

US EPA ARCHIVE DOCUMENT

# Opportunities to Increase the Sustainability of your Project



ARC Guideline Information Sessions

*October 2011*

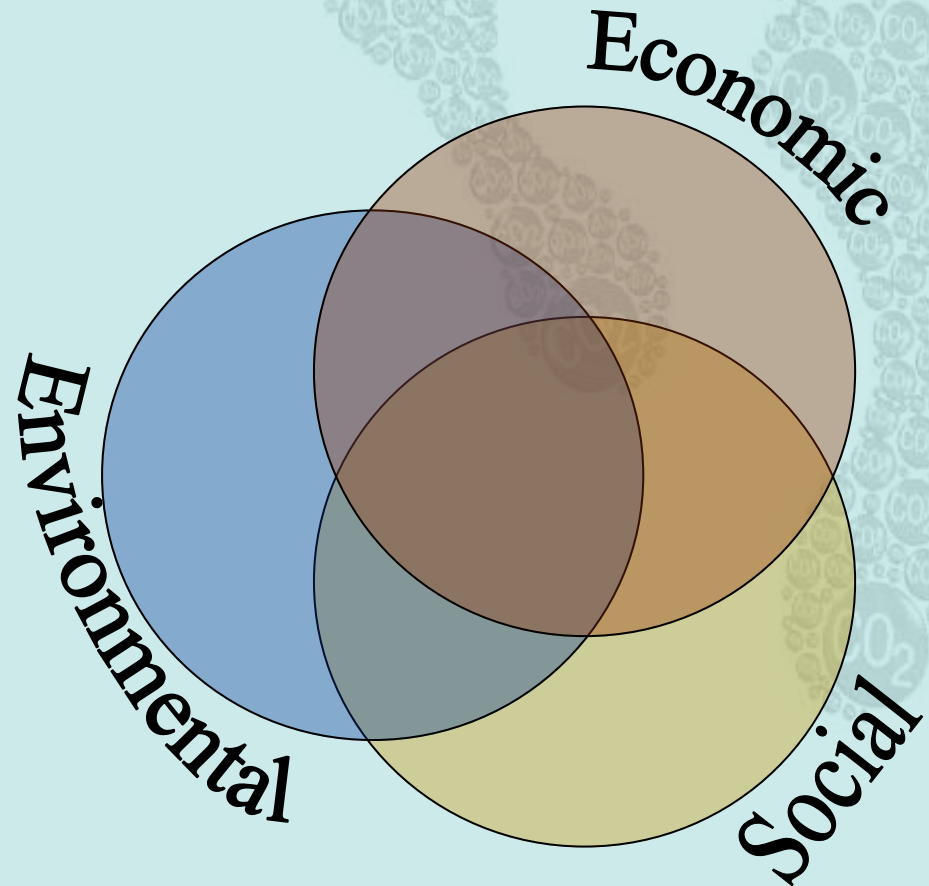


# Aspects of Sustainability

Environmental

Social

Economic



# Sustainability in the Guidelines

## **4. Project Benefits**

Under this criterion, proposals will be evaluated on the extent to which the project's anticipated outcomes promote general welfare through the improvement of the public health and safety, economy, and environment of the targeted community(ies) and how these outcomes will contribute to your overall community "vision" for the revitalization of brownfield sites. Applicants must demonstrate how the proposed project considers and addresses identified health, economic, and environmental needs of concern to the community and must identify the planned outcomes of the project. Consideration will be given to how public health issues are addressed during the project, the anticipated benefits of redevelopment, and the degree to which the community's plan incorporates sustainable practices identified in Section I.D.

**a. Welfare and/or Public Health**

**b. Economic Benefits and/or Greenspace**

**c. Environmental Benefits from Infrastructure Reuse/Sustainable Reuse**

**Assessment – 30pts**

**Cleanup – 20pts**

**RLF – 15pts**

# Sustainability in the Guidelines

## I.D. Livability Principles

On June 16, 2009, EPA joined with the U.S. Department of Housing and Urban Development (HUD) and the U.S. Department of Transportation (DOT) to help improve access to affordable housing, more transportation options, and lower transportation costs while protecting the environment in communities nationwide. It is the goal of this partnership to discourage sprawl and encourage or incentivize location efficient investments, smart growth practices, and green infrastructure development. As a result of this federal partnership, a set of guiding livability principles have been developed. Livability principles include:

1. **Provide more transportation choices**
2. **Promote equitable, affordable housing**
3. **Increase economic competitiveness**
4. **Support existing communities**
5. **Leverage federal investment, and**
6. **Value communities and neighborhoods.**

<http://www.sustainablecommunities.gov/>

EPA recognizes that eligible activities listed in these guidelines advance the partnership's livability principles by providing funding to inventory, characterize, assess and conduct planning that promotes cleanup and sustainable reuse of brownfields sites.

**Applicants will be evaluated on how they will incorporate livability and equitable development principles in their responses to the ranking criteria (Section V.B.4, *Project Benefits*).**

# Sustainability in the Guidelines

## V.C. Other Factors (and Appendix Checklist)

In making final selection recommendations from among the most highly ranked applicants on each of the lists discussed in Section V.A., EPA’s Selection Official may consider the following factors if, and as, appropriate. Including:

- Whether the applicant is a recipient of a **HUD/DOT/EPA Partnership for Sustainable Communities grant**; and
- Communities implementing **green remediation plans**.

Current Recipients of Partnership for Sustainable Communities Grants in Region 1				
Bridgeport, CT	New Haven, CT	MAPC (MA)	BRPC (MA)	Port of Providence
CT DECD	Sanford, ME	PVPC (MA)	Boston, MA	Claremont, NH
Hartford, CT	NMDC (ME)	FRCOG (MA)	UVLSRPC (NH)	Concord, NH
CRCOG (CT)	GPCOG (ME)	Lowell, MA	Portsmouth/Kittery	Burlington, VT
Regional Plan Association (CT)	Penobscot County ME	Fairmount Collaborative (MA)	Providence, RI	NWRPC (VT)
WRCOG (CT)	ME DOT	Somerville, MA	RI Housing	CCRPC (VT)

# Aspects of Sustainability

	<b>Resources &amp; Assets of Your Project</b>		
	<b>Environmental</b>	<b>Social</b>	<b>Economic</b>
<b>Site</b>	<ul style="list-style-type: none"> <li>- Stormwater/Flood Control</li> <li>- Habitat</li> <li>- Clean Air/Soil/Water</li> </ul>	<ul style="list-style-type: none"> <li>- Connection to the Community</li> <li>- Access</li> <li>- History of the Site</li> </ul>	<ul style="list-style-type: none"> <li>- Site Marketability</li> <li>- Taxes</li> <li>- Property Values</li> <li>- Site Use Supplies a Demand</li> </ul>
<b>Community</b>	<ul style="list-style-type: none"> <li>- Drinking Water</li> <li>- Air Quality</li> <li>- Open Space</li> <li>- Stormwater/Flood Control</li> </ul>	<ul style="list-style-type: none"> <li>- Housing</li> <li>- Schools</li> <li>- Recreation</li> <li>- Connectivity</li> <li>- Cultural Features</li> </ul>	<ul style="list-style-type: none"> <li>- Local Business</li> <li>- Tourism</li> <li>- Taxes</li> <li>- Jobs</li> <li>- Development</li> </ul>
<b>Overall</b>	<ul style="list-style-type: none"> <li>- Ecosystems</li> <li>- Clean Air/Soil/Water</li> <li>- Climate</li> <li>- Food Supply</li> </ul>	<ul style="list-style-type: none"> <li>- History</li> <li>- Labor Supply</li> <li>- Culture</li> <li>- Population Patterns</li> </ul>	<ul style="list-style-type: none"> <li>- Economic Incentives</li> <li>- Market Trends</li> <li>- Supply and Demand</li> </ul>

# Aspects of Sustainability

- **Are you Considering the Most Significant Aspects of Sustainability in your Project?**
- **What are the Environmental, Social and Economic Characteristics of your Targeted Area and Community?**

## **Think:**

- **Green Remediation**
- **Planning and Design**
- **Site Use and Maintenance**
- **Community Benefits**
- **Surrounding Environment**

# Greener Cleanups

## Minimize Total Energy Use and Maximizes Use of Renewable Energy

- Minimize energy consumption
- Power cleanup equipment through onsite renewable energy sources
- Purchase commercial energy from renewable resources

## Minimize Air Pollutants and Greenhouse Gas Emissions

- Minimize the generation of greenhouse gases
- Minimize generation and transport of airborne contaminants and dust
- Use heavy equipment efficiently
- Maximize use of machinery equipped with advanced emission controls
- Use cleaner fuels to power machinery and auxiliary equipment
- Sequester carbon onsite

## Minimize Water Use and Impacts to Water Resources

- Minimize water use and depletion of natural water resources
- Capture, reclaim and store water for reuse
- Minimize water demand for revegetation
- Employ best management practices for stormwater

# Greener Cleanups



## Reduce, Reuse and Recycle Material and Waste

- Minimize consumption of virgin materials
- Minimize waste generation
- Use recycled products and local materials
- Beneficially reuse waste materials
- Segregate and reuse or recycle materials, products, and infrastructure

## Protect Land and Ecosystems

- Minimize areas requiring activity or use limitations
- Minimize unnecessary soil and habitat disturbance or destruction
- Minimize noise and lighting disturbance

**Greener Cleanup efforts have already begun** in some Region 1 brownfield projects including writing green considerations into Analysis of Brownfield Cleanup Alternatives (ABCA) and consultant Request for Proposals!

# Brownfield Greener Cleanups

## Where could this fit in my process?

- Grant Proposal and Workplan
- Consultant RFPs/RFQs
- Community Relations Plan
- Analysis of Brownfield Cleanup Alternatives (ABCA)
- Remedial Action Plan
- Quarterly Reporting
- Outreach Materials

# Sustainability Success

## In Proposals

	Examples of <b>Positive</b> Proposal Components	Examples of <b>Negative</b> Proposal Components
<b>Economic Benefits and/or Greenspace</b>	<ul style="list-style-type: none"><li>- An opportunity for community groups to carry out gardening/ landscaping, hold events, and encourage residents to be a part of park maintenance and beautification.</li><li>- Benefits include a community parking lot, native landscaping, decorative lighting, and public art.</li><li>- Good narrative that touches on economic and non-economic benefits.</li><li>- Good numbers and references.</li></ul>	<ul style="list-style-type: none"><li>- Did not provide any information on economic benefits.</li><li>- No discussion of green space, a comprehensive plan, or smart growth.</li><li>- Would have included economic benefits of preventing stated imminent threat of drinking water aquifer contamination.</li><li>- No attempt to quantify the anticipated outcomes.</li><li>- Does not focus on site to be remediated.</li></ul>

# Sustainability Success

## In Proposals

	Examples of <b>Positive</b> Proposal Components	Examples of <b>Negative</b> Proposal Components
<p><b>Environmental Benefits from Infrastructure Reuse/ Sustainable Reuse</b></p>	<ul style="list-style-type: none"> <li>- Utilities exist for the lighting and maintenance.</li> <li>- LID stormwater management will be incorporated.</li> <li>- Goal is to use 98% of demolition materials in accordance with LEED.</li> <li>- Will comply with town requirements and state guidelines on green building.</li> <li>- Will minimize impact of remediation through green remediation techniques.</li> </ul>	<ul style="list-style-type: none"> <li>- Says they will follow and implement initiatives but not how they will.</li> <li>- Does not discuss infrastructure reuse.</li> <li>- Only discussed infrastructure reuse.</li> <li>- No mention of construction &amp; demolition recycling/reuse.</li> <li>- Does not make the connection between green use and economic benefits.</li> <li>- No policy, resources or plans cited to support stated sustainability goals.</li> </ul>

# Sustainability Success

## In Projects

<b>Urban Oaks Organic Farm</b>	New Britain	CT	Local Food Supply, Green Space
<b>Green Condos</b>	New London	CT	Green Building
<b>Occum Park</b>	Norwich	CT	Green Space, Public Access
<b>Multimodal Transit Center</b>	Holyoke	MA	Transit-Oriented Development, Smart Growth, Green Building
<b>Rivers Edge</b>	Medford	MA	Green Space, Public Access, Habitat Restoration, Green Building
<b>Brockton Brightfields</b>	Brockton	MA	Renewable Energy Development
<b>Gardner-Kilby-Hammond Neighborhood</b>	Worcester	MA	Construction & Demolition Recycling
<b>Meeting Street School</b>	Providence	RI	Green Building
<b>Save the Bay Center</b>	Providence	RI	Green Building, Habitat Restoration, Green Space, Public Access
<b>Waterfront Residences</b>	Burlington	VT	Green Building, Affordable Housing
<b>Bates Mill</b>	Lewiston	ME	Building/Material Reuse

# Opportunities and Benefits

Two stylized footprints are positioned on the right side of the slide. Each footprint is composed of numerous small circles, many of which contain the chemical formula 'CO2', symbolizing carbon footprints or environmental impact.

- FY09 Sustainability Pilots
- FY10 Sustainable Communities Pilot
- FY11 Area-Wide Planning Pilots
- Sources of Support
  - Smart Growth
  - Renewable Energy
  - Water Efficiency
  - Green Building
  - Green Remediation
  - Funding and Cost Analysis

# Sustainability Pilots

## Jackson Square Redevelopment

*Roxbury, MA*

- EPA hired a contractor to develop a summary of recommendations for green roof systems for each building type at the site.
- **Report documents the pros and cons of three green roof systems to enable the best strategies for incorporating green roofs into cleanup and site preparation.**
- The recommendations include:
  - an overview of the site preparation and cleanup costs associated with each system
  - a summary of potential maintenance issues
  - a review of the potential structural and drainage systems that may need to be integrated into the overall site preparation
  - a summary of the energy performance and water demand impacts.

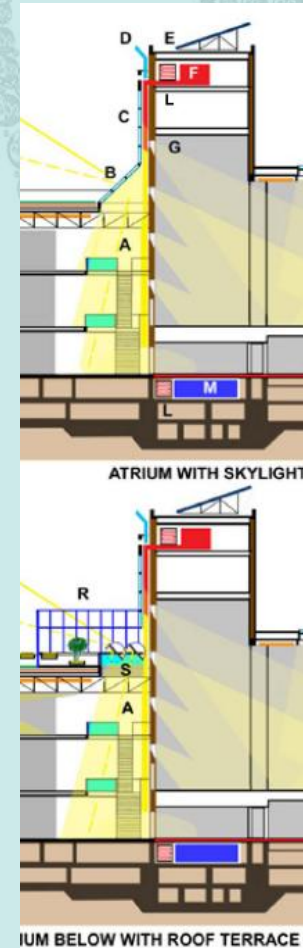


# Sustainability Pilots


## Moran Center Redevelopment

*Burlington, VT*

- EPA hired a contractor to develop a report consisting of analyses and recommendations in support of the energy and environmental goals of the project.
- **Items included in the analyses are:**
  - sustainable energy features
  - green building features
  - stormwater, water quality and landscape details
  - site design for sustainable transportation and linkage to downtown
  - proposed building uses
  - program opportunities presented by community and tourism programs
  - long-term property management and promotion of green features.
- Green elements were prioritized in terms of cost, and promise to demonstrate lessons that can be replicated.



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# Sustainable Communities Pilot

## Fairmount/Indigo Corridor

Boston, MA

- HUD, DOT, and EPA partners are helping support the community through existing programs with transit-oriented development (TOD) planning to help minimize displacement of existing residents, create job and recreational opportunities for those residents, and encourage development of affordable housing.
- Technical assistance from an EPA contractor assisted with three projects;
  - **Fairmount/Indigo Corridor Brownfield Inventory & Prioritization Tool**
    - consolidation of existing brownfield inventories and projects.
    - an area-wide prioritization tool for brownfield redevelopment that enables plans for a greenway and helps inform decisions to minimize the effects of gentrification and displacement of current residents.
  - **Morton Street Homes/Mixed Use Development**
    - planning and technical design consultation for brownfield redevelopment .
    - preparation of visual renderings for community outreach sessions.
  - **Talbot Commons Project**
    - planning assistance to address neighborhood environmental issues (mostly auto-sector and petroleum related) and community concerns related to density so that they can be factored as a whole towards TOD decisions.
- As an off-shoot of this effort, additional connections are being made for assistance with such things as green jobs, green buildings, and innovative remediation technology.

Last Modified	Development Potential	Parcel Id	Site Address	Acres	Station
12/10/2010 9:52	0.00	030100000	0 Broad St	0.08	SOUTH STATI
12/10/2010 9:52	0.00	030100000	98-114 Water St	0.08	SOUTH STATI
12/10/2010 9:52	0.00	030100000	19-21 Congress St	0.08	SOUTH STATI
12/10/2010 9:52	0.00	030100000	0 India St	0.08	SOUTH STATI
12/10/2010 9:52	0.00	030100000	171-173 Milk St	0.08	SOUTH STATI
12/10/2010 9:52	0.00	030100000	301 Franklin St	0.08	SOUTH STATI
12/10/2010 9:52	0.00	030100000	127-133 Broad St	0.08	SOUTH STATI
12/10/2010 9:52	0.00	030100000	172-174 High St	0.08	SOUTH STATI
12/10/2010 9:52	0.00	030100000	0.08	0.08	SOUTH STATI
12/10/2010 9:52	0.00	030100000	60-62 Beach St	0.08	SOUTH STATI



# Opportunities and Benefits

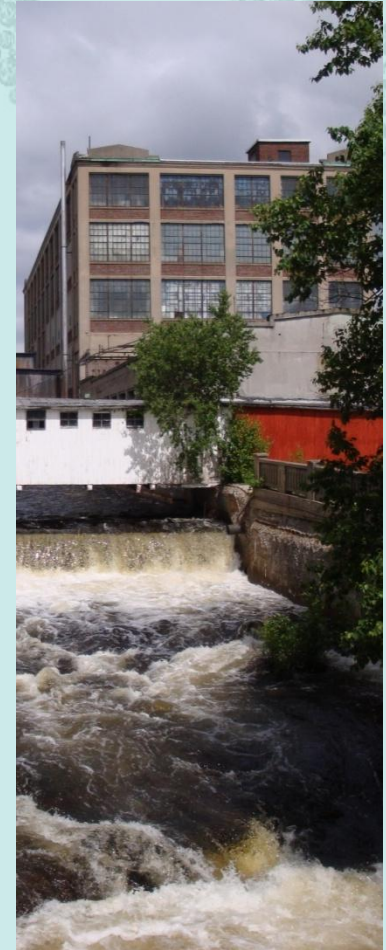
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# Area-Wide Planning Pilots

## Mill District Revitalization

*Sanford, ME*

- EPA awarded a grant to Sanford, ME to support area-wide planning for assessment and cleanup of properties within the City's mill district.
- Tasks of the project include:
  - Market analysis of the Mill Yard area
  - Developing strategies for the reuse of existing infrastructure
  - Developing an area-wide plan for brownfield reuse including required next steps and resources



# Area-Wide Planning Pilots

## Tanner Street District

*Lowell, MA*

- EPA awarded a grant to Lowell, MA to support area-wide planning for assessment and cleanup of properties within the Tanner Street district.
- Tasks of the project include:
  - Site-reuse planning
  - Creating a set of area-wide strategies
  - Developing strategies for facilitating the reuse of existing infrastructure
  - Developing an area-wide plan for brownfields in the Tanner Street District
  - Determining the required next steps and resources needed to implement them.



# Area-Wide Planning Pilots

## West End Revitalization

*Chicopee, MA – Pioneer Valley Planning Commission*

- EPA awarded a grant to Pioneer Valley Planning Commission to support area-wide planning for assessment and cleanup of properties within the West End of Chicopee, MA.
- Goals of the project include:
  - Reinforce/establish relationships with key brownfields stakeholders: residents, landowners, developers, community groups, and relevant public officials (including state and federal)
  - Gather data on existing conditions (environmental, infrastructure and market analyses) at neighborhood brownfields
  - Analyze data, set goals, and establish a strategic vision for the brownfields impacted area
  - Identify re-use scenarios and next steps for key brownfields sites, linked to ongoing plans and projects
  - Establish an iterative process: create a long-term brownfields advisory group to monitor and inform plan implementation



# Opportunities and Benefits



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# Sources of Support

## **Smart Growth**

- HUD-DOT-EPA Sustainable Communities Partnership  
<http://www.sustainablecommunities.gov>
- U.S. EPA Resources
  - EPA Smart Growth  
<http://www.epa.gov/smartgrowth/>
  - Urban Agriculture  
<http://www.epa.gov/brownfields/urbanag/>
  - Sustainable Development of Brownfields  
<http://www.epa.gov/brownfields/sustain.htm>
- SustainLane Government  
<http://www.sustainlane.us/>
- Smart Growth Network  
<http://www.smartgrowth.org/>
- Playbook for Green Buildings & Neighborhoods  
<http://www.greenplaybook.org/>
- LEED for Neighborhood Development (ND)  
<http://www.usgbc.org/>

# Sources of Support

Two footprints are visible on the right side of the slide, composed of numerous small circles, each containing the chemical formula CO2. The footprints are light blue and appear to be walking towards the left.

## **Renewable Energy and Energy Efficiency**

- EPA Study and Guidance on Siting Renewable Energy Development on Contaminated Land  
<http://www.epa.gov/renewableenergyland/>
- General EPA guidance on the use of renewable sources of energy such as solar, wind, geothermal or biomass  
<http://www.epa.gov/cleanenergy>
- EPA Green Power Partnership  
<http://www.epa.gov/grnpower/>
- Energy Star  
<http://www.energystar.gov/>
- HUD Renewable Energy and Green Design Notice – October 2009  
<http://www.hud.gov/offices/adm/hudclips/notices/pih/files/09-43pihn.doc>
- DOE - National Renewable Energy Laboratory  
<http://www.nrel.gov/>

# Sources of Support



## **Water Efficiency and Stormwater Management**

- EPA Guidance on Water Efficiency  
[http://www.epa.gov/WaterSense/water\\_efficiency/](http://www.epa.gov/WaterSense/water_efficiency/)
- EPA Guidance on Low Impact Development (LID) or Storm Water Retention  
<http://epa.gov/owow/nps/lid>  
[http://cfpub.epa.gov/npdes/home.cfm?program\\_id=6](http://cfpub.epa.gov/npdes/home.cfm?program_id=6)  
<http://cfpub.epa.gov/npdes/stormwater/const.cfm>  
*(specifically related to construction concerns)*
- EPA Drinking Water Program  
<http://www.epa.gov/region1/eco/drinkwater/index.html>
- USDA – Natural Resources Conservation Service  
<http://www.nrcs.usda.gov/>
- LID Urban Design Tools (and Clearinghouse)  
<http://www.lid-stormwater.net/>  
*(<http://www.lid-stormwater.net/clearinghouse/>)*

# Sources of Support



## Green Building

- EPA Guidance on Construction and Demolition Recycling:  
<http://www.epa.gov/epawaste/consERVE/rrr/imr/cdm/index.htm>  
<http://www.epa.gov/brownfields/tools/cdbrochure.pdf>
- EPA Green Building Workgroup
  - EPA Guidance on Green Building  
<http://www.epa.gov/ne/topics/envpractice/gbuildings.html>
- HUD Public Housing Environmental and Conservation Clearinghouse  
<http://www.hud.gov/offices/pih/programs/ph/phecc/>
- Energy Star and Green Buildings  
[http://www.energystar.gov/index.cfm?c=green\\_buildings.green\\_buildings\\_index](http://www.energystar.gov/index.cfm?c=green_buildings.green_buildings_index)
- U.S. Green Building Council  
<http://www.usgbc.org/>

# Sources of Support



## **Green Remediation**

- *Green Remediation is defined by the EPA as “the practice of considering all environmental effects of remedy implementation and incorporating options to maximize net environmental benefit of cleanup actions.”*
- EPA Guidance on Green Remediation  
<http://www.clu-in.org/greenremediation/>
- EPA Green Cleanup Standard Initiative (*under development*)  
[http://www.cluin.org/greenremediation/subtab\\_b5.cfm](http://www.cluin.org/greenremediation/subtab_b5.cfm)  
<http://www.astm.org/DATABASE.CART/WORKITEMS/WK23495.htm>
- Sustainable Remediation Forum (SURF)  
<http://www.sustainableremediation.org/>
- EPA Guidance on Diesel Emission Reduction  
[www.epa.gov/cleandiesel](http://www.epa.gov/cleandiesel)

# Sources of Support



## Funding and Cost Analysis

- Reducing Stormwater Costs through LID Strategies and Practices  
<http://www.epa.gov/owow/nps/lid/costs07/>
- Green Values Stormwater Toolbox  
<http://greenvalues.cnt.org/green-infrastructure>
- Federal Tax Credits for Energy Efficiency  
[http://www.energystar.gov/index.cfm?c=products.pr\\_tax\\_credits](http://www.energystar.gov/index.cfm?c=products.pr_tax_credits)
- Economic Benefits of LID  
<http://www.econw.com/casestudies/casestudy?study=low-impact-development>
- Eco-Efficiency Learning Module  
<http://www.wbcd.org/plugins/DocSearch/details.asp?type=DocDet&ObjectID=MTgwMjc>
- BEES 4.0 – Building for Environmental and Economic Sustainability  
<http://www.bfrl.nist.gov/oea/software/bees/>
- EPA Environmentally Preferable Purchasing  
<http://www.epa.gov/opptintr/epp/>

# Let's Recap



Sustainability is in the Guidelines.



Learn from past proposal and project success.



Sustainability is an environmental, social AND economic consideration.



There are many resources and support opportunities available for your project.

# Any Questions?

## Contact Information:

**Jessica Dominguez**  
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**Sustainable Reuse Lead**

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