

Resilience Planning and Adaptation Training for Water and Wastewater Utilities



Build Resilience to Extreme Weather Events

Tuesday, May 22, 2018 | 8:00 a.m. – 4:30 p.m.
Brewer Auditorium, Brewer, Maine

Dr. Jack Kartez

New England Environmental Finance Center



Principles: It doesn't start with the money

- Plan for Financing EARLY in Project Conception
- Scope Funding Programs Even if Not Sure of Eligibility – always ASK!
- Examine Possible Application of Funding Streams *You Already Have*:
Look at rates, repurposing, combining funds
- Look for Collaborators, Partners (Other Depts., Jurisdictions, NGOs, Private Enterprises) = *Big Potentials*

Plan for Financing EARLY
in Project Conception

Hoboken (BASF) Resiliency Park



Rotterdam Museumpark, NL

Special Thanks to:

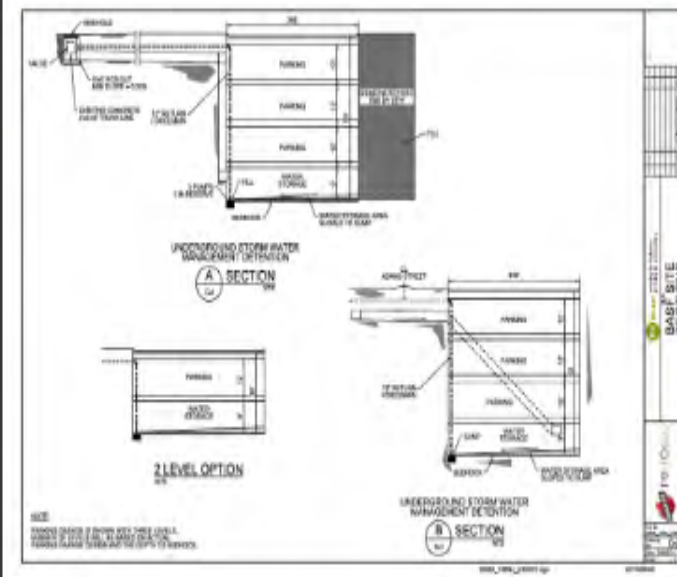
- ✓ Rockefeller Foundation,
- ✓ Re.Invest Initiative, and
- ✓ Refocus Partners

Low Interest Loan LOI Application pending before the NJ Environmental Infrastructure Trust Fund.

Estimated Price: TBD



Hurricane Irene 2011



Scope Funding Programs Even
if Not Sure of Eligibility

City of Augusta CDBG projects 2003--2016

Augusta	2003	PS	50,000	Training coordinator position
Augusta	2003	PI	357,425	Water/sewer line replacement
Augusta	2003	MITF	500,000	Downtown parking garage
Augusta	2003	HA	160,000	Conversion of structure to a 9 SRO shelter
Augusta	2003	BA	355,193	Central Maine Commerce Center
Augusta	2005	CE	127,500	Façade Program
Augusta	2005	PS	50,000	Salary for Self-sufficiency mentor at Bread of Life
Augusta	2007	BA	400,000	Kenway Corporation
Augusta	2009	BA	300,000	Kenway Corp
Augusta	2010	PI	500,000	Sewer project
Augusta	2010	CPG	10,000	Plan to assess needs of elderly in subsidized housing
Augusta	2010	PF	150,000	Bread of Life Ministries homeless shelter
Augusta	2010	PS	40,000	Bread of Life emergency overflow shelter
Augusta	2013	HA	500,000	Affordable housing for seniors (Cony Flatiron) and veterans (Cony Village)
Augusta	2014	WDG	98,000	National Alliance on Mental Illness-Maine Chapter
Augusta	2015	HA	550,000	Rehab multi-family rental housing
Augusta	2016	BA	560,000	J.S. McCarthy Printers
Augusta	2016	SNP	49,000	D.A.R.E. program; license plate reader; 'Hot Spot' details

Examine Possible Application of Funding Streams You Already

Have:

look at rates, repurposing, combining funds

Look for Collaborators, Partners

Other Depts., Jurisdictions, NGOs, Private
Enterprises



Stormwater Alternatives through Green Infrastructure (SAGE): a connective and multifunctional network of green infrastructure that directly helps the City of Hampton towards achieving Chesapeake Bay TMDL requirements.

Resilience Financing Scoping Tool: Identified Need _____

Principles/Tests	Applicable? y/n	Adequate? y/ n	Feasible? Potential difficulty v. payoff	Some cases & examples
Plan for Financing EARLY in Project Conception				<ul style="list-style-type: none"> • Hoboken excess stormwater storage under for-revenue parking garage with a green infrastructure roof-park
Scope Funding Programs Even if Not Sure of Eligibility—ASK!				<ul style="list-style-type: none"> • FEMA Flood Mitigation Assistance Program • CDBG Grants to Municipality • State CW SRF Loans
Examine Possible Application of Funding Streams You Already Have: Look at rates, repurposing, combining funds				<ul style="list-style-type: none"> • Can changes be made part of ongoing O&M, training? • Can existing fee underwrite project loan? • Combine funds?
Look for Collaborators, Partners (Other Depts., Jurisdictions, NGOs, Private Enterprises = Big Potentials				<ul style="list-style-type: none"> • Drinking Water Utilities and Land Trusts Partnering for Source Protection; • Hampton Gardens Project (Va.)

FUNDING PROGRAMS FOR CLIMATE ADAPTATION - MAINE

Use these resources to identify funding opportunities for implementing climate adaptation measures.

Organization	Resource Title	Resource Details	Website
Maine Department of Agriculture, Conservation and Forestry, Maine Coastal Program	Coastal Communities Grants	Grants for projects that improve water quality, increase adaptation to erosion and flooding, restore coastal habitat, promote marine-related development, and enhance the coastal-dependent economy while preserving natural coastal resources.	http://maine.gov/dacf/municipalplanning/financial_assistance.shtml Rita Dzenis, 287-3854
	Shore and Harbor Management Grants	Projects that promote sound waterfront planning, harbor management, and balanced development of shore and harbor areas to improve marine infrastructure and assure access to the shore.	http://maine.gov/dacf/municipalplanning/financial_assistance.shtml Claire Entelme, 287-1493
Maine Department of Environmental Protection	Clean Water State Revolving Fund (CWSRF)	U.S. EPA and state funding for construction of wastewater treatment facilities and implementation of other water quality management activities. In partnership with the Maine Municipal Bond Bank (MMBB).	https://www1.maine.gov/dep/water/grants/srfoarag.html John True Engineering Services Manager (207) 287-7808 Division of Water Quality Management
	State Municipal Construction Grant Program	affordable financing of municipal and quasi-municipal wastewater facilities, including planning, design, and construction of wastewater treatment facilities.	https://www1.maine.gov/dep/water/grants/srfoarag.html John True Engineering Services Manager (207) 287-7808 Division of Water Quality Management
	Nonpoint Source Water Pollution Control Grants ("319")	Grants to help communities make progress restoring or protecting waters named as NPS Priority Watersheds. Nonpoint Source Priority Watersheds List	https://www1.maine.gov/dep/water/grants/319.html Wendy Garland Phone: 207-615-2451
	Invasive Aquatic Plants	Cost Share Grants to Prevent the Spread of Invasive Aquatic Plants	https://www1.maine.gov/dep/assistance/grants-loans/77#

Clean Water State Revolving Fund

Climate Adaptation Plan (CAP)

Incentive to encourage municipalities, wastewater districts, and quasi-municipalities to develop a Climate Adaptation Plan (CAP) for their wastewater treatment system

<http://www.maine.gov/dep/water/grants/srfparag.html>

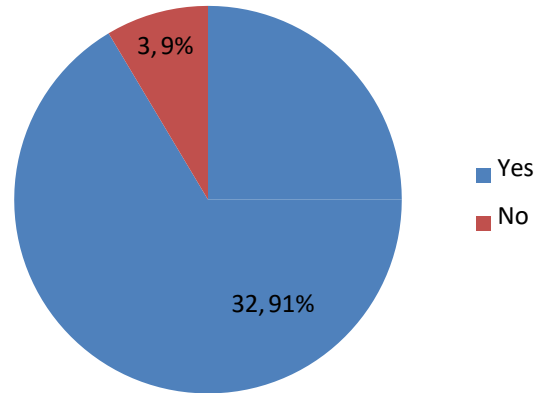
Goals

- Assess the wastewater treatment system
- Develop a plan for system resiliency
- Insightful and sustainable outcomes



Some examples in Maine

Have Your Facility's Operations ever been Impacted by Extreme Weather Events?



Survey Questions	Yes	No
Have you made any Plans to Protect Assets from changes in climate?	47%	53%
Is climate adaptation part of the annual budget	0%	100%
Would you ever consider adding climate adaptation to your annual budget?	61%	39%

Arranged in order of those highest to least reported in the survey of southern Maine wastewater facilities:

- Heavy precipitation & floods
- Severe storms
- Sea level rise
- Storm surge with sea level rise
- Ocean acidification
- Drought
- Ice storms
- Heavy snowfall
- Stronger winds
- Temperature changes



Climate Adaptation Plan

\$20,000 per project in CWSRF loan principal forgiveness

Guidance and Requirements:

1. Personnel
2. Hazards
3. Impacts
4. Adaptation practices
5. Implementation plan
6. Submit for review
 - ✓ Prepared by a licensed engineer
 - ✓ Submitted within one year from the loan closing date

Since 2015:

- Completed plans for Towns of Brownville and Norway
- Total of \$160,000 in funding has been allotted to eight other communities for Plans.

Applicants Committed	FFY	Status
4	2015	2 complete 2017, 2 pending
2	2016	2 pending
4	2017	4 pending
?	2018	Upcoming Spring
10	3 years	2 complete, 8 pending



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Thank you!

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