Retrospective **Governance** Analysis for the Narragansett **Bay Watershed and** Airshed

Presented to Coastal Resources Center Seminar, September 29, 2015 Coastal Institute Auditorium

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Project funded by the Environmental Protection Agency (EPA), Atlantic Ecology Division (AED)



This presentation is dedicated to the memory of Dr. Tim Hennessey, our teacher, inspiration, fellow researcher, colleague, mentor and friend.

Project Objectives

- Review and identify past government practices and responses to the changing ecological health of the Narragansett Bay watershed
 - Document and summarize these responses by developing a detailed timeline and collection of digitized materials
 - Analyze the materials to draw insights about changes in network governance
 - Produce a report which concisely documents the governance history, presents a framework to understand how the changes in network governance occurred, and identifies attributes that contribute to healthy network governance processes
 - Documented the methodology used to complete the governance analysis and provide recommendations with respect to its possible utilization to examine the governance in other watershed settings

Scope of Work Deliverables

- Timelines of policies and action
 - JL online timeline
 - Detailed timeline with 1,560 entries organized using a Microsoft Excel spreadsheet
 - Summary of environmental policies
 - Eleven summary stories to illuminate key policies and inform analysis
- Written analysis on governance response
 - A detailed analysis that uses governance networking as framework
- Report that concisely documents process used
 - Methodology Recommendations and Lessons Learned document



Project Deliverables

- Quarterly reports
- Summary timeline in a format that can be displayed and maintained on a website
- Detailed timeline
- Eleven governance stories that were used to help develop the timeline. These reflective essays were used to begin synthesizing the data contained in the report
- Detailed timeline with 1,560 entries organized using a Microsoft Excel spreadsheet
- Digital archive of documents collected as part of the data collection effort containing 1,438 with approximately 125,724 pages of searchable digital material (Adobe PDF files)
- A report documenting and analyzing the governance responses to ecosystem changes
- A report that details the project methodology with recommendations for investigating other watershed governance experiences

Other Deliverables

Additional Deliverables

- Master Bibliography that includes 1,564 entries, tagged as either copyrighted or not
- Digital archive of documents collected as part of the data collection effort containing 1,438 with approximately 125,724 pages of searchable digital material (Adobe PDF files)

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Our approach



Summary Stories to distill

Governance Response Analysis

Methodology and Lessons Learned to replicate in other jurisdictions

Detailed Timeline

Detailed timeline



Retrospective Governance Analysis for the Narragansett Bay Watershed and Airshed project

Timeline of policies and actions

Prepared for: Environmental Protection Agency (EPA) Atlantic Ecology Division (AED) Order number: EP-13-D-000271

Prepared by: Lighthouse Consulting Group, Inc Warren, RI



lighthousecg.com

Detailed Timeline

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				senator) created land													
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851	First study of pollution in Greenwich Bay by												GB				EPA Imprint
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80 83	typhus fever	554000 ac of farmland in RI PLond				First fresh water runs to		FP	BV	т			-	-	RL	TMDL	Plond 2009 Nixon Buckley 2005
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1623	Timothy Dwight, president of Yale College, publishes four volume documentation of			MA Act creating the Blackstone Canal					BV								sta tu te
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		all the watersheds that drain in to the Seekonk and Providence River estuaries (the Bakstone, Ten Mile, Moshassuck,															
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Base All Entries

Detailed Timeline

Title Page
BASE TIMELINE (pages 3 - 165)
Summary 1: Shea
Summary 2: CCMP
Summary 3: Blackstone River
Summary 4: SENE Study
Summary 5: Taunton River
Summary 6: Regional Land
Summary 7: 208 Plans
Summary 8: TMDL, N
Summary 9: Mercury
Summary 10: Greenwich Bay
Summary 11: Fields Point, NBC

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Date	Problem stream: Key Information & Reports	Problem stream: Environmental and social impacts	Politics Stream	Legal & Institutional Framework	Policy changes based on laws & planning	Operational milestones	Implementation issues and focusing events	51 W.S	511 FP & NBC	53 S BV	ST S.	INE 20	6 0	CMP	510 59 58 Hg	S6 RL	SE TMDI 8: N	. References
1850		554000 ac of farmland in RI PLond							100.5	BV T						RL		Plond 2009
18672				FED Morrill Act (Vt senator) created land erant college system												RL		Foster 2009
1854	George Perkins Marsh "Man and Nature" published															RL		
1671						RI Water pipe from Pawtuxet River to Providence was opmed on December 1, 1871 From 1871 to 1902, water was pum pad directly from the river and dischanged into the system witho ut a my purification treatment.			FP							RL		Plond or RIW/RB or Prov Wat Bel
1673		Panic of 1873 prompts civic leaders to focus on diversifying the economy of Ri Plont														RL		Plond 2009
1874						RI Provide noe has a lready built 43 miles of sewers PLord			FP							RL		Plord 2009
1886					Roger Williams Park initiated											RL		Plord 2009 ?
1886					with 1004	MA Lawrence MA experiment station on Merrimack River considered the founding of sanitary engineering in US [Foster p 3 44]			FP							RL		Foster 2009 p 334
1891					MA Metro polita n (Boston) Parles Renort											RL		1891 MA Metro politan Parks Report FIND MAP
1893	MA First report of the Board of Metropolitan Park commissioners			MA Appoints Metro politan Park Commissions												RL		MA Acts of 1892 Ch 342
1394					Slater Park in Pawtucket acquired											RL	TMDL	Reported in 2011 Pawtucket Comprehensive plan update
1895					MA Identification of Qualibin Bese proir											RL		Foster 2009
1895		Ri Eband of Health documents water quality problems Plond							FP							RL		Plord 2009
1896				FED Green v Connecticut: states have right to control and regulate with the												RL		Foster 2009 ?
1896				warme-		RI Roger Williams Park Museum of Natural History Openes Plont										RL		Plord 2009
1897						RI Provide noe Fields Pt sewage treatment plant o pens Plord			FP							RL		Plord 2009
1897						RI Audubon begins, with meeting hosted by Mrs Henry R Chase, just one year after Massachusetts group PLond										RL		Plond 2009
1897				FED Organic Actallows USGS and the General Land Administration to seek 3 priorities for forests: timber, water												RL		
1696				MA Massachusetts Forest and Parks Association formed [2See Applegate												RL		Applegate 1974 ?

S6 Regional Land

 Summary timeline in a format that can be displayed and maintained on a website

http://www.narragansettwatershedhistory.org



Filter Events

Jurisdiction	Location	Context	Туре
Federal	Massachusetts	Air	Executive
First Circuit	Rhode Island	Economic	Executory
International		Enviromental	Historical
Local		Land	Interstate Compact
Municipal		Society	Judicial Decision
National		Water	Legislation
Regional			Operational Change
State			Program
			Project
			Utility

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Summary Stories

- Eleven governance stories were used to develop the timeline. The reflective essays were used to synthesize the data contained in the report
 - Walter Shea's 1947 plan
 - Before and after the Narragansett Bay CCMP
 - Blackstone River
 - NERBC and the Level B Plan
 - Watershed stewardship in the Taunton River and Mount Hope Bay
 - Open space and regional land capability planning
 - Section 208 planning
 - TMDLs
 - Mercury TMDL and the history of metals impacting Narragansett Bay
 - Before and after the 2003 Greenwich Bay fish kill
 - History of Fields Point and the NBC

Summary Stories

- Walter Shea's 1947 plan "A Sensible Approach to a Complicated Problem"
- Before and after the Narragansett Bay CCMP "all struggled to attain a workable bi-regional governance perspective and operations"
- Blackstone River "combined pollution control and economic development"
- NERBC and the Level B Plan "a cautionary tale on regional approaches"
- Watershed stewardship in the Taunton River and Mount Hope Bay "emergence of civic associations"
- Open space and regional land capability planning "events in both Massachusetts and Rhode Island proved the reality to be otherwise"
 - Section 208 planning "a useful but odd requirement of the Clean Water Act"
- TMDLs "unanticipated impacts on a changing bay ecosystem"
 - Mercury TMDL and the history of metals impacting Narragansett Bay "regional cooperation"
 - Before and after the 2003 Greenwich Bay fish kill "ambitions may outstrip source, non-point controls"
 - History of Fields Point and the NBC "A tale of two successes, a century apart"

Summary of Our Analysis

- Network governance is not a new phenomena with examples dating back to the late 1800s
- There is an amazingly rich, if not long forgotten history of Bay governance that predates the reconfiguration of the governance system that occurred in the 1970s
- The changing patterns of IGR between federal-state-local officials are similar to those occurring in other policy areas over time
- Network governance is a dynamic and changing process, but change happens slowly in an incremental, path dependent fashion
- Complex governance system today necessitates pragmatic, strategic, and collaborative approaches to address shared problems
- It will be difficult to fundamentally transform existing programs given the interconnected and interdependent nature of the governance system

Network Governance

- Collection of institutions and resources used to achieve direction, control, and coordination between individuals (and organizations) that possess varying degrees of autonomy in order to advance joint objectives across the network as a whole
- Includes enabling statutes, organizational and financial resources, programmatic structures, and administrative rules and routines
- Governance networks are often self-governed because no one is charge
- Activities include making joint decisions, setting shared priorities, modifying policies, improving coordination, or finding other ways for members to work together in productive ways
- It is inherently political and involves bargaining, negotiation, and compromise.
- It tends to be strategic and centers on shared problems or solutions
- Tends to focus on win-win or at least win-no-lose situations

Intergovernmental Relations (IGR)

- Things that happens between two or more governments, or between levels of the same government
- Network governance is a mechanism for shaping, changing, or managing IGR
- Deil Wright (1978, 1988) first identified the changing patterns of IGR
- The patterns of IGR associated with programs upon their adoption stays with them as a result of statutory construction, funding relationships, program requirements, etc. unless the statute gets modified in a significant way
 - Some EPA CWA programs have a pattern of IGR exemplified by programs developed in 1972 while those established with the 1987 amendments have a very different set of IGR
- State-local officials are then left to work with a wide range of federal programs established and operating under very different patterns of IGR
- Programs developed by state governments also exemplify different patterns of IGR



Conflict and Early Network Development 19th Century – 1930s

- Conflicts during this period were the result of an imprecise specification of the limits of federal, state, and local authority
 - Rhode Island is a Dillon's rule
 - Massachusetts is home rule
 - Operating assumption was largely that the authorities of federal, state, and local officials were mutually exclusive
 - Whose responsibility was waste water treatment?
 - It was largely viewed as a local public health problem
- Search to sort out roles, specify boundaries of authority between levels of government, and to find the one political jurisdiction that performed functions best



Conflict and Early Network Development 19th Century – 1930s

- By 1854, City of Providence had its second Cholera epidemic in 5 years and Edwin Snow, the Superintendent of Health described the river as
 - "filthy as any common sewer, and the stench arising from it at times pervades the whole neighborhood.... At any time, dogs, cats, and hogs may be seen in the water in every stage of decomposition."
- While the public health issues were of concern to state officials, the problems and solutions were largely considered to be local responsibilities
- Providence, RI and Worcester, MA represent the wide range of local responses to these public health issues
- States had limited impact on changing local behavior and mostly focused on documenting the problem with studies
- Federal government funds its first study in 1928

Cooperation, Concentration, and Continued Infrastructure Expansion 1930s to 1950s

- The 1930s marks a shift towards more cooperative approaches to problem solving
 - Response to economic distress of the great depression and World War II
 - Civilian defense, war rationing, etc. stimulated cooperative federal-state-local efforts
 - National Resources Planning Board (NRPB) in 1933, dozen new grant-in-aid programs
- Recognition that the federal government has an important role to play in addressing local problems (e.g., New Deal era programs)
- Recognition that there were central shared and often overlapping functions of all three levels of government
- 1940s and 1950s IGR becomes increasingly specific, focused, and highly functional

Cooperation, Concentration, and Continued Infrastructure Expansion 1930s to 1950s

- 1929 New England Regional Planning Commission (NERPC)
- 1935 Governor Green "modernizes" state government
- 1936 NRPB releases report and recommends an interstate compact
- 1946 1961 the number of federal grant-in-aid programs nearly doubles
 - Federal funding of deferred maintenance as a result of WW II
 - Lot of post-war construction of WWTFs and significant state bonds to help finance
 - Federal expenditures subsidized and incentivized suburbanization
- Professionalism, "neutral competence", and the emergence of a professional state dominate public service by the 1950s

Cooperation, Concentration, and Continued Infrastructure Expansion 1930s to 1950s

- 1947 Shea Report
- 1947 RI approves the Blackstone Valley District Commission
- 1948 New England Interstate Water Pollution Control Compact (NEIWPCC)
- 1950 New England New York Inter-Agency Committee (NENYIAC) raised new issues beyond water quality
- 1955 NENYIAC releases "Gold Book" recommending a wide range of water quality improvements in the basin
- Cooperative efforts were concentrated and selectively channeled and programmatic and functional connections were vertically solidified and supported by professionals at the federal-state-local officials level

Existing Conditions 1955 NENYIAC "Gold Book"





Conditions Likely as Result of Plan NENYIAC "Gold Book"





Conditions in 1946





Conditions Likely as Result of Walter Shea Plan





Creative Expansion of Federal Planning 1950s – 1970s

- Program planning, project grants, and public participation were often required in many of the "great society" programs
 - Comprehensive local, areawide, or statewide plans were common
 - Grants required individual project proposals expanding the discretion of grant administrators who had more control over what was funded
 - Matching requirements shifted more of the financial burden to recipients
 - Administrative and fiscal requirements became increasingly rigid
 - Playing the grant game soon became a time-consuming activity for state-local officials
 - New programs were driven largely by federal priorities
 - Less discretion given to state and local officials, new tools like partial preemption and mandates

Creative Expansion of Federal Planning 1950s – 1970s

- 1965 Water Resources Planning Act (WRPA) River basin planning
 - NERBC was a federally driven counterpart to the NEIWPCC
 - SENE "Type B" study released in 1975
 - Some of plan was innovative, a lot was controversial
 - Regarded as one of the best RBCs, but they were not well received by state-locals
- 1/972 Clean Water Act Programs
 - Section 208 planning (along with other planning requirements)
 - NPDES permit system based on partial preemption
 - Construction grant program
 - Public participation requirements & citizen suit provisions



WATER BODIES (Category A)

PRIORITY PROTECTION AREAS (Category A) wetlands, well sites, beaches, critical erosion areas.

OTHER PROTECTION AREAS (Category B) flood plains, class I and II agricultural soils, unique natural and cultural sites, excluding all "A" lands

DEVELOPABLE AREAS REQUIRING MANAGEMENT

WATER RESOURCE LIMITATIONS



AQUIFER and/or RECHARGE AREAS (Category C_1) highest yield aquifers in each basin

WILDLIFE and SCENIC RESOURCE LIMITATIONS

WILDLIFE HABITAT (Category C₃) land considered best upland wildlife habitat other than publicly owned land or wetland

LANDSCAPE QUALITY AREAS (Category C₂) land characterized by high landscape quality

SOILS RESOURCE LIMITATIONS

LEDGE and/or STEEP SLOPE (Category Cs) land with slope greater than 15% and/or with rock at or near surface

SEVERE SEPTIC SYSTEM LIMITATIONS (Category C4)

land with severe septic system limitations caused by conditions other than slope and ledge soils

MODERATE TO NO SEPTIC SYSTEM LIMITATIONS (Categories F and G) land with moderate or no septic system limitations

PREEMPTED USE AREAS



URBAN AREAS (Category E) including residential areas on less than one-acre lots, institutional, commercial and industrial development

Competition and Devolution 1970s – 1980s

- Creative eras rapid proliferation of grant programs, regulatory requirements, and new IGR tools like unfunded mandates and partial preemption create a great deal of conflict
- Competition arises between federal-state-local officials regarding priorities
- General "malaise" given state of economy and world events
- Public participation creates conflict between government and its clients
- Gap between promise and performance grows in many programs
- Nixon's new federalism begins slowing rate of expansion and provides more state local discretion (e.g., block grants and revenue sharing)
- Some new programs emerge based on different pattern of IGR emerge



Competition and Devolution 1970s – 1980s

- 1972 Coastal Zone Management Act (CZMA)
 - Department of Commerce rather than EPA or DOI
 - Voluntary with "carrots" for participation funding and federal consistency
 - States provided with considerable flexibility to develop a program
 - There was no specific set of federal policies that state programs had to implement the statute merely required a program for making decisions that balanced competing national policies
 - Flexibility in how state programs were developed and implemented truly creative in that regard
 - Federal consistency provisions let state policy trump national policy and federal preemption in many instances

Contraction: Aid Cuts and Mandates 1980s – 1990s

Reagan

- "Government is not the solution to our problem; government is the problem."
- While government continues to expand, rhetoric and philosophy slow rate of growth
- Imparts a new federalism philosophy on new programs, ushers in era of new tools for IGR
- By the end of the 1980s, state-local government are exerting much more leadership as a result of new capacity built to develop and implement creative era programs
- Devolution presented new challenges
 - Replace lost federal funding and finance new projects
 - Need to further develop state-local capacity
 - Privatization and contracting become common place by the 1990s

Contraction: Aid Cuts and Mandates 1980s – 1990s

- Reagan eliminates the RBCs with E.O. 12319 in September 1981
- 1987 amendments to the Clean Water Act (CWA)
 - Construction grants are replaced with state revolving loans (SRLs)
 - Two new planning/grant programs NEP and Section 319 where state had flexibility and baseline funding was to support implementation efforts
 - NPDES Phase II much more local government planning and discretion but slow implementation
 - State-local leadership expands significantly
 - RI Erosion and Sediment Control Act, Rhode Island Rivers Council, Greenwich Bay Reclamation Plan, Land Use Commission, improved comprehensive land use planning, harbor management planning, CRMC's SAMPS for Salt Ponds, Narrow River, and Providence Harbor

Creative Era Programs During Period of Contraction 1990s – early 2000s

- Just like the CZMA was an anomaly during the creative era, new programs emerge during the 1990s that have IGR patterns similar to creative era programs
- Section 6217 Coastal Nonpoint Pollution Control Program (CNPCP) relied on a combination of IGR tools that were almost certain to cause conflict
 - Boundaries were different than existing state CZM programs
 - Mandatory new program in voluntary CZM program and states given no real "carrot" (i.e., planning grants) – only major penalty for non participation
 - Largely an unfunded mandate because implementation funding is well short of the real cost of implementing the management measures
 - Mandated cooperation between EPA (Section 319) and NOAA (CZM) two programs built around a pattern of IGR based on contraction and devolution now have to implement a creative era style program

Creative Era Programs During Period of Contraction 1990s – early 2000s

TMDL Regulations proposed at the end of the Clinton administration

- Proposed rules required TMDLs for all high priority water bodies within 5 years, with TMDLs for all 20,000 listed waters (approx. 40,000 TMDLs) within 8-15 years
- New requirement that the TMDLs would have to include an implementation plan with timelines and other interim deadlines for attaining state water quality standards
- Development of 20,000 implementation plans would have been a significant challenge
- Highly likely development of these plans would cause some significant state-local conflict and litigation
- Rule suspended by The Bush Administration in July 2001, and permanently in May 2003
- While Bush was criticized, and the progress today in terms of TMDL development and its creative use may not have been possible under the proposed regulations because they would have created a very different pattern of IGR

Pragmatism and Collaborative Management 1990s - Present

- Patterns of IGR during each period are distinctive
 - Programs developed during one era largely maintain those patterns of IGR because they are embodied in the program design
- Has a new pattern emerged?
 - Obama certainly believes in strong federal control and relatively limited state discretion and flexibility – uses administrative authority and executive action
 - Obamacare is built around many of the IGR patterns of creative era programs
 - Proposed rule on Wetlands jurisdiction and regulating CO₂ are other examples of federal intervention
 - Not enforcing federal law to achieve policy objectives is another strange new tool of IGR (e.g., blocking AZ, immigration executive action, marijuana law enforcement in CO)
- Immediate pushback and legal challenges by states, election of Republican Congress suggest this isn't a fundamental shift or realignment of IGRs but it will take time to tell

Pragmatism and Collaborative Management 1990s - Present

- Two dominant and competing patterns of IGR creative era or devolution era
- Current governance network is complex, overlapping, and sometimes redundant, fragmented, and even contradictory in nature
 - Resulting conflict is a healthy part of our federal system a competition of ideas
 - State-local officials have worked to find ways to advance their objectives in this programmatic landscape since the 1930s there is just a lot more government today
- Current IGR pattern is driven by state-local priorities and pragmatic problem solving
 - Collaboration becomes IGR tool used to improve network governance
 - Large scale synoptic planning has largely given way to targeted, strategic efforts focused on smaller geographic areas

Pragmatism and Collaborative Management 1990s - Present

- CRMC SAMPs
 - Updated Salt Ponds and Narrow River, Greenwich Bay, Aquidneck Island, Metro Bay, Ocean, Shoreline Change (Beach)
- Narragansett Bay Commission NBC)
 - Fields Point is a fascinating story of success and failure
 - Development of the NBC provided an interesting network governance solution to problems in early 1980s
 - NBC faces new challenges moving towards the future and raises interesting questions about who should be financing future sewage treatment upgrades
 - Stormwater management will face similar financial challenges in terms of developing equitable financial arrangements

Attributes of Healthy and Useful Network Governance

- We specifically avoid using terms like "success" and "failure" when discussing network governance
 - Federal-state-local officials work within programs or have important features of their governance arrangements (as well as planning and implementation arrangements) imposed upon them
 - Whether arrangements are a good or bad idea, or if no one implements the plan, officials can still interact in meaningful ways that generate value now or in the future
 - Effort might also produce a lot of conflict and damage intergovernmental relationships but still produce environmental results
 - Governance effectiveness does necessarily equal improved environmental outcomes
- Perspectives on "success" and "failure" are also shaped by value judgments about whose priorities should drive governance processes

Attributes of Healthy and Useful Network Governance

- Traditional notions of "success" and "failure" also imply network governance should endure for long-periods of time and that disbanding the network is a failure
 - Networks like other organizational forms have a useful life
 - When the useful life has passed, it is time for network resources to be redeployed in more productive ways
 - NBEP is an example of what happens when you prolong a governance network that is no longer useful for prolonged periods of time – Could these resources have been used more effectively to address Bay problems?
 - Concept of a healthy and useful life also draws attention to the fact that governance networks require constant nurturing
- Focus on healthy life helps draw attention to danger signs associated with unhealthy processes

Attributes of Healthy and Useful Network Governance

- Strategic Long-Term Focus
- Importance of Shared Problems/Solutions
- Shared Decision Making
- Entrepreneurial Leaders
- Leveraging Resources
- Network Coordinators

- Ability to Adapt and Reconfigure Networks
- Science is Used to Justify Policy
- Communication and Information Sharing
- Participatory Processes
 Designed to Build Support
- Local Government Involvement

Strategic Long-Term Focus

- Practical limits in terms of how much any collection of policies or programs can or should be "integrated"
- Network governance appears to work best in win-win, or at least win-no lose situations
- Challenge is to sustain focus over a prolonged period of time to avoid "random acts of environmental kindness"
- Examples
 - NEIWPCC is a good example of a strategic, focused effort, Salt Ponds and Narrow River SAMPs have also helped keep development density to planned levels
 - NBP/NBEP is a example of an effort that lacked a strategic long-term focus and instead carried out numerous small projects
 - Section 319 tries to maintain a long-term focus but design of program makes it hard to accomplish much more than random acts of environmental kindness

Importance of Shared Problems/Solutions

- Network governance is crafted around a shared sense of purpose.
 - The shared sense of purpose provides a strategic focus that motivates participation in the governance effort over time
- Problem/solution framing is a central part of useful network processes
- Governance efforts perceived as unsuccessful may still help in the framing/reframing processes
- Reframing problems and solutions can take a long time, this is one reason that science often doesn't drive policy formation

Examples

Shattuck Report (1850) documents connection between urban development, sanitation, and disease but it takes several decades to frame the problem and solutions

Shared Decision Making

- Ability for one actor in the network to compel another to act in a particular way is often quite limited
- Healthy and useful governance processes need to find ways to motivate federalstate-local actors to get involved and work together for a sustained period of time
- Wide range of strategies for promoting participatory network processes that promote shared decision making
- Examples illustrate wide variation in approaches to joint decision making
 - NEIWPCC vs. NERBC
 - CRMC SAMPs
 - NBP CCMP/NBEP

Entrepreneurial Leaders

- Leadership is critical to sustaining healthy network governance processes
- The traditional view of a leader who works to influence or transform a group or organization (i.e., followers) is problematic in networks where organizations are relatively autonomous and there is no consensus on who needs to be influenced

Analogy is a flock of birds, which moves in unison but has no "leader"

- Examples of dynamic leaders
 - Walter Shea (NEIWPCC from 1947 1988)
 - Save The Bay's Executive Directors John Scanlon, Trudy Coxe, and Curt Spalding
 - Scott Nixon, GSO and RI Sea Grant
 - Samuel Gray (Designed Providence's sewer system)
 - Paul Pinault (NBC Director for 25 years)

Leveraging Resources

- Network governance can redeploy network resources (e.g., staff, technical expertise, funding, equipment, etc.) in a coordinated way to pursue shared priorities, policies, and shared problems over a period of time
 - Helps avoid "random acts of environmental kindness".
- It is common for network members realize they lack access internally to sufficient resources needed to address their shared problems.
 - Our review finds many more examples of new studies and plans than it does implementation efforts over a sustained period of time
 - Examples illustrate that financing and who should pay are big parts of the story
 - CWA grants vs. revolving loans
 - Mandating pollution control without providing funding has always been a central tension
 - Interesting equity issues as revealed by NBC commission

Network Coordinators

- Governance focuses on making joint decisions, setting shared priorities, and developing coordinated policies, priorities and procedures and finding ways for network members to work together in productive ways
 - Participation is often voluntary, even when actors are compelled to participate, they remain relatively autonomous
 - Central challenge is to achieve some level of self-organization or "structure" that produces a level of coordination and direction in the absence of a centralized authority
- Examples reveal wide variation in coordinating structures
 - CRMC SAMPs local and states pursue identical policies but through their own processes
 - Members of NEIWPCC crafted their own structure while NBC and NERBC had it imposed upon them
 - NBP/NBEP has been unable to find a structure that works but other NEPs functioned in this capacity

Ability to Adapt and Reconfigure Networks

- Network processes are best left to develop at their own pace, they should also be allowed to die when their useful life has passed
 - Frees up scarce network resources that can be deployed to better address other watershed problems
- Examples
 - MÉIWPCC and NBC have been resilient and demonstrate an ability to adapt, change, and reconfigure themselves in fundamental ways
 - Better at forming networks as part of a planning process than we are at adapting the networks to fit the new demands and challenges associated with implementing the policies, plans, and programs (NERBC, SENE, NBP)
 - Why wasn't the NBP allowed to die? Could all of those resources over a 20 year period been redeployed in other, perhaps more productive ways?

Science is Used to Justify Policy

- Considerable debate in terms of the role that science plays in the policy process
- There were few examples where science generated the type of focusing event which produced the catalyst for fundamental policy changes
- Gradual production of policy relevant scientific research stimulates policy-oriented learning which then produces shifts in how problems/solutions are framed, which then allows for new policies, programs, and governance networks to take shape
- Examples
 - Interconnected nature of urban development, sanitation, and diseases was well established by the 1850 Shattuck Report, but it takes decades for the problem/solution to get framed in a way that the problem starts to get addressed
 - 1970s 1980s mesocosm studies is used to support 2008 lawsuit

Communication and Information Sharing

- Need to communicate and share information among the diverse network of individuals and organizations affected by an issue or problem
 - This requires being sensitive to the media used to participate and communicate as well as the frequency and duration of processes
- Piecing together digital archive revealed how difficult it can be to learn from subsequent planning efforts because many materials are largely unavailable
- Example
 - Prior to the 1972 Clean Water Act, Rhode Island law imposed a greater penalty on the disclosure of pollutant discharge information for private wastewater sources than the infractions themselves Frederiksen's "Our Dirty Water" expose
 - 1970s witnessed an explosion of participation opportunities Section 208, SENE study, CRMC RICRMP, etc. – however when planning ended, so did participation, communication, and information sharing



Participatory Processes Designed to Build Support

- Big difference in complying with public participation requirements and using it as a strategy to build support for policy change and implementation
 - Having lots of opportunities for the public to participate is no guarantee that it will translate into agency or political support
 - Involving those affected by plan's recommendations is important
 - Examples
 - SENE and NBP had lots of public participation opportunities but it translated into little agency or political support
 - CRMC SAMPs in Salt Ponds and Narrow River focused on building support for needed zoning change by working directly with local officials
 - Participation during implementation is often lacking notable exception is NBC CAC.



Local Government Involvement

- Local governments play an important role in the governance story
 - Public water and sewer are fundamental public services that are typically provided by local/regional governments
- Tension between local governments and federal-state-regional efforts to influence local decision making was readily apparent
 - Efforts like the SENE study or NBP's CCMP are unlikely to compel local governments to change their behavior, particularly if they are not involved in network processes
 - Local governments sometimes cannot afford to upgrade facilities or lack the political will to take the steps necessary to finance improvements (Providence in the late 1970s)
 - Regional authorities like NBC commission can insulate from politics
 - CWA is important counterbalance to keep progress moving forward
 - System today has local governments now paying cost mostly themselves, which creates a new tension



WATER BODIES (Category A)

PRIORITY PROTECTION AREAS (Category A) wetlands, well sites, beaches, critical erosion areas.

OTHER PROTECTION AREAS (Category B) flood plains, class I and II agricultural soils, unique natural and cultural sites, excluding all "A" lands

DEVELOPABLE AREAS REQUIRING MANAGEMENT

WATER RESOURCE LIMITATIONS

AQUIFER and/or RECHARGE AREAS (Category C₁) highest yield aquifers in each basin

WILDLIFE and SCENIC RESOURCE LIMITATIONS

WILDLIFE HABITAT (Category C₃) land considered best upland wildlife habitat other than publicly owned land or wetland

LANDSCAPE QUALITY AREAS (Category C₂) land characterized by high landscape quality

SOILS RESOURCE LIMITATIONS

LEDGE and/or STEEP SLOPE (Category C₅) land with slope greater than 15% and/or with rock at or near surface



SEVERE SEPTIC SYSTEM LIMITATIONS (Category C4) land with severe septic system limitations caused by conditions other than slope and ledge soils

MODERATE TO NO SEPTIC SYSTEM LIMITATIONS (Categories F and G) land with moderate or no septic system limitations

PREEMPTED USE AREAS



URBAN AREAS (Category E) including residential areas on less than one-acre lots, institutional, commercial and industrial development





WATER BODIES (Category A)



PRIORITY PROTECTION AREAS (Category A)



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Prospects for the Urban Sea

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2 Springer



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Editors

Questions?

A report that details the project methodology with recommendations for investigating other watershed governance experiences

- Historians of environmental governance
- Personal experience and knowledge
- Assembled largely from secondary information
- 1,438 documents containing approximately 125,724 pages of material
- Other timelines and document collections
- Systematic qualitative techniques to examine these data



Recommendations for investigating other watershed governance experiences

- Mesh data on pollution, treatment, control and impact to the governance story lines
- Extend the Narragansett Bay Watershed Governance History
- Build a corpus of local and regional information
- Compile timelines of critical events within stories or themes
- Document regional and watershed-wide governance perspectives
- Look for evidence of policy network membership and functioning



Methodology

- Expanded timelines from previous research
- Identified 11 case examples or story lines
 - Walter Shea's 1947 plan
 - Before and after the Narragansett Bay CCMP
 - Blackstone River
 - NERBC and the Level B Plan
 - Watershed stewardship in the Taunton River and Mount Hope Bay
 - Open space and regional land capability planning
 - Section 208 planning
 - TMDLs
 - Mercury TMDL and the history of metals impacting Narragansett Bay
 - Before and after the 2003 Greenwich Bay fish kill

Methodology (Cont.)

- Eleven cases and key words are used as the filter to search for materials and build the timeline
- Reflective essays were developed and discussed.
- The ongoing analysis
 - Added further entries to the timeline
 - Identified connections between the cases
 - Identified connections to other events occurring in society
 - Produced quotes, examples, and many of the smaller related case examples contained in the report

Methodology (Cont.)

- Timelines for the individual cases were merged with other significant events into a master timeline with 1,560 unique entries
- Cross-case analysis of the 11 governance stories combined with the analysis of the master timeline was used to develop high-level analysis
- The analytical framework builds in part on the work of Deil Wright (1978, 1988) and the changing patters of intergovernmental relations (IGR)
- Then identified attributes of healthy and useful network governance present when comparing the governance episodes over time
 - We believe this framework and methodology could easily be replicated in other watershed settings

Next steps

- Receive feedback from this retreat
- Lighthouse team is meeting immediately to
 - Consolidate comments
 - Revise documents as necessary
- Finalize Analysis and Methodology and Lessons Learned Documents
- /Transfer JL timeline
- Submit documents for final approval
- Complete project; discuss opportunities for additional applications

