

Water Is Worth It



PROTECTING YOUR CLEAN WATER FOR 40 YEARS

Using the Clean Water State Revolving Fund for Nonpoint Source and National Estuary Projects

Watershed Academy Webcast

Tuesday, April 17, 2012

1:00–3:00 PM Eastern

Instructors:

Stephanie vonFeck, Environmental Protection Specialist, U.S. Environmental Protection Agency
Alice Rubin, Environmental Review Coordinator, State of Washington
Curtis Bohlen, Director, Casco Bay Estuary Program

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Guide to Our Webcasts

- **To Ask a Question** – Type your question in the text box located at the bottom of your screen and click on the “Ask” button
- **To Answer Poll Questions** – Click on the radio button to the left of your choice and click submit.
- **To See Closed Captioning** – Turn your pop-up blocker off and click on the “closed captioning” button
- **To Complete the Evaluation** – Answer questions in the slide window

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Topics for Today's Webcast

- Overview of Clean Water State Revolving Fund (CWSRF)
 - Using it to Implement Nonpoint Source and National Estuary Program Projects
- Washington State Case Study
- Casco Bay National Estuary Partnership Case Study



Using the Clean Water State Revolving Fund for Nonpoint Source and National Estuary Projects

Stephanie vonFeck
U.S. Environmental Protection Agency
Office of Water



Water Quality Protection

- Both point and nonpoint sources impact water quality
- Nonpoint sources are the primary source of pollution in over 33,000 waters
 - Roughly $\frac{3}{4}$ of all impaired waters for which Total Maximum Daily Load (TMDLs) have been calculated
- Nitrogen and phosphorus have escalated over the past 50 years.
- Watershed protection incorporates both gray and green approaches.

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Clean Water State Revolving Fund

- EPA's largest water quality funding program
- Flexible
 - Can fund publicly owned wastewater and stormwater projects
[section 212 of the Clean Water Act (CWA)]
 - Can fund public or privately owned nonpoint source and estuary projects
(sections 319 and 320 of the CWA)
- Priorities, project selection and funding are decided at the state level
- EPA provides national oversight

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Clean Water State Revolving Fund Snapshot

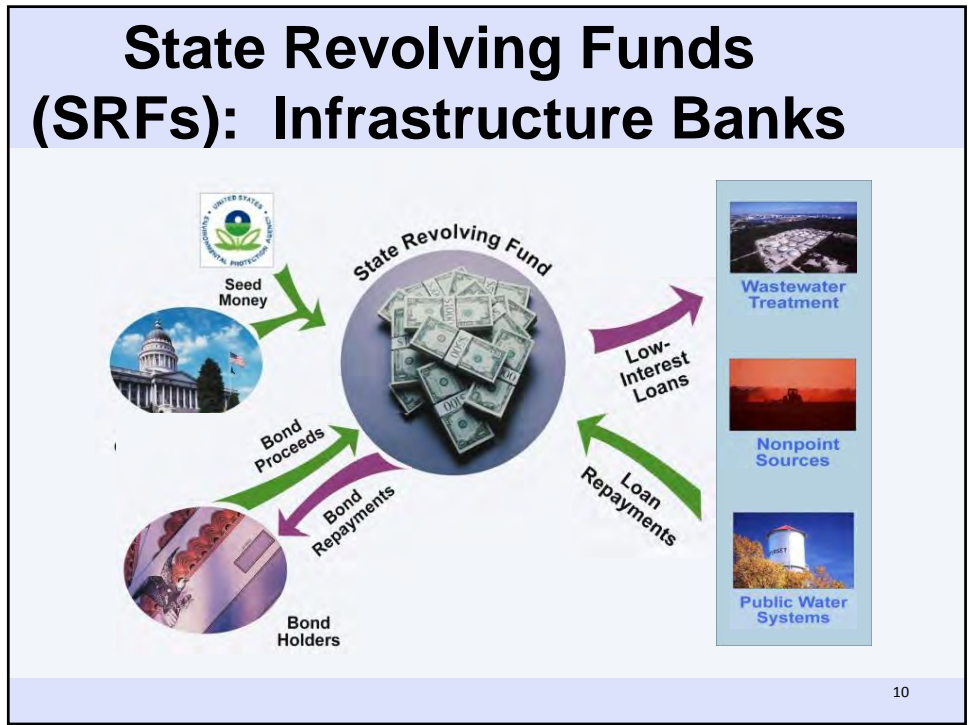
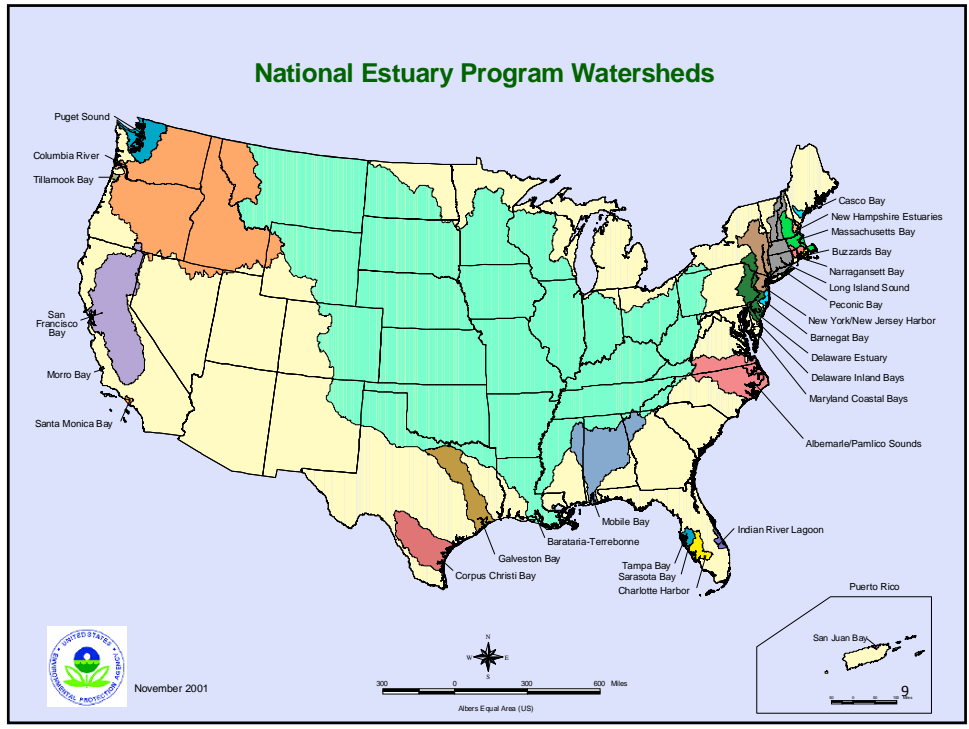
- \$90 billion funded between 1988 – 2001
 - For every \$1 Federal Funds, \$2.53 provided to projects
- \$3.8 billion for nonpoint source projects
 - 4% of total assistance
- 45 States have funded nonpoint source projects



Nonpoint Source Project Types

- Agricultural Animals
- Agricultural Cropland
- Hydromodification
- Groundwater Protection
- Urban
- Storage Tanks
- Brownfields
- Individual/Decentralized Sewage Treatment
- Resource Extraction
- Silviculture
- Marinas
- Sanitary landfills



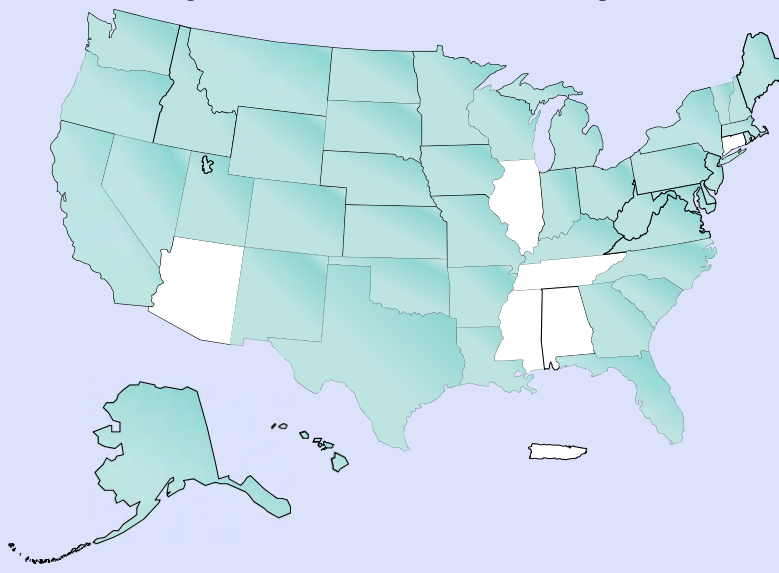


CWSRF Priority Setting

- Most common criteria
 - Water quality benefit of each project
 - Compliance
 - Public Health
- Green Project Reserve Requirement:
 - Includes (1) Green Infrastructure (2) Water Efficiency (3) Energy Efficiency and (4) Environmentally Innovative Projects
 - ARRA, FY2010 and FY2011 appropriations required that 20% of funds from EPA be used for green projects, to the extent that States have eligible projects
 - FY 2012 appropriation lowered the requirement to 10%
- 319 Program Evaluation
 - Potential Recommendation that relates to CWSRF Funding
 - Potentially greater flexibility for State 319 programs in States that use the CWSRF or other State funds for nonpoint source (NPS) projects

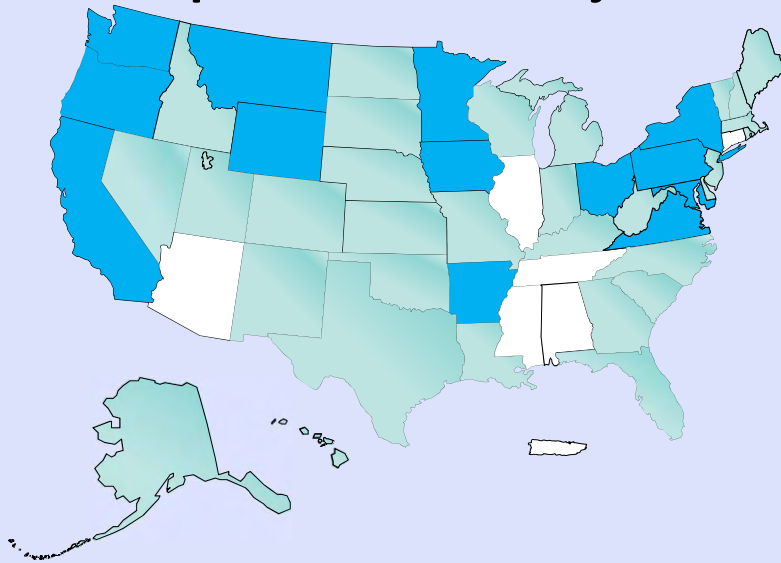
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States that Fund Nonpoint Source Projects



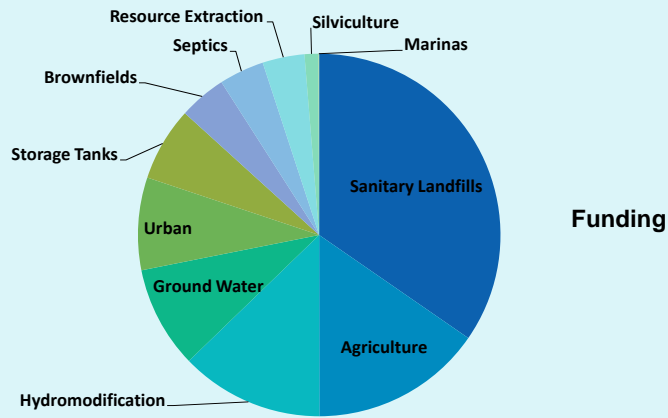
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States that Fund Nonpoint Source Projects



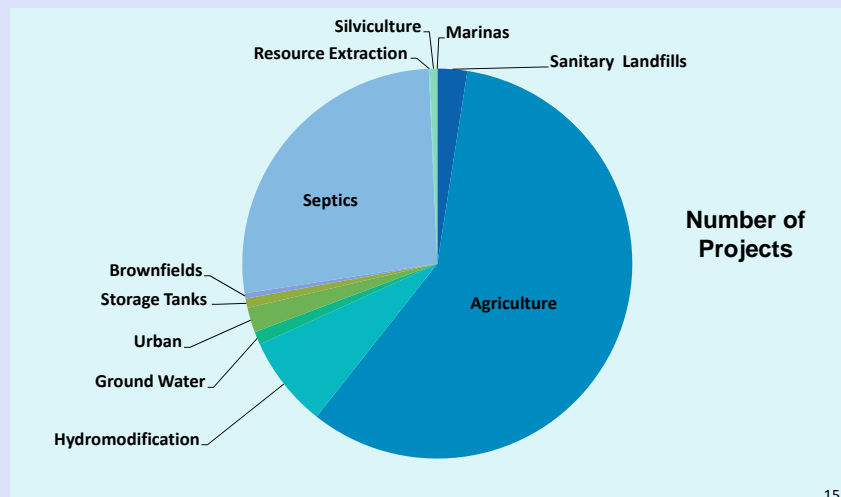
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Nonpoint Source Project Funding



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Nonpoint Source Project Funding



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Challenges of Funding NPS Projects

- State Programs
 - Staffing is down severely
 - Staff expertise
 - Program Integration
- Priority Setting
 - Expertise/Precedent
 - Green versus Gray solutions
 - Infrastructure Funding Gap
- Finance
 - Grant followers
 - Repaying a Loan
- Authority to Fund Nonpoint and/or Privately Owned Projects

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Innovative Solutions

- Partnerships
 - Bring statewide water quality perspective
 - Essentially augment CWSRF staffing level
 - Access to expertise to identify NPS projects and evaluate designs
 - Bring high quality applications
 - Access to expertise in private credit analysis
 - Partnerships can insulate the CWSRF from loan defaults if Partners take a loan and then reloan or grant it to individual NPS projects

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Innovative Solutions

- Priority Setting
 - How does your state prioritize projects?
 - How does the priority ranking system relate to priority watershed issues, impaired waters, TMDLs and other elements of the water quality protection program?
 - Does it measure “bang for the buck”?
 - Have you ever commented on the annual Intended Use Plan?
 - Address concerns about best management practice (BMP) performance and maintenance

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The Challenge

This Generates
Revenue



But This
Doesn't



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Innovative Solutions

- Funds to repay the loan do not have to be generated by the project
 - Fees, business districts, non-profit dues/bequeaths, general revenue, farmer income, homeowner income, etc.
- Conduit Lending –
 - Some partners are willing to shoulder the credit risk of loan default in return for access to capital for priority projects
- Put on your thinking cap—It's worth it

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Innovative Solutions

- CWSRF recently received limited “grant authority”
 - called additional subsidy
 - principal forgiveness, negative interest rate or grant
 - All formats are equivalent financially but grants must comply with Federal grant regulations
 - FY2010: approx. \$996,900,000 available nationally
 - FY2011: approx. \$446,900,000 available nationally
 - FY2012: approx. \$115,400,000 available nationally

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Grant Equivalence of a Loan

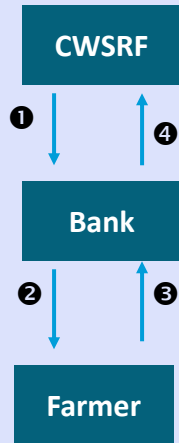
		CWSRF Rate						
		0.0%	1.0%	2.0%	3.0%	4.0%	5.0%	6.0%
Market Rate	5.0%	38%	31%	24%	16%	8%	0%	-9%
	6.0%	43%	36%	30%	23%	16%	8%	0%
	7.0%	47%	41%	35%	29%	22%	15%	8%
	8.0%	51%	46%	40%	34%	28%	21%	14%
	9.0%	54%	49%	44%	39%	33%	27%	20%

For example, when the market rate is 5.0%, a 2.0% CWSRF loan to a \$1 million project is equivalent to a \$240,000 grant and a \$760,000 loan at the market rate

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Linked Deposit

A form of CWSRF Conduit Lending



- ❶ CWSRF invests in reduced-interest CD (up to 5 percentage points below market rate)
- ❷ Bank makes low-interest loan to farmer or homeowner (up to 5 percentage points below bank's standard rate)
- ❸ Farmer or homeowner repays loan to bank
- ❹ CWSRF receives low-interest return on CD investment (investment is guaranteed regardless of loan repayment)

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Innovative Solutions



**One
CWSRF
Loan**

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Innovative Solutions

- Sponsorship
 - Publicly owned treatment work (POTW) agrees to add the cost of a NPS project to their loan in return for a reduced CWSRF interest rate.
 - POTW user fees repay the loan in full.
 - Project costs the POTW the same or slightly less as a combined project than it would have as a POTW only project at normal CWSRF interest rates
 - NPS project has no repayment responsibility.
 - Useful approach for NPS projects in a State's priority watersheds that do not have a revenue stream to repay a loan.

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http://water.epa.gov/grants_funding/cwsrf/cwsrf_index.cfm

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Washington State Department of Ecology Clean Water State Revolving Fund Nonpoint Source Projects

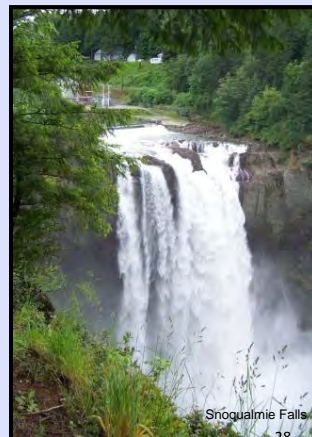


Alice Rubin
Environmental Review Coordinator

<http://www.ecy.wa.gov/programs/wq/funding/funding.html> 27

Presentation Overview

- Ecology's combined funding programs
- Nonpoint SRF funded projects
- Challenges and successes



Ecology's Combined Funding Programs

- Three funding programs:
 - CWSRF
 - Section 319 Grants for nonpoint sources of pollution
 - WA State Centennial Clean Water Fund grants
- Funding Program Features:
 - One set of guidelines and one application
 - One ranked funding list
 - Leverages other funding sources

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Ecology's Combined Funding Programs

- Emphasis on water quality improvements:
 - Wastewater & stormwater infrastructure
 - Nonpoint source pollution management
 - Onsite septic repair & replacement
- Nonpoint loan projects compete with wastewater projects.
 - Dedicated funding CWSRF 20% set-aside for nonpoint by WA rule.
 - Left-over funds can be rolled into wastewater projects.

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Ecology's Combined Funding Programs

- Advantages to combined program
 - ★ Education and outreach to broader audience on funding options such as loans for nonpoint projects.
 - Best funding package for high priority projects.
 - Streamlined process: one-stop-shop.
 - Allows for combination grant/loan projects.
 - Combined technical assistance from Ecology staff.

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Nonpoint SRF Funded Projects

- Direct seed/no-till local loan project
- Onsite septic repair & replacement local loan program
- Stormwater low impact development (LID) and infrastructure
- Irrigation projects
- Nonpoint source pollution control

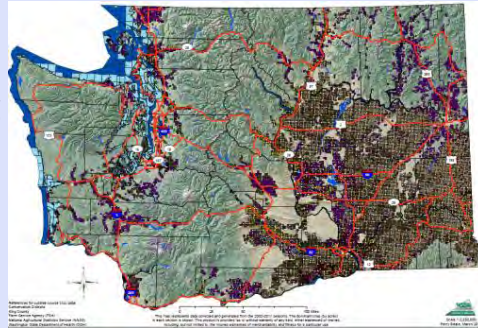
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DIRECT SEED LOAN PROGRAM



Background Information

- 4,067,400 ac of field crops harvested in 2010
 - 2,285,000 acres in wheat
 - 200,000 acres in corn
 - 840,000 acres in hay
 - Other crops including barley, potatoes, and hops(!)



Direct Seed Loan Program

- Brain child of Spokane Conservation District (CD) with help from Ecology and EPA
- Focus on conversion from conventional tillage to direct seed/no-till
 - Now covering 14 eastern Washington counties
 - Over \$18 million in CWSRF loans since 1995
- Set up as revolving fund: equipment purchase facilitates conversion to direct seed
 - Repaid to Ecology from landowner repayment
 - Secured through local tax assessment funds

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Direct Seed Loan Program

- Outreach techniques:
 - CD monthly newsletter
 - Monthly growers guide
 - Radio ads in Spokane: Ag Report and Green Team
- Significant water quality protection.
 - Sediment
 - Nutrients
 - Pesticides
 - Almost zero rain run-off

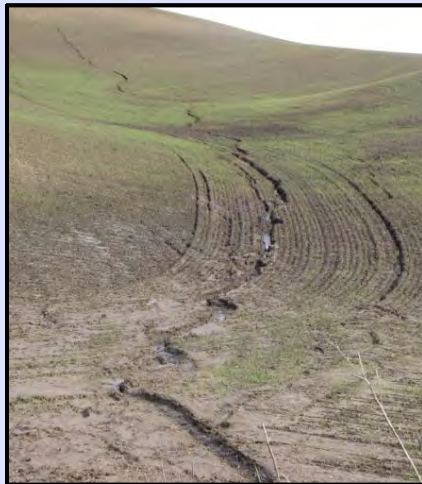
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Direct Seed Loan Program

- Benefits to producer
 - Reduced costs: fuel, fertilizer
 - Water savings/moisture retention
 - Maintains and builds topsoil
 - Improved yields over time
- Leverage of funds:
 - Grant money in combination with loan for eligible administration and outreach activities
 - Grant project with Direct Seed Association supports additional outreach and mentoring

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Direct Seed Project



Before (conventional seeding)



After (cross slot direct seeding)

More information available on Spokane CD's website: <http://sccd.org/>

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VS.



Photo by John Aeschliman

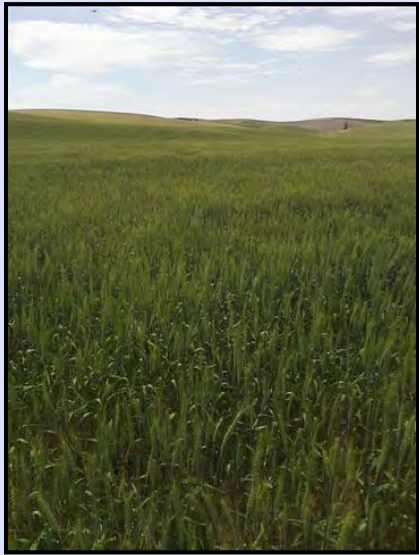


Photo by Dan Harwood



Photo by: Dan Harwood



Photos provided by Spokane CD

Equipment prices can range from \$5,000-\$250,000



Background and History

- Estimated 600,000 septic tanks in 12 Puget Sound counties.
- Septic tanks have an average 20 year life expectancy.
- Average repair cost runs \$10,000-\$15,000.



Onsite Septic Repair & Replacement Program

- Helps local health departments create loan programs to address failing septic tanks.
- Always been an eligible activity for SRF funding.
- Rule change and legislative directives added eligibility for state grant funds in 2007:
 - Cost of program management and administration
 - Loan loss reserve
 - Small grants and residential hardship

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Onsite Septic Repair & Replacement Program

- Hardship interest rates may be applied to SRF loan after project is closed.
- Currently 10 counties participating in programs, most in Puget Sound area.
 - \$20 million in CWSRF loans, \$7 million in grants
- Over 600 homeowners since 2007 have participated in the program.

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Onsite Septic Repair & Replacement Program

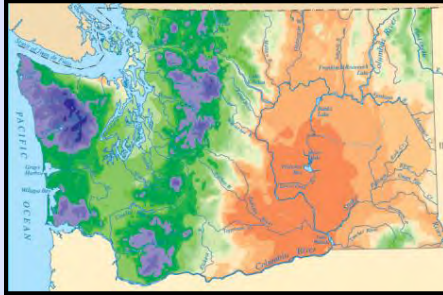
- Recipient benefits:
 - Leverage of funds from grant/loan combination.
 - Enforcement tool.
 - Gives ability to award loans to high risk homeowners.
- Environmental and health benefits:
 - Reduce fecal coliform and nutrients from failing systems.
 - Reduce shellfish bed and beach closures.

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Background

- 6 Municipal Stormwater Permit (MSP) Phase I communities
- 99 cities and portions of 11 counties MSP Phase II communities
- Protection and improvement of Puget Sound waters: high state priority



WA annual rainfall

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Stormwater

- In WA state, LID considered nonpoint solution for stormwater.
- Communities use SRF as match for state funded stormwater grant programs (not part of combined funding program).
 - SRF as match discussed at application workshops.
 - Increased interest from ARRA.
 - Green project reserves (GPR): possible forgivable principal.

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Stormwater

- SRF funds can be used for permit required activities.
- Water quality improvements:
 - Total suspended solids
 - Nitrogen and phosphorus
 - Metals
 - Combined sewer overflow (CSO) abatement

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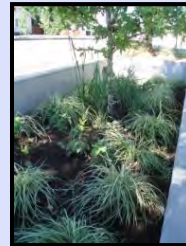
Ballard Green Streets Project



Photos by Sean Mellon

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City of Spokane Urban Runoff Greenways Ecosystem (SURGE) Project



Photos by Cynthia Wall

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Photo by Melanie Tyler: Columbia River from Beacon Rock

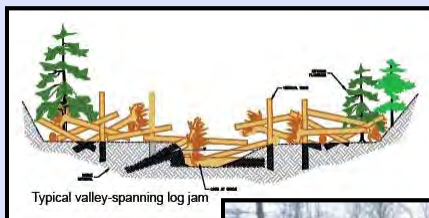
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Stream Restoration

- Large projects when not enough grant money available.
 - SRF projects often occurring in urban setting.
- Able to do additional work that is not grant eligible.
- Examples: channel daylighting, channel restoration, re-routing
- Water quality benefits: nutrients, temperature, sediment, fecal coliform, etc.
 - Also habitat improvements and flood control

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Clark County Upper Whipple Creek Restoration Project



Photos by Clark County

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Irrigation

- Convert open-ditch systems to piped systems.
- Better control of water that is demanded results in water savings
- Water quality benefits
 - Eliminate need for aquatic pesticide use
 - Reduced turbidity from erosion and tail water
 - Lower temperature

Overall Challenges and Successes for SRF Nonpoint Projects

- Difficult for traditional nonpoint recipients to secure loans.
- Loans harder sell when grants available.
- Combined funding program:
 - Advertise to larger audience.
 - Create attractive funding packages.
- Creative thinking.
- Increased emphasis from EPA and shrinking grant availability.
- State priorities to increase interest and demand.

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Questions?

Alice Rubin: alice.rubin@ecy.wa.gov

<http://www.ecy.wa.gov/programs/wq/funding/funding.html>

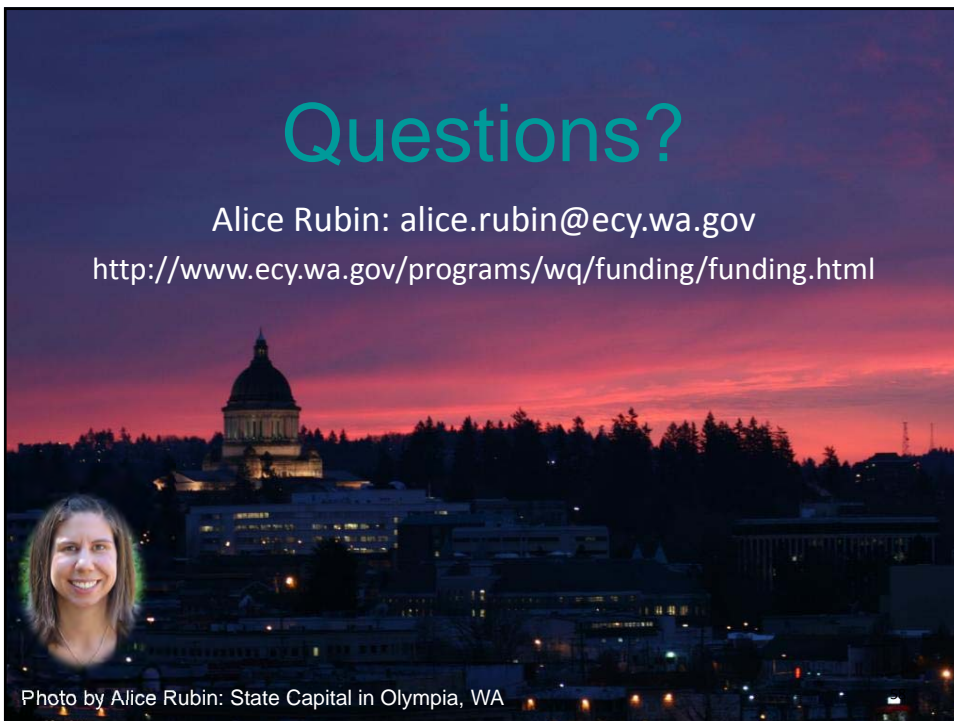


Photo by Alice Rubin: State Capital in Olympia, WA

Tapping the Clean Water SRF to address stormwater pollution in an urban watershed

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The Long Creek Watershed Management
District (Maine)

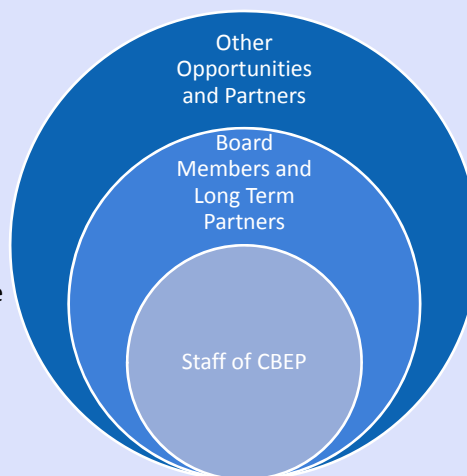
Curtis Bohlen, Director, CBEP



CBEP's Approach



- Casco Bay Estuary Partnership (CBEP) is a catalyst for action
- Many Partners
 - Private sector
 - Citizens and civic organizations
 - Governments and government agencies
 - Academia
- We build consensus, facilitate communications and attract resources for protection of the Bay.
 - Focused
 - Collaborative
 - Credible data and information
 - Strategic direction



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Our Impaired Waters are Suburban

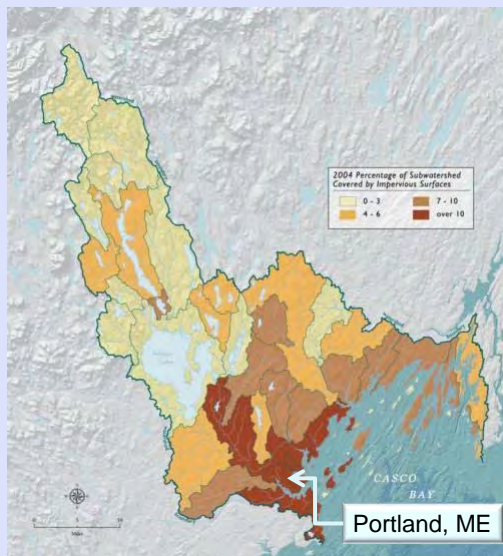


A close relationship between waters that do not meet water quality standards and watershed imperviousness

(Impaired Waters)

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Our Impaired Waters are Suburban



A close relationship between waters that do not meet water quality standards and watershed imperviousness

(Watershed Imperviousness)

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Long Creek – an Urban Stream

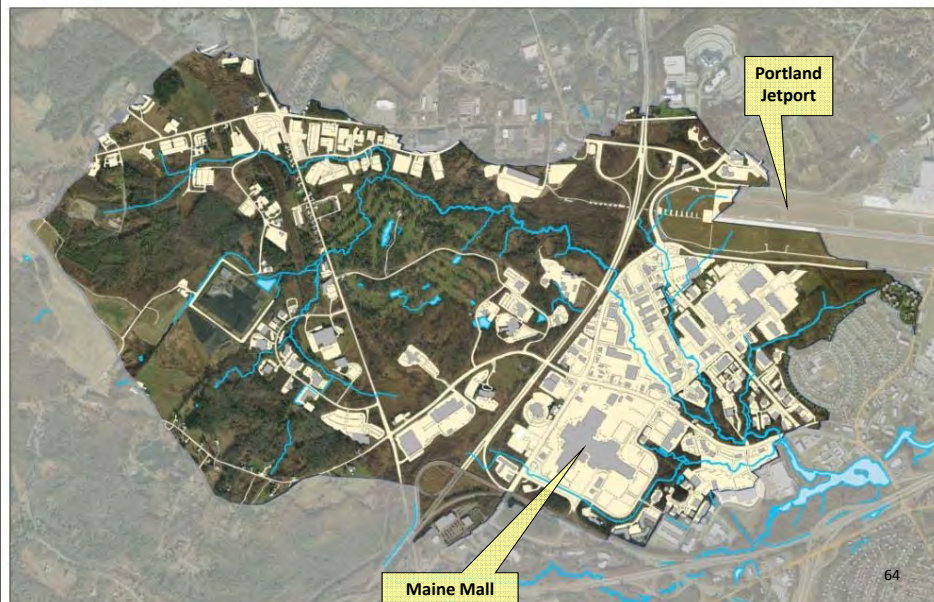
- Long Creek
 - Is located in a suburban, mostly commercial watershed, with no industrial discharges
 - Fails to meet applicable water quality standards
- Similar watersheds can be found nationwide
 - 30 other “Urban Impaired Streams” in Maine alone
 - Hundreds of similar watersheds nationwide



C. Bohlen

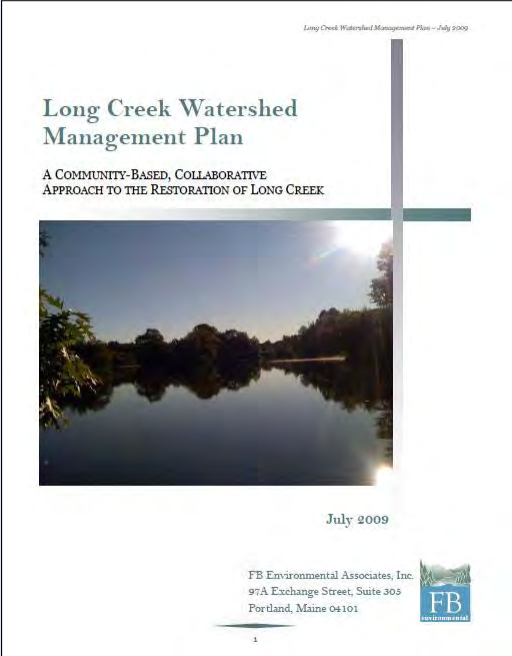
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Long Creek Watershed



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McDonald, Long Creek Watershed Management District




July 2009

FB Environmental Associates, Inc.
97A Exchange Street, Suite 305
Portland, Maine 04101

Management Plan

- Two year + planning process
- Professionally facilitated
- Significant stakeholder involvement



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Costs...

- The plan carried an estimated 10 year cost of about \$14 million
 - BMP construction and maintenance
 - Stream restoration
 - Good housekeeping practices
 - Inspection and maintenance
 - Monitoring
 - Administration



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Funding Mechanism Based on RDA



C. Bohlen, CBEP

Pervious pavement installed by Maine DOT in partial support of Long Creek Watershed Management District (LCWMD)

- “Residual Designation Authority” (RDA)
- New permit obligations for landowners
- Landowner’s (including municipalities, MTA, DOT) choose:
 - Individual Permit (IP)
 - General Permit (GP)
- GP based on participation in Watershed Plan
 - \$3000 annually per impervious acre

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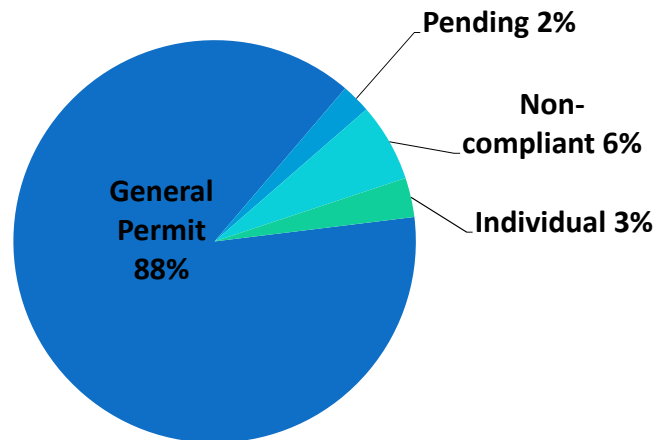
Long Creek Watershed Management District (LCWMD)

- A non-profit, quasi-municipal corporation created under the authority of four municipalities expressly to manage stormwater in the watershed
- Participation a condition for the General Permit
- A board appointed by town councils, with representatives from businesses, towns, non-profits
- Administered by the Cumberland County Soil and Water Conservation District



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Participation (December 2011)

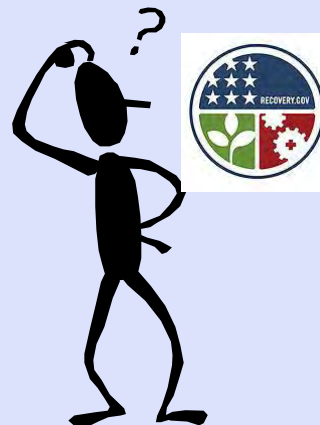


Landowner Participation
127 designated parcels

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SRF Funds... Timing is Everything....

- When the American Recovery and Reinvestment Act (ARRA) legislation was enacted (February 2009) LCWMD did not yet exist
- We had a detailed “to do” list from the Plan, with preliminary engineering designs
- But no established way to pay back SRF loans
- And no easements in place for work slated to occur on private property



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Critical State Agency Leadership

- Leaders at Maine DEP were very engaged in Long Creek
- Agency gave the SLOWLY emerging LCWMD time to mature before requiring permits
- Helped shepherd SRF funds
 - Worked across agency to get around bureaucratic barriers to facilitate the first use of SRF for stormwater in Maine
 - Flexibility in how to structure the loan facilitated access to funds while funding mechanism evolved



Jeff Varrichione, Maine DEP

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Use of SRF Funds

- \$2.1 Million in ARRA-related SRF funding
- 27.7% “Loan Forgiveness”
- Funds went to three projects installing stormwater control systems



LCWMD



LCWMD



SRF Funded Projects

Project	Cost	Acres Treated	Cost per Acre
Philbrook Avenue (Proprietary units and tree box filters)	\$ 435,104	2.12	\$ 205,238
Darling Avenue (Infiltration swales and tree box filters)	\$ 564,189	7.21	\$ 78,251
Mall Plaza (Infiltration system and proprietary units)	\$ 1,236,384	14.5	\$ 85,268
Total	\$ 2,235,677	23.8	\$ 368,757



Example: Mall Plaza Retrofits

SITE CHARACTERISTICS

Impervious Cover:

14.5 Acres

Rooftop ~ 25%

Parking ~ 75%

Project Costs

Engineering & Oversight:	\$ 149,867
Construction:	\$ 1,054,861
Legal & Administration:	\$ 31,656
Total	\$ 1,236,384



Cost/acre treated \$85,268

LOWMID

Example: Mall Plaza Retrofits

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Legal Subtleties

- SRF funds were used in part to address private CWA permit obligations
- Not normally something that SRF funds can do
- Long Creek lies within the Casco Bay Watershed and the Casco Bay Plan authorizes projects to reduce stormwater pollution



Friends of Casco Bay

Nutrient enrichment – in part from runoff – affects Casco Bay

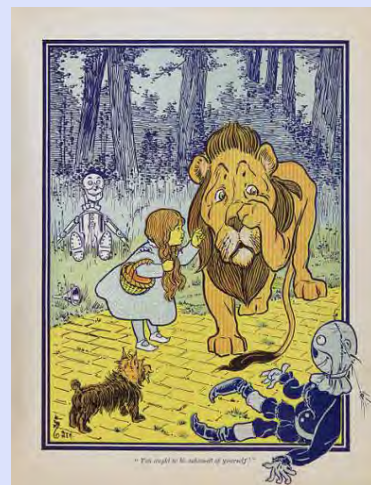
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Leadership and Courage

Cumberland County Soil and Water Conservation District

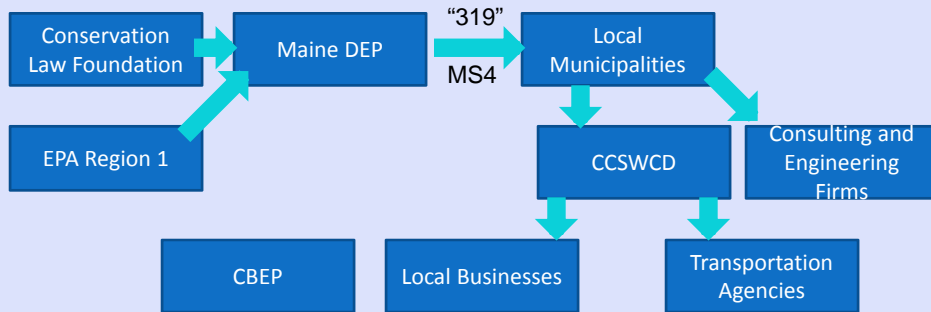


- Cumberland County Soil and Water Conservation District managed construction contracts, accepted SRF funds – and loan obligations
- South Portland authorized acceptance of loans under town authority
- DEP worked to structure SRF loans to help protect partner organizations



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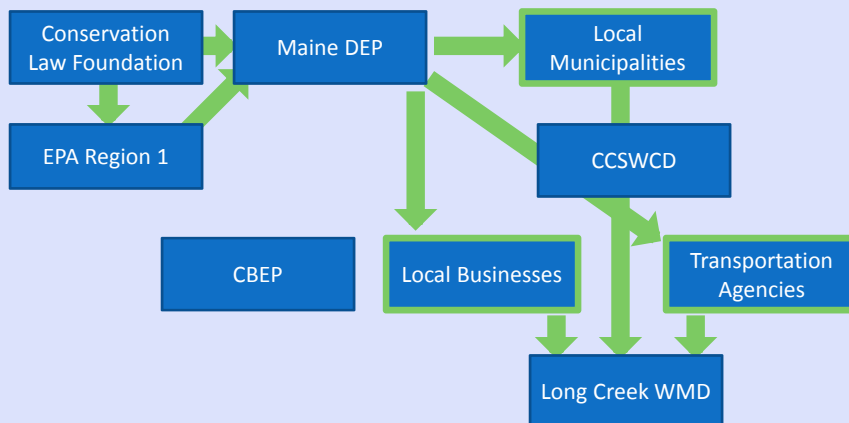
L.C. Stakeholders Horrendogram



Planning

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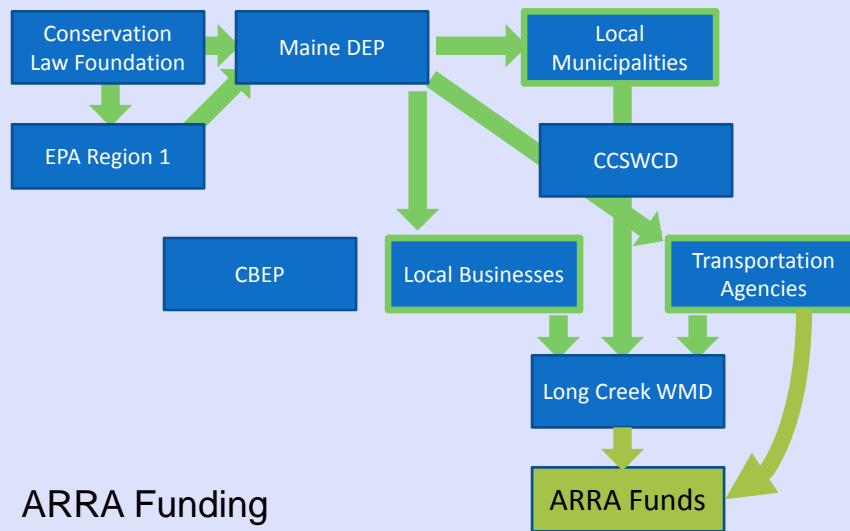
L.C. Stakeholders Horrendogram



Regulatory

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L.C. Stakeholders Horrendogram



Assessment

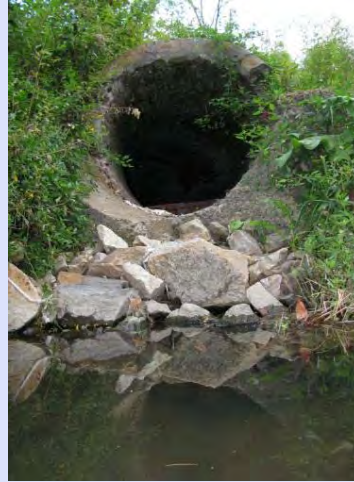


- Benefits
 - Speed up implementation of Plan by two to three years
 - Increase public acceptance of LCWMD by showing early success
 - Strengthen financial position of LCWMD
- Costs
 - Nominal zero interest loan, but came with significant costs in the form of annual fees
 - Bond attorney cost \$18,000; some other administrative fees waived
 - ARRA accounting and reporting obligations impose significant “hidden” administrative costs

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Challenges to Overcome

- State SRF office not familiar with stormwater
 - Established communications mechanisms with Wastewater treatment plant (WWTPs); no communication with organizations working on stormwater
 - Processes, selection criteria, and funding formulas did not match stormwater realities
- SRF for “Bricks and Mortar” only – not useful for non-structural parts of watershed plan
- SRF is primarily a LOAN program
 - How are you going to pay back the loan?
- Legal authority
 - CWSRF can not address private water quality permit obligations outside of National Estuary Program (NEP) watersheds



CSO Outlet on Capisic Brook, Portland

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Lessons and Reflections

- Preparation
 - Prior planning was critical – we were (almost) ready when ARRA created opportunity
 - Existing relationships, committed partners were key
- Flexibility and determination
 - Bureaucratic systems presented roadblocks, but dedicated partners – especially at state agencies – found ways around them
- Willingness to take risks

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Long Creek Planning Project Partners

- Municipalities/Quasi-municipal
 - City of South Portland
 - City of Westbrook
 - Town of Scarborough
 - City of Portland
 - ecomaine
 - Cumberland County Soil & Water Conservation District
- State Entities
 - Maine Department of Environmental Protection
 - Maine Department of Transportation
 - Maine Turnpike Authority
- Businesses/Business Representatives
 - Fairchild Semiconductor
 - National Semiconductor
 - Marriott at Sable Oaks
 - The Maine Mall
 - CBRE The Boulos Company
 - Ocean Properties Ltd.
 - Bramlie Development Corp.
 - Maine Wetlands Bank
 - Portland Regional Chamber
 - SP/CE Chamber of Commerce
- Nonprofits
 - South Portland Land Trust
 - Casco Bay Estuary Partnership
 - Conservation Law Foundation



Speaker Contact Information



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Water Is Worth It



PROTECTING YOUR CLEAN WATER FOR 40 YEARS

Next Watershed Academy Webcast

Our next webcast will be announced shortly. For more information please check:

www.epa.gov/watershedwebcasts

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Participation Certificate

If you would like to obtain participation certificates for multiple attendees, type the link below into your browser:

http://water.epa.gov/learn/training/wacademy/upload/041712_certificate.pdf

You can type in each of the attendee's names and print the certificates.