

COASTAL CONNECTIONS



VOLUME 6, ISSUE 5

A BIMONTHLY PUBLICATION FOCUSED ON TOOLS FOR COASTAL RESOURCE MANAGERS

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Kathy Taylor
Marine Habitat Specialist,
Shorelands and Environmental
Assistance Program,
Washington State Department
of Ecology

Where you live: In Auburn, just north of my workplace in Olympia, Washington.
Job description: Each local government in Washington State with a shoreline is required to complete a shoreline master program (SMP), which is either approved or not approved by the Department of Ecology. My job is to support the SMP efforts of local governments, review the scientific and technical information in SMPs, and work collaboratively with other organizations to improve our shoreline knowledge.
Education: B.S. in biology and M.S. in plant ecology, Western Washington University; Ph.D. in estuarine ecology, Louisiana State University.
Family: Husband, Tom Kantz, and sons, Jonathan, 12, and Jeffrey, 10.
Professional achievement that makes you proud: I'm truly excited about our Washington

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FOCUS

USING CANVIS TO ILLUSTRATE COASTAL CHANGES

This visualization tool has been adapted for use by the nation's coastal professionals.

Simulated visual images—also termed visualizations—can be much more effective than charts and graphs in drawing attention to the potential impacts of coastal development and policy changes. But until recently, effective visualizations have been hard to come by for most coastal managers. Many lacked the needed skills, resources, and time.

In response to requests for easy-to-use and inexpensive visualization tools, the National Oceanic and Atmospheric Administration (NOAA) Coastal Services Center has partnered with the U.S. Department of Agriculture (USDA) National Agroforestry Center to provide CanVis—agroforestry's free software visualization tool—in a form suited to the needs of coastal professionals. CanVis now enables users with minimal computer skills to create realistic simulations using their own photographs and a digital library that features coast-appropriate visual objects and aids.

"The response from coastal professionals has been excellent," says Hansje Gold-Krueck, a specialist with the Center's Human Dimensions program. "We've handled more than 250 CanVis software requests from 20 states and the territory of Guam, as well as from Australia and South Africa. We've also held CanVis workshops across the country, and our course on Coastal Community Planning and Development now includes a CanVis tutorial," she adds.

CanVis in Action

The following stories exemplify the changes confronting many coastal communities and the use of CanVis to highlight such changes.

CONVEYING THE VISUAL IMPACTS OF SMALL DOCKS AND PIERS

Officials in the Town of Falmouth, Massachusetts, were concerned about the aesthetic and natural-resource impacts of an increasing number of docks on Green Pond. They wanted a tool that would allow them to illustrate dock and pier "build-out" under the existing regulations. They also wanted to show the visual outcome of proposed changes to current dock and pier regulations.

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Profile continued from Page 1

Coastal Atlas (www.ecy.wa.gov/programs/sea/sma/atlas_home.html), which I manage and improve in cooperation with our outstanding geographic information system unit. It's an easy-to-use on-line tool for local officials completing their SMPs. Atlas users can find detailed, localized shoreline information—via satellite imagery, oblique aerial photography, and a large assortment of data layers—without ever stepping away from their desks.

What do you do in your spare time? I like to read and discuss books with my kids. Carl Hiaasen's novel *Flush* generated lots of discussion in our home. It's about a casino boat in Florida that dumps sewage into the bay.

In supporting Washington State's local officials who are crafting SMPs, Kathy Taylor has found the Center's products and services to be helpful. "Our Washington Coastal Atlas features land cover data from the NOAA Coastal Services Center's Coastal Change Analysis Program," says Taylor.

"Thanks to NOAA's Coastal Management Fellowship program [administered by the Center], we also have a coastal fellow working on our atlas—and communicating with the coastal fellow in Oregon, because there's a natural synergy between the two atlas projects. In addition, we recently invited a Center staff member to talk to our local officials about CanVis, because this software program can help them show the visual impacts of potential changes to the shoreline when they are updating their SMPs."

Focus continued from Page 1

An initial visualization project was completed using Visual Nature Studio software. However, technical and funding limitations were encountered when staff members from the Massachusetts Office of Coastal Zone Management sought to apply this software program to other ponds in the area. A solution was found when Center personnel showed how CanVis could be used to combine dock objects, photography, and Google Earth imagery into simulated illustrations of cumulative impacts, which could then be shown at planning meetings and town meetings.

REVEALING THE EFFECTS OF HIGH-RISE CONDOMINIUMS ON WATER VIEWS

The historic port area of Philadelphia, Pennsylvania, affords picturesque views of the Delaware River, so when high rise condominiums started appearing on the port's finger piers, issues arose about the effects on scenic vistas. "We have difficulty promoting the values of coastal management to citizens who can't get to the water's edge, either visually or physically," says Shamus Malone, the assistant manager for Pennsylvania's Coastal Resource Management Program.

Center staff members helped Malone and his colleagues illustrate the aesthetic impacts of the additional proposed condos. First, CanVis object files were developed from photographs of existing condos in the area. Next, these objects were added to an image of the waterfront. At an annual Great Lakes regional meeting sponsored by the NOAA Office of Ocean and Coastal Resource Management, these "before and after" visualizations showed the aesthetic consequences of building high rise structures along a coastal river waterfront (see "A" images on Page 3).

ILLUSTRATING THE IMPACTS OF PROJECTED SEA LEVEL RISE

Coastal resource managers nationwide are increasingly concerned about anticipated sea level rise and are considering actions to better understand and mitigate its negative impacts. Resource management professionals in Washington State's Puget Sound region have used CanVis to simulate future sea level rise, to picture the height of existing seawalls, and to digitally "add" hypothetical seawalls.

Coastal professionals can also use CanVis to demonstrate the scenic impact of anticipated sea level rise on prized community landmarks. One hypothetical example shows the Battery in Charleston, South Carolina, a landmark of great historical, aesthetic, and economic importance in this tourism-driven region (see "B" images on Page 3).

WANT TO START WORKING WITH CANVIS?

The Center's CanVis website features object images specially designed to be downloaded and used for coastal applications. These include docks, region-specific houses, boats, seawalls, buoys, and aquatic vegetation. The object library continues to grow as new objects are developed by the Center's partners. The library is located at www.csc.noaa.gov/canvis/.

For more information on CanVis workshops and resources, contact Hansje.Gold-Krueck@noaa.gov.



A1. Untouched Port Image



A2. CanVis Visualization



B1. Untouched Battery Image



B2. CanVis Visualization

ADDITIONAL DECISION-SUPPORT TOOLS FROM THE NOAA COASTAL SERVICES CENTER

Benthic Terrain Modeler

www.csc.noaa.gov/benthic_terrain/

For mapping the deepwater benthic environment

Habitat Priority Planner

www.csc.noaa.gov/hpp/

For developing area maps and adding important components—this is a helpful tool for group decision making

Hazard Assessment Tool

www.csc.noaa.gov/hat/

For downloading information about the various hazards that might impact a location

Historical Hurricane Tracks

<http://maps.csc.noaa.gov/hurricanes/>

For accessing location-specific information on past tropical cyclone tracks

Hurricane Evacuation Zones Map Tool

www.csc.noaa.gov/hez_tool/

For finding hurricane evacuation zones

Impervious Surface Analysis Tool

www.csc.noaa.gov/isat/

For calculating the percentage of impervious surface and estimating how changes in land use management will affect imperviousness

Nonpoint Source Pollution and Erosion Comparison Tool

www.csc.noaa.gov/nspect/

For predicting water-quality impacts from nonpoint source pollution and erosion

Legislative Atlas

www.csc.noaa.gov/legislativeatlas/

For downloading ocean-related laws, policies, and jurisdictions on specific places of interest

Risk and Vulnerability Assessment Tool

www.csc.noaa.gov/rvat/

For helping communities assess and prioritize the precautionary measures that increase resilience



Coastal Connections is a publication of the National Oceanic and Atmospheric Administration Coastal Services Center, produced for the coastal resource management community. Each issue of this free bimonthly newsletter focuses on a tool, information resource, or methodology of interest to the nation's coastal resource managers.

Please send us your questions and suggestions for future editions. To subscribe or contribute to the newsletter, contact our editors at

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NEWS AND NOTES

Oceans Awareness Campaign Appeals to Children and Parents

The Oceans Awareness campaign has launched an on-line suite of public service announcements, games, e-cards, and teacher resources. Campaign partners include NOAA, the National Marine Sanctuary Foundation, Department of the Interior, Environmental Defense Fund, and Ad Council. On-line visuals inspired by the film *The Little Mermaid* were provided by the Walt Disney Company. The website is located at <http://keepoceansclean.org/campaign/>.

Great Lakes Estuary Positioned to Become a NERR

Wisconsin Governor Jim Doyle announced the nomination of the St. Louis River estuary as a National Estuarine Research Reserve (NERR). The proposed reserve's roughly 15,000 acres near Lake Superior provide critical habitat for birds, fish, and plants, as well as an excellent site for research into aquatic invasive species, climate change, and other coastal concerns. To learn more, contact Travis.Olson@wisconsin.gov.

CICEET Awards \$2.8 Million to Improve Coastal Planning

The Cooperative Institute for Coastal and Estuarine Environmental Technology (CICEET), a program led by NOAA and the University of New Hampshire, has awarded \$2.8 million to 13 project teams from Maine to Oregon as part of CICEET's Living Coasts program. The teams are building and demonstrating tools for effective planning and sustainable growth. For more information, view http://ciceet.unh.edu/stats/living_coasts.html.

Transitions

Peter Hanlon, the former policy and outreach coordinator for the Massachusetts Bays National Estuary Program, has moved to New York City to support his wife's acting career and work for an alternative energy nonprofit organization... **L. Scott Quackenbush** has become the executive director of the Dauphin Island Sea Lab. Quackenbush was previously the director of Humboldt State University's Marine Lab. **John Dindo**, who was interim director of the Dauphin Island Sea Lab, will remain the chair of the K-12, teacher, and public outreach programs.

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