

## EC4 ACTION PLAN - STATUS UPDATE - NOVEMBER 2014

### GOAL 1: LEAD BY EXAMPLE

#### Objective 1.1 Governance - facilitate prioritization, coordination and collaboration for the purpose of building resiliency

**Action 1.1.1:** Legislation adding consideration of climate change and resiliency to powers and duties of state agencies; establishing council to coordinate climate change and resilience related programs and activities among state agencies and to encourage intergovernmental as well as cross-sector coordination and collaboration. Expand from EC3 membership by adding Lt. Governor as Chair of Emergency Management Advisory Council, Building Code Commission, DPUC, and/or allow flexibility for Governor to add limited number of members.

See also Action 5.1.1

**Responsibility:** General Assembly  
**When** Current legislative session.

**STATUS:** DONE

**Action 1.1.2** Establish climate change resiliency as a decision-making principle for all state agencies, including quasi-public agencies; direct the executive climate change council, or its successor if established by the General Assembly, to develop practical guidance in consultation with agency heads and their senior staff; and direct agencies to cooperate with the council to the greatest extent possible.

**OPR** Governor's Office/EC3  
**When** Guidance by 9/30/2014. Responses by 10/31/2014 (so they can inform Strategic Plan due by end of year)

See also Action 1.1.4, Objective 1.2

**STATUS:** Governor has sent letter to 20 agency heads, who have designated leads. Work on guidance has not begun. Meeting with leads is being planned for late November, early December.

**Action 1.1.3:** Designate senior level position in Governor's office to help direct and facilitate interagency coordination on matters relating to climate change and resiliency, as well as facilitate intergovernmental and cross-sector coordination and collaboration

**OPR** Governor's Office  
**Responsibility:** Governor  
**When** asap

**OCR** EC3  
 Div. of Planning

**STATUS:** Governor has designated Jan Reitsma to coordinate with agency leads (see below).

**Action 1.1.4:**

Designate senior staff level leads in each state agency to coordinate implementation of guidance across programs and projects, incorporation into strategic and work plans, tracking of performance, identification of challenges and opportunities, etc.

<b>OPR</b>	All agencies	<b>OCR</b>	OMB/Perf. Mgt
Responsibility:	Cabinet members		Div. of Planning
Action Officer:			
<b>When</b>	7/1/2014 (note: could start with smaller group that works with RIEMA and OMB to develop guidance and formats for tracking, reducing paperwork burden)		
<b>How</b>	Executive order, memo from OMB		

**STATUS:** See 1.1.2 above

**Action 1.1.5:** Create short- or longer-term interagency teams where that allows outcomes to be achieved more cost-effectively and/or quickly, for example, in areas like scientific and technical support, vulnerability assessments, public outreach and education, communications.

<b>OPR</b>	All agencies	<b>OCR</b>	EC3/Successor Council
Responsibility:	Cabinet members		
Action Officer:			
<b>When</b>	7/1/2014 (note: could start with smaller group that works with RIEMA and OMB to develop guidance and formats for tracking, reducing paperwork burden)		
<b>How</b>	Executive order. Memorandum from DOA/OMB.		

**STATUS:** Interagency work groups have been working on communications strategy (goal 8), consistent projections and mapping of SLR and storm surge inundation (1.3.4), storm guidance to municipalities (1.3.3), and reduction of GHG emissions in transportation sector (5.3.3-5.3.5)

**Objective 1.2** *Incorporate climate change resiliency into government operations at all levels, implement Lead by Example programs, measure and track performance*

**Action 1.2.1:** Integrate climate change into the functional elements of the State Guide Plan

*See also Action 4.1.10*

**OPR** Div. of Planning **OCR** All SPC members  
 Responsibility: Kevin Flynn  
 Action Officer:  
**When** Ongoing, begin asap  
**How** Is within enabling authority of SPC; add to its powers and duties.

**STATUS:** Climate Resilience incorporated into draft Economic Development and Housing Plans.

**Action 1.2.2:** Develop a set of standard metrics agencies can use to track activities related to climate change

**OPR** OMB/Perform. Mgt **OCR** RIEMA,  
 Responsibility: Peter Marino Div. of Planning  
 Action Officer: Brian Daniels  
**When** 12/1/1214  
**How** Memo from OMB Director outlining the criteria and distribute a semi-annual report on agency-specific activities

**STATUS:** No action taken.

**Action 1.2.3:** Develop and incorporate a set of resiliency criteria for use in this year's capital planning process.

**OPR** RIEMA/OMB **OCR** CRMC, Div. of  
 Responsibility: Jamia McDonald Planning, OMB  
 Action Officer: Michelle Burnett  
**When** Criteria developed by 6/1/2014 and distributed to state agencies by 7/1/2014  
**How** Memo from OMB Director outlining the policy behind the instructions and the criteria that will be used to weight capital project requests

**STATUS:** RIEMA forwarded initial check list to OMB. No further action taken. Coordination required.

**Action 1.2.4:** Evaluate state role in construction permitting process and identify opportunities to expedite permitting process post-disaster and for selected types of mitigation and adaptation actions

**OPR** OMB/Office of Reg. Reform **OCR** BCC, CRB, CRMC, DEM, Div. of Planning, DLT, DOH, Fire Marshall  
 Responsibility: RIEMA  
 Action Officer:  
**When** 11/1/2014  
**How** Convene working group 5/2014

**STATUS:** No action taken.

**Action 1.2.5:** Develop long-term targets and a plan for net zero energy usage in state facilities through a combination of energy efficiency upgrades, renewable energy and conservation effort; also mitigate transportation energy impacts by requiring reductions in Vehicle Miles Traveled (VMT) by state employees and expanding the use of alternative fuel and low emission vehicles in state fleets.

**OPR** DOA **OCR** Div. of Planning, SPC, OER  
 Responsibility: Ron Renaud Green Building Advisory  
 Action Officer: Marion Gold Committee

**When**

**How** Finalize and implement State Energy Plan

**STATUS:** See update under 1.2.6 below on PEP (energy use reduction). Also, Statewide Planning adopted a recommendation of the State Employee Commuter Task Force regarding VMT reduction as a task in the FY15 Uniform Transportation Planning Work Plan. The draft SEP has been completed for review by the SPC.

**Action 1.2.6:** Continue "Lead by Example" state energy efficiency program through RI Public Energy Partnership: benchmark energy use in state facilities and set goals for energy use reduction

**OPR** DOA **OCR** All agencies  
 Responsibility: Ron Renaud  
 Action Officer: Marion Gold

**When** Benchmarking completed by ?  
 Reduction goals posted by?

**STATUS:** 9 state agencies are now RIPEP partners, 529 facilities have been baselined in ENERGYSTAR Portfolio Manager, 8 energy assessments have been completed, and 1 energy efficiency project has been completed for estimated electric reduction of 67%. 15 DOT facilities have been entered in US DOE Asset Scoring Tool (how building characteristics impact energy consumption).

**Action 1.2.7:** Revise TIP selection process to include climate change resilience criteria

**OPR** Div. of Planning **OCR** DOT, SPC  
 Responsibility: Kevin Flynn  
 Action Officer:

**When** Criteria developed in 2014. TIP amended in FY16.

**How** Quadrennial TIP  
*See also Actions 4.1.2, 4.1.3, 4.1.4*

**STATUS:**

**Action 1.2.8:** Create a "State Employees Lead by Example" program and encourage/support initiatives such as the State Employee Commuter Task Force to reduce Vehicle Miles Traveled (VMT, see Action 5.3.3) by state employees.

**OPR** DOA **OCR** EC3 agencies  
 Responsibility Director's Off., HR, Div. of Planning  
 Action Officer Deb Dawson  
**When**  
**How**

**STATUS:**

**Action 1.2.9:** Conduct a review of laws and regulations to identify those that, in the context of climate change, create or add to risk, or interfere with the ability to reduce risk or to improve resilience

**OPR** DOA/Office of Reg. Reform **OCR** EC3 agencies  
 Responsibility Director Municipalities  
 Action Officer Stakeholders  
**When** FY15  
**How**

**STATUS:**

Form interagency task force to work with Office of Regulatory Reform. Conduct, or ask university or college to conduct, best practices research. Include survey of key user groups, including municipal planners.

**Objective 1.3** *Coordinate, integrate and/or network data collection, analysis, modeling and mapping of sea level rise, storm surge, riverine flooding and other climate change related impacts and scenarios, for example, involving heat, air quality, increases in water- and vector-borne diseases, invasive species, etc. (among state agencies)*

See also Goal 7

**Action 1.3.1:** Conduct inventory of current and planned activity by state agencies, including contracted work; conduct SWOT analysis, including gap analysis and evaluation of options to improve coordination, use of scarce resources, etc.

**OPR** RIEMA **OCR** Div. of Planning/BRWCT,  
 Responsibility: All agencies  
 Action Officer:  
**When**  
**How**

**STATUS:** No action taken.

Create web site/page where agencies are asked to post basic information (per template) by ? Create small working group or use contractor analyze/evaluate. Invite feedback/input from academic institutions, perhaps other private sector parties?

**Action 1.3.2:** Establish or task an existing interagency advisory board or committee to make (1) policy recommendations, for example regarding research needs and priorities, and (2) recommendations regarding practical steps that can be taken to improve efficiencies, pool and leverage resources, etc.

**OPR** Div. of Planning/BRWCT? **OCR** CRMC, DEM, DOH

Responsibility:

Action Officer:

**When** asap

**How** If possible, first identify/constitute the entity that can become the broader advisory/coordinating committee proposed in Action 7.1.1. Task 2 can then be undertaken by establishing an interagency subcommittee for that committee or the Executive Climate Change Council.

**STATUS:** No action taken.

**Action 1.3.3:** Develop statewide planning criteria for the anticipated amount of SLR, level of riverine flooding, and the frequency and intensity of storms for which the State and its municipalities should plan, by time period.

**OPR** Div. of Planning/CRMC **OCR** RIEMA, DEM, DOH, DOT

Responsibility: Kevin Flynn/Grover Fugate

Action Officer: Jared Rhodes/

**When** Interim maps, criteria, guidance in 2014. Finalize in 2015.

**How** By 8/1/2014, determine what maps, if any, planning criteria and guidance can be provided, if need be on interim basis, for SLR, riverine flooding, frequency and intensity of storms based on currently available data. By 10/1/2014, issue inundation maps, planning criteria and guidance for public comment and/or on an interim basis. By 11/1/2014, have plan and target date for development and adoption in 2015 of maps, criteria, standards and guidance by SPC, CRMC and RIFMA  
*Note: CRMC has suggested that 500-yr floodplain (.02% storm) could serve as interim standard.*

**STATUS: Done.** Coordinated interim guidance, including maps, completed, with help from URI and NOAA/NWS. Agencies committed to ongoing updates.

**Action 1.3.4:** Produce state inundation maps for 1', 3' and 5' SLR scenarios, with and without storm surge, consistent with state planning criteria for SLR and coastal flooding

**OPR** CRMC **OCR** Div. of Planning  
 Responsibility: Grover Fugate RIEMA  
 Action Officer: Jim Boyd URI/EDC, Ocean Engineering; RISG

**STATUS: Done.** Inundation analyses completed for 1', 2'\* and 5' SLR scenarios to include current conditions and 25, 50 and 100 year storm event return intervals. Draft maps are being prepared and expected to be available in November 2014. \*RI may experience 2' as soon as 2050; more realistic planning criterion.

**When** Integrated mapping tool for use by state and local planners by 9/1/2014. Process for ongoing review (with user feedback) and updating by same date. Refined by 7/1/2015.  
**How** Preliminary agreement on interagency/multi-party protocol for ongoing updating by 9/1/2014; scientific and further policy review completed by 12/1/2014. Adjustments, if any, made by 7/1/2015.  
*Note: See also Goal 7.*

**Action 1.3.5:** Add standardized language to all state contracts for the conducting of climate change related activities to ensure that all data and maps produced are owned and accessible by the State of RI and are compatible with RIGIS formatting standards

**OPR** Div. of Purchases **OCR** Div. Of Planning, DOT  
 Responsibility:  
 Action Officer:  
**When** 9/30/2014  
**How** Div. of Planning to provide Language to Division of Purchases

**STATUS:** No action taken.

**Objective 1.4** *Address legal issues raised by climate change, especially as it affects private property*

**Action 1.4.1:** Convene taskforce to identify, prioritize and evaluate issues, for example, effect of loss of land in context of zoning and other land use regulations, possible conflicts between public hazard mitigation/adaptation planning and private property interests (e.g. buy-out programs, projects to increase flood storage), public trust interest in access along shoreline and in use and conservation of marine waters and natural resources, requirements to provide notice at time of sale; develop guidance for cities and towns, real estate professionals, property owners under existing law and regulations; and develop proposals for changes in laws, policies and regulations as needed.

**OPR** Off. of the Att. General **OCR** General Assembly  
 Responsibility: DOA, RIEMA, CRMC  
 Action Officer: RWU, Bar Association  
**When**  
**How** Begin with research of what other jurisdictions have done to date.

**STATUS:** No action taken.

**Objective 1.5** *Continuity*

**Action 1.5.1:** Develop Strategic Plan to guide state agency actions, coordination and collaborations for next 5 years

**OPR** EC3/Successor Council **OCR** Div. of Planning  
 Responsibility:  
 Action Officer:  
**When** 11/1/14 draft, 1/1/15 final  
**How**

**STATUS:** No action taken.

**Action 1.5.2:** Semi-annual summits

**OPR** EC3/Successor Council **OCR** URI/Brown/RWU  
 Responsibility:  
 Action Officer:  
**When**

**STATUS:** No action taken.

**Action 1.5.3:** Annual Reports

**OPR** EC3/Successor Council **OCR**  
 Responsibility:  
 Action Officer:

**STATUS:** No action taken.

**GOAL 2: PARTNER WITH LOCAL GOVERNMENT & PRIVATE SECTOR**

**Objective 2.1 :** *Cities and towns have easy access to reliable scientific and technical information (see also Goal 7)*

**Action 2.1.1** Establish a one-stop point-of-contact for inquiries, information resources, technical assistance, etc.

<b>OPR</b>	Div. of Planning	<b>OCR</b>	RIEMA	<b>STATUS:</b> No action taken.
Responsibility:	Kevin Flynn			
Action Officer:				
<b>When</b>				
<b>How</b>	EC3 to assist with finding staffing/funding solution, including use of outside funding streams, collaboration with non-profit, academic institution			

**Action 2.1.2** Establish a Resilient RI clearinghouse website for municipal planners

<b>OPR</b>	Div. of Planning	<b>OCR</b>	URI	<b>STATUS:</b> No action taken, other than being by Communications Group in discussions/plans for web site.
Responsibility:	Kevin Flynn		RIEMA, CRMC, DEM,	
Action Officer:			DOT, OER	
<b>When</b>				
<b>How</b>	First convene team to evaluate existing web sites, formats, audiences, gaps, need for new site vs using existing one(s)			

**Objective 2.2:** *All Cities and towns have up to date Hazard Mitigation Plans and Local Comprehensive Plans*

**Action 2.2.1:** Develop planning guidance for cities and towns to complete and/or update Hazard Mitigation Plans, including recommendations regarding coordination with neighboring towns

<b>OPR</b>	RIEMA (HMPs)	<b>OPR</b>	Div. of Planning	(LCPs. Also coordinate with RIEMA on outreach and getting input from other agencies)
Responsibility:	Jamia McDonald	Resp.	Kevin Flynn	
Action Officer:	Michelle Burnett	AO:	Jared Rhodes	
<b>When</b>				<b>STATUS:</b> RIEMA is working on developing a mitigation template and handbook for municipalities to utilize during their plan development process

**How** Align and coordinate HMP and LCP processes to the extent possible, to save cost at local and state level

**Action 2.2.2:** Develop standards for addressing natural hazards and climate change in local comprehensive plans, and provide technical assistance to help cities and towns meet the standards and increase the number of state-approved plans

**OPR** Div. of Planning **OCR** RIEMA, CRMC,  
Responsibility: Kevin Flynn DEM  
Action Officer: Jared Rhodes

**STATUS:** Included in draft guidance document developed by Statewide Planning, in consultation with RIEMA, CRMC and DEM, for update of local comprehensive plans by cities and towns.

**When** ongoing, complete November 2014.

**How** Align and coordinate HMP and LCP processes to the extent possible, to save cost at local and state level

**Action 2.2.3:** Provide technical assistance to municipalities to incorporate climate change adaptation into comprehensive planning, hazard mitigation plans, capital improvement and transportation improvement programs

**OPR** Div. of Planning, **OCR** URI/CRC/SG  
Responsibility: Pam Rubinof  
Action Officer: Pam Rubinof RIEMA, CRMC,  
DOT

**STATUS:** Needs state agency (instead of URI) lead for initiative to work statewide. Work ongoing on projects and guidance. Pilot projects in Norht Kingstown and Newport. Former to be completed in December and to be incorporated in LCP process beginning January 2015. Draft model for local vulnerability assessment and adaptation planning to be completed by December 2014, and shared with municipalities. Coordination with Statewide Planning and CRMC on guidance for new LCP chapters.

**When**

**How** Continue current pilot projects but convene team (with OCRs, and private sector partners, see, e.g., Action 2.5.1) to address available funding and means to increase it so as to allow scaling up to ongoing municipal assistance program

**Action 2.2.4:** Develop mechanism to provide notice to cities and towns of funding opportunities to implement projects outlined in their Hazard Mitigation Plans

**OPR** RIEMA (HMPs) **OCR** Div. of Planning  
Responsibility: Jamia McDonald  
Action Officer: Michelle Burnett

**STATUS:** According to RIEMA, cities and towns are notified of all funding opportunities.

**When** asap; use if and when funding is available

**How** Develop comprehensive strategy and portal (see Action 2.1.2) to notify municipalities of opportunities as they arise. Information can include application timelines, requirements, eligibility criteria and application forms.

*Note: consider expanding to joint program covering additional funding opportunities and projects in Local Comprehensive Plans, as well*

**Objective 2.3 :** *Provide timely guidance and technical assistance, with support from academic institutions to cities and towns*

**Action 2.3.1:** Provide standard maps, criteria and guidance relating to scenarios involving sea level rise, storm surge, riverine flooding, frequency and intensity of extreme weather events, heat, air quality, water- and vector-borne diseases, etc.

**OPR** Div. of Planning/RIEMA **OCR** CRMC, DEM, DOT  
 Responsibility: Kevin Flynn/Jamia McDonald URI CI, CRC, RISG  
 Action Officer: Jared Rhodes/

**STATUS: Done** with respect to inundation scenarios; see 1.3.4. Further action required to provide updates, and with respect to heat, air quality, diseases, etc.

**When** Interim maps, criteria, guidance in 2014. Finalize in 2015.  
**How** See Action 1.3.3

**Action 2.3.2:** Provide guidance and technical resources to cities and towns to set and achieve clean energy goals, i.e. goals for reduced energy consumption, decreased carbon emissions, increased renewable energy, and environmentally-friendly transportation and land use systems; include guidance for updating and streamlining local permitting

**OPR** OER **OCR** Div. of Planning  
 Responsibility: Marion Gold  
 Action Officers: Rachel Sholly, Sue AnderBois, Danny Musher, Chris Kearns

**STATUS:** OER convened Municipal Energy Working Group in September; 32 cities and towns participated. This will serve as forum to learn about state programs, available funding and other assistance, best practices, and to provide feedback and input back to the state as new programs and guidance are being developed.

**When** Planning in 2014. Anticipated launch in 2015.  
**How** Examples of technical assistance:  
 i. Assistance establishing a municipal energy use baseline and develop a plan to reduce energy use by XX% within X years  
 ii. Information and guidance for designating municipality as a Property Assessed Clean Energy (PACE) Municipality – thereby providing residents the option of financing clean energy upgrades to their homes through a property tax

- iii. Assistance implementing a “stretch code” for new construction
- iv. “As-of-right” siting model zoning ordinances for renewable energy
- v. Expedited application and permitting processes for renewable energy
- vi. Assistance and guidance for purchasing fuel efficient fleet vehicles
- vii. Assistance adopting property tax and zoning policies that preserve open space and promote “smart growth”

**Action 2.3.3** Develop strategies for properly managing storm debris without unnecessarily filling scarce landfill space, distinguishing between natural (vegetative) materials and non-natural materials (e.g., building parts, propane tanks, boat parts); provide specific guidance to cities and towns; and pursue innovative, environmentally as well as economically beneficial solutions

<b>OPR</b>	RI RRC	<b>OCR</b>	CRMC, DEM, Div. of Planning, DOT, RIEMA	<b>STATUS:</b> No action taken.
Responsibility:	Kevin Flynn		CommerceRI	
Action Officer:	Sarah Kite		Municipal Planners	
<b>When</b>				
<b>How</b>	Develop model management plans. Include considerations of local staging areas, sites for composting, pre-approvals, etc.			

**Action 2.3.4** Complete an assessment of lessons learned from the climate change planning process and economic vulnerability and opportunity assessment in North Kingstown, and produce a tool that can be used in other cities and towns

<b>OPR</b>	Div. of Planning	<b>OCR</b>	CRMC, DOT	<b>STATUS:</b>
Responsibility:	Kevin Flynn		URI/CRC; RISG	
Action Officer:				
<b>When</b>	<i>Depends on ability to find additional funding for URI team</i>			
	<i>Note: to the extent possible, include review of experiences and lessons learned in Cranston, Newport and Matunuck.</i>			

**Objective 2.4** ***Public and private sector resources are combined to facilitate access for businesses to information, programs, assistance***

**Action 2.4.1:** Create or use an existing public-private partnership to deliver a one-stop, consolidated concierge service to provide homeowners as well as small businesses with easy access to energy programs



**How**

Renewable Energy Fund and the Energy Revolving Loan Fund

**Action 2.5.2** As part of Resilient Economy Collaborative, create team with experts from financial and utility sectors, as well as Treasurer's Office, explore/develop new, sustainable financial strategies for public utilities, including drinking water, wastewater, stormwater, etc., to cover costs associated with adaptation

**OPR**

DPUC

**OCR**

CommerceRI

Responsibility:

Tom Ahern

Treasurer's Office

Action Officer:

DEM, DOH, OER,

RIEMA, NBRWCT, NBC

**STATUS:** No action taken, other than regular communication with NBC. DPUC was only recently made aware of action plan and lead role.

**When**

**How**

**GOAL 3: PURSUE ECONOMIC OPPORTUNITIES**

**Objective 3.1** *Combine public and private sector leadership and expertise to identify and develop economic opportunities associated with developing greater resiliency (e.g., in fields like science, technology, engineering, architecture and design, green infrastructure, renewable energy)*



**Action 3.1.1:** Convene a Resilient Economy Collaborative to follow up on findings and key recommendations of *Economic Intersections of Rhode Island* (Feb. 2014) and *Understanding the Opportunity and Impact of Climate Change* (Draft April 2014).

**OPR** CommerceRI **OCR** Div. of Planning, DLT, OER,  
 Responsibility: Marcel Valois RIEMA  
 Action Officer:

**STATUS:** "CommerceRI is taking the lead on developing a clean-tech energy sector in Rhode Island."

**Action 3.1.2:** Make test sites available to support piloting of resiliency-related innovation

**OPR** CommerceRI **OCR** DOA  
 Responsibility: Marcel Valois  
 Action Officer:

**STATUS:** "CommerceRI does not control any real estate that can be used as test sites."

**When**  
**How** Implementation of new Economic Development Plan

**Action 3.1.3:** Develop a comprehensive workforce development strategy that maximizes the employment and training opportunities made available to diverse Rhode islanders in meeting the demands of the new economic opportunities resulting from the growing energy efficiency, renewable energy and resiliency industries.

**OPR** DLT **OCR** CommerceRI  
 Responsibility:  
 Action Officer:

**STATUS:** No action taken.

**When**  
**How** Incorporate into Resilient Economy Collaborative's agenda?

See also Actions 2.3.3, 2.5.1, 2.5.2, 4.2.1, 5.4.1, 5.4.2, 5.5.1, 6.2.6, 6.4.1.

## GOAL 4: ACCELERATE VULNERABILITY ASSESSMENTS

### Objective 4.1

*Expedite proactive vulnerability assessments for geographic areas and populations of particular concern, economic sectors, and key infrastructure such as drinking water, wastewater (including on-site wastewater) treatment, stormwater, waste management, transportation, energy, healthcare, education, housing, food supply, etc., to the extent not already assessed*

**Action 4.1.1:** Establish one or more core, interdisciplinary, rapid assessment teams, preferably with private sector participation. Prioritize and conduct proactive assessments on regular schedule.

<b>OPR</b>	RIEMA	<b>OCR</b>	BCC, CRMC, DEM,
Responsibility:	Jamia McDonald		Div. of Planning, DOH, DOT,
Action Officer:	John Washburn		OER, URI, CommerceRI,
			DPUC

**When** Establish core team of experts by 11/1/2014. Begin assessments 1/1/2015.

**How** Prioritize key infrastructure assets based in 16 sectors of critical infrastructure and foreseen vulnerabilities in the state. Establish core team of experts to conduct assessments according to priorities. Develop joint fundraising strategy as necessary. Develop methodology for desktop as well as field assessment. Develop application to collect real-time data in the field. Create schedule to rotate through all 16 sectors on bi-annual basis. Develop resilience checklist for communities and property owners. Develop and/or assist with self-assessment programs. Consider using Hazus model, already used by DOH and in North Kingstown pilot project.

**STATUS:** Attempt to develop/implement statewide program as part of Federal "all hazards" assessment was unsuccessful. Interagency group now working with RIEMA on new strategy, including funding for expert consultant services to design and execute assessments with steering group.

### Action 4.1.2:

Conduct risk assessment along state highway corridors for stormwater inundation, impacts of downed trees, utilities, etc.

<b>OPR</b>	DOT	<b>OCR</b>	RIEMA, CRMC,
Responsibility:	Mike Lewis		Div. of Planning, DEM,
Action Officer:	John Preiss		DPUC

**When**

**How**

**STATUS:** DOT consultant and staff are identifying risk locations, plan to contact OCRs after that to determine mitigation options. This is part of Transportation Asset Management Plan, expected to take 13-19 months. See 6.2.3.

**Action 4.1.3:** Conduct assessment of known stormwater impacts between state highways and municipal drainage systems, options to eliminate or mitigate such impacts

**OPR** DOT **OCR** RIEMA,  
 Responsibility: Mike Lewis  
 Action Officer: Div. of Planning,  
 CRMC, DEM

**When** Determine whether federal flood hazard funding is available by ? Conduct survey of municipalities by ? Conduct assessments, either as part of rapid vulnerability assessments (Action 4.1.1) or separately.

**How**

**STATUS:** Appr. 10% of assessment and mitigation done. All 4,000 ± state outfalls mapped + inspected. Next are catch basins and manholes. Data gathering and mapping expected to be completed in 2015. Funds scheduled to become available in 2017 for cleaning, inspection and repair, not expected to be completed until 2021; including mapping of entire subsurface system. Note: work will not include increasing capacity.

**Action 4.1.4:** Conduct statewide assessment of highway drainage system

**OPR** DOT **OCR** RIEMA,  
 Responsibility: Mike Lewis  
 Action Officer: Div. of Planning,  
 CRMC, DEM

**When** Consultant has been hired. Full assessment is currently expected to take 3-5 years.

**How** As part of developing a state Transportation Asset Management Plan pursuant to federal MAP-21 mandate (see also Action 6.2.3 )

**STATUS:** Consultant is conducting roadway inventory, as part of which visible drainage system will be mapped by fall of 2015, followed by detailed inspection to determine connectivity. Timing/completion depends on resources.

**Action 4.1.5:** Work with a science team to develop statewide heat island maps (coordinated with flood zones)

**OPR** DOH **OCR** RIEMA  
 Responsibility: Dr. Fine  
 Action Officer: Julia Gold  
 Div. of Planning  
 URI, Brown?

**When** asap

**STATUS:** Not yet initiated. Needs science team. (See 1.3.2 and 7.11?)

**How** Statewide heat island maps that can be used for planning purposes, vulnerability assessments, etc  
*Note:* Needs to be done with a GIS team and satellite data over the summer

**Action 4.1.6** Review and update Energy Assurance Plan or conduct new vulnerability assessment for energy infrastructure

**OPR** OER  
Responsibility: Marion Gold  
Action Officer:

**OCR** DPUC  
RIEMA

**STATUS:** OER is coordinating with RIEMA in the context of its development of a critical infrastructure protection plan; see also 4.1.1, however.

**When** Convene Working Group with DPUC to review Energy Assurance Plan and assess gaps, areas in need of update (for example, vulnerability at municipal and facility levels, especially for critical assets like hospitals, public safety facilities, water and wastewater facilities, senior centers and nursing homes, shelters, correctional facilities, fueling facilities, groceries stores, etc.)

**How** OER has applied for CDBG-DR funding to convene this working group.

**Action 4.1.7:** Complete RI Ports Assessment

**OPR** Div. of Planning  
Responsibility: Kevin Flynn  
Action Officer:

**OCR** CommerceRI  
CRMC  
URI Transportation Ctr, CELS  
QDC, ProvPort

**STATUS:**

**When** TBD

**How** Jointly pursue funding

**Action 4.1.8:** Complete a housing vulnerability assessment for structures in coastal and riparian zones

**OPR** Div. of Planning/OHCD  
Responsibility: Kevin Flynn  
Action Officer:

**OCR** RIEMA, DOH, CRMC

**STATUS:**

**When** TBD

**How** TBD

**Action 4.1.9:** Complete a vulnerability assessment of the State's historic and cultural resources

<b>OPR</b>	RI HPHC	<b>OCR</b>	RIEMA, CRMC,
Responsibility:	Ted Sanderson		Div. of Planning, DEM,
Action Officer:			DOT, CommerceRI
<b>When</b>	TBD		
<b>How</b>	TBD		

**STATUS:**

**Action 4.1.10:** Require all updates of elements of State Guide Plan to consider vulnerability of populations, natural or built environment, cultural and historic resources, infrastructure etc. to impacts associated with climate change or variability and, if necessary, to include, incorporate by reference, or be supplemented by a vulnerability assessment

<b>OPR</b>	Div. of Planning	<b>OCR</b>	All SPC members
Responsibility:	Kevin Flynn		
Action Officer:			
<b>When</b>	immediately		
<b>How</b>	Already within legislative authority of Div. of Planning and SPC		

**STATUS:** To date done for Economic Development and Housing Plans.

**Action 4.1.11:** In preparing vulnerability assessments, include an evaluation of the type of training required of the workforce to limit such vulnerabilities, the current and expected availability of such trained personnel, the educational and on-the-job training programs that could facilitate any needed expansion of that workforce, and the potential competition for that workforce from nearby states. Engage the trades, schools, and businesses.

<b>OPR</b>	DLT	<b>OCR</b>	CommerceRI,
Responsibility:			Div. of Planning, RIEMA
Action Officer:			
<b>When</b>			
<b>How</b>			
	<i>See also Objective 4.2</i>		

**STATUS:**

**Objective 4.2** *Public and private sector leadership, expertise and resources are combined to assess vulnerabilities as well as means to mitigate them, agree on cost-effective strategies, and identify opportunities to strengthen the RI economy through resiliency*

**Action 4.2.1:** Establish working groups that will conduct assessments for prioritized sectors of the economy, e.g., small business, ports and marine trades, agri- and aquaculture, manufacturing, tourism. Assessments should address vulnerabilities and economic impact, options to mitigate impact, options to improve preparedness, response and recovery, and economic opportunities associated with design, engineering, technological and other skills and capabilities that can improve resilience.

<b>OPR</b>	CommerceRI	<b>OCR</b>	RIEMA, CRMC, Div. of Planning, DOT/Multimodal, OER, DLT
Responsibility:	Marcel Valois		Chambers
Action Officer:			URI

**STATUS:** No action taken.

**When** Start by ?

**How** *Seek support from RIF, academic institutions to help fund, facilitate, provide research, intern support, etc. To the extent possible, merge with Action 4.1.1. Build on work being done by Div. of Planning with EPA grant to evaluate economic impact of climate change. Use work done by pilot projects in North Kingstown and Newport (Newport Waterfront). Prioritize sectors and issue sector reports on regular schedule, beginning 9/1/14 See also Action 6.4.3.*

**Objective 4.3** *Ongoing evaluation through monitoring, tracking and updating*

**Action 4.3.1:** Incorporate post-assessment monitoring/tracking and mechanisms for reporting and updating in overall program and schedule. As part of each assessment, define specific conditions, parameters, etc. that need to be monitored/tracked.

<b>OPR</b>	RIEMA	<b>OCR</b>	BCC, CRMC, DEM, Div. of Planning, DOH, DOT, OER, URI
Responsibility:	Jamia McDonald		
Action Officer:	John Washburn?		

**STATUS:**

**When**

**How**

*See also Objective 1.3 and Goal 7*

**GOAL 5: INCREASE RESILIENCE THROUGH MITIGATION - to protect, reduce risk and create new opportunity**

**Objective 5.1** *Adopt greenhouse gas emission reduction targets*

**Action 5.1.1:** Adopt state greenhouse gas emission reduction targets, consistent with regional goals and adding a new interim target: 10% by 2020, 45% by 2035, 80% by 2050 (from 1990 levels)

Responsibility: General Assembly

**STATUS: DONE**

**When** This legislative session

**Action 5.1.2:** Continue participation in the Regional Greenhouse Gas Initiative (RGGI), with the goal of reducing greenhouse gas emissions from the electric sector by 50% below 2005 levels by 2020.

**OPR** DEM/OER

**When** Ongoing

**How** Implement State Energy Plan (Action 5.2.1) and other emission reduction strategies and Actions below.

**STATUS:** Participation continuing. Intent is to continue lowering the cap.

*Note: Continued participation in this regional, market-based program is needed both to achieve greater GHG emission reductions and to increase economic benefits, i.e. reductions in cost of compliance and growth in the clean energy economy sector.*

**Action 5.1.3:** Measure, repair and prevent leaks in natural gas distribution system; evaluate and adjust repair and replacement options to serve both mitigation and adaptation objectives

**OPR** DPUC

**OCR** OER, DEM

Responsibility: National Grid

Action Officer:

**When** Repairs ongoing. Measurements may be incomplete.

**How** Briefing, interagency planning meeting.

**STATUS:** DPUC not aware of action item until recently. Issue is part of two dockets. National Grid provides updates, also to DEM and OER.

**Objective 5.2** *Adopt clean energy strategies that meet the 3 criteria of security, cost-effectiveness and sustainability*

**Action 5.2.1:** Finalize and adopt the update to the State Energy Plan

**OPR** OER **OCR** Div. of Planning  
Responsibility: Marion Gold  
Action Officer: Danny Musher  
**When** asap  
**How** Approval by SPC, incorporation into State Guide Plan

**STATUS:** SEP Advisory Council has approved final draft. Transmitted to State Planning Council for internal and public review and adoption.

**Action 5.2.2:** Reduce GHG emissions by increasing import of renewable energy, including large scale hydro and wind energy, and by improving the regional transmission and distribution infrastructure

Responsibility: General Assembly  
**When:** This legislative session  
**How:** Pass H7991/S2439

**STATUS: DONE**

**Objective 5.3** *Optimize energy efficiency in electric, thermal and transportation sectors*

**Action 5.3.1:** Establish building energy labeling program, disclosing energy performance data to occupants, prospective buyers and/or public; together with training program for building inspectors, including third-party inspectors

**OPR** EERMC **OCR** OER, BCC  
Responsibility:  
Action Officer:  
**When**  
**How**

**STATUS:** OER, EERMC, Nat'l Grid and NEEP are discussing labeling program. OER is also discussing this with others as possible item for legislative action in 2015.

**Action 5.3.2:** Form Working Group to develop sustainable funding mechanism for energy efficiency programs for unregulated fuels

**OPR** OER **OCR** EERMC  
Responsibility: Marion Gold  
Action Officer: Danny Musher  
**When** OER has formed working group. Recommendations later in 2014.  
**How**

**STATUS:** OER convened the Thermal Working Group at the beginning of this year and has held approximately monthly meetings. A final report is expected during December 2014.

**Action 5.3.3:** Develop comprehensive strategy and action plan to reduce Vehicle Miles Traveled (VMT)

**OPR** Div. of Planning **OCR** DOT, OER, RIPTA  
Responsibility: Kevin Flynn Governor's Office, DEM  
Action Officer:

**When** Convene interagency policy group June 2014. Develop policy recommendations for reduction of GHG emissions in transportation sector by 9/1/2014. Include review of LRTP 2035 and recommend implementation as appropriate. Include Lead by Example actions. Include items to be further developed in Strategic Plan by 12/2014. Align longer-term strategies with LRTP update in FY16.

**How** Examples of recommendations/action items  
i. Implement policies from long-range transportation plan 2035  
ii. Conduct a "Pay-as-you-drive" auto insurance pilot  
iii. Investing in alternative transportation and mass transit  
iv. Smart land use planning and incentive tools  
v. Ridesharing, care-share, and flexible workplace programs  
vi. Parking policies

**STATUS:** DOT convened interagency group with heads of 4 agencies as well as senior staff, and technical support group. Following initial evaluation of goals and options, discussion shifted to work done by Transportation & Climate Initiative done for northeast states, including data collection, analysis and modeling, and preliminary evaluation GHG emission reduction from various options/strategies, including VMT reduction, and possibility of regional reduction goal with flexibility for states to develop their own plans to meet or approximate that goal (30-40%).

**Action 5.3.4:** Develop RI implementation plan for 8-state ZEV policy and action plan

**OPR** DEM/OER **OCR** DOA, DOT  
Responsibility: Janet Coit/Marion Gold  
Action Officer: Frank Stevens/

**When** Draft by end of 2014? Expedite early action items, such as new state purchase target?

**How**

**STATUS:** Action delayed initially due to staff resource issues. OER, DEM, DOT and Div. of Planning have engaged with Ocean State Clean Cities to form Work Group and developed work plan. Action Plan to be completed by April 2015.

**Action 5.3.5:** Prioritize congestion mitigation in project design and construction

**OPR** DOT **OCR**  
Responsibility: Michael Lewis  
Action Officer:

**When**

**How** For example, ensure that design and construction of Replacement of I-95 Providence Viaduct Bridge #578 Northbound project achieves greatest congestion mitigation benefits possible.

**STATUS:** Congestion management is a priority that RIDOT attempts to address as an aspect of all projects. Arterial Signal and Intersection Improvement projects are specifically targeted toward congestion management. Additionally, RIDOT partners with RIDOA in running the Congestion Management Task Force.

**Objective 5.4** *Increase use of renewable energy and clean fuels*

**Action 5.4.1:**

Reduce GHG emissions, increase use of renewable energy and improve resilience by expanding the Distributed Generation program

Responsibility: General Assembly

**When** This legislative session

**How** Pass H7727A/S2690A

**STATUS: DONE.** *But there's more :* Sustainable Energy Advantage (SEA) has been hired by the DG Board/OER to develop ceiling prices for the expanding distributed generation program, known as the Renewable Energy Growth (REG) Program. National Grid has developed a REG tariff and held several workshops for the DG Board and interested stakeholders in October. SEA released the first draft of proposed ceiling prices on October 20th at a public meeting. Public comments were solicited on the tariff and submitted to National Grid on October 28. Public comment is also being solicited on the ceiling prices National Grid will submit the REG tariff documents to the PUC by November 14th. SEA will release the second draft of ceiling prices on November 17th.

**Action 5.4.2:** Increase renewable energy use while creating local jobs by updating licensing laws to remove barriers for renewable energy installations by local renewable energy businesses, electricians and general contractors

Responsibility: General Assembly

**When** This legislative session

**How** Pass H8200A/S2692A

**STATUS: DONE.** *But there's more:* Staff from OER, DLT and CommerceRI worked together to develop criteria and the application process for the new license by September 10th. As of November 3, 2014, there are 4 licensed renewable energy professionals in RI. OER is partnering with Commerce RI (Renewable Energy Fund) and SmartPower to launch the *Solarize Rhode Island* program, and has rolled out a three-town pilot in North Smithfield, Little Compton, and Tiverton.

**Objective 5.5** *Pursue clean energy industry growth opportunities*

**Action 5.5.1:** Develop comprehensive market development strategy for stimulating the adoption of renewable thermal fuels

<b>OPR</b>	OER	<b>OCR</b>	EERMC
Responsibility:	Marion Gold		National Grid
Action Officer:	Danny Musher		Fuel Dealers
<b>When</b>	Report with recommendations by end of 2014		
<b>How</b>	OER is convening Working Group with key stakeholders		

**STATUS:** OER has allocated approximately half of the pilot funds committed through its RGGI Renewable Thermal Pilot initiative to explore the market potential of renewable thermal technologies in RI. OER expects to commit the rest of the funds during the first half of 2015. Based on the pilot, the OER will work with stakeholders to develop further recommendations.

**Objective 5.6** *Modernize the grid*

**Action 5.6.1:** Convene a working group to develop recommendations for electric grid, rate, and regulatory modernization

<b>OPR</b>	OER	<b>OCR</b>	DPUC, PUC
Responsibility:	Marion Gold		National Grid
Action Officer:	Danny Musher		
<b>When</b>	Start by July 2014		
<b>How</b>	OER has committed funds to support this effort		

**STATUS:** OER and the EERMC have convened a “System Integration” subgroup, which is exploring issues of system reliability, utility planning and investment, and grid modernization. This effort is ongoing; a timeline and workplan with deliverables will be developed in early 2015.

**Objective 5.7** *Address non-energy emissions from waste and agriculture*

**Action 5.7.1:** Pass legislation requiring certain food waste generated in certain quantities to be separated from solid waste stream to composting or methane digestion facilities

<b>OPR</b>	General Assembly	<b>OCR</b>	
<b>When</b>	2014		

**STATUS: DONE**

**Other Actions** To be developed with DEM, RIRRC

**STATUS:**

**Objective 5.8** *Promote smart land use, biomass retention, and other carbon-fixing measures*

**Action 5.8.1:** Strengthen incentives for municipalities to obtain state approval for local comprehensive plans, thereby encouraging adoption and implementation of land use planning and practices that reduce risk and improve resilience.

**OPR** Div. of Planning **OCR** RIEMA, CRMC, DEM, DOH, DOT  
Responsibility: Kevin Flynn  
Action Officer:  
**When** FY15  
**How** Grant funding eligibility or ranking criteria, for example.

**STATUS:**

**Action 5.8.2:** Evaluate barriers municipalities are facing in implementing smart growth initiatives and develop recommendations for overcoming such barriers

**OPR** Div. of Planning **OCR** CRMC, DEM  
Responsibility: Kevin Flynn  
Action Officer: GSRI  
**When** FY15  
**How**

**STATUS:**

**Other Actions** To be developed with DEM (Forestry, Agriculture), Div. of Planning, URI et al.

**STATUS:**

*Note: include reducing emissions associated with overuse of pesticides, and sequestration of carbon through natural resources management programs, including agriculture, forestry and habitat restoration/management.*



*Note: Build on post-Sandy coordination between CRMC, DEM, local building officials and others. See CRMP Section 180 - Emergency Permitting. See also Action 1.2.4.*

**Action 6.1.4:** Deploy response teams post disaster to measure, monitor and catalog impacts to natural resources

<b>OPR</b>	RIEMA	<b>OCR</b>	DEM, CRMC URI/CI	<b>STATUS:</b> No action to date.
Responsibility:				
Action Officer:				
<b>When</b>				
<b>How</b>	Use existing MOU between DEM and URI regarding the development, training and deployment of the Scientific Support for Environmental Emergency Response (SSEER) to provide scientific and training support to RIEMA			

**Action 6.1.5:** When appropriate and consistent with federal regulations, incorporate the state's SLR and flood risk projections into evaluation criteria for public facilities and infrastructure projects funded through federal emergency and/or disaster allocations.

<b>OPR</b>	RIEMA	<b>OCR</b>	Div. of Planning	<b>STATUS:</b> Agencies have worked together to develop joint guidance, including planning criteria and maps.
Responsibility:				
Action Officer:				
<b>When</b>				
<b>How</b>	Adapt recommendations developed by FEMA Recovery Team post Sandy, if applicable			

**Action 6.1.6:** Conduct assessment of traffic light power needs for evacuation routes and implement upgrades as needed

<b>OPR</b>	DOT	<b>OCR</b>	RIEMA, Div. of Planning	<b>STATUS:</b> No action to date, due to lack of staffing resources. With existing staff, assessment will take 10-14 months, implementation several years, if integrated into regular projects.
Responsibility:	Michael Lewis			
Action Officer:				
<b>When</b>				
<b>How</b>	RIEMA to work with DOT on funding?			



**How** Interagency, multi-sector team may be needed to supplement available resources at DOT

**Note:** *of critical importance to emergency management, utilities, municipalities, businesses, etc.*

coordinate with all OCRs. RIDOT has targeted this coordination meeting for December 2014. Development of the TAMP is expected to take 13-19 months

**Action 6.2.4:** Implement recommended strategies developed through the vulnerability assessment of the State's historic and cultural resources (Action 4.1.9).

**OPR** HPHC? **OCR** Div. of Planning, RIEMA

Responsibility:

Action Officer:

**When**

**How**

**STATUS:** No action to date.

**Action 6.2.5:** Conduct review of current natural gas infrastructure repair and replacement program from a GHG mitigation and adaptation perspective and develop recommendations

**OPR** DPUC **OCR** OER

Responsibility: Tom Ahern National Grid

Action Officer:

**When**

**How**

**STATUS:** See 5.1.3 (mitigation of gas leaks).

**Action 6.2.6:** Assess the opportunity, costs, and benefits of deploying resilient microgrids at critical infrastructure to maintain services during power outages or severe weather events

**OPR** OER **OCR** DPUC

Responsibility: Marion Gold National Grid

Action Officer: Danny Musher

**When** OER has applied for CDBG-DR funding, funding award anticipated during summer, two years to complete work

**How** Will contract with a qualified vendor to do the analysis and work with key stakeholders

**STATUS:** OER has been awarded CDBG-DR funding, plans to coordinate this project with Action 4.1.6, and intends to kick it off during the next two months, with completion expected by end of 2015. . Staff capacity constraints have been a key barrier to date.

**Objective 6.3** *Develop and implement adaptation strategies to address priority public health impacts*

**Action 6.3.1:** Complete *Climate and Health Profile*, identifying priority health impacts from climate change and recommending adaptation strategies

**OPR** DOH  
Responsibility: Dr. Fine  
Action Officer: Julia Gold

**OCR** DEM, DEA, DOT  
Brown U. School of Public Health

**When** Sept. 2014  
**How**

**UPDATE:** 1st draft completed and distributed to EC4. 2nd draft expected to be completed in January '15.

**Action 6.3.2:** Implement recommended strategies produced through the housing vulnerability assessment (Action 3.1.8)

**OPR** Div. of Planning/OHCD  
Responsibility:  
Action Officer:

**OCR** RIEMA, DOH, BCC, CRMC

**When** TBD  
**How** TBD

**STATUS:** No action to date. Assessment has not yet been conducted.

**Objective 6.4** *Develop and implement adaptation strategies to reduce economic impacts, increase resilience and help create new opportunities*

**Action 6.4.1:** Adopt Insurance Institute for Business & Home Safety (IBHS) “Fortified for Safer Business” and “Fortified Homes” programs within State Building Code. (Insurance premium reductions for IHBS-certified structures provide incentives to create more resilient structures).

**OPR** BCC  
Responsibility:  
Action Officer:

**OCR** CRMC, Div. of Planning,  
RIEMA, CommerceRI  
General Assembly

**When** TBD  
**How** TBD

**STATUS:** Regional initiative underway to expand Fortified program. Insufficient coordination among OCRs to date. Coordination meeting needed, add DEM.

**Action 6.4.2:** Conduct public outreach and education, as part of larger resiliency education campaign at community level, about need to raise "freeboard" from 1' to 2' or 3'

**OPR** RIEMA/BCC **OCR** BCC, CRMC,  
 Responsibility: CommerceRI  
 Action Officer:  
**When**  
**How**

**STATUS:** Discussions have been held with BCC and other stakeholders. This will require a change to the State Building Code and many levels of partners need to be on board with this effort.

**Action 6.4.3:** Build capacity for waterfront business sectors, including marine trades, building and real estate sectors, to incorporate impacts of climate change in business strategies, and provide guidance for hazard mitigation and adaptation.

**OPR** URI/CI **OCR** CRMC, BCC  
 Responsibility: CommerceRI  
 Action Officer: URI CRC/SG,  
**When** GSO, CELS  
**How** Build on current research and community engagement involving the marine trades, ports, BeachSAMP, etc.

**STATUS:** Rapid Assessment of 3 marine businesses in Newport conducted, used as basis for development of resilience checklist for sector, in Newport or statewide. Symposium aimed at waterfront businesses to be held in December. Partnerships with trade groups and agencies expanding.

**Action 6.4.4:** Develop public-private partnership to create buy-out program, targeting most vulnerable areas and leveraging funding from a variety of sources

**OPR** RIEMA **OCR** CommerceRI  
 Responsibility: BCC, CRMC,  
 Action Officer: Div. of Planning  
**When**  
**How**

**STATUS:** Discussed with Div. of Planning. Applied for CDBG/DR funding for feasibility study to analyze legal and programmatic issues. Follow-up in early 2015.

See also Action 2.5.1

**Objective 6.5** *Develop mechanisms by which municipalities can begin to adapt their land use patterns to better accommodate climate change impacts*

**Action 6.5.1:** Conduct feasibility assessment of the potential for a statewide transfer of development rights program that would target vulnerable areas as "sending zones."

<b>OPR</b>	Div. of Planning	<b>OCR</b>	CRMC, DEM, RIEMA
Responsibility:	Kevin Flynn		
Action Officer:			
<b>When</b>	FY15		
<b>How</b>	Evaluate previous analysis; consider asking universities for assistance (Brown, RWU Law, URI)		

**STATUS:** No action to date?

**Action 6.5.2:** Develop a statewide coastal wetland monitoring, protection and restoration strategy to help lower the rate at which habitat, ecosystem resilience and shoreline protection are being lost, and to develop effective mitigation and adaptation strategies.

<b>OPR</b>	CRMC	<b>OCR</b>	DEM, Div. of Planning
Responsibility:	Grover Fugate		
Action Officer:			NBNERR, URI
<b>When</b>	FY15		STB, TNC
<b>How</b>			

**STATUS:** Development of statewide coastal wetland restoration strategy ± 50% complete. Additional partners include NBEP, EPA, FWS and NRCS. Completion expected July '15. 2 restoration projects at Narrow River and Salt Ponds in planning/design. STB and NBNERR with funding from BRWCT/EMC are developing coastal wetland monitoring strategy based on a vetted set of regional indicators. Currently < 50% complete; completion expected in 2015.

**Action 6.5.3:** Adopt Sea Level Affecting Marshes Model (SLAMM) data and projections as planning and decision-making support tool in statewide coastal wetland monitoring, protection and restoration strategy

<b>OPR</b>	CRMC	<b>OCR</b>	DEM,
Responsibility:	Grover Fugate		NBNERR
Action Officer:			
<b>When</b>	FY15		
<b>How</b>	Rule-making		

**STATUS:** CRMC, DEM, NBNERR, Div. of Planning, TNC, URI/CRC/SG and STB have completed SLAMM maps for all 21 coastal communities. CRMC has posted public notice for adoption of maps in CRMP at [www.crmc.ri.gov/regulations\\_proposed/2014\\_1125\\_CRM\\_P\\_110and210.pdf](http://www.crmc.ri.gov/regulations_proposed/2014_1125_CRM_P_110and210.pdf). Maps available at [www.crmc.ri.gov/maps/maps\\_slamm.html](http://www.crmc.ri.gov/maps/maps_slamm.html).

**Action 6.5.4:** Convene short term working group to develop options for long term, sustainable funding of coastal wetlands protection and restoration, including, but not limited to legislation

<b>OPR</b>	CRMC	<b>OCR</b>	DEM, RIEMA
Responsibility:	Grover Fugate		NBEP, NBNERR, URI
Action Officer:	Jim Boyd		Federal and state legislators? Private sector? See Action 2.5.1
<b>When</b>	FY15		
<b>How</b>			

**STATUS:** sustainable funding is being discussed as part of agenda of working group convened by CRMC and DEM with stakeholders to develop statewide habitat restoration strategy, to be completed in 2015 (currently <50% complete)

**Objective 6.6** *Develop and implement adaptation strategies to reduce impacts to natural resources, protect and where possible improve ecosystem resilience, and adapt resource management policies and programs to changing trends and conditions*

**Actions:** To be developed with CRMC, DEM, DOH, URI et al.

**STATUS:** See 6.5.2-6.5.4 above. This is a broad-based goal that still requires comprehensive development of additional actions by multiple agencies, and a combination of agency action actions.

*Notes (based on public comments): address inland resources, as well, not just coastal ones; include protection/restoration of freshwater wetlands, stream flow, riparian buffers, etc.; incorporate strategies into local comprehensive plans, state wildlife action plan, bonds; include municipal and private land trusts and watershed organizations in implementation*

## GOAL 7: COORDINATE SCIENTIFIC AND TECHNICAL SUPPORT

See also Objective 1.3

**Objective 7.1** *Integrate, coordinate and/or network data collection, analysis, modeling and mapping, combining public and private sector expertise, including academic institutions, into one program that provides consistent, reliable support for policy development, decision-making and projects*

- Action 7.1.1:** Establish a Science and Technical Advisory and Coordinating Committee to:
- (1) keep the Executive Climate Change Council or its successor coordinating council abreast of important developments in scientific and/or technical information relating to climate change and resiliency;
  - (2) explore and provide advice regarding opportunities to provide timely support for key policy and management decisions by aligning academic research around issues of resiliency;
  - (3) inventory the scientific and technical work being done by public and private sector entities and evaluate options to coordinate or integrate/consolidate such work in order to achieve greater efficiency, save resources, provide better services, etc.;
  - (4) assist the council, upon request, by providing scientific and technical information and advice pertaining to matters that come before the council;
  - (5) make recommendations and provide advice regarding priorities from its perspective, for example, regarding research needs, or planning thresholds.

<b>OPR</b> Responsibility: Action Officer:	Governor's Office/DOA	<b>OCR</b>	CRMC, DEM, Div. of Planning, DOH, DOT, OER CommerceRI, BRWCT, NBEP URI/CI, CRC, EDC; RISG; Brown U.; RWU Municipal, private sector partners, users?
--	-----------------------	------------	--

<b>When</b>	<b>STATUS:</b> Discussed with Coordination Team, Div. of Planning and others. Partial list of candidates assembled. To be expanded, reviewed, vetted, narrowed and submitted to Governor by early December.
-------------	---

<b>How</b>	<i>Consider new role for Coordination Team, perhaps joining Div. of Planning?</i>
------------	---

<b>Note:</b>	<i>Include or consider role of State Climatologist</i>
--------------	--

**Objective 7.2** *Ensure convenient and reliable access to the best available scientific and technical information for state and local planners, decision-makers, researchers, students, stakeholders*

**Action:** Same as 2.1.1 and 2.1.2

**STATUS:** Included in planning for web site upgrade. To be coordinated with STAB, above.

**Objective 7.3** Provide clear guidance and standards for use of scientific and technical information in planning, decision-making, applications, etc.

**Action 7.3.1:**

<b>OPR</b>	Div. of Planning	<b>OCR</b>	CRMC, DEM, RIEMA
Responsibility:			
Action Officer:			URI
<b>When</b>			
<b>How</b>			

**STATUS:** See 1.3.3, 1.3.4, 2.3.1 and 2.3.2 as an example of progress on storm-related science and technical information. This will be an area in which the STAB will play an important role, as well.

**Objective 7.4** Improve data collection, monitoring to enhance understanding of impacts of climate change on natural resources

**Action 7.4.1:** Strengthen and expand existing collaborative monitoring program

<b>OPR</b>	DEM	<b>OCR</b>	BRWCT, NBEP,
Responsibility:	Janet Coit		URI, Brown U., RWU
Action Officer:	Sue Kiernan?/Ames Colt?		TNC, STB, ASRI

**STATUS:** Coordination Team, Environmental Monitoring Collaborative and NBEP have been working on indicators and included this in their work plans and that of their joint Science Advisory Committee.

**When**  
**How**

Convene joint meeting of Science and Technical Advisory and Coordination Committee (STACC, Action 6.1.1) and Environmental Monitoring Collaborative (EMC) to develop new list of climate change related key indicators for which baseline monitoring needs to be conducted, and to evaluate capacity of EMC and its partners to conduct such monitoring.

*Note, for example, existing monitoring, mapping and GIS capacity and programs at URI that could/should be used, leveraged and supported.*

**Action 7.4.2:** Coordinate data collection and analysis to improve understanding of the relationship between climate-related changes in the ecosystem and the abundance and distribution of priority fish species (such as lobster, winter flounder, summer flounder, squid, and black sea bass).

<b>OPR</b>	DEM/STACC	<b>OCR</b>	CRMC
Responsibility:	Janet Coit		URI/CELS, GSO
Action Officer:	Mark Gibson?		NOAA, USFWS, EPA ASMFC, other reg'l councils
<b>When</b>	TBD		
<b>How</b>	Coordinate through STACC?		

**STATUS:**

**Action 7.4.3:** Improve understanding of climate-related impacts on key habitats from coastal watersheds to open ocean, emphasizing those habits used by managed species as juvenile nursery or adult spawning areas

<b>OPR</b>	DEM/STACC	<b>OCR</b>	CRMC
Responsibility:	Janet Coit		URI
Action Officer:	Mark Gibson?		NOAA, USFWS, EPA ASMFC, other reg'l councils
<b>When</b>	TBD		
<b>How</b>	Coordinate through STACC?		

**STATUS:**

**Action 7.4.4:** Develop a series of key indicators that can be monitored annually with less resources than are needed for operational models to track current changes and provide managers with early warnings of future changes such as changes in the distribution and abundance of important marine resources

<b>OPR</b>	DEM/STACC	<b>OCR</b>	CRMC
Responsibility:	Janet Coit		URI
Action Officer:	Mark Gibson?		NOAA, USFWS, EPA ASMFC, other reg'l councils
<b>When</b>	TBD		
<b>How</b>	Coordinate through STACC? Combine with Action 7.3.1?		

**STATUS:**

**GOAL 8: COMMUNICATE EFFECTIVELY**

**Objective 8.1** *Provide easy access to up-to-date, reliable information about climate change, mitigation, adaptation, resilience, who is doing what, how to get involved, get assistance, etc.*

**Action 8.1.1:** Develop web site in partnership with nonprofit private sector that aggregates and/or links to best available information about climate change, mitigation, adaptation, resilience, best practices, etc.; and that provides forum for interactive communication (blogs, town meetings, etc.)

<b>OPR</b>	<b>OCR</b>
Responsibility:	URI/CI, CRC; RISG
Action Officer:	
<b>When</b>	
<b>How</b>	<i>Combine with Actions above that propose development of a new web site, or adaptation of/networking with existing web sites</i>

**STATUS:** Communications group has identified priorities for web site update. These have been discussed with Office of Digital Excellence. Application for TA grant has been submitted to get assistance with graphic and "public forum interactive" design aspects. Steering group including stakeholders to be formed once funding and schedule is in place.

**Objective 8.2** *Develop a partnership-based, interactive communications program through which citizens, businesses, planners and decision-makers exchange information and ideas about the challenges and opportunities associated with climate change and resilience*

**Actions:** *To be developed by EC3 subcommittee with working group by 8/1/2014*

**STATUS:** Behind schedule. Will need to build on/off 8.1.1 and 8.1.3?

**Objective 8.3** *Conduct and support outreach, public education and training programs in multiple sectors, at multiple levels*

**Action 8.3.1:** Develop program that can be delivered in modules, and tailored to different audiences, as part of state outreach initiative or in response to requests from communities, businesses, organizations

<b>OPR</b>	RIEMA	<b>OCR</b>	Div. of Planning, CRMC, DEM,
Responsibility:	Jamia McDonald		OER, CommerceRI
Action Officer:	TBD		URI/CI, CRC; RISG; NBNERR
			GrowSmart RI

**STATUS:** Initial work with Brown students produced limited results (but did confirm that outreach to/training of state employees needs to be priority, as well). Interagency communication group has been meeting to discuss overall strategy, audiences, priorities,

**When** MOA between key agencies conducting or planning outreach to municipalities, businesses, etc. by ? Partners, resources identified by ? Program modules, formats defined by ?

etc. Priorities include upgrading web site, portal to other web site/resources, outreach materials, CC 101 for state employees.

**How** Formal steering group of agencies, providers and user group reps. (Note possibility of building on work of NBNERR Coastal Training Program and its steering committee.) Strategic plan. Contract with institution or nonprofit?

## Glossary

ASMFC	Atlantic States Marine Fisheries Commission	NBNERR	Narragansett Bay National Estuarine Research Reserve
ASRI	Audubon Society of Rhode Island	NESCAUM	Northeast States for Coordinated Air Use Management
BCC	Building Code Commission	NOAA	National Oceanic and Atmospheric Administration
BRWCT	Bays, Rivers and Watersheds Coordination Team	OER	Office of Energy Resources
CELS	College of Environmental Life Sciences @ URI	OHCD	Office of Housing and Community Development
CI	Coastal Institute	OMB	Office of Management and Budget
CRB	Contractors Registration Board	RGGI	Regional Greenhouse Gas Initiative
CRC	Coasta Resources Center @ URI	RIBA	RI Builders Association
CRMC	Coastal Resources Management Council	RIEMA	RI Emergency Management Agency
CRMP	Coastal Resources Management Plan (CRMC)	RIFACCT	RI Flood Awareness Climate Change Taskforce
DEM	Dept. of Environmental Management	RIGIS	Rhode Island Geographic Information System
DBR	Dept. of Business Regulation	RIPTA	Rhode Island Public Transit Authority
DG	Distributed Generation	RIRRC	Rhode Island Resource Recovery Corporation
DLT	Dept. of Labor and Training	RISG	RI SeaGrant
DOA	Dept. of Adminstration	RWU	Roger Williams University
DOH	Dept. of Health	SAMP	Special Area Management Plan
DOT	Dept. of Transportation	SLAMM	Sea Level Affecting Marshes Model
DPUC	Div. of Public Utilities & Carriers	SLR	Sea Level Rise
EC3	Executive Climate Change Council	SPC	Statewide Planning Council
EDC	Environmental Data Center @ URI	STACC	Science and Technical Advisory and Coordinating Cte
EERMC	Energy Efficiency and Resource Management Council	STB	Save The Bay
EPA	Environmental Protection Agency	SWOT	Strengths, Weaknesses, Opportunities and Threats
GHG	Greenhouse Gas(es)	TIP	Transportation Improvement Plan
GSRI	Grow Smart Rhode Island	TNC	The Nature Conservancy
HMP	Hazard Mitigation Plan	URI	University of Rhode Island
HPHC	Historic Preservation and Heritage Commission	USFWS	United States Fish and Wildlife Service
LCP	Local Comprehensive Plan	VMT	Vehicle Miles Traveled
NBC	Narragansett Bay Commission	WRB	Water Resources Board
NBEP	Narragansett Bay Estuary Program		