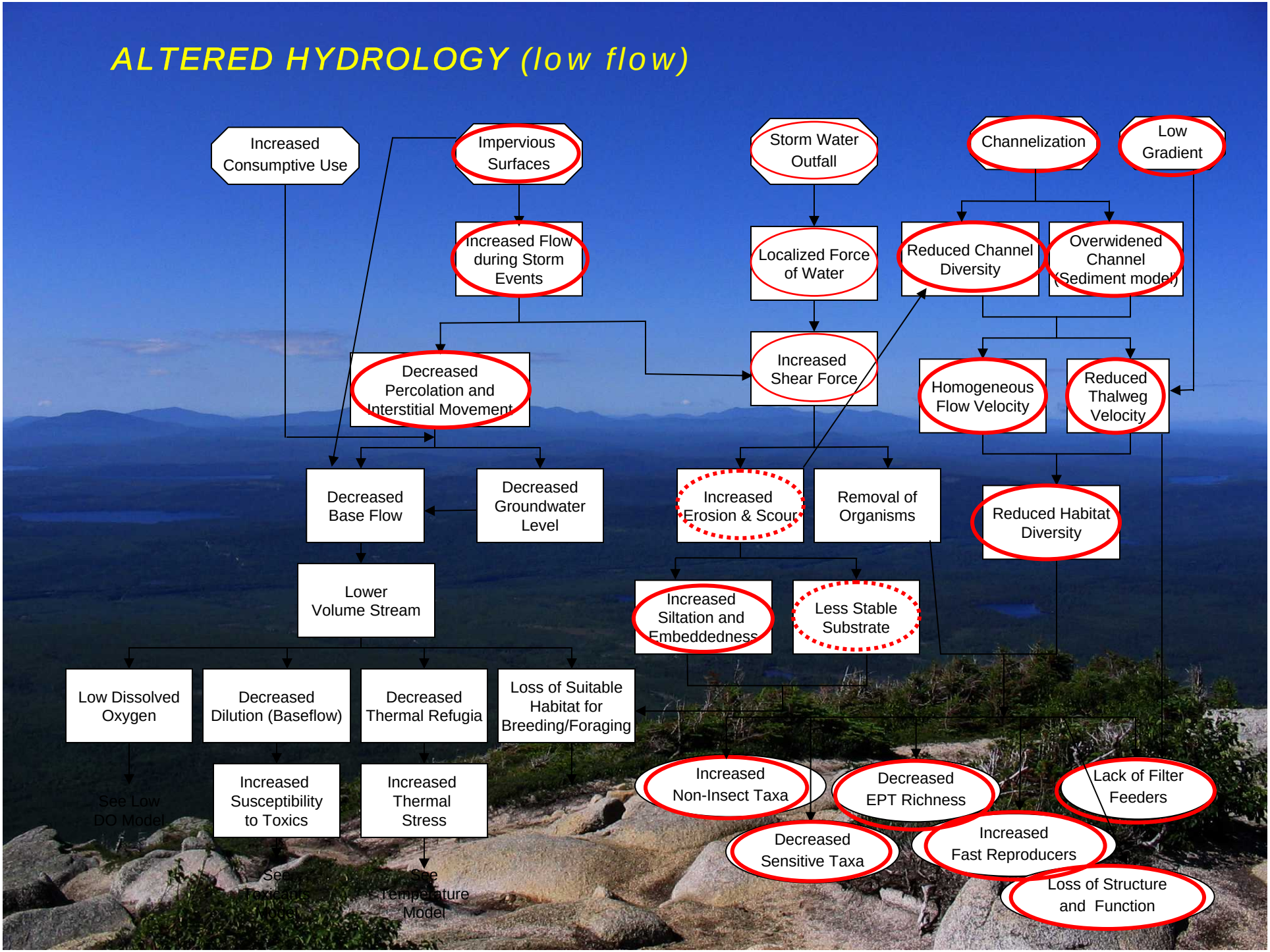
Development of Stormwater TMDLs

- Urban streams listed for biological impairments
- Challenge- combine TMDL loading with achieving biological goals
- Study project to identify the source of impairments
- Conducted Stressor Analysis and determined Impervious Cover is a reasonable surrogate



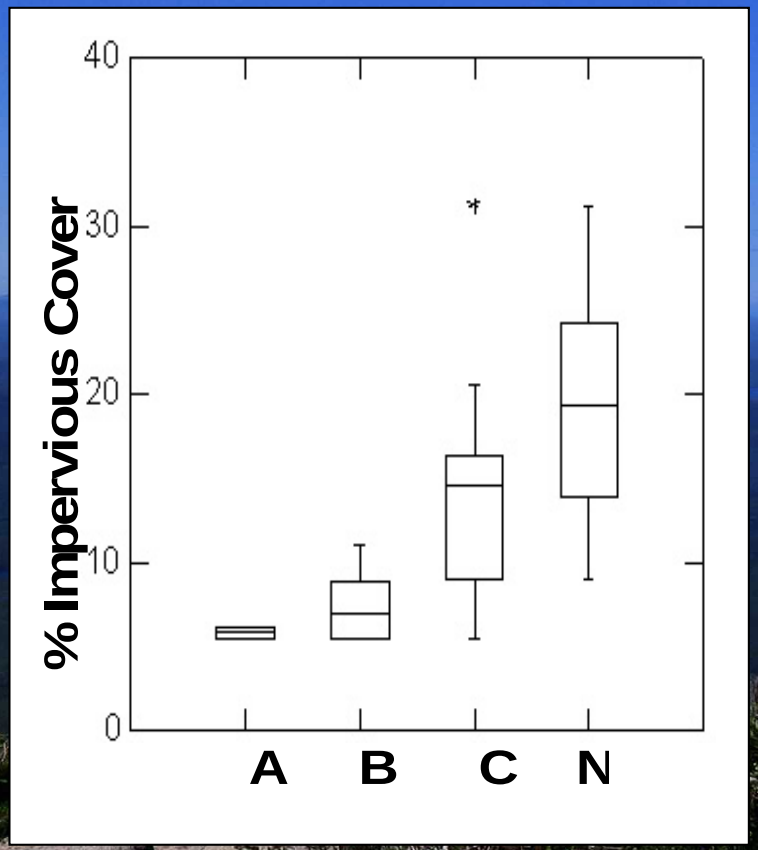
ALTERED HYDROLOGY (low flow)



Impervious Cover & TMDL Target

Analysis of Biomonitoring Program data:

- **43 macroinvertebrate samples collected between 1994 and 2004**
- **watersheds with > 5 % impervious landuse**
- **link to tiered water quality standards-AA, A, B, and C classes**



Internal Reactions to IC TMDLs

- **Skepticism-**
  - Long standing regarding effectiveness of NPS TMDLs
  - Voluntary compliance or lack of enforceability means questionable value
- **Problems translating TMDL approach from Point Source to NPS**
  - Expect precise models & limits
  - Lacks detailed prescriptive solutions
  - Not the right tool, should implement a Watershed Management Plan instead
- **Controversy surrounding TMDL reductions may derail Watershed Planning or influence higher level politics**

External Reactions to IC TMDL

The TMDL Greif Cycle- Reactions in MS4 Communities

1. DENIAL- Trying to avoid having to do anything or change current practices

- Development activities affect water quality in our community?
- Unaware of the 303d list and the legal aspects of the CWA &TMDLs
- Assume building permits and required BMPs are sufficient to keep the stream healthy, unaware of instream water quality standards

External Reactions to IC TMDL

The TMDL Greif Cycle-

2. ANGER- Frustrated outpouring

- Questions on the original 303d listing & sampling that determined non-attainment status
- Assume the reductions are unattainable & explain accordingly
- Write negative comments about the flaws in the TMDL method
- Good news- you have their attention

External Reactions to IC TMDL

The TMDL Greif Cycle-

3. Bargaining- Seeking a way out
   - Stakeholders want to know more and are receptive to educational TMDL efforts
   - Want to know about UAAs and how to downgrade the stream
   - Discussions begin to focus more on possible solutions rather than TMDL methodology

External Reactions to IC TMDL

The TMDL Greif Cycle

4. Acceptance- Finding the way forward

- Accept the stream needs to be restored
- Developing a Watershed Management Plan is the best approach
- Acknowledge adaptive or iterative approach to BMP implementation provides stakeholders most flexibility
- Focus on the WMP

DEP Lessons

- Legal & technical requirements of the CWA concerning the TMDL not easy to understand
- Connections to biological endpoints is difficult to convey, instream water quality can be abstract concept
- DEP can offer reasonable judgment concerning restoration potential, but not guarantees

The Future

- **Retrofit Specific Watershed Management Plans**
- **Implementation through Stormwater Utility District**
- **‘Residual Designation Authority’**

‘Statistics are no substitute for judgment’
Henry Clay