

Day 2 Working Lunch

A Closer Look At

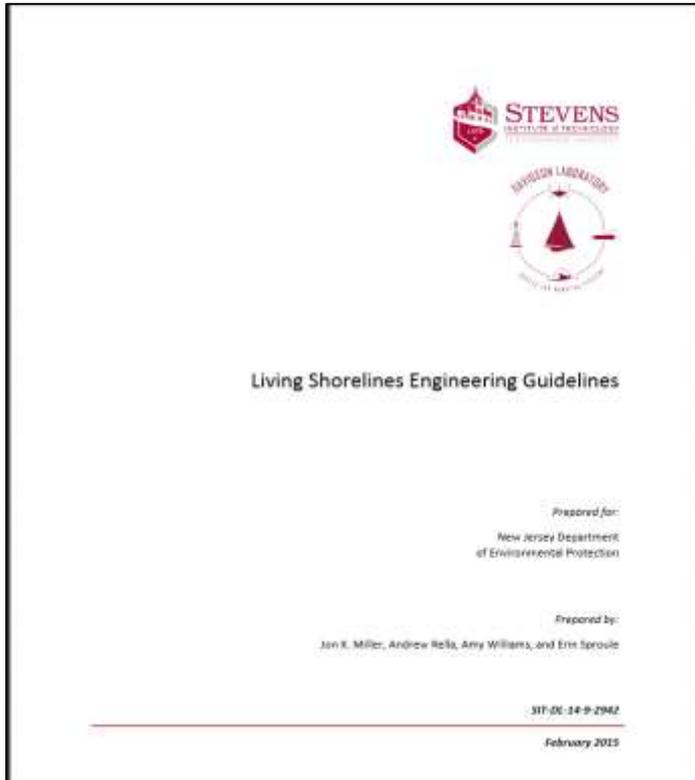
Living Shoreline Design Guidelines & Resources

March 17, 2016

Delaware Living Shoreline Training Workshop

Lewes, Delaware

Living Shorelines Engineering Guidelines



Jon K. Miller, Andrew Rella, Amy Williams,
& Erin Sproule

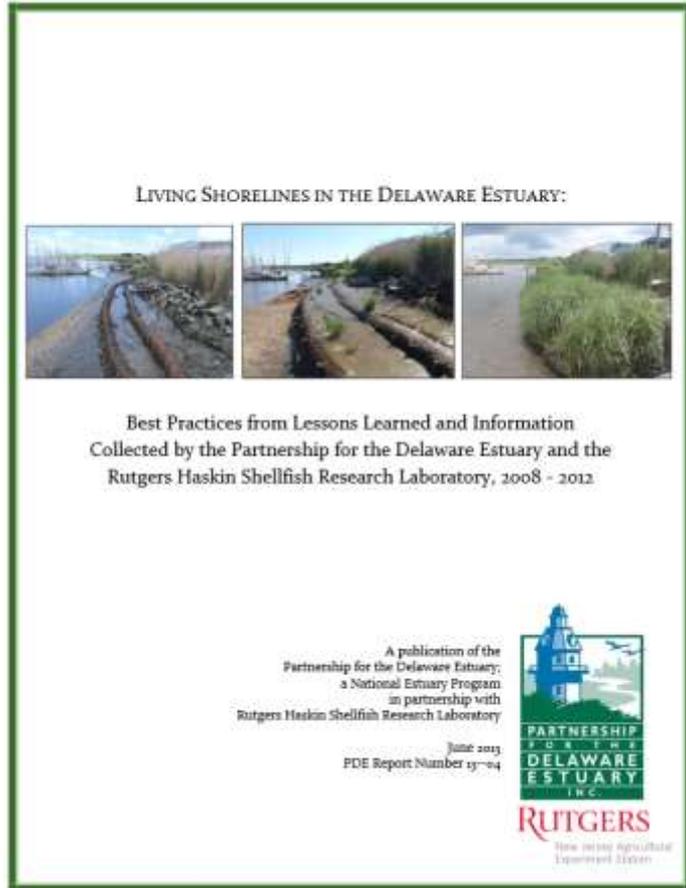
Stevens Institute of Technology

Prepared for New Jersey Department of
Environmental Protection

February 2015

<https://s3.amazonaws.com/delawareestuary/living-shorelines-engineering-guidelines-final.pdf>

[Living Shorelines in the Delaware Estuary: Best Practices from Lessons Learned](https://delawareestuary.s3.amazonaws.com/pdf/Living%20Shorelines/living_shorelines_best_practices.pdf)
& Information Collected by PDE & the Rutgers Haskin Shellfish Research Laboratory
2008-2012



Sari Rothrock with materials from Danielle Kreeger, Ph.D., Jennifer Adkins, and Laura Whalen

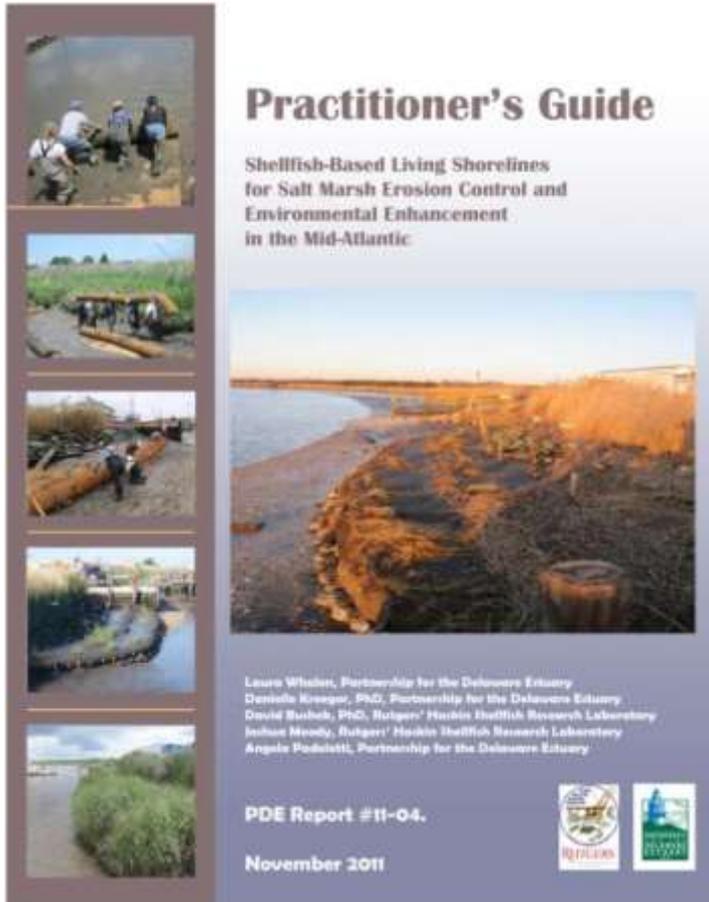
Partnership for the Delaware Estuary.
PDE Report No. 13-04

June 2013

https://delawareestuary.s3.amazonaws.com/pdf/Living%20Shorelines/living_shorelines_best_practices.pdf

Practitioner's Guide: Shellfish-Based Living Shorelines

for Salt Marsh Erosion Control & Environmental Enhancement in the Mid-Atlantic



Laura Whalen, Danielle Kreeger, Ph.D., David Bushek, Joshua Moody, Angela Padeletti

Partnership for the Delaware Estuary. PDE Report No. 11-04

June 2011

https://s3.amazonaws.com/delawareestuary/pdf/Living+Shorelines/Final_DELSI+Practitioners+Guide_2012.pdf

Delaware Estuary Living Shoreline Initiative (DELSI)



Find all 3 previous references here
Plus other reports & resources

<http://delawareestuary.org/living-shorelines>

Living Shorelines Academy

Web site currently under construction

Self-Paced Training Modules

Projects & Case Studies

Literature Resources

Professional Directory

North Carolina Coastal Federation

Restore America's Estuaries RAE

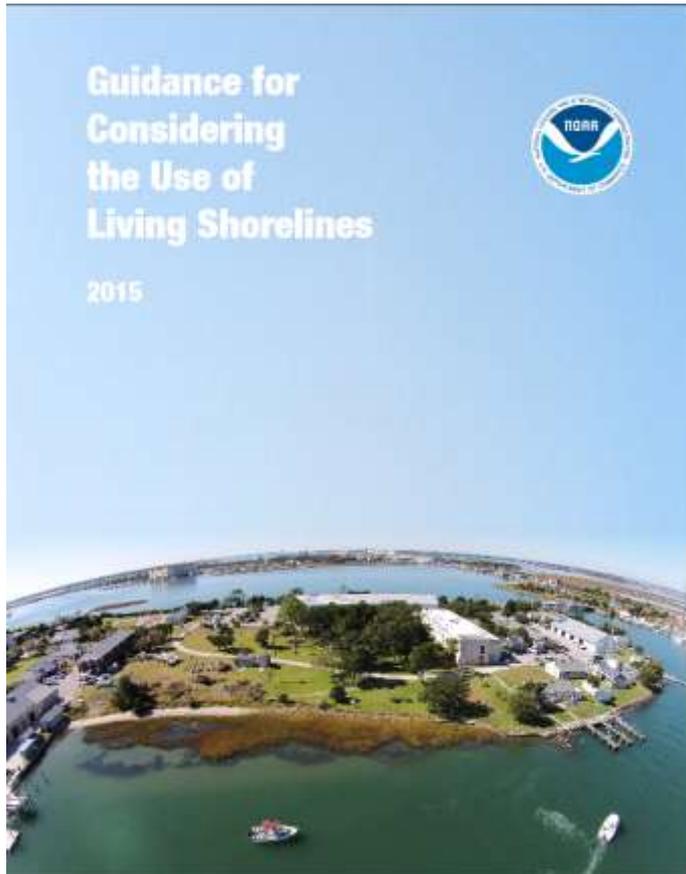
Southern Environmental Law Center

EPA



<http://livingshorelinesacademy.org/>

NOAA Living Shoreline Guidance



NOAA Living Shorelines Workgroup

National Marine Fisheries Service

Office of Habitat Conservation, Chair

Office of Protected Resources

National Ocean Service

National Centers for Coastal and Ocean Science

Office for Coastal Management

Office of National Marine Sanctuaries

Office of Oceanic & Atmospheric Research

National Sea Grant Program Office

Climate Program Office

Office of Program Planning and Integration

2015

<http://www.habitat.noaa.gov/restoration/techniques/livingshorelines.html>

NOAA Tides & Currents



Tides and Currents Map

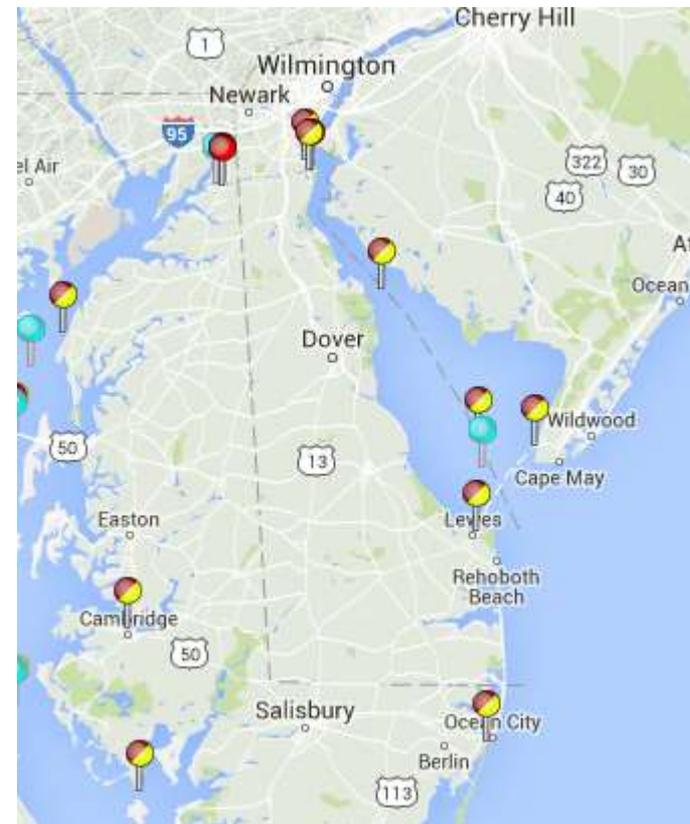


Sea Level Trends



PORTS®

Tide, current, water level, & other oceanographic products & services



<http://tidesandcurrents.noaa.gov/>

Delaware Wetland Mapping Resources



Delaware Environmental Navigator (DEN)

State-Regulated Tidal Wetland Map Index

DEMAC current & historical aerial photography

USFWS Wetlands Online Mapper with customizable maps

Delaware Sea Level Rise Maps

Delaware Shoreline Inventory



Marcia Berman et al.

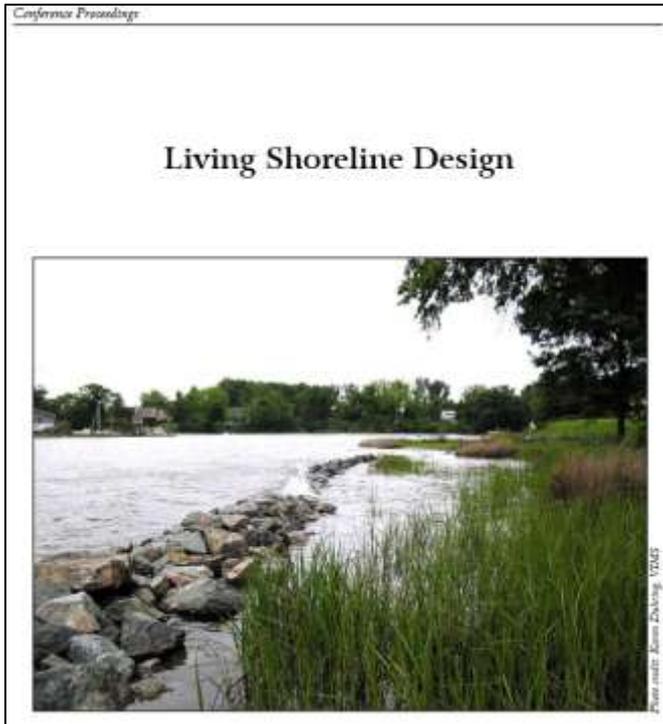
Virginia Institute of Technology

Prepared for New Jersey Department of Environmental Protection

3 phases 2005 2008 2012

2006 Living Shoreline Summit Proceedings

Section 2. Design



Includes papers by:

Kevin Smith *Maryland*

Karen Duhring *Virginia*

Bonnie Bendell et al *North Carolina*

Walter I. Priest, III *NOAA Restoration Center*