

Cape Cod Regional Wastewater Management Planning Assessment and Process Design Findings and Recommendations

The Cape Cod Commission is in the process of developing an area-wide water quality management plan for the Cape Cod region pursuant to Section 208 of the Clean Water Act, which will build upon the policies and strategies set forth in the Cape Cod Regional Wastewater Management Plan (RWMP). This process will lead to the development of a range of watershed-based solutions to the region's wastewater issues and their impacts on coastal waters.

The Cape Cod Commission engaged the Consensus Building Institute (CBI) to seek input from engaged Cape Cod stakeholders about their views and concerns on this issue, and to help recommend an appropriate public engagement process and other actions to promote effective solutions. To do this, CBI and the Cape Cod Commission held 7 focus group sessions throughout Cape Cod between February 12 and 25, involving 43 individuals from town government and administration, town wastewater committees, business and civic organizations, and regional and other stakeholder groups. Each session lasted 2-3 hours, beginning with an overview from the Cape Cod Commission on the Regional Wastewater Management Plan, the 208 planning process, and other Commission efforts, and then, after the Commission left the room, included discussion with CBI facilitators about how to construct a public engagement process.

In the focus groups, CBI asked stakeholders questions about their views and perceptions of:

- The impacts of nutrient loading in their watersheds
- The needs for finding local and regional solutions to the problem
- Opportunities and priorities for public engagement
- Recommended actions and the scale/participants for those actions
- Appropriate roles and actions for the regional Cape Cod Commission in achieving a solution

This draft report is based on input received in the focus group sessions, as well as our analysis and reflections to draw recommendations based on that input. It is designed to clarify the full range of views, and to roughly indicate the prevalence of those views in the focus groups. However, because the focus groups involved only a small number of individuals, who represent the views of various numbers of other Cape Codders, this report does not purport to attest to the popularity of these views across the population of the Cape. This report was distributed to interviewees in draft form on March 19, 2013, and revised based on that feedback.

The report is organized into four sections. Sections one and two seek to summarize: 1) the range of views about the nature of the nutrient problem and the needs for achieving solutions, and 2) the range of views on the appropriate role for the Commission on helping address the issue of nutrient impacts to Cape Cod's waters. The third section offers a list of potential audiences and stakeholders that focus group participants suggested be considered and included in the planning process. The final section of the report offers a set of process recommendations that CBI has drawn from these findings and our conversations with the Cape Cod Commission, which provide process advice to

the Cape Cod Commission on the development of an area-wide water quality management plan for Cape Cod.

Findings on the Nature of the Problem and Needs for Solutions

In our focus groups, we heard a range of views, concerns, and conclusions regarding the current state of nutrient management and its impact on Cape Cod. The general themes we heard focused around:

- Knowledge and motivation of Cape Codders on wastewater and nutrient loading
- The potential immediate costs versus long-term benefits of action
- The financial barriers and opportunities for action
- The technical options available for action
- The existing institutional mechanisms available for managing the problem through various levels of government
- The current regulatory environment that may promote or suppress action

Knowledge and motivation of Cape Codders on wastewater and nutrient loading

While most of the people participating in the focus groups were highly informed and motivated on the issue, many of them noted that the average (and the skeptical) Cape Codder's knowledge of the problem of nutrient loading from wastewater is limited, and that the numbers of those motivated to act is even more limited. Interviewees noted the following:

- The state of the bays is declining over time, but not dramatically in any one year.
- The visual appearance of the bays is the same as a healthy system, with few beach closures or other events that would spark concern or outrage.
- The long-term impact is great, as noticed by fishermen and longer term residents, but not visible to many nor to newer residents who may not have fished, boated, or recreated in the waters 20 or 30 years ago.
- The population of concerned citizens with a long-term perspective is, literally, dying off.
- Many citizens do not understand or acknowledge the extent of the threat.

Many interviewees noted that lack of awareness and high concern is not due to lack of attempts at educating the public. Interviewees noted that many Towns, the Commission, and many non-government organizations have worked, in some cases for over a decade, to inform and raise awareness about this issue to Cape Codders. The concern about nitrogen contamination to Cape Cod's coastal waters is hardly new. Yet, according to most interviewees, misunderstandings and limited knowledge, lack of concern, and low motivation to take action by voters prevails. Some interviewees felt that legitimate questions remained about some areas, particularly about the MEP formulation of TMDLs. The low levels of general knowledge and concern are contrasted with the high levels of information, motivation, and ongoing effort of those who have put themselves

forward to help solve the problem on a local or regional level (such as environmental groups, local wastewater committees, civic task forces), as well as those responsible for the problem due to their position/job (Town administrators or elected officials).

The potential immediate costs versus long-term benefits of action

Many interviewees noted that the issue is not only one of knowledge and motivation, but also one of discontinuity between immediate costs and long-term benefits. Interviewees noted the following:

- A large cohort of retired citizens, often with fixed or constrained incomes, who have no plans to sell their properties, is highly sensitive to short-term tax increases and insensitive to long-term market costs or benefits they may never see in their lifetimes
- The year-round younger population is usually of limited income, working multiple jobs, rarely able to enjoy the natural resources, and seeing little nexus between their economic challenges and this problem
- Part of the actual benefit may be to have avoided or made less bad the environmental impacts. However, avoidance of a worse problem is difficult to make given that you may not see or feel the severity of the problem today nor do citizens later see what “bad things” did not occur
- Individual Town efforts to solve the problem have frequently met with objections not only around cost, but technologies, their performance, and their ultimate outcomes. This public debate at its best has surfaced new, viable, and alternative or additional solutions. At its worst, it has spread worry, misinformation, confusion, and inaction.

The financial barriers and opportunities for action

Many interviewees noted that one of the key impediments to action is cost: many Towns have had difficulty in passing final measures through selectmen or at Town meetings due to costs. There appears often to be no clear way forward to finance the cost of the choices before Cape Codders that provides sufficient fairness, equity, and manageable costs. Interviewees noted financial challenges such as:

- The total cost, even when spread out over decades, is very high for most residents, especially for limited income households in the middle of difficult regional and national economic times. Addressing the problem is very, very expensive.
- The allocation of costs raises numerous conflicts. Betterments force the cost on those who receive the benefit, but often at a very high cost per household. Town-wide taxes spread the cost over more taxpayers but may force taxpayers who receive no improvements (e.g., they are not in a particularly impaired watershed or already have an existing treatment system of some kind).
- Homeowners who have recently upgraded their systems for Title V compliance might have to spend money yet again to meet TMDLs.
- In contrast, much of the business community has come to the conclusion that impaired water quality poses a major challenge to the financial well-being of an economy primarily based on tourism and access to clean, beautiful, and accessible coastal waters.

- Thus, while the overall benefit-cost ratio of taking action is positive, the individual costs borne by individual residents is high and would be immediately felt while the long-term benefit would take years to realize collectively.

The technical options available for action

Most interviewees recognized that there are complicated technical and planning questions involved in taking action. These range from the impacts and performance of various systems, to the siting of localized or inter-municipal treatment plants to the uncertainty of when new or emerging innovative technologies may be both viable and acceptable to regulators. Some stakeholders have become focused on one or another particular solution, which they tended to feel was not being sufficiently considered or valued by other towns or the region. These stakeholders are often perceived by others as trying to drive the debate toward that particular solution, even if it was only one of many reasonable choices. That being said, while some interviewees expressed interest in more information-sharing about the range of technical options, most did not believe that the primary impediment to action was technical. Rather, the financial, public motivation, and other factors were named far more frequently as key barriers.

The existing institutional mechanisms available for managing the problem through various levels of government

Several interviewees noted that the most effective and efficient solutions to the problem might vary in scale from the sub-watershed level to the inter-municipal level; however, they also noted that entity charged with proposing, implementing, and funding solutions was at the Town level, and that, like it or not, the Towns are the political units that ultimately decide on where and how to spend their money. The lack of institutional mechanisms for managing the problem at different scales could raise barriers to finding the most efficient, appropriate, and politically acceptable solutions. A minority of interviewees felt that Towns might not always be the best political unit to solve the technical and planning challenges, such as which solutions to use and where to site them, but most interviewees found that this activity is best left to the Towns. There is a current lack of well-established institutions to coordinate solutions across Town boundaries, or even within sub-sections of Towns, to effectively plan and finance watershed needs. For instance, Towns have limited means to monitor and help maintain smaller scale units such as private cluster systems and individual septic. The Boards of Health have strong powers to address problems once they occur and are identified, but not the institutional ability to manage these systems overall. Thus, even though a range of scales of action may be the best overall solution, clear institutional mechanisms to manage such multi-scale solutions are sometimes lacking.

The current regulatory environment that may promote or suppress action

Interviewees raised a range of concerns regarding the current regulatory environment. On the regional level, most interviewees raised strong concerns that, through the regional planning effort, the Commission will overreach and overrule Towns and their particular approaches and pacing of solving the issue, though a few felt that the Commission has not exercised its regulatory powers aggressively enough to force action on this issue. At the state level, some noted that the state has not played an active enough role in forcing the solution to the issue. It was noted that the current Title V regulations, focused on a property-by-property solution to sewage improvements and nutrient flow, might be too limiting and constrain more creative solutions. For instance, a few suggested that

Title V regulations on the Cape could allow a watershed or sub-watershed flow, rather than by individual property, and that overall flow could even be set lower than is granted by current law, but would then allow more efficient overall solutions within that area.

Role of the Commission

Not surprisingly, interviewees had a range of views regarding the proper and appropriate role the Commission should play in helping address nutrient impacts and meeting TMDLs. Many interviewees noted that the relationship between Towns and the Commission had a long and sometimes challenging history, and highlighted local skepticism about the Commission's attitudes, methods, and intentions. We summarize below the views expressed in our interviews about some possible areas for Commission action.

Decision-making about technical options and land use

Most interviewees do not see the Commission as having a primary role in the decision-making about technical options and land-use – what goes where – which they felt should be determined by the Towns. Most are concerned or very concerned that the Commission's regional planning effort will negatively impact or seek to override the work already underway or completed on CWMPs within Towns. Many interviewees are confused and unclear about how the regional plan will relate to individual CWMP's across the Cape, and some expressed concerns that the lack of clarity about regional planning efforts was already being used by critics to undermine support for local CWMP progress, especially on votes planned for this spring. Some were concerned that the Commission does not have a specific and clear enough understanding of what Towns are already doing, and/or that it does not sufficiently respect and acknowledge that work. Some interviewees did show openness to regional standards that might guide technical solutions.

Technical Assistance

Many interviewees do see the Commission as providing regional technical assistance. That is, the Towns can figure out what goes where if the Commission gives them support: evaluation of technologies, information on innovative technologies, information about existing modeling, build out analysis, and so forth. Several interviewees raised concerns about the source of data that the Commission might use in its tools and support, and stressed that the data must be based on or compatible with local data, and that the Commission must be transparent about its data and the sources.

Inter-Municipal Coordination

Some stakeholders do want help with watershed-level coordination across Town boundaries. Interviewees named several specific cross-boundary watersheds that might benefit from an inter-municipal dialogue, which the Commission could help foster and join, but not run.

Educational

Many interviewees stated that the Commission could provide materials, resources, and tools to assist with local or network-based educational/outreach efforts, by helping to shape the messages and offering tools for dissemination, but that Towns and existing networks of constituents, rather than

the Commission, would be better messengers for sharing the information. As noted above, some interviewees raised concern that education might not be particularly effective or useful if done in the way it has been done in the past. Some interviewees suggested that the Commission could take the lead on developing a comprehensive campaign, which might be disseminated through local groups.

Financial

Most interviewees see the Commission's central role in this effort as helping address the financing of the work needed: working with the region as a whole to determine the best financial mechanisms to address total revenues needed, seek funding outside of the Cape at the state or federal level, create a broad enough base for revenue, and address issues of equity and fairness.

Regulatory

Many interviewees recognize the regulatory role of the Commission and its ability to approve or disapprove CWMPs. A few even noted that the Commission has the authority to create an area of District Critical Planning Concern (DCPC). Nonetheless, most are wary of the Commission's regulatory powers, though some recognize the threat of their existence could help move action forward.

Potential Audiences and Stakeholders

Interviewees mentioned a number of possible audiences and stakeholders that might be reached out to or engaged in regional planning. These include the following:

- Regulatory agencies such as EPA and DEP
- State legislators, not only those on the Cape, but those whose votes might be needed for funding or other legislation
- County and Town elected officials and staff
 - Wastewater treatment staff, planners, water districts, boards of health, selectmen, Town managers
- Citizens and organizations already engaged in the issue
 - Town CWMP committee members, PALS participants, existing civic wastewater task forces (Chamber of Commerce, League of Women Voters, NGOs, others)
- The business community
 - Health care, development (builders and realtors), and hospitality (hotels, restaurants, activities)
- Citizens at large
 - Second home owners, retirees, civil servants (fireman, policeman, teachers)
 - Non-government working people (service providers, laborers, fishermen and shell fishermen, and many others)

Recommendations

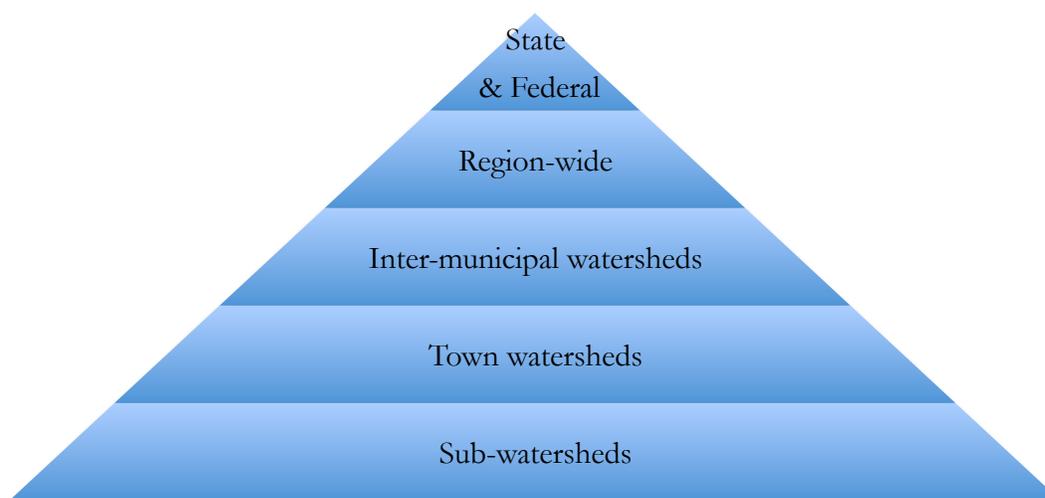
Given the concerns, suggestions, and ideas presented, we offer the following recommendations for developing a multi-prong, effective public engagement process. We recommend specific steps below, but first seek to place our recommendations in a broader context.

The recommendations are informed by the following sources and principles:

- Based on the ideas and interests raised in the focus groups
- Based on CBI's experience in working in a variety of Cape Cod, Massachusetts, and U.S. cases across water, energy, land use, and environment
- Seeks to add value to existing efforts already underway
- Utilizes the Commission's new tools (MVP for instance) wherever possible
- Includes a multi-faceted approach to the complex nature of problem and the diversity of audiences
- Builds off of existing civic capital rather than trying to create entirely new civic capital
- Seeks to link Commission's technical/regulatory know-how with key stakeholders interests, influence, and legitimacy

As noted in our findings on audiences, there are multiple levels at which the Commission and its many stakeholders need to be engaged. This effort should include engaging state and federal appointed and elected officials, as well as involving local citizens who will be most affected, both in benefits and costs at the sub-watershed or watershed level. Since the Towns have both significant regulatory and financial responsibility and have been underway for some time in watershed planning around this issue, they need to be engaged directly, effectively, and in a variety of ways and forums.

Figure 1: Levels of Engagement



Furthermore, the Commission’s approach needs to draw upon and encourage innovation across a number of areas, including but probably not limited to financial, information, technical, institutional and regulatory, and engagement. Given the complexity of the problem, the Commission and its stakeholders need to deploy as much innovation as possible to move the issue forward. This will likely require weaving engagement throughout its process – from how to share information with citizens at large, to how to enlist the business community – to wrestle with challenging questions of funding for necessary actions over long-periods of time.

While our recommendations are focused on engagement and information, we wanted to note the substantive key areas in which an engagement strategy must be interwoven in order to succeed.

Figure 2: Levels of Engagement



The following are our recommendations.

Recommendation #1: Engage Municipal Governments in joint discussion of how the Town-level Comprehensive Wastewater Management Plans (CWMPs), in their various stages of completion, and the regional plan will “fit” together.

As noted in our findings, many municipal officials and others already engaged in wastewater planning are not clear how the proposed regional plan fits with the various CWMPs already underway. Will the regional plan simply include those CWMPs already completed, and focus energy on those watersheds where planning is further behind? Will the plan attempt to supplement, change, or even replace existing efforts? Will the process require Towns to go backward or redo steps they have already completed? For Towns already far along in their planning processes, but not

yet complete, will the Commission play a supportive and supplemental role, or seek to be more active? Will the regional plan in any way replace existing or soon to be developed CWMPs? The Commission should also engage Towns around the tools they have developed, to show Towns how to use those tools and to ensure the tools are responsive to Town-specific data such as build-out analyses and water use. For Towns with shared watersheds, the Commission might organize an additional meeting focusing on the watershed and what is expected in a shared watershed management plan. We find that it is very important for the Commission to engage the Towns one-on-one, through Commission meetings and perhaps a joint forum, to explicitly dialogue with them on how the various planning efforts will, should, and can best fit together.

Recommendation #2: Invest in an innovative social marketing campaign to raise not only awareness and understanding, but also motivation to address the problem.

Our interviewees stated that decades of education efforts have had limited effect. Many citizens do not know about, do not understand, and/or are not motivated to take action on the water quality and management problems facing the Cape. Though most engaged stakeholders are convinced of the powerful economic and environmental consequences of not acting, many citizens are not. As noted in the findings, limited incomes, busy lives, the slow “eroding” nature of the problem, and other factors, make this issue less likely to rise to the top of public concern. Thus, we recommend tapping into the best of social marketing to help achieve greater focus on and attention to the problem. Deriving the solution should be left to an extensive public engagement effort at different levels, as noted above, but citizens will not be motivated to engage to help solve the problem if they do not find the problem compelling and imminent. Many interviewees noted that there are a variety of messengers who are likely to be more compelling to audiences than the Commission itself, encouraging the Commission to enlist the support and efforts of many, rather than taking on this challenge of messaging by itself. Key groups are likely to have more detailed ideas, though some of the specific ideas suggested in our interviews include the following:

- Utilize existing networks – local committees, NGOs, etc. – as the messengers with a shared set of communication and engagement tools.
- Support outreach efforts at existing local public events and engagement opportunities, or specialized forums for specific audiences, led by their peers.
- Develop video with local fireman, teacher, fisherman, service worker talking about the problem and the range of solutions, explained in very simple language.
- Use social media for the “coolness” factor and keep engaged at the micro-level with younger and older constituents.

Recommendation #3: Convene (do not own) a representative Cape-wide “RWMP Network” of actors already engaged within Towns and key civic groups.

The Commission has a valuable role in helping convene stakeholders within Towns and at various levels to create forums for regional dialogue and problem solving. The Commission has already done this through a variety of events on this topic over the years. We recommend convening a series of related workshops in a regular and systematic way during the development of the regional plan in the next 12 to 18 months. While anyone would be welcome to such events, these forums would seek to “deploy” the many government and non-government actors already highly

knowledgeable about the issue, to build on and support the network of actors already active on this issue. Such events would fit with key areas of the plan that need discussion and development. These forums would only secondarily be about education and information and more importantly would be about problem solving around key issues, ideas, and emerging options from the planning process. While we do not have enough detailed information to suggest the exact sequence, topic, and format for such workshops, they might include: 1) sharing best practices and lessons for finalizing watershed CWMPs; 2) exploring various local to regional to state financing and funding mechanisms; 3) considering regulatory innovations from the Title V to approval of new technologies that might help accelerate action; and, 4) creating various options for creative institutional responses to cross-boundary governance and managing systems at different scales.

Recommendation #4: Linked to the Network, the Commission should also convene or enhance any existing Working Group from the business, banking, environmental, and government sectors to specifically address local to federal funding options for action on the Cape.

One of the key issues our focus groups identified was addressing more holistically and effectively the question of how best to fund the various improvements likely needed in many if not all watersheds. Most interviewees believed that the Commission did have an important role on this topic and that the business community could be a key asset in considering a range of ideas and tools for addressing funding that expand beyond the difficult ones being developed within individual towns (i.e., betterments, state-wide property tax levies, etc.). The Commission should work with a Working Group of influential people in real estate, lodging, the health sector, tourism, as well as environmental advocates, and government officials, to explore and prioritize a host of options for providing sufficient funding. The group might very well be the existing Chamber of Commerce task force or an enhancement of that effort. This group would seek not only to prioritize a host of options, but to jointly develop a strategy for making them become a reality, from lobbying on Beacon Hill, to considering region-wide mechanisms requiring broad-based voter support, to other means. This Working Group should seek to act and implement concrete, tenable solutions.

Recommendation #5: Pilot three to five watershed-based planning efforts across town boundaries, investing in extensive local engagement and deploying the Commission's newly created tools.

While the Commission might wish to engage all forty-three watersheds in this planning effort, attempting such an effort all at once would be enormous, might in some cases repeat good work already done, might interfere with some Towns' individual planning efforts (breeding resistance), and might succeed at breadth rather than depth of both engagement and outcomes. Thus, we recommend the Commission partner with Towns to establish three to five watershed-based planning efforts across town boundaries. The Commission should work with the Towns to identify those watersheds that are "ripe" for this type of collaboration, based on criteria such as substantial nitrogen contributions and impacts, likely complex and varied technical solutions, opportunities for mutual gain, and willingness of the Towns to engage with each other and the Commission. These efforts should begin with initial discussions with affected towns to understand whether and how they have been addressing these issues and concerns, and plan additional steps in collaboration with them.

These cross-boundary watershed planning efforts would seek to: 1) engage broader and newer audiences in the effort, including youth, local working people, people with families, second home owners and others, as well as those already working on these issues; 2) utilize the new tools in “gaming” and “MVP” planning to explore options and ideas; 3) coordinate both interests and possible options across town boundaries; and, 4) learn from these efforts to consider using them in additional watersheds. These pilots should also reach out to MADEP, as the state agency that develops and oversees implementation of the Total Maximum Daily Loads (TMDL) for nitrogen, the reduction standard the Towns will be required to meet in the watersheds. Each watershed process might include the following, with the potential for core group work in-between meetings:

- A convening to identify key participants and issues for that watershed and how best to outreach to that watershed’s neighborhoods;
- A first meeting that allows people to express their range of views and concerns on the issue, the potential solutions, and questions;
- A second workshop that uses some of the Commission’s new tools to explore together issues and ideas;
- A third meeting where a technical consultant provides analysis and options given the initial feedback;
- A fourth meeting where the participants explore these options and seek to prioritize them; and,
- A fifth workshop where final recommendations are offered, refined, and finalized.

Recommendation #6: Consider additional online tools for two-way communication, per pilot watershed projects, before and after key events, and during the entire planning process.

While we recommend a variety of in-person mechanisms to gain input, problem solve, work out priorities, and focus on action, there are a number of citizens who likely cannot participate actively in face-to-face efforts (such as second home owners, who do not live on the Cape in the winter). Thus, we recommend the Commission seek to deploy any number of readily available tools to encourage citizens at home, students in school, and others to review plans and documents, engage with maps and ideas, provide input and comment, and dialogue with each other via online tools. While we do not endorse any particular vendor, such services/programs include MetroQuest, MindMixer, and within the Commonwealth, the Massachusetts Office of Public Collaboration (MOPC) at UMass Boston and its partners at UMass Amherst and Idealogue. Inc. have developed an online engagement platform called Mediem.

Recommendation #7: Design and implement an overall adaptive stakeholder engagement strategy for regional planning.

Given the findings of our focus groups and drawing our experience from other processes, we believe that the six specific recommendations will help the Commission and its stakeholders engage in effective, problem-solving regional planning. However, the Commission can best integrate these recommendations and other possible actions into an overall strategy. Thus, we recommend that the

Commission consider these recommendations, gather additional input as needed from others, and devise an overall engagement strategy that would include the following:

- Clear goals, objectives, and intended outcomes
- Intended audiences
- Specific tools and processes
- Internal and external resources needed
- Evaluation criteria and methods
- How to be adaptive as the ongoing efforts provide new information and learnings

The Commissioner and Commissioners will need to determine what sequence of activities is best and how to incorporate the key learnings from any watershed pilots into an overall and adaptive engagement approach. We recommend that this overall strategy be completed and shared with the public appropriately so that the efforts are clear and transparent.

Recommendation Summary

The following table summarizes our specific recommendations and seeks to identify which target audiences they are intended for.

Table 1: Recommendations and Target Audiences

	General Citizenry	Business Community	Engaged Officials and Citizens	State and Federal Officials
Clarify regional and local planning			X	X
Deploy social marketing	X			
Convene a region-wide network		X	X	X
Create a financing working group		X		X
Pilot cross-boundary pilot projects	X	X	X	X
Deploy additional online tools	X			
Design an overall strategy	X	X	X	X

Appendix A: List of Interviewees and Focus Group Attendees

Matt Anderson	Sue Leven
David Augustinho	Paul Lubel
Sandy Bayne	Alan McLennan
Phil Boudreau	Fran McLennan
Brian Braggington-Smith	Win Munro
Dara Bryan	Wendy Northcross
JoAnne Buntich	Madhawa Palihapitiya
Tom Cahir	Patricia Pajaron
Linda Cebula	George Price
Kris Clark	Jari Rapaport
Brad Crowell	Sallie Riggs
Jane Crowley	Mark Robinson
Gene Curry	Deanna Ruffer
Ed DeWitt	Florence Seldon
Curt Felix	Ken Smith
Margo Fenn	David Spitz
Tom Fudala	Charles Sumner
Katherine Garofoli	Jason Taylor
Charlene Greenhalgh	Matt Teague
Ned Hitchcock	Judy Thomas
Scott Horsley	Virginia Valiela
Pat Hughes	Mary Anne Walk
Susan Jeghelian	Robin Wilkins
Alison Leschen	Linda Zuern