

# Resilient Approaches for Municipalities to Address Flooding in Mississippi: Green Infrastructure and Wetlands



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**ENVIRONMENTAL LAW INSTITUTE**  
**OCEAN PROGRAM**

Gulf of Mexico  
**Restoration and Recovery**

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**Introduction to Gulf Recovery**  
*Learn about the processes that are helping the Gulf recover from the Deepwater Horizon Oil Spill*

(DoD photo by Petty Officer 3rd Class Hubert Brazzali, U.S. Coast Guard/Released)

[www.eli-ocean.org/gulf](http://www.eli-ocean.org/gulf)

# Agenda

- Green Infrastructure Approaches to Flooding
  - *David Perkes and Tracy Wyman, GCCDS*
- Identification and Strategic Preservation of Wetlands to Maximize Protection from Flooding
  - *Rebecca Kihslinger, ELI*
- Funding Mechanisms for Projects that Address Flooding
  - *Amy Reed and Sofia O'Connor, ELI*
- Q&A

# Please Submit Your Questions

- We will have a Q&A session at the end of the webinar, rather than after each presentation
- You can submit your questions by typing them in the GoToWebinar's chat window
- If you are joining us by phone, you can e-mail your questions to [ococonnor@eli.org](mailto:ococonnor@eli.org)

# Resilient Approaches for Municipalities to Address Flooding in Mississippi: *Green Infrastructure and Wetlands*

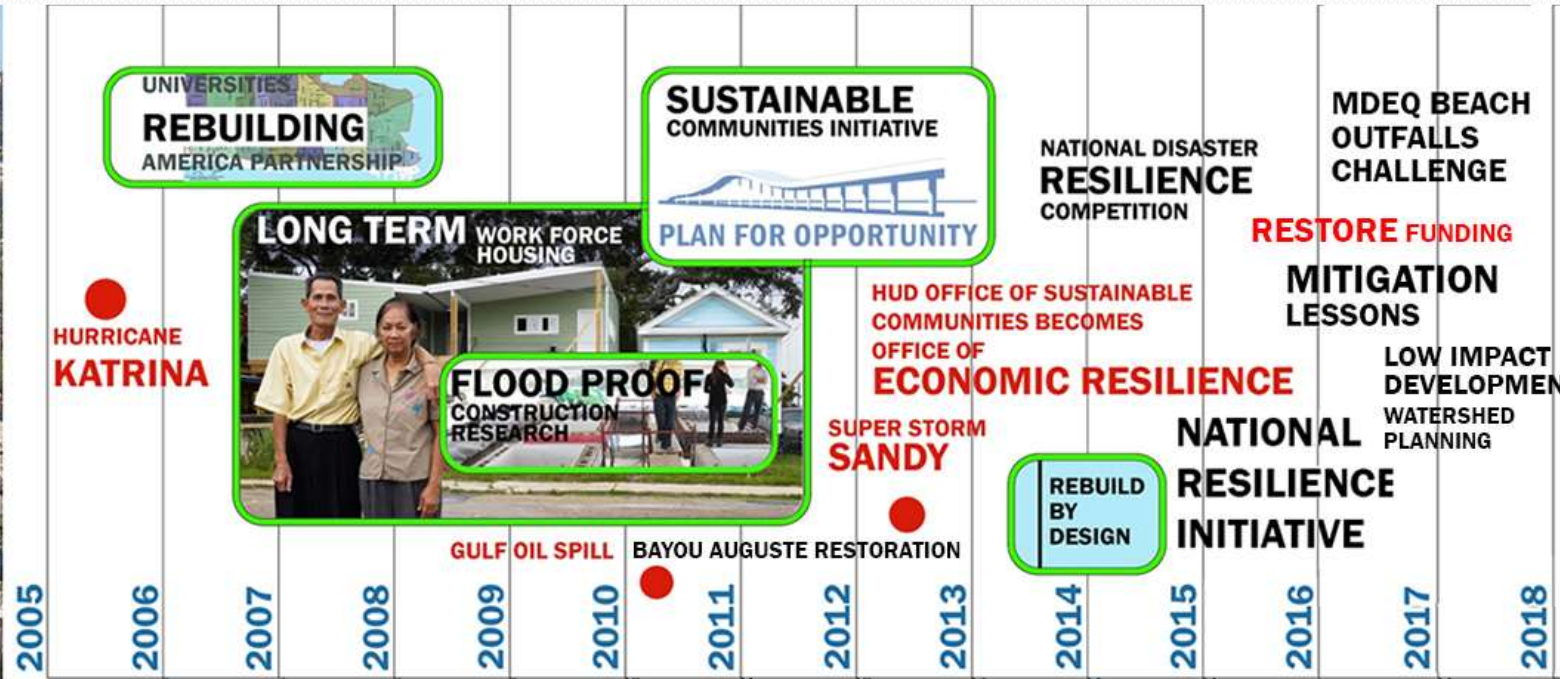
## Green Infrastructure Approaches to Flooding

*David Perkes and Tracy Wyman  
Gulf Coast Community Design Studio*

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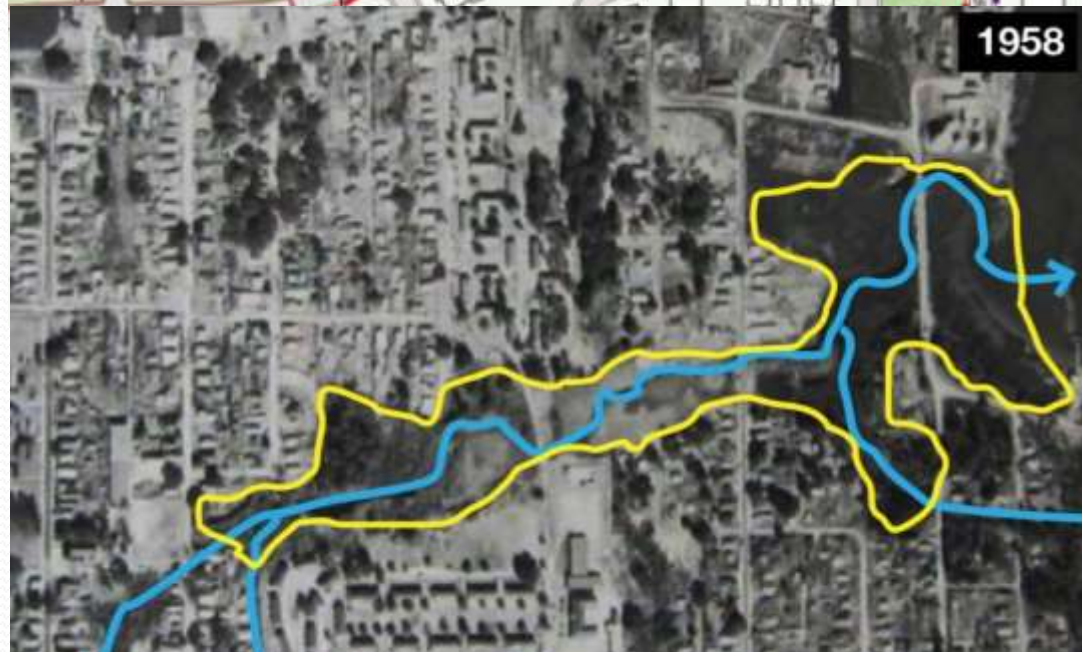
# Gulf Coast Community Design Studio

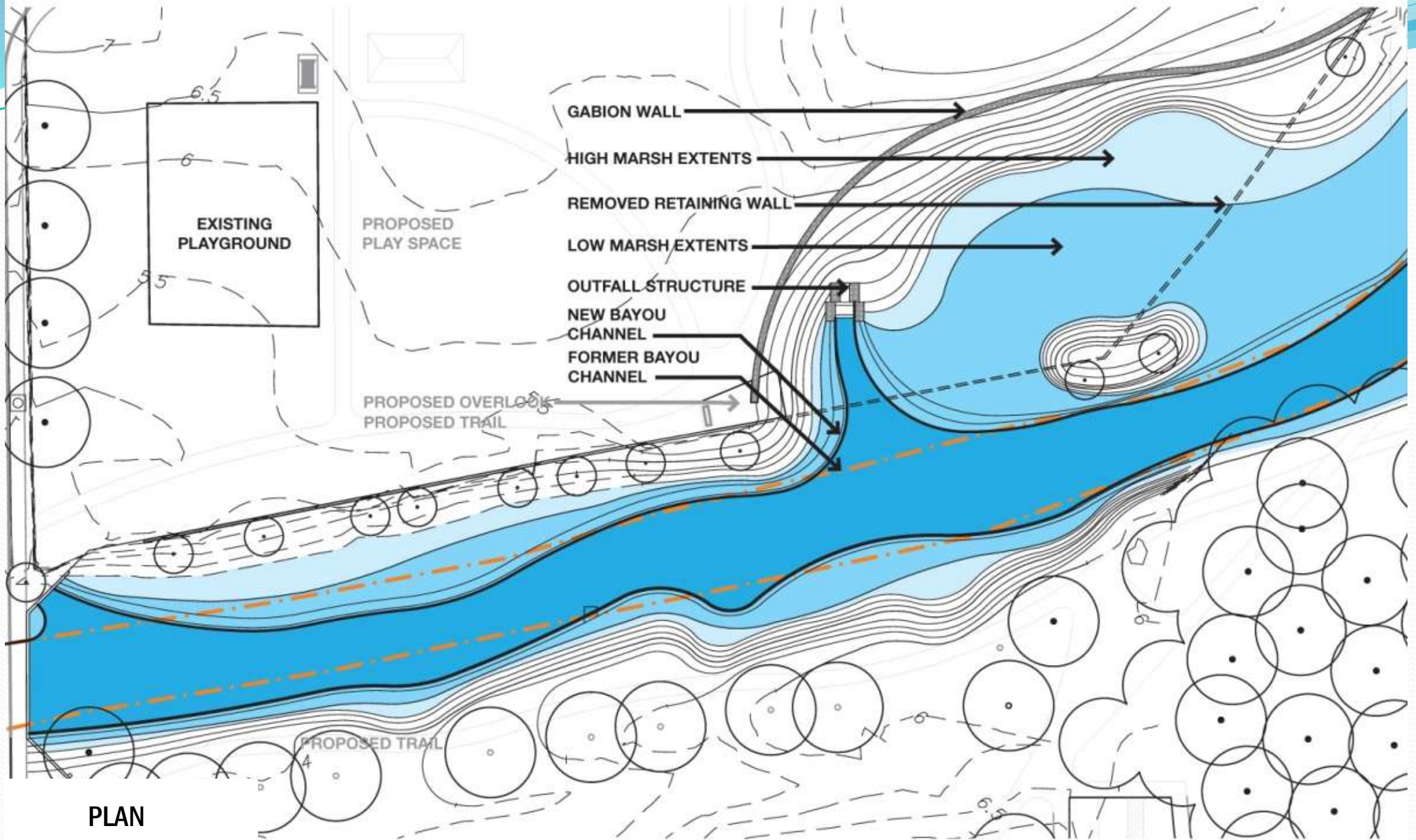




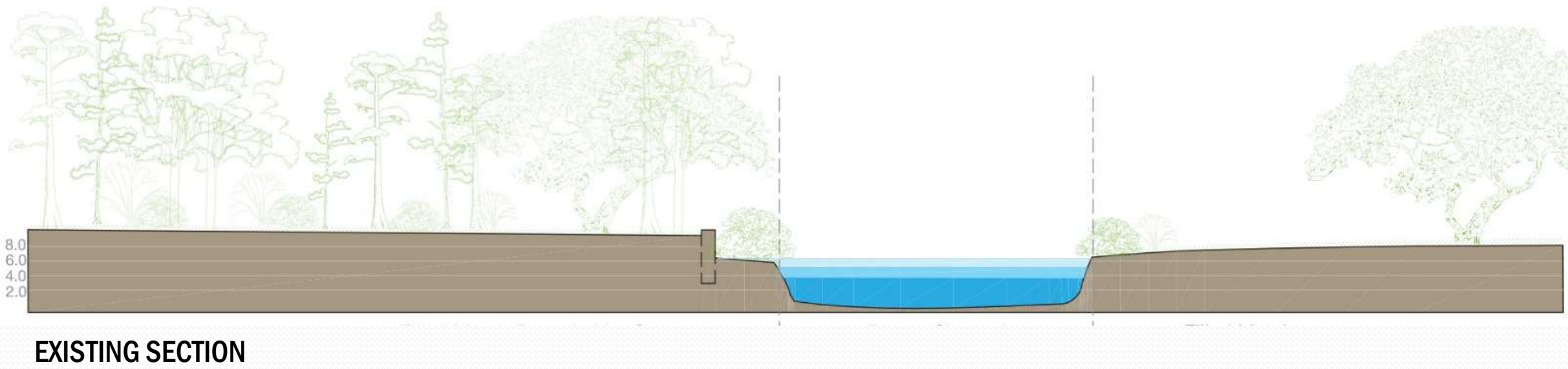
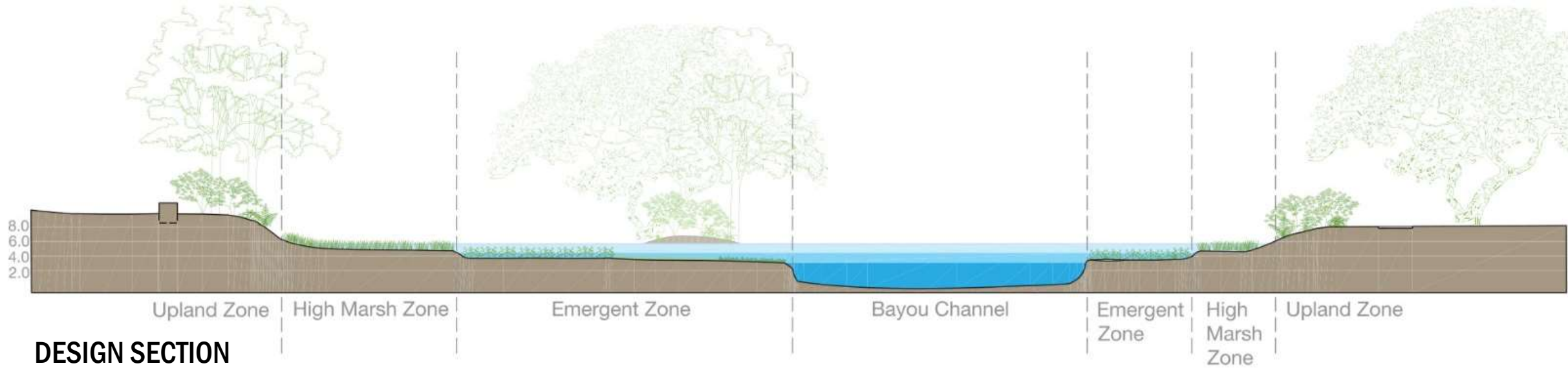








PLAN











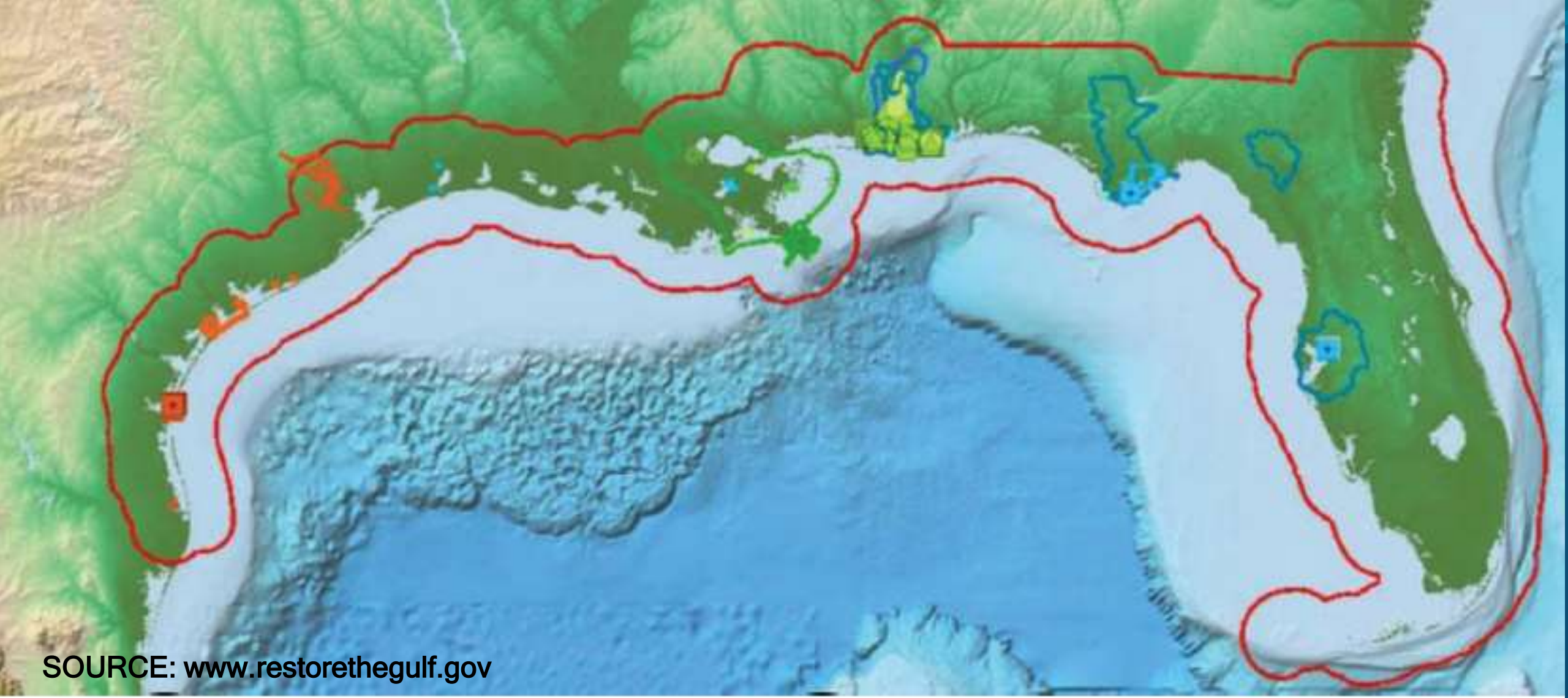
# Green Infrastructure / Low Impact Development



**An approach to stormwater management that preserves natural resources and uses natural processes to recharge stormwater into the ground while also meeting community development goals.**

**For a well-designed system, the approach integrates economics, ecological science, and social dynamics in development processes within the context of a watershed.**





**SOURCE: [www.restorethegulf.gov](http://www.restorethegulf.gov)**

## **MAXIMIZING THE IMPACT OF RESTORE FUND PROJECTS**

Significant resources are being directed toward restoration projects on the Mississippi Gulf Coast as a result of the 2010 BP Oil Spill, with many of these directly adjacent to the coastline. The connection between upland management strategies and activities is undeniable and extremely important in maximizing the potential benefits of these downstream restoration projects.

## STORMWATER CARRIES POLLUTANTS



PET & LIVESTOCK  
WASTE



SEDIMENTATION



LITTER



PESTICIDES &  
FERTILIZERS



OIL & CHEMICALS



YARD WASTE &  
ORGANIC MATTER

## WHAT HAPPENS UPSTREAM *impacts downstream waterways.*

In heavy storm events the velocity and volume of stormwater often cause flooding in low-lying areas, as well as erosion of stream banks and sedimentation in stream beds.

When stormwater is piped underground it is untreated, compromising water quality as it carries pollutants downstream to drainage areas, creeks, streams, bayous, and the Mississippi Sound.



FLOODING



STREAM SCOURING



STORMWATER OUTFALL

This and facing image courtesy of LID - Low Impact Development - a design manual for urban areas by the University of Arkansas Community Design Center.

**OUR NATURAL WATERBODIES** *are the region's greatest asset.*



**OLD FORT BAYOU AT THE  
PRESERVE GOLF CLUB**



**A TRIBUTARY OF TURKEY CREEK,  
NORTH OF GULFPORT- BILOXI  
AIRPORT**



**WEEKS BAYOU ACROSS  
FROM EAST BEACH**



**MISSISSIPPI SOUND FROM  
PASS CHRISTIAN**

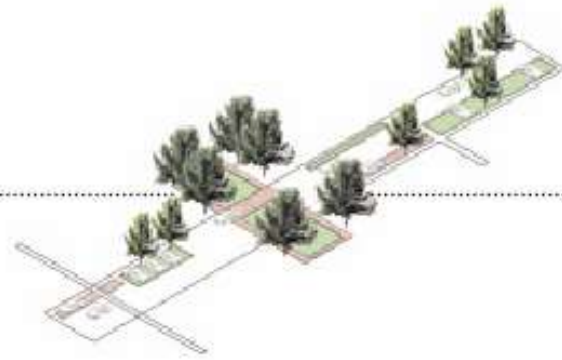
## LID IS EFFECTIVE AT MULTIPLE SCALES



**PROPERTY SCALE**



LID **lots** infiltrate stormwater through **reduction of impervious surfaces** and integrating **rain gardens** and **productive landscapes** with play lawns.



**STREET SCALE**



LID **streets** reduce and filter runoff using **curb cuts** or **flush curbs** to direct stormwater to **infiltration planters**, **tree boxes**, **rain gardens** and **bioswales**. The street ensures pedestrian and bicycle safety, and enhances sociability while providing **ecologically-based stormwater management**.



**NETWORK SCALE**



**Vegetated open space** at the scale of the city and region can deliver vital ecological services not feasible at the scale of the lot, block, neighborhood, or street. To achieve this, open space should be comprehensively planned as a green network that maintains waterbody functioning and ecosystem connectivity through the use of **designed parks**, **greenways**, and **self-organizing conservation areas**.

# Low Impact Development (LID)

## KEY PRINCIPLES

SLOW

DISPERSE / SPREAD

FILTER

SOAK / INFILTRATE



### Conventional Design

- Quickly moves stormwater off site.
- Uses piped systems to carry stormwater to an outlet, many times a natural body of water.

### LID Design

- Uses natural processes in a designed system
- Slows and disperses stormwater so it can infiltrate the soil before reaching a natural body of water.

**Porous Pavement** Page 2 of 4

**Design Factors**

**Sites**  
Porous pavement replaces impervious area at a 1:1 ratio. All stormwater from the porous pavement surface must infiltrate directly into a crushed rock storage layer.  
To deter clogging over time, porous pavement should operate with closed curbs. If approved by the local jurisdiction, alternate storage may be installed beneath the porous pavement and used to approved applications. Water quality treatment must be provided for any stormwater flowing from adjacent impervious areas onto the porous pavement.

**Slopes**  
In general, porous pavement should not be used on slopes greater than 20% (1:5).

**Climate**  
As needed, and where existing soils have low permeability and an infiltration rate of 0.2" per hour or less, provide an under drain to an approved outlet structure.

**Methods**  
Check with the local building department to confirm site-specific requirements. Impervious limits are recommended between base rock and aggregate foundations and conventional Asphalt Concrete (AC) or Portland Cement Concrete (PCC) pavement.

**Porous Pavement Design**  
For specific design sites, use the following references:  

- Porous asphalt  
 ODOT 2008 Standard Specifications, or as updated.  
 See National Asphalt Pavement Association Information Series 101 for additional information.
- Porous concrete  
 Stormwater Management Manual, Chapter 2.  
 Porous Pavement section, City of Portland Bureau of Environmental Services, 2008 or as updated.
- Pavers  
 Interlocking Concrete Pavement Institute specifications and Portland Department of Transportation 2007 Standard Specifications Section 867.01.00 or as updated.

Portland Pavement, Portland Community College, West Creek Campus

**Porous Pavement**



# Porous Pavement

ABLE . PERVIOUS . POROUS . WATER FLOWS THROUGH IT . SAME THING



**Curb Cut**



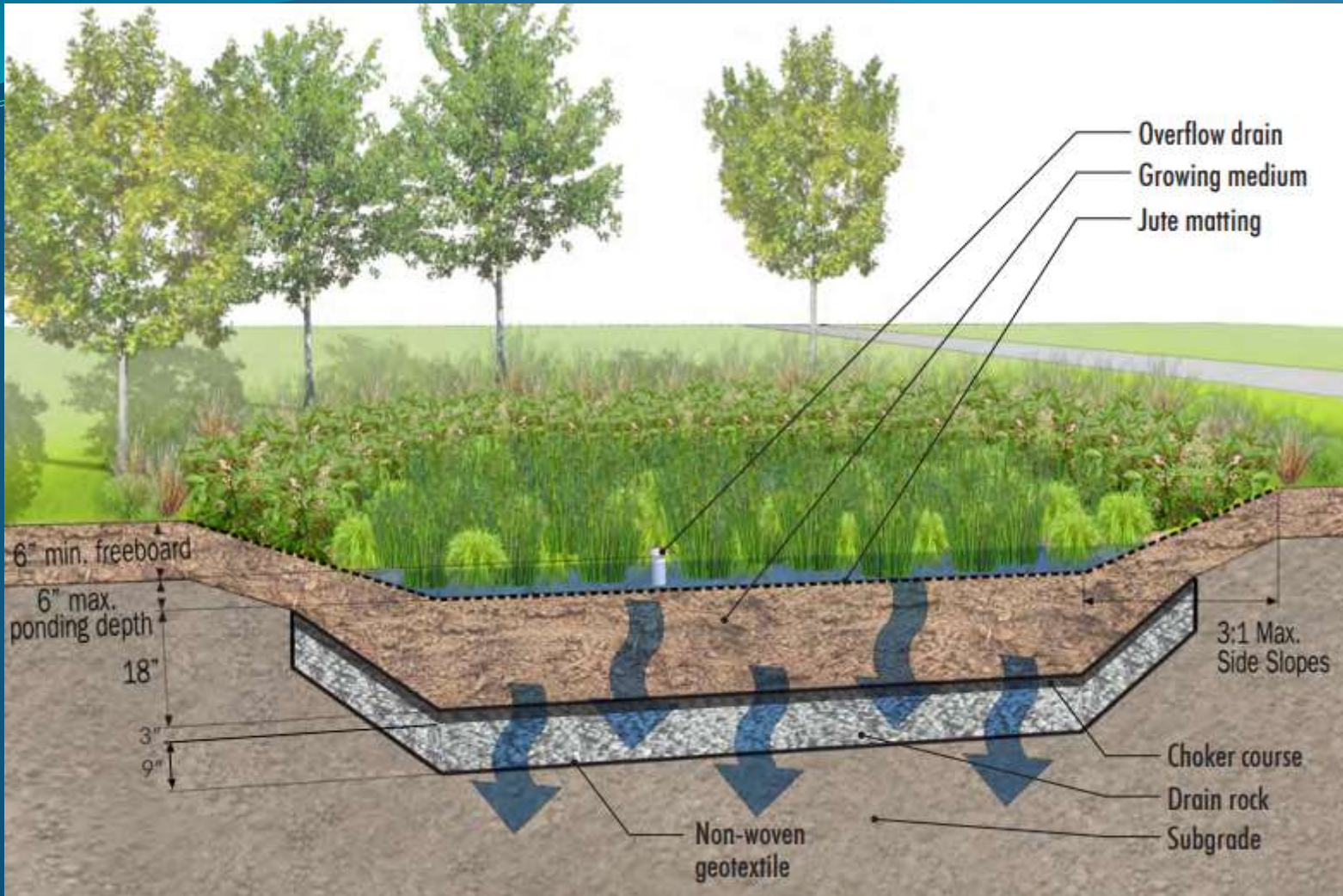


Image Source: *Low Impact Development Approaches Handbook* by Clean Water Services, Portland Oregon.

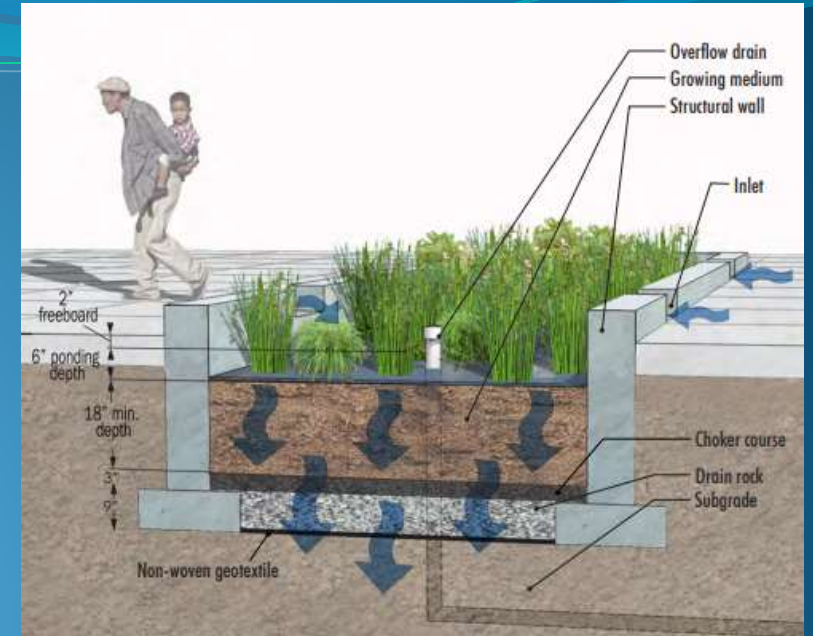


Image Source: *Low Impact Development Approaches Handbook* by Clean Water Services, Portland Oregon.

# Rain Garden / Infiltration Planter

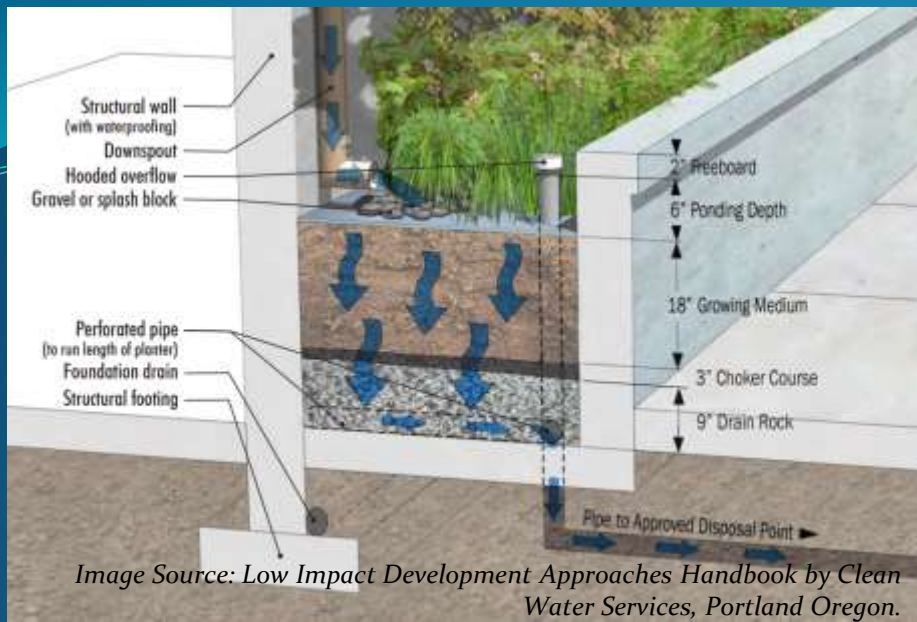


12<sup>th</sup> & Montgomery Street, Portland, Oregon. *Image Source: Low Impact Development Approaches Handbook by Clean Water Services, Portland Oregon.*



Fowler Middle School, Tigard, Oregon. *Image Source: Low Impact Development Approaches Handbook by Clean Water Services, Portland Oregon.*

# Rain Garden / Infiltration Planter

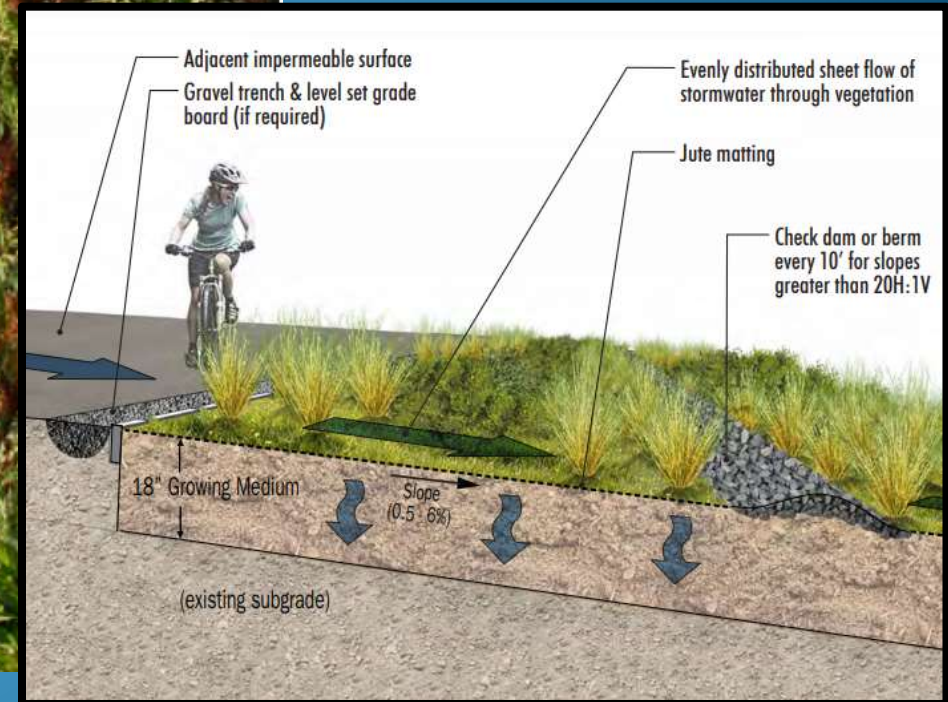


PSU Stephen Epler Hall. Stormwater from the impermeable plaza area is directed to bands of granite stone that are strategically placed at low drainage points to convey stormwater to a series of flow-through planters. *Image Source: Low Impact Development Approaches Handbook by Clean Water Services, Portland Oregon.*

# Flow-Through Planter



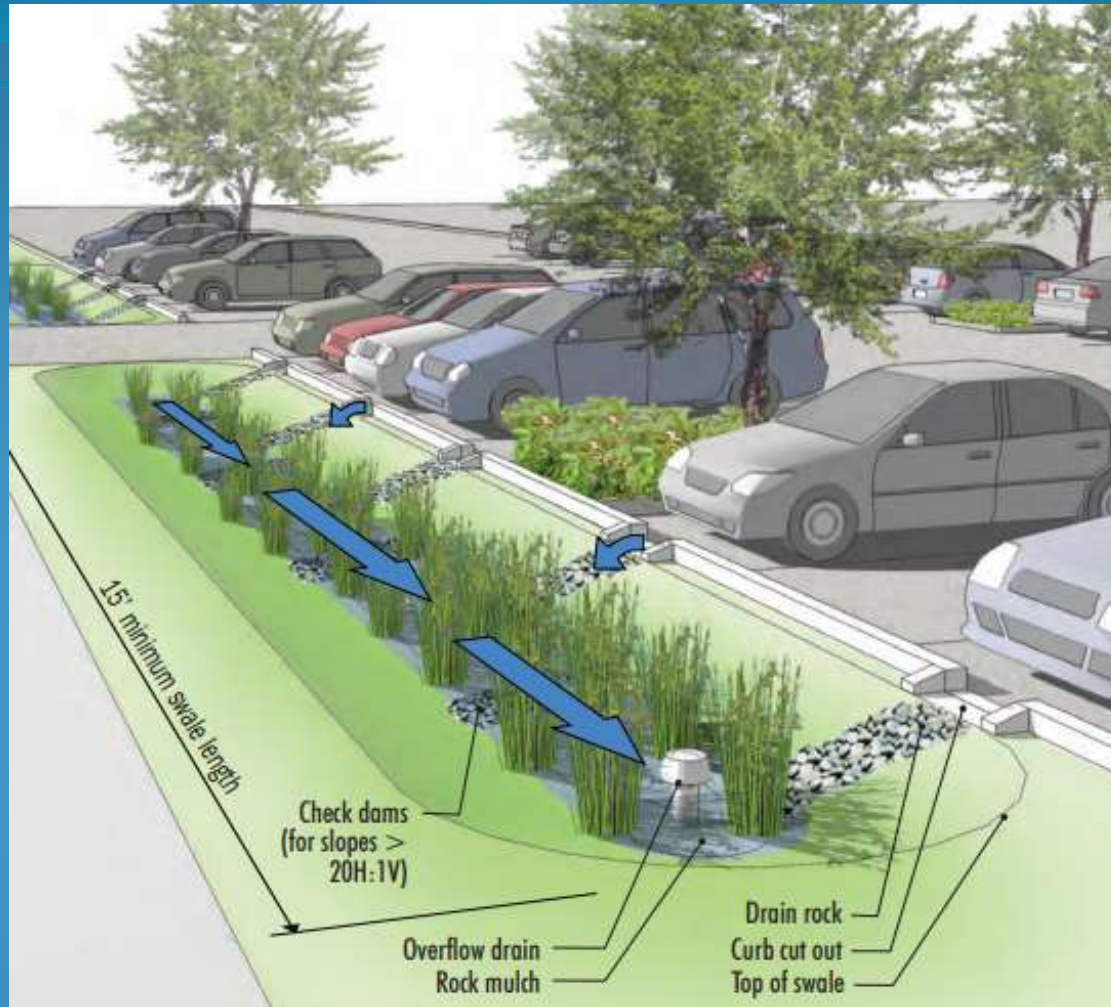
Oregon Zoo Parking Lot. Image Source: *Low Impact Development Approaches Handbook* by Clean Water Services, Portland Oregon.



# Vegetated Filter Strip



Tanasbourne Office Building, Washington County



# Bioswale



# Constructed Wetland



<https://www.cleanwaterservices.org/media/1468/lida-handbook.pdf>



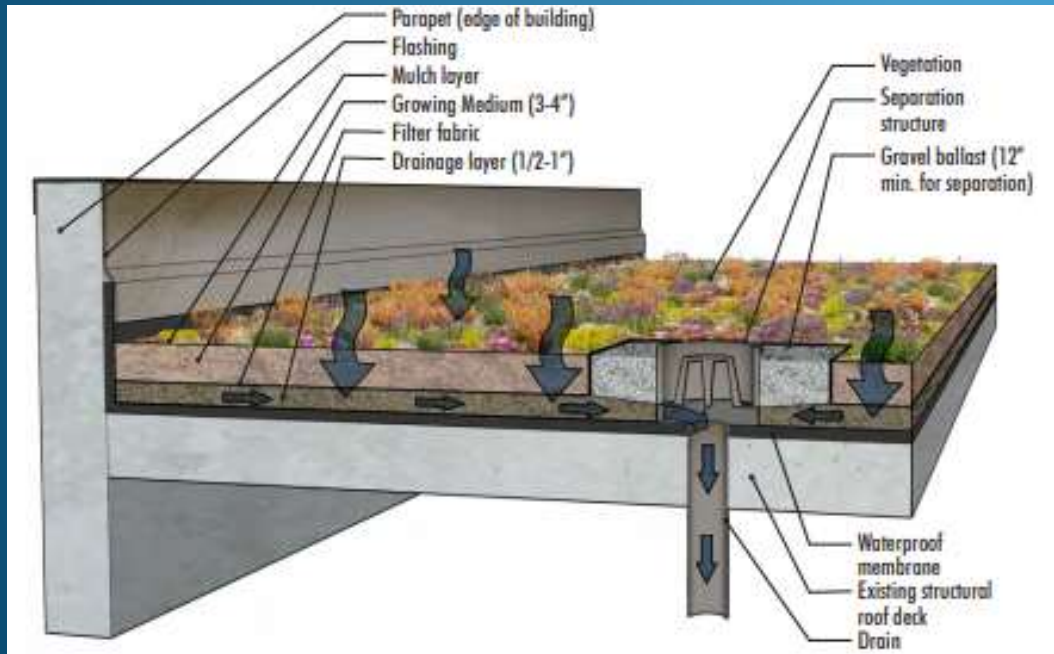
10<sup>th</sup> & Hoyt; Image Source: <https://artfulrainwaterdesign.psu.edu/project/10thhoyt>

Image Source: *Low Impact Development Approaches Handbook* by Clean Water Services, Portland Oregon.

# Disconnected Downspout



Rinker Hall Green Roof, University of Florida. *Image Source: [http://sfathi-bcp6580.blogspot.com/2012/01/green-roof-systems-precious-technology\\_31.html](http://sfathi-bcp6580.blogspot.com/2012/01/green-roof-systems-precious-technology_31.html)*



Clean Water Resources Field Operations. *Image Source: Low Impact Development Approaches Handbook by Clean Water Services, Portland Oregon.*

# Green Roof



# The Economics of LID

**Table 2. Summary of Cost Comparisons Between Conventional and LID Approaches<sup>a</sup>**

Project	Conventional Development Cost	LID Cost	Cost Difference <sup>b</sup>	Percent Difference <sup>b</sup>
2 <sup>nd</sup> Avenue SEA Street	\$868,803	\$651,548	\$217,255	25%
Auburn Hills	\$2,360,385	\$1,598,989	\$761,396	32%
Bellingham City Hall	\$27,600	\$5,600	\$22,000	80%
Bellingham Bloedel Donovan Park	\$52,800	\$12,800	\$40,000	76%
Gap Creek	\$4,620,600	\$3,942,100	\$678,500	15%
Garden Valley	\$324,400	\$260,700	\$63,700	20%
Kensington Estates	\$765,700	\$1,502,900	-\$737,200	-96%
Laurel Springs	\$1,654,021	\$1,149,552	\$504,469	30%
Mill Creek <sup>c</sup>	\$12,510	\$9,099	\$3,411	27%
Prairie Glen	\$1,004,848	\$599,536	\$405,312	40%
Somerset	\$2,456,843	\$1,671,461	\$785,382	32%
Tellabs Corporate Campus	\$3,162,160	\$2,700,650	\$461,510	15%

<sup>a</sup> The Central Park Commercial Redesigns, Crown Street, Poplar Street Apartments, Prairie Crossing, Portland Downspout Disconnection, and Toronto Green Roofs study results do not lend themselves to display in the format of this table.

<sup>b</sup> Negative values denote increased cost for the LID design over conventional development costs.

<sup>c</sup> Mill Creek costs are reported on a per-lot basis.



A VEGETATED FILTER STRIP SURROUNDS THE WATER-CAPTURING RESERVOIR USED TO IRRIGATE THE PARK'S LANDSCAPE



PERMEABLE PAVING IS USED FOR WALKWAYS AND PARKING

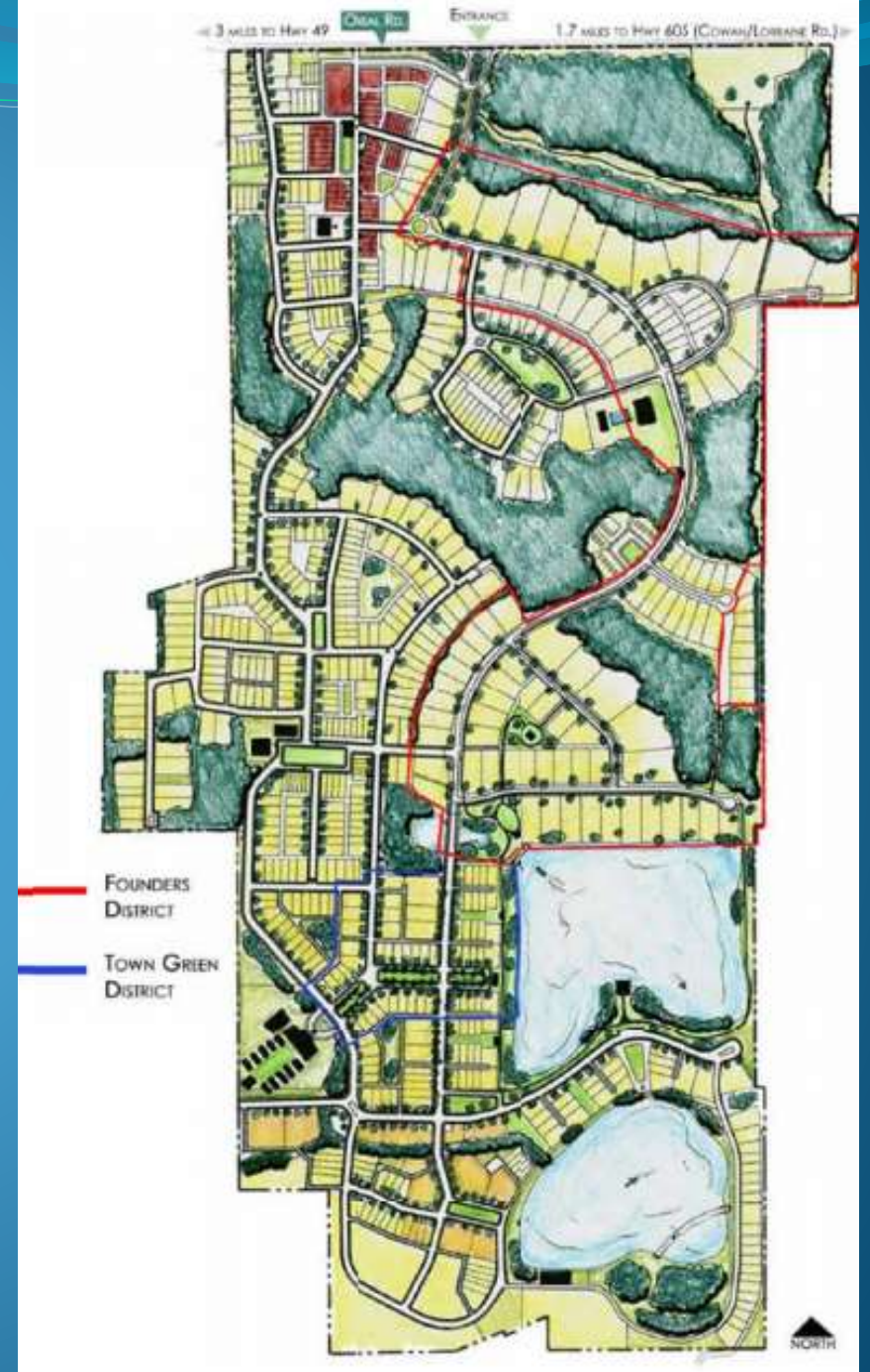
## Railroad Park, Birmingham



Gaines Street, Tallahassee



Florence Gardens, Gulfport



# It takes a team from policy to design to development

## for Additional Sustainable Dev

### Applicability

a. New development in the RM-, B-1, or B-2 zones is eligible for bonuses including:

1. An increase in maximum area...
2. An increase in the maximum...
3. A reduction in the total area...
4. A modification to the off-site parking, or an increase to...

b. Development may include a surface water feature, the amount of an incentive be...

c. Features provided to satisfy a design standard shall not be counted towards other...

### Conflict with Transitional Standards

where bonuses in this section conflict with...

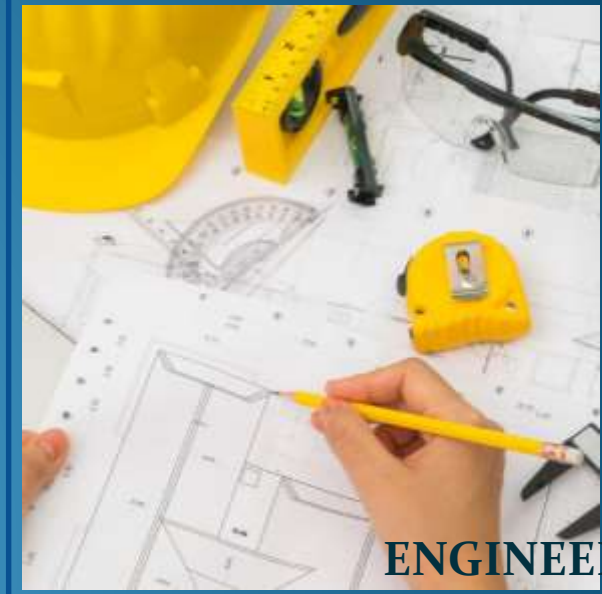
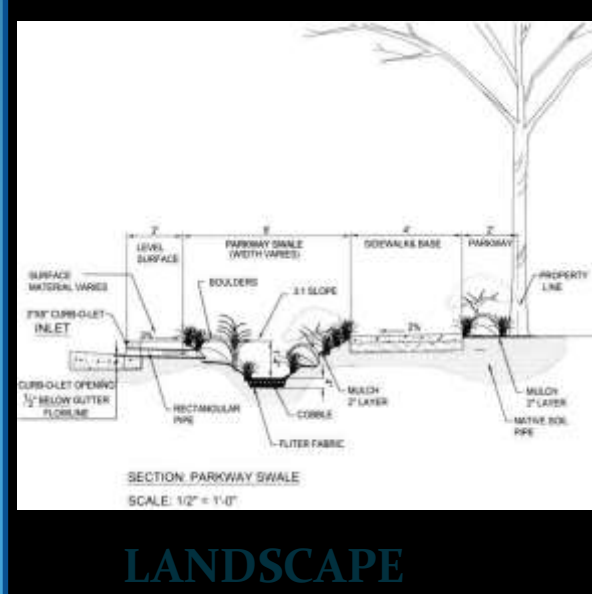
### Procedure

a. Applicants seeking to use the surface water feature...

b. Review of any request for a bonus shall be held in a public hearing (Section 23-2-4(C)), Site Plan (Section 23-6-12(C)(4)), and...

c. The bonus granted shall be based on the criteria in Section 23-6-12(C)(4), Menu of Incentives, and...

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REGULATION**



**ST**

# Low Impact Development

## Gulf Coast Story Map

MSU / Gulf Coast Community Design Studio | November 7, 2019

<https://storymaps.arcgis.com/stories/a4dofb39b26b4b7bbfc202c3457405d>

# Identification and Strategic Preservation of Wetlands to Maximize Protection from Flooding

Rebecca Kihslinger  
Environmental Law institute

# ELI's Wetlands Program

eli.org/wetlands-program

The screenshot shows the website for the Environmental Law Institute's Wetlands Program. At the top, there is a navigation bar with a search box, 'ADVANCED SEARCH', 'MEMBERS', 'ENVIRONMENTAL LAW 101', 'RECOGNIZING EXCELLENCE', 'BLOG', and a 'DONATE' button. Below this is a dark header with the ELI logo and the tagline 'ELI makes law work for people, places, and the planet'. A secondary navigation bar contains links for 'WHO WE ARE', 'EXPLORE OUR PROGRAMS', 'ACCESS OUR RESOURCES', 'ATTEND AN EVENT', and 'GET INVOLVED'. The main content area features a breadcrumb trail: 'You are here > Home » Explore Our Programs » Wetlands'. On the left, a 'Wetlands' dropdown menu is open, showing options for 'MAIN PROGRAM PAGE', 'CONFERENCES, TRAININGS, & SEMINARS', 'PUBLICATIONS', and 'CONTACT US'. The main heading is 'ELI's Wetlands Program'. The introductory text states: 'The Environmental Law Institute's Wetlands Program provides professionals and the public with timely, balanced information on wetlands law, policy, science, and management in order to prevent wetland losses and achieve an overall gain of wetlands across the United States.' A 'NEW!' announcement invites users to join the 'Wetlands and Waters' e-mail list. The 'Featured Areas of Expertise and Resources' section includes: 'Education and Outreach to promote the best in wetlands protection.'; 'National Wetlands Awards: The National Wetlands Awards honor people who have contributed in an extraordinary way, through science, education, land stewardship, land development, or program development, to the conservation of the nation's wetlands resources.'; 'National Wetlands Newsletter: The National Wetlands Newsletter was published for nearly 38 years, providing key information and analysis to people engaged in protection and management of wetlands, watersheds, floodplains, and coastal resources. ELI members can access the complete online archives, illustrating the progression of wetlands law and policy from 1978-2016.'; 'Convening Experts and Stakeholders to develop and identify model approaches:'; 'Wetlands Training, Seminars, and Workshops'; and 'Research and Policy Analysis on cutting edge issues.' This section further details 'Clean Water Act Jurisdiction' and 'Compensatory Mitigation Research'.

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Wetlands

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CONFERENCES, TRAININGS, & SEMINARS

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## ELI's Wetlands Program

The Environmental Law Institute's Wetlands Program provides professionals and the public with timely, balanced information on wetlands law, policy, science, and management in order to prevent wetland losses and achieve an overall gain of wetlands across the United States.

**NEW!** Join *Wetlands and Waters* e-mail list to get monthly updates on the latest research, resources, events, and more from ELI. Contact [wetlands@eli.org](mailto:wetlands@eli.org) to join.

Featured Areas of Expertise and Resources:

- Education and Outreach to promote the best in wetlands protection.
  - National Wetlands Awards:** The National Wetlands Awards honor people who have contributed in an extraordinary way, through science, education, land stewardship, land development, or program development, to the conservation of the nation's wetlands resources.
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- Convening Experts and Stakeholders to develop and identify model approaches:
  - Wetlands Training, Seminars, and Workshops**
- Research and Policy Analysis on cutting edge issues.
  - Clean Water Act Jurisdiction:** ELI works to support protection for wetlands and waters no longer protected by the federal Clean Water Act in the wake of two pivotal Supreme Court decisions.
  - Compensatory Mitigation Research:** ELI is the leading research institution to evaluate compensatory mitigation required to offset adverse impacts to wetlands. ELI has conducted multiple studies of all compensatory mitigation mechanisms, including mitigation banking, **in-lieu fee mitigation**, and permittee-responsible mitigation, and done foundational work on the magnitude of compensatory mitigation and new approaches to improve its effectiveness.



# Wetlands





Photo: Ray Skinner,  
Flickr

# Wetlands and Flood Protection



# Otter Creek, Vermont

Photo: Doug Kerr, flickr



# Wetlands and Coastal Storms

NASA



# Superstorm Sandy

U.S. Fish and Wildlife Service



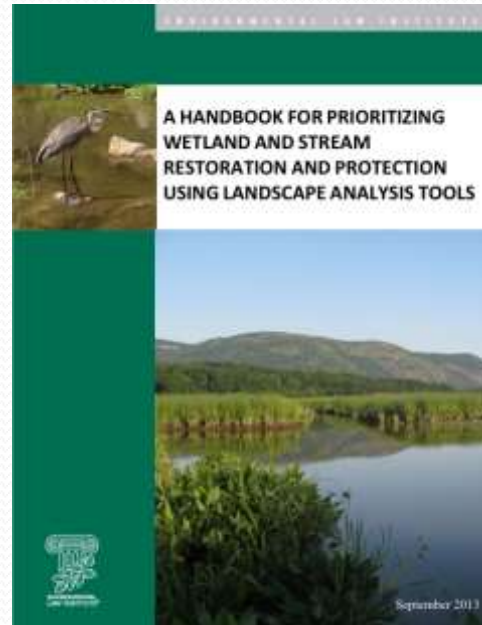
Photo: Garden Beth, flickr

# Wetland Restoration Reduces Coastal Flooding – Cape May, New Jersey

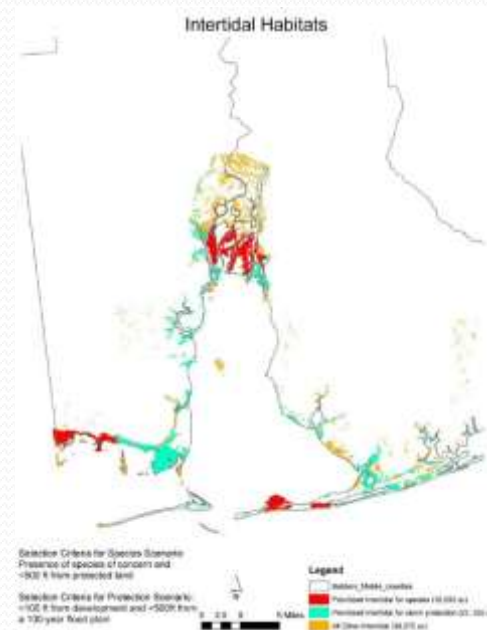
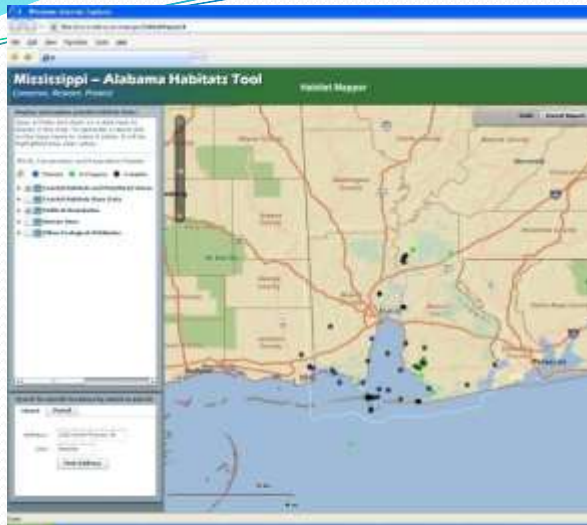
## Developing Wetland Restoration Priorities for Climate Risk Reduction and Resilience in the MARCO Region



Environmental Law Institute  
December 2016



# Prioritizing Wetlands for Risk Reduction



# NOAA Habitat Priority Planner/ Mississippi-Alabama Habitats Tool

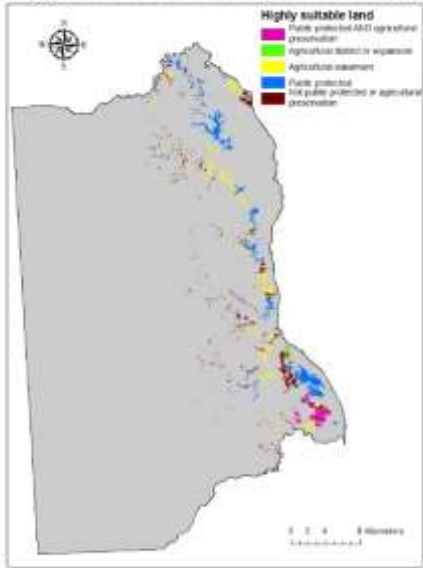




# Protecting and Restoring Wetlands for Flood Risk Reduction

- Identify Goals and Objectives with community input (what problems are you addressing)
- Work with experts to conduct analyses/ map potential sites/ identify potential projects
- Determine prioritization criteria (highest risk, cost-effectiveness, site sustainability, social values, maintenance)
- Select Projects (based on prioritization criteria)
- Funding and implement

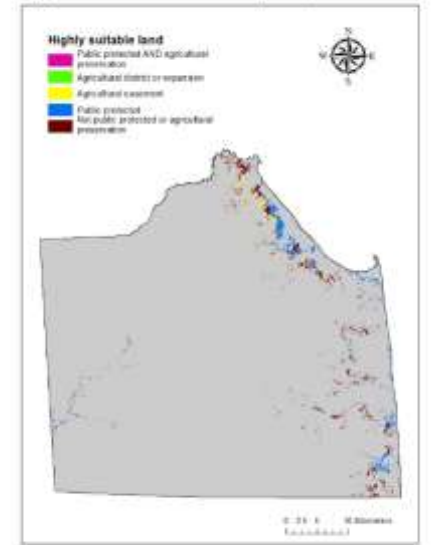
Highly suitable land for marsh migration, Kent County



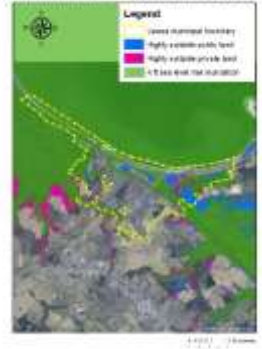
Highly suitable land for marsh migration, New Castle County



Highly suitable land for marsh migration, Sussex County



Sea level rise and marsh migration potential, Lewes, DE



# Delaware Stepwise Approach for Marsh Migration

1. Define Focus Areas
2. Identify Priorities
3. Use Existing Programs to Implement Priorities
4. Develop Focused Messaging and Outreach Campaign



## Protection and Restoration Programs

- Regulations
  - Federal, state, local
  - Compensatory mitigation
- Planning
  - Comprehensive plans
  - Resilience plans
  - Hazard Mitigation Plans
- Voluntary Restoration
  - State, local, private



Questions

# Funding Mechanisms for Projects that Address Flooding

Amy Reed and Sofia O'Connor  
*Environmental Law Institute*



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# Today's Discussion

- MDEQ's Mississippi Project Portal
- The 3 Main Funding Streams (RESTORE Act, NRDA, NFWF) can all be used to address flooding
  - How the process works
  - Project selection process
  - Criteria used for evaluating project ideas
- Additional funding sources

# The Mississippi Project Portal

- **All project ideas must be submitted to the state's Project Portal**
  - Submit a new idea
  - Change or tweak a previous idea
  - Review all existing ideas in the portal (map)
- **The Project Portal is online and is open 24/7**
  - Linked on the MDEQ website (or search "MDEQ project portal")
  - <https://www.mdeq.ms.gov/restoration/project-portal/>
  - Not the same as the Gulf-wide NRDA portal – **best to use the state portal**
- ***Keep in mind:*** No guarantee that ideas will be implemented exactly as described in the original proposal (or that the person/organization who submits the idea will be chosen to implement the project)

## What information do I include in my portal submission?

- The online form will ask you to provide information about:
  - **Organization/sponsor**
    - According to MDEQ, only certain types of entities are eligible to be selected to implement project ideas they submit:
      - **Non-profit organization**
      - **Government entity**
  - Project Name (description and location)
  - Location of project
  - Project description
  - Types of activities (check all that apply)
  - Type of habitat
  - Resources that would benefit
  - Project status
  - Project cost



# Funding Streams for Restoration Projects

- 3 Major Funding Streams
  - **RESTORE Act**
    - Money in Bucket 1 and 3 is for projects selected by the state
    - Bucket 2 projects are chosen by the RESTORE Council and may occur in MS or elsewhere in the Gulf region
  - **NRDA** (Natural Resource Damage Assessment)
  - **NFWF** (National Fish and Wildlife Foundation)
- Project ideas collected in the Project Portal are considered under multiple funding streams
  - Ideas that aren't selected for funding in a given cycle stay in the database for future consideration
- Each funding stream has **its own project selection process and evaluation criteria.**

# The RESTORE Act

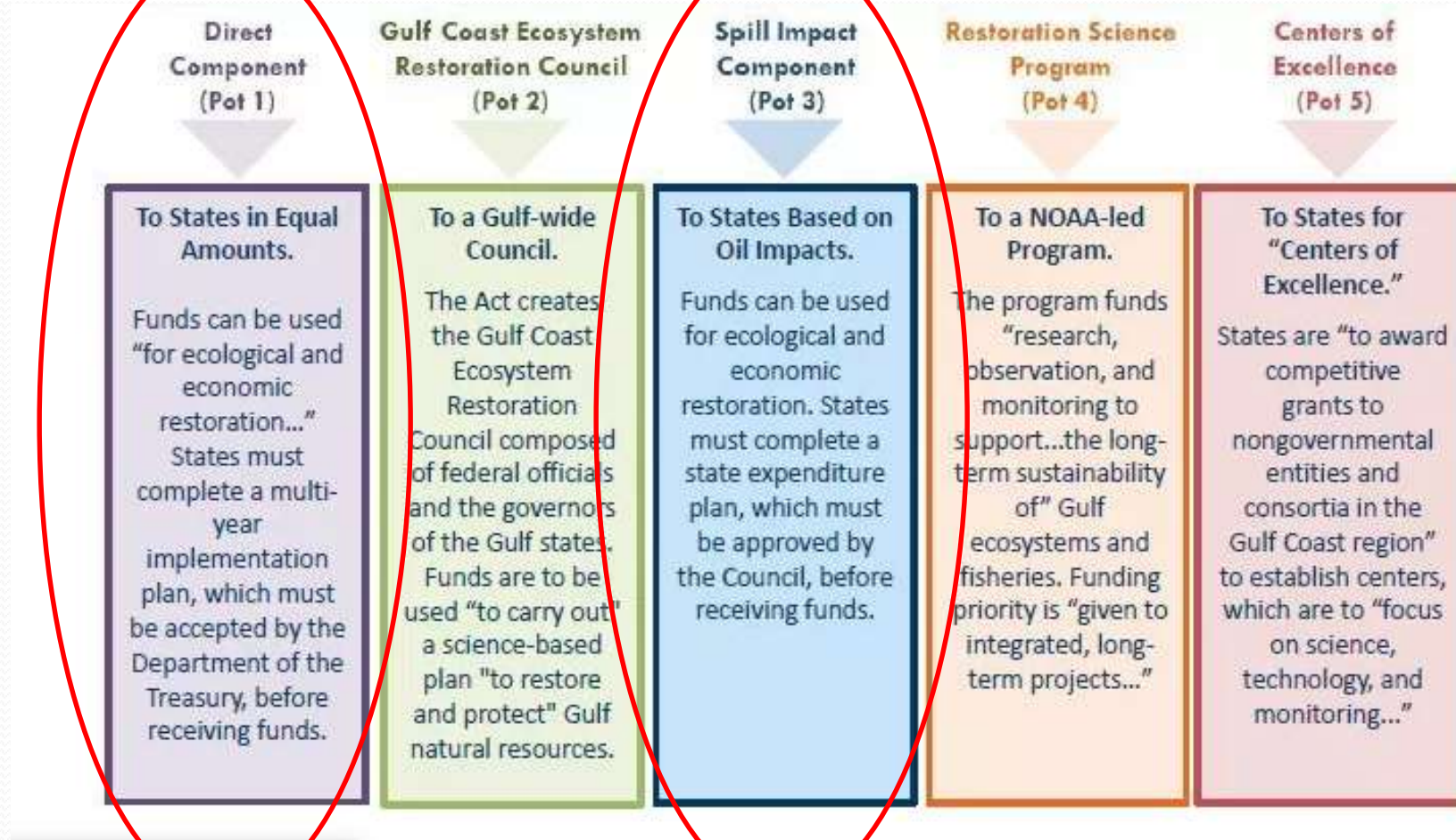
***What is RESTORE?*** The RESTORE Act is a law that sends *Deepwater Horizon* settlement money to the Gulf for restoration and recovery.

RESTORE Act money can be used for environmental and economic restoration projects, as well as research activities.

- The RESTORE money flows through five different “Buckets.” Each bucket has different rules for how, where, and by whom the funds are to be used.

***How much?*** MS is receiving over **\$700 million** through the RESTORE Act’s five buckets. As of Feb. 2020, **around \$466 million are left in Bucket 1 and Bucket 3** combined (these are the pots for which the public can submit project ideas to MDEQ).

# The RESTORE Act



## The RESTORE Act law and regulations set the guardrails for “eligible activities” under Bucket 1 and Bucket 3.

- **Geographic Area:** Activities must be carried out in the “Gulf Coast Region”
  - In Mississippi: Jackson, Harrison, Hancock Counties (and state waters seaward to state’s jurisdictional limits)
  - “Adjacent land, water, and watersheds” within 25 mi. of a coastal county
  - All federal waters in the Gulf of Mexico
- **Science-Based:** Activities designed to protect or restore natural resources must be based on the best available science (defined in the law)
- **Types of Projects:** The RESTORE Act lists 11 categories of “eligible activities” (activity means activity, project, or program, including research or monitoring) for funding under Bucket 1 and 3.

# RESTORE Act:

## List of Eligible Activities (Buckets 1 and 3)

- **(a) Restoration and protection of the natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and coastal wetlands of the Gulf Coast Region.**
- **(b) Mitigation of damage to fish, wildlife, and natural resources.**
- **(c) Implementation of a Federally-approved marine, coastal, or comprehensive conservation management plan, including fisheries monitoring.**
- **(d) Workforce development and job creation.**
- **(e) Improvements to or on state parks located in coastal areas affected by the *Deepwater Horizon* oil spill.**
- **(f) Infrastructure projects benefitting the economy or ecological resources, including port infrastructure.**
- **(g) Coastal flood protection and related infrastructure.**
- **(h) Promotion of tourism in the Gulf Coast Region, including promotion of recreational fishing.**
- **(i) Promotion of the consumption of seafood harvested from the Gulf Coast Region.**
- **(j) Planning assistance. (MDEQ may apply for planning assistance grants to fund preparation and amendment of the Multiyear Implementation Plan.)**
- **(k) Administrative costs.**

# RESTORE Act: Bucket 1 – Direct Component

## *How does Bucket 1 work?*

- Mississippi lists all the projects/activities it seeks to fund through Bucket 1 in its **Multiyear Implementation Plan (MIP)**
  - Submits the plan to the U.S. Dept. of Treasury for approval
  - Dept of Treasury grants the money to MDEQ, who can provide sub-awards to carry out the activities in the MIP
- Annual MIP Amendment Process
  - Changes to the original MIP's list of funded projects (including adding new projects) come in the form of are "Amendments to the Multiyear Implementation Plan"
  - So far, there are three approved Amendments, with the last one approved in **June 2019**
  - Available on the MDEQ's website

# RESTORE Act: Bucket 1 – Direct Component

## *What is the project selection process?*

- **GoCoast 2020 Final Report** is key for Bucket 1 funding decisions
- There are “GoCoast Committees” for 8 focus areas.
  - **Focus areas:** Eco-restoration, economic development, **infrastructure**, research and education, seafood, small business, tourism and workforce development
  - Every GoCoast committee has chairperson(s) (listed on the MDEQ website)
- Every year, MDEQ provides all the Committee chairs with a list of all the project ideas from the portal that fall under their committee’s focus area.
  - Check all the focus area(s) that apply when you submit your idea to the portal
  - **Tip:** Reach out to the GoCoast chair and let them know about your project idea!
- After the committee chairs have had time to consider the projects, consult with others, etc., MDEQ convenes the committee chairs and receives their recommendations for Bucket 1 projects for that year
  - **Usually convene in April**
- The projects recommended by the committee chairs are presented to the Governor, who makes the final decision about which projects are listed in the MIP.
- **Check the GoCoast 2020 Final Report for details on how the GoCoast committees prioritize and evaluate projects.**

# RESTORE Act: Bucket 3 – Spill Impact Component

## *How does Bucket 3 work?*

- Office of the Governor lists all the activities it wants to fund in the **State Expenditure Plan** and submits it to the Council for approval
  - 2017 and 2018 Amendments have been approved; and
  - 2019 Amendment was recently open for public comment
  - Mississippi State Expenditure Plan document explains the process and criteria used to select projects from the portal
  - Plan is available on the MDEQ website (in addition to process, the plan lists all of the projects selected for funding)



## RESTORE Act Bucket 3 – Spill Impact Component

### *What is the selection process?*

- MDEQ uses targeted polling to confirm stakeholders' current priorities (chosen from the established goals of the RESTORE Council's Comprehensive Plan)
- Ideas in the portal are evaluated for consistency with stakeholder goals and other criteria
- Recently reaffirmed goals:
  - Restoring water quality,
  - restoring and revitalizing the economy, and
  - **community resilience**
- Focus on enhancing “Community Resilience” as a priority rather than just a consideration
- Community resilience is a goal to build and sustain communities with capacity to adapt to short- and long-term changes (MDEQ adopted definition from the RESTORE Council's Comprehensive Plan)

# RESTORE Act Bucket 3 – Spill Impact Component

## *What is the selection process?*

- In the most recent approved SEP, the evaluation process is described as follows:
  - Step 1) Portal Project Identification
    - Consideration of whether a project was **identified as a community resilience** activity and/or **prioritized community resilience** as a primary or secondary goal
  - Step 2) Vetting Project Description
    - Evaluation of project description and supporting documentation to determine w/r a project **supports community resilience** as a goal and activity classification
  - Step 3) Duplicate projects of existing projects already selected for funding
    - W/r a project description was already selected for funding
  - Step 4) Evaluation of community resilience project elements
    - Determine w/r a project element **promoted community resilience** and, if implemented, would improve marine ecosystem, promote ecosystem health, and/or decrease water pollution
  - Step 5) Supports community resilience
    - Final evaluation included review of existing and proposed projects that had both environmental and economic benefits to determine if additional **resilience** elements could be added to support building and sustaining communities with the capacity to adapt to short- and long-term changes

## RESTORE Act Bucket 2 – Council-Selected Restoration

### *How does Bucket 2 work?*

- The RESTORE Council has 11 federal and state members
  - Secretaries of the Interior, Army, Commerce, Agriculture, and Homeland Security;
  - Administrator of the U.S. EPA; and
  - Governors of the five Gulf states (who selected the Secretary of Commerce as Chair).
- One of the Council's primary responsibilities is to develop a **Comprehensive Plan** to “restore and protect natural resources”
  - Initial Plan was approved in 2013; update approved in 2016
  - The Plan describes Council's goals, objectives, and evaluation criteria

# RESTORE Act Bucket 2 –Council-Selected Restoration

## *How does Bucket 2 work?*

- Council develops **Funded Priority Lists (FPLs)**, which include projects and programs
- For a project to be approved for Bucket 2 Funding, it must be included on the FPL – a new list comes out every few years
- Two FPLs approved so far
  - FPL 1 (Dec. 2015): Projects and programs (5 projects in MS Sound watershed)
  - FPL 2 (Jan. 2018): Planning support grants (no specific projects)
  - Developing FPL 3 now; should be finalized this month (will include projects)

## Bucket 2 – Council-Selected Restoration

### *What is the project selection process?*

- Council reviews ideas submitted by the public through website and public meetings
- Council members may also solicit and choose to “sponsor” projects and programs from any entity and general public
- Council evaluates proposals
  - Step 1: Eligibility Verification
  - Step 2: Coordination Review (RESTORE and other funding efforts)
    - Avoid duplication of efforts and maximize benefits from collaboration
  - Step 3: Evaluation
    - Chosen projects are included on the Funded Priority List

## Bucket 2 – Council-Selected Restoration

### *What are the evaluation criteria?*

The Comprehensive Plan states that the Council will **use the best available science** and give the highest priority to ecosystem projects and programs that met one or more of the four priority criteria:

- **Projects that are projected to make the greatest contribution to restoring and **protecting the** natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and **coastal wetlands** of the Gulf Coast region, without regard to geographic location within the Gulf Coast region.**
- **Large-scale projects and programs that are projected to substantially contribute to restoring and protecting the** natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and **coastal wetlands** of the Gulf Coast ecosystem.
- **Projects contained in existing Gulf Coast State comprehensive plans for the restoration and protection of** natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and **coastal wetlands** of the Gulf Coast region.
- **Projects that restore long-term resiliency of the** natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and **coastal wetlands** most impacted by the Deepwater Horizon oil spill.

# Natural Resource Damage Assessment (NRDA):

## *How does NRDA work?*

- **MS will receive around \$296 million for restoration through the NRDA process.**
- **For MS projects, the MS Trustee Implementation Group (“TIG”) plans restoration activities and develops Restoration Plans:**
  - Ask the public for project ideas
  - Notice of initiation of restoration planning (starting on a draft plan)
  - Draft restoration plan + public review and comment
  - Final restoration plan
- **Final Plans of the MS TIG so far – 1 plan, 1 supplement**
  - **MS TIG 2016-2017 Restoration Plan/Environmental Assessment**
  - **Grand Bay Supplemental Plan/EA – supplement to Plan 1 (adds \$10M; 2019)**
- **NRDA Plans are not annual – look out for a request for ideas from the public**
  - MS TIG asked for project ideas for a second plan in June 2018

## NRDA:

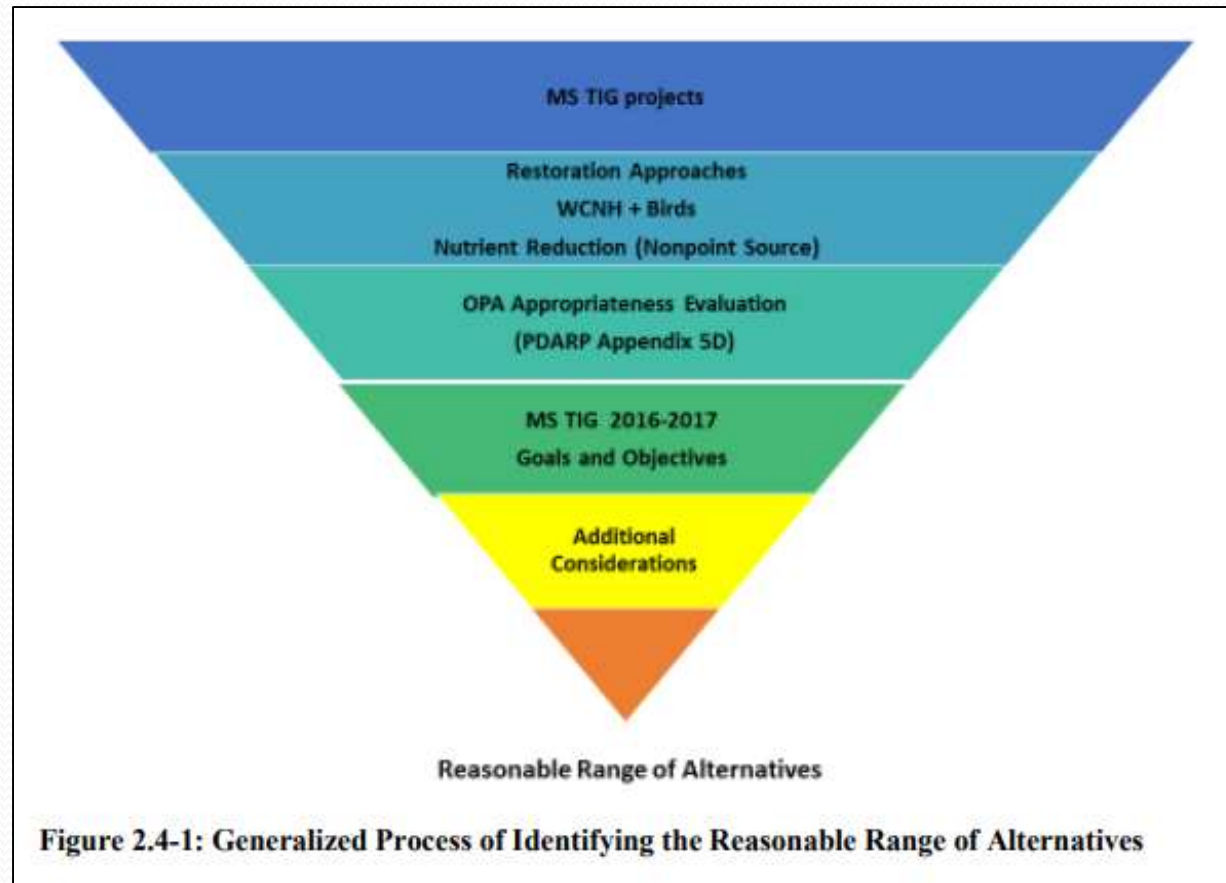
### *What is the project selection process?*

- All projects must be consistent with the Programmatic Damage Assessment and Restoration Plan (PDARP) that came out with the settlement agreement
  - Restoration goals and restoration types
- All projects must consider six criteria set out in the federal Oil Pollution Act (OPA) NRDA Regulations
- All projects must be consistent with “additional criteria” developed by the TIG
  - *Tip: Can change per funding circle, but we know what the TIG has looked for in the past*



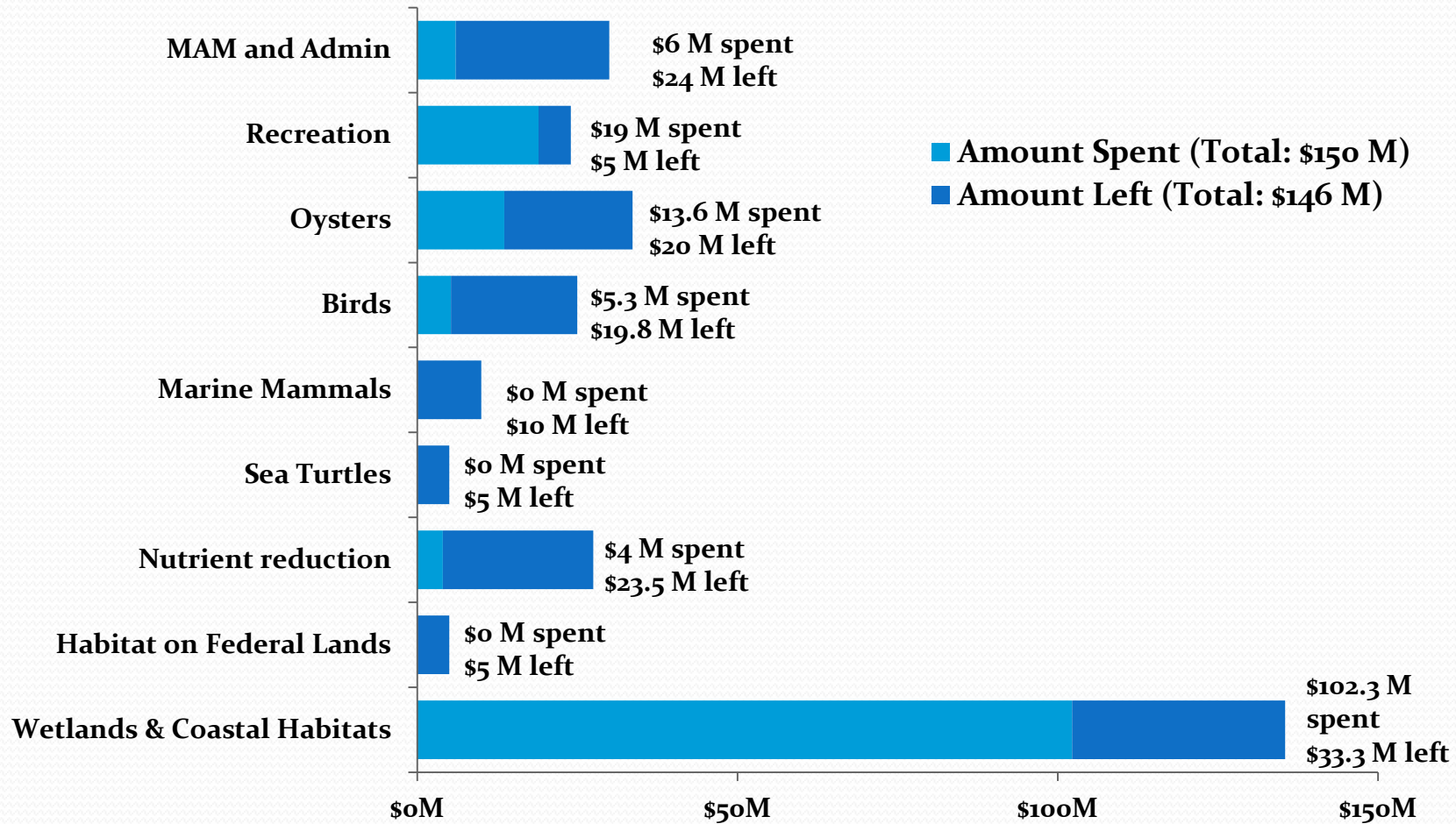
# NRDA:

*What is the project selection process?*



# PDARP Consistency:

*What restoration types will the MS TIG be funding?*



## NRDA:

### *What are the required OPA Evaluation Criteria?*

- The cost to carry out the alternative
- The extent to which each alternative is expected to meet the trustees' goals and objectives in returning the injured natural resources and services to baseline and/or compensating for interim losses
- The likelihood of success of each alternative
- The extent to which each alternative will prevent future injury as a result of the incident, and avoid collateral injury as a result of implementing the alternative
- The extent to which each alternative benefits more than one natural resource and/or service
- The effect of each alternative on public health and safety

## NRDA:

### *What “additional” criteria did the MS TIG use for its first restoration plan?*

- **Four broad Mississippi objectives (Step 3 in pyramid)**
  - Regional connectivity
  - Leveraging
  - Project partnering opportunities
  - Synergy with existing regional planning initiatives
- **Additional considerations (Step 4 in pyramid)**
  - For Habitats and Birds project types
    - Consistent with regional planning efforts or ongoing restoration efforts
    - Consistent with MSCIP (MS Coastal Improvements Program)
  - For Nutrient Reduction Projects
    - Cooperation with landowners
    - Leveraged by existing programs (e.g., Farm Bill programs)
    - Reduce nutrient and sediment load contribution in Pascagoula River watershed, which contains Gulf sturgeon critical habitat
    - In a sub-watershed where conservation practices would maximize water quality benefits in the MS Sound, particularly sediment removal

# National Fish and Wildlife Foundation (NFWF)

## *How does it work?*

- NFWF's Gulf Environmental Benefit Fund (GEBF) was put in charge of administering \$2.5 billion
  - Money is from BP and Transocean criminal penalties
- NFWF will award **\$356 million** for projects in MS
  - **So far, around \$159M has been awarded, leaving \$197M to be spent.**
- NFWF consults with MDEQ and federal agencies when selecting projects in MS
- Typically there is 1 project selection cycle per year, starting in spring
  
- Information about the selection criteria, priorities, and selected projects is available on the NFWF website: [www.nfwf.org/gulf/](http://www.nfwf.org/gulf/)

## NFWF

### *What is the project selection process?*

- NFWF consults with state natural resource agencies (including MDEQ), NOAA, and US Fish and Wildlife Service
- NFWF begins project review process each spring
- NFWF works to develop consensus among their board
- Projects are announced each fall
- Ways to participate?
  - NFWF is not a government agency, so no public review and comment requirements for NFWF decisions.
  - Talk with MDEQ about whether your idea might be a good NFWF project – MDEQ will be consulting with NFWF.

## NFWF

### *What are the evaluation criteria?*

- According to the plea agreement, eligible activities for NFWF funding must:
  - **Remedy harm to natural resources** – habitats and species – of a type that were impacted by the oil spill.
- NFWF’s “Gulf FAQ” webpage says “further criteria” include:
  - Advance priorities in natural resource management plans
  - Are within reasonable proximity to where impacts from the oil spill occurred
  - Are cost-effective and maximize environmental benefits
  - Are science-based, and
  - Produce measurable and meaningful conservation outcomes to habitats and species of a type impacted by the oil spill

NFWF:

## *What are some examples of Potential Activities to Benefit Natural Resources?*

- **Coastal marshes:**
  - utilize living shorelines and other non-structural or structural approaches to protect vulnerable shoreline
  - conserve marsh through land acquisition and protection of key marsh habitats that expand the network of state, federal, local and private conservation areas
  - identify, protect through purchase or easements, and enhance land areas available to act as buffers to facilitate the natural migration of coastal marsh habitat inland in response to sea level rise

These examples are not exhaustive – there are many more!

To view the full list, visit:

<https://www.nfwf.org/gulf/Pages/fundingpriorities.aspx>



# Additional Funding Sources

- FEMA's Hazard Mitigation Grant Program
- FEMA's Pre-Disaster Mitigation
- FEMA's Flood Mitigation Assistance (FMA) grant program
- U.S. Army Corps of Engineers (USACE) flood risk management program
- NOAA's coastal resilience grants program
- EPA's Clean Water State Revolving Fund (loan programs)

# Questions?

If you have questions in the future, please don't hesitate to reach out to us any time by emailing [gulfofmexico@eli.org](mailto:gulfofmexico@eli.org) or individually:

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Visit our Gulf of Mexico Restoration website for educational materials, restoration project database, blogs, upcoming events, public participation opportunities, and other restoration information: [www.eliocean.org/gulf](http://www.eliocean.org/gulf)

# Please Submit Your Questions

- You can submit your questions by typing them in the GoToWebinar's chat window
- If you are joining us by phone, you can e-mail your questions to [occonnor@eli.org](mailto:occonnor@eli.org)