

# COASTAL SERVICES

VOLUME 7, ISSUE 1 • JANUARY/FEBRUARY 2004

LINKING PEOPLE, INFORMATION, AND TECHNOLOGY

## **STORM WATER MANAGEMENT:**

**Putting Real Life  
to the Test  
in Connecticut**

**When Coastal  
Management  
Crosses the Border**

**Georgia's Beaches Are  
Going to the Dogs**



# From the Director

How do you get local communities to change long-standing building codes and regulations to allow for green development? It helps to have evidence that the practices being recommended work and save money.

An innovative storm water management experiment in Connecticut may be getting coastal resource managers the verification they need.

The cover story of this edition of *Coastal Services* features that state's almost complete 10-year monitoring initiative that followed side-by-side developments—one employing traditional building practices, the other using practices that are more conducive to reducing runoff and protecting water quality.

Preliminary results from the Jordan Cove National Urban Watershed Monitoring project are positive and may give communities the substantiation they need to re-evaluate outdated storm water management regulations that can hold back developers willing to build with the environment in mind.

If your storm water management problems are coming from across the state line or national border, you will want to read the article on the Tijuana

River National Estuarine Research Reserve's international efforts.

With about two-thirds of the 1,750-square-mile Tijuana River watershed in Mexico, the reserve has had to get creative in its efforts to reach across the U.S. border to identify and address areas of mutual interest.

Their efforts provide a template for other coastal resource managers who may be looking for a way to work across political boundaries to protect an entire ecosystem or watershed.

Also in this edition of *Coastal Services*, you'll read how Wisconsin is celebrating its coastal program's 25<sup>th</sup> anniversary by giving a gift to every child in the state, and how Georgia is helping reduce the health threat to swimmers by providing beach etiquette lessons to dog owners.

We are open to your suggestions about what you would like to read about in the next edition of *Coastal Services*. As we come into the opening months of 2004, please share with us your successes, concerns, and resolutions.



Margaret A. Davidson

## National Oceanic and Atmospheric Administration

U.S. Secretary of Commerce  
Donald L. Evans

Under Secretary of Commerce for Oceans and Atmosphere, and Administrator, National Oceanic and Atmospheric Administration (NOAA)  
Conrad C. Lautenbacher Jr.  
Vice Admiral, U.S. Navy (Ret.)

Assistant Administrator for Ocean Services and Coastal Zone Management, National Ocean Service  
Dr. Rick Spinrad

**NOAA Coastal Services Center**  
Director: Margaret A. Davidson

Deputy Director: Jeff Payne

Coastal Information Services,  
Branch Chief: Anne Hale Miglarese

Resource Management Services,  
Branch Chief: Beth McCandless

Coastal Management Services,  
Branch Chief: Paul Scholz

Communications Director:  
Donna McCaskill

Magazine Writer and Editor:  
Hanna Goss

Copy Editor: Gerald Esch

Graphic Designer: Frank Ruopoli

Back issues of *Coastal Services* can be viewed at [www.csc.noaa.gov/magazine/](http://www.csc.noaa.gov/magazine/)

To subscribe to *Coastal Services*, please direct correspondence to:

Hanna Goss  
NOAA Coastal Services Center  
2234 South Hobson Avenue  
Charleston, SC 29405-2413  
Phone: (843) 740-1332  
Fax: (843) 740-1313  
E-mail: [Hanna.Goss@noaa.gov](mailto:Hanna.Goss@noaa.gov)

For more information about the Coastal Services Center, call (843) 740-1200 or visit our home page on the Internet: [www.csc.noaa.gov](http://www.csc.noaa.gov)

NOAA/CSC/20401-PUB

*Coastal Services* is produced bimonthly as a trade journal for coastal resource managers. Editorial content is unofficial and not authority for action. Views and opinions expressed may not reflect those of the Department of Commerce or NOAA.

# News and Notes:

## Making Comprehensive Information Readily Available



### Rhode Island Characterization

Having ready access to pertinent information is an important prerequisite to good decision making.

Coastal resource managers in Rhode Island put this idea to work as they developed a Web site that provides exhaustive information about their state's habitat restoration efforts. The Rhode Island Habitat Restoration Portal, found at [www.edc.uri.edu/restoration/](http://www.edc.uri.edu/restoration/), includes habitat descriptions, maps, spatial data, and permitting and funding information.

The site also contains three decision-support tools that help evaluate potential habitat restoration projects, specifically for anadromous fish runs, seagrass, and salt marshes. The tools each use a geographic information system (GIS) and socioeconomic and ecological data to identify and prioritize sites based on user-selected criteria.

The National Oceanic and Atmospheric Administration (NOAA) Coastal Services Center participated in the development of this project, which is a critical component of Rhode Island's restoration planning and project

prioritization efforts. To explore ways in which the Center might help your program with a similar effort, please contact Linda Rowe at [Linda.Rowe@noaa.gov](mailto:Linda.Rowe@noaa.gov).

### Visualizing Flood Forecasts

Flooding is the most deadly consequence of a hurricane. A new effort by the State of North Carolina and the federal government aims to improve flood forecasting and to increase the use of this information by making it visual. A GIS illustrates flood forecasts and makes the information easier for citizens to understand.



The prototype was well received during Hurricane Isabel, and as a result, NOAA is looking for ways to expand this system nationwide.

This project is a joint effort of North Carolina, the NOAA National Weather Service, the U.S. Geological Survey, and the NOAA Coastal Services Center. For more information, contact Doug Marcy at [Doug.Marcy@noaa.gov](mailto:Doug.Marcy@noaa.gov).



### One Stop for Data

Federal, state, and local governments are easily the biggest producers of data in this country, yet for many people, finding this information can be difficult. The federal government is moving to improve this situation by creating [geodata.gov](http://geodata.gov). This Web site will become a one-stop access to maps, data, and other geospatial data services.

While the effort is still in its infancy, the site already contains a wealth of good information and has the potential to become a powerful data access tool. Seventeen categories of data are already in place, and coastal resource managers will find the "oceans and estuaries" category of great interest.

[Geodata.gov](http://Geodata.gov) is part of the federal government's Geospatial One-Stop initiative, one of the 24 electronic-government initiatives under development to enhance government efficiency.

Visit this site or contact the NOAA Coastal Services Center's Dave Stein at [Dave.Stein@noaa.gov](mailto:Dave.Stein@noaa.gov) to find out how you can make your organization's data and Internet mapping applications accessible through this information portal. ❖

The mission of the NOAA Coastal Services Center is to support the environmental, social, and economic well being of the coast by linking people, information, and technology.



U.S. DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
National Ocean Service  
Coastal Services Center

# COASTAL MANAGERS WITHOUT BORDERS

## *Working on the Edge of America*

The border between the U.S. and Mexico is patrolled and often fenced. Visitors between the two countries have to go through official checkpoints, and may be searched or turned away. Mother Nature, however, has a way of ignoring political boundaries, which can cause headaches for coastal resource managers whose problems may come from the other side of the fence, but whose authority is stopped at the barrier.

Nowhere is this demonstrated more than at the Tijuana River National Estuarine Research Reserve, located at the mouth of the Tijuana River in the most southwesterly corner of the continental U.S. Because about two-thirds of the 1,750-square-mile Tijuana River watershed is in Mexico, the reserve faces a unique set of challenges that affect resource management, protection, research, and education.

The work the reserve has done to unify U.S. conservation efforts with those of Mexico can provide other coastal managers with a "template to look at political boundaries and

**"Here, we're talking about an international border, but we have a good model for multi-jurisdictional management of resources, which could be state borders, as well."**

**Mike Wells,  
Tijuana River National  
Estuarine Research Reserve**

develop a mechanism to treat the ecological whole," says Mike Wells, the reserve's manager.

"Here, we're talking about an international border, but we have a good model for multi-jurisdictional management of resources, which could be state borders, as well."

### **Down Mexico Way**

The Tijuana River Estuary is one of the few salt marshes remaining in Southern California. The 2,500-acre

reserve is home to eight threatened and endangered species, and is an essential breeding, feeding, and nesting ground, and key stopover point on the Pacific Flyway for over 370 species.

Of particular impact to the environmental quality of the basin are the growing cities of Tijuana and Tecate on the Mexican side and Imperial Beach and San Diego on the U.S. side, which combined have a population of over four million. Most of the region's population is located within 15 miles of the ocean and 20 miles on either side of the international boundary.

"There is tremendous growth and development taking place on the Mexican side of the border, and a lot of it is unplanned," notes Wells.

### **When the Rains Come**

"Activities on the Mexican side really affect the reserve," says Oscar Romo, the reserve's coastal training program coordinator, who is on contract from the Southwest Wetlands Interpretive Association.

One of the biggest impacts is erosion on the Mexican side that ends

up in the reserve. Even light rains can cause erosion and sedimentation in the lower watershed, and moderate rains bring massive flows of mud and trash to areas of the reserve.

The erosion and pollution problems have gotten worse as explosive population growth in Tijuana has left many without affordable housing. To find shelter, people are illegally moving onto Mexican federal lands in Los Laureles Canyon, where they dig into the steep sides of the gorge and build homes out of found materials, such as tires and garage doors.

"When it rains, a lot of those structures come right down the hillside causing deaths and property damage on the Mexican side. The sediment and debris from the erosion ends up settling in the estuary," Wells says.

This situation created a "confluence of interests" that has led to partnerships with a number of U.S. and Mexican agencies, city governments, and nonprofit organizations to address this and other issues.

### **Climbing Barriers**

There are a number of challenges that must be overcome to work successfully with another country, says Wells. In addition to differences in political and administrative structures, there are legal, cultural, and language barriers, which can make it "difficult to make contact with the right people—the decision makers—on the Mexican side of the border."

The first step in crossing these barriers, Wells says, was to bring Romo on board as the coordinator

of the coastal training program, which provides the opportunity for networking with and educating local leaders and decision makers across the region.

Getting Romo into the position was key, Wells says, because the Mexican national is binational, bicultural, and bilingual, has research experience, and is "well-known and well-respected" by local Mexican authorities.

"What I think is most important to making progress," adds Wells, "is identifying areas of mutual interest."

### **Sharing Common Ground**

Through networking and cross-border training programs, Romo has been able to show Mexican authorities that the reserve serves both countries.

"Air quality has increased in the area because of the reserve, and species common to both sides of the border have been preserved," Romo points out. "The reserve belongs to and serves all the residents of the region."

To demonstrate this, the landmark step of adding the mayors of Tecate and Tijuana to the reserve's management authority was made last August.

The State of California is "recognizing the importance of investing funding in Mexico to prevent impacts on the U.S. side," says Romo. "That's new. It's never been done before, and Mexican authorities are very receptive."

Over the past two years, memorandums of understanding (MOUs) have been signed with the municipalities and Mexican nonprofit organizations to address the two areas that most directly impact the reserve. The MOUs implement the Los Laureles Canyon erosion control project, and begin work to establish El Matadero Canyon as a conservation park, which would create a physical extension of the reserve on the Mexican side of the border.

A newly formed Mexican nonprofit organization will be created to administer the conservation park,

and the scope of work for this new organization is being written at the reserve, with assistance from Mexican officials. The reserve also will share information and data such as maps and surveys of plant and animal species, and other biological resources that are significant for the border region's conservation.

The Los Laureles Canyon project task force is working to stabilize the canyon's slopes, reduce flood damage, and generally enhance environmental quality in the canyon. "This transborder effort will promote a sustainable approach to the erosion control problem," Romo says.

"Have we seen a marked decrease in sedimentation? Not yet. But we are creating a framework to undertake on-the-ground projects in the future," Wells says. "We are also creating a template that can be exported to other areas along the Mexican border, and other borders as well."

Romo says he is creating a decision-making tool to help other reserves manage multi-jurisdictional situations. "We are developing a set of documents that explain what the process was, where we had success, and where we found obstacles or failures."

### **More Responsibility**

Wells says that while the most fulfilling aspect of his job is "interacting with leaders and citizens in the Mexican part of our watershed," cross-border issues add a layer of complexity to managing the reserve's resources.

"It really is an added layer of problems for us," Wells acknowledges. "We're unique in the reserve system, and even our home state agency. It's hard to get other people to recognize the difficulties in dealing with a lot of different jurisdictions and approaches. We have to approach a lot of things with creativity." ❖

*For more information on the Tijuana River National Estuarine Research Reserve's international projects, contact Oscar Romo at (619) 575-3613 or [oromo@tijuanaestuary.com](mailto:oromo@tijuanaestuary.com). You may also contact Mike Wells at (619) 575-3615, or [mwells@parks.ca.gov](mailto:mwells@parks.ca.gov).*



Photos courtesy of Tijuana River NERR  
Erosion from the Mexican side of the border can send mud and debris to areas of the reserve.

# Storm Water Management:

## Putting Real Life to the Test in Connecticut

**R**esource managers know intuitively that by controlling water running off the land, sediment and pollutants ending up in coastal waters will be reduced. Thanks to an innovative experiment in Connecticut, managers are now getting proof.

"That's why we pursued this project. There weren't any studies out there done on a long-term basis that documented the fact that if you develop in a certain way and use BMPs [best management practices] you can reduce runoff and improve the quality of the runoff," says Mel Cote, manager of the Water Quality Unit of the U.S. Environmental Protection Agency's (EPA) New England Regional Office.

The Jordan Cove National Urban Watershed Monitoring project is a 10-year monitoring initiative comparing the quantity and quality of runoff between a traditionally developed residential subdivision and environmentally sensitive development.

Results from the Jordan Cove project may help provide the documentation communities around the country need to re-evaluate outdated storm water management regulations that often tie the hands of developers willing to change the way they do business.

"What we hope to do with the results," Cote says, "is show that the environmental benefits of building this way outweigh the cost of going through the process of changing regulations."

### The One and Only

Jordan Cove is the first storm water project in the country dealing with urban and suburban development, and is one of 23 national monitoring projects funded by the EPA's Nonpoint Source Management Program under section 319 of the federal Clean Water Act.

**"This will give managers more ammunition to help them sell low-impact development."**

**Bruce Morton,  
Aqua Solutions**

While 22 of the projects address agricultural runoff, Cote says most of the nitrogen in the Long Island Sound is coming from urban and suburban land use.

"We knew we needed to do a better job managing urban and suburban areas to control nitrogen," says Paul Stacey, supervising environmental analyst for Connecticut's Department of Environmental Protection, "but other than a few places in the Chesapeake Bay area, we really hadn't seen this consolidation of so many real-life BMPs in one residential development put to the test."

Managers from state and federal agencies and researchers from the University of Connecticut often discussed "conceptually, what we might do better," Stacey says. Eventually, talk turned to putting a

number of BMPs to the test "all at once in a real neighborhood. That's when things got complicated."

### Critical Pieces

Certain elements of the Jordan Cove project had to come together perfectly, or there would have been no project.

Needed was a soon-to-be-developed piece of coastal property with just the right topography in an environmentally aware community that would be willing to bend its zoning regulations. Key was a developer willing to put in the extra time and investment while working with local, state, and federal regulators, as well as academic researchers, all of whom had to be committed enough to the project to carry it through to fruition.

"The story is not the fact that we have all these engineering details; it's the fact that it actually happened at all," says Bruce Morton, co-owner of Aqua Solutions and the project's coordinator.

In 1995, after a year of searching, the project group found its site, an 18-acre parcel located in a small watershed that drains into Jordan Cove, an estuary connected to Long Island Sound.

The property had been a family farm, and the owner was willing to develop part of it in an environmentally sound manner.

The parcel was located in the town of Waterford, which is known as an environmentally progressive community.

To conduct the paired watershed experiment, the property would be split roughly in half. On one half, a subdivision would be built using traditional building practices following the town's zoning requirements. On the other, a neighborhood would be built using practices that are more conducive to reducing runoff and protecting water quality. An existing subdivision nearby served as a control site.

Monitoring, led by University of Connecticut's Dr. Jack Clausen, was begun on all three sites and was conducted for nearly two years before construction began. Monitoring has continued through construction, which was completed in 2003, and will continue for the next two years.

### Exceptions to the Rules

While baseline data were being collected, committee members completed the most challenging part of the project—getting the variances and approvals needed from all of the various town commissions and officials.

"A lot of our proposed measures in the BMP area are not standard building measures and did not fit into the confines that most towns have on the books," explains Cote.

What the town didn't allow in its regulations had to go through variance procedures.

"That in itself was one of the major obstacles," he says. "In most towns and cities, zoning regulations are pretty strict, and a lot of what they allow is not good for the environment."

Stacey notes that the response of Waterford officials was "very flexible and very interested. We made certain adjustments that you might expect along the way, but we were able to pretty much implement the project as we saw it."

### More Equals Better

With the community's approvals in hand, construction of the traditional subdivision began in 1997, and ground was broken for the experimental neighborhood in March 2000. Construction on the BMP site was complete in 2002, and the traditional site was completed last year.

In the traditional neighborhood, curbs and catch basins collect runoff, which is then piped through a detention pond treatment system before entering a nearby stream and Jordan Cove. Houses were built in a "cookie-cutter" fashion, streets are impervious, and vegetation is minimal.

Homeowners in this area, although aware of the monitoring project, are not part of the experiment, says project coordinator Morton. "We didn't want to interfere with their activity or give them special training because we wanted a real, actual neighborhood under traditional conditions."

In the experimental section, housing is clustered to minimize

impervious coverage, permeable driveways are shared, and deed restrictions prohibit expansion of impervious surfaces. Rainwater from roofs is funneled into special "rain gardens," grass swales line the narrower, permeable road, and the center of the cul-de-sac is a vegetated infiltration basin. Lawns have areas designated as "low-mow" or "no-mow."

All of the experimental homes were sold before they were built, and educating those homeowners is an important part of the project, Stacey says. Education guidelines were written into the bylaws of the homeowners' association, presentations are made at association meetings, and graduate students conducting the monitoring answer homeowner questions.

### A Question of Money

By the end of the 10-year project, Cote says, they will have spent \$1 million in section 319 grant funds. He notes that 70 to 80 percent of those funds will have been used to pay for monitoring—equipment, graduate students, analysis, collection, and publishing.

The rest went to subsidize the developer for any BMP costs that went above and beyond what he would have had to pay for traditional approaches.

The experimental neighborhood took more time—and therefore money—than the traditional neighborhood, but much of that was due to the extra time it took to sell the town on the plan, and the learning curve of contractors unfamiliar with some of the practices.

*continued on Page 6*

# Children Get the Presents During Wisconsin's Anniversary Celebration

Wisconsin celebrated its coastal program's 25<sup>th</sup> anniversary last September by giving a present to every child in the state. Managers hope the gift, a special reprinting of a classic children's book about the Great Lakes, will help inspire the next generation of coastal stewards.

"We saw the importance of reaching out to the next generation of coastal managers," says Jim Langdon, director of the Division of Intergovernmental Relations in the Wisconsin Department of Administration. "These books will remain in schools and libraries for many years to come."

The 1941 children's book *Paddle to the Sea* by Holling Clancy Holling "illustrates the history, character, and importance of the Great Lakes," Langdon says. The book chronicles the adventures of a small wooden Indian in a tiny canoe as it travels from the headwaters of Lake Superior through the Great Lakes to the Atlantic Ocean.

The book won a Caldecott Medal in 1942, which is presented annually to the most distinguished American picture book for children. Langdon believes its images and story hold up well for today's youth.

"Our family started reading it, and from that I could see the benefits of trying to create the same excitement in other kids that my daughters felt about the book," Langdon recalls.

The commemorative edition includes a forward by Wisconsin Governor Jim Doyle and a classroom activity developed by the Wisconsin

Historical Society. "In addition to the children," Langdon says, "we wanted to reach teachers and parents with our program's overall message, 'enjoy and protect Wisconsin's Great Lakes.'"

With the support of the book's publisher, Houghton Mifflin Company, the coastal program printed 2,500 copies of the special version of the book using a school bindery. The cost was about \$10 per book.

After a kickoff event where the state's first lady read portions of the book to students aboard a schooner, copies of the book were distributed to every elementary school in the state and to all public libraries, as well as to coastal managers around the country.

So far, the coastal program has received a number of thank you letters and e-mails from librarians, many of whom fondly remember the book from their childhood and are happy to be introducing it to their students.

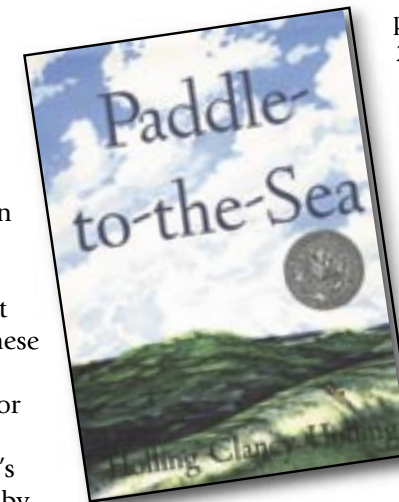
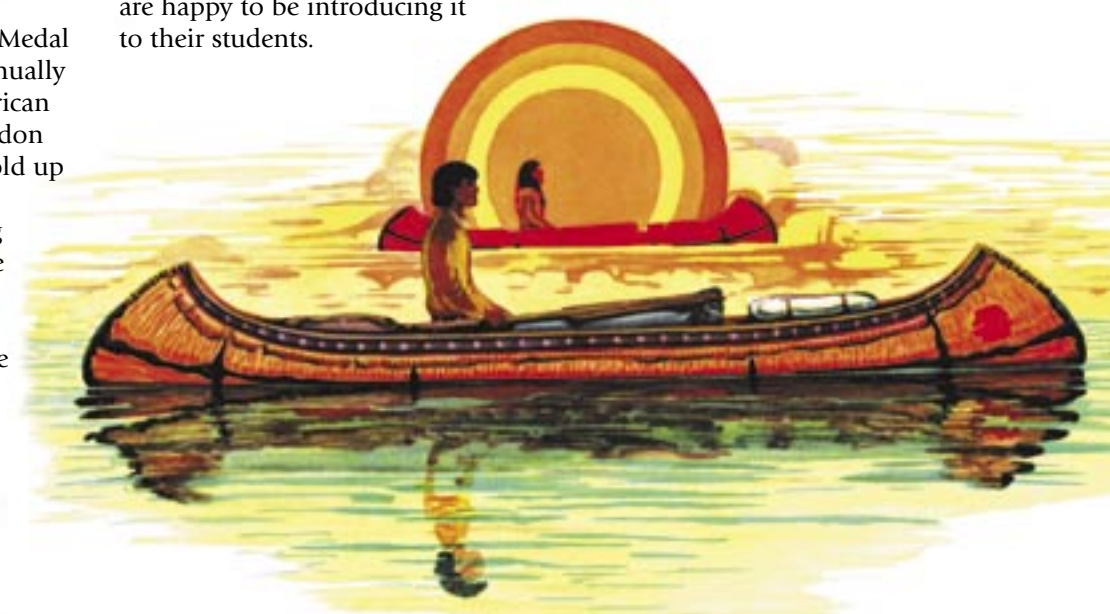
**"The real proof of the book's impact will come several years from now when these children grow to adults who are more aware of the lakes and more willing to protect their aquatic resources."**

**Jim Langdon,  
Wisconsin Department  
of Administration**

"The real proof of the book's impact," Langdon says, "will come several years from now when these children grow to adults who are more aware of the lakes and more willing to protect their aquatic resources."

He adds, "You can't discount the impact of communication as an effective coastal management tool." ❖

*For more information on Wisconsin's publication of Paddle to the Sea, contact Jim Langdon at (608) 261-7520 or James.Langdon@doa.state.wi.us.*



regulators, design professionals, academics, and citizens. He notes that one of the project goals is to develop model guidelines that other towns can use to implement BMPs, and Washington State University is undertaking a similar project looking at their effectiveness in different soil types.

Cote adds, "What we've learned is that we can develop in a way that creates less pollution than how we've developed in the past. The practices exist, they are not expensive, and they are often aesthetically pleasing and attractive. It won't get us to 100 percent removal, but it will be worth the cost." ❖

*For more information on the Jordan Cove National Urban Watershed Monitoring project, point your browser to [www.canr.uconn.edu/jordancove/](http://www.canr.uconn.edu/jordancove/). You may also contact Bruce Morton at (860) 295-1505 or [aquasolutions@snet.net](mailto:aquasolutions@snet.net), Paul Stacey at (860) 424-3728 or [paul.stacey@po.state.ct.us](mailto:paul.stacey@po.state.ct.us), and Mel Cote at (617) 918-1553 or [cote.mel@epa.gov](mailto:cote.mel@epa.gov).*

Preliminary results are showing that there is less runoff from the BMP area on a per unit basis and the quality of what does run off is improved.

"This will give managers more ammunition to help them sell low-impact development," Morton says. "If we're serious about dealing with water quality in the long term, this is something we are going to have to do to succeed."

## Reaching Out

Managers, it seems, are interested in getting that ammunition. So far, 29 states and 3 countries have wanted more information on the Jordan Cove project.

"It's a bit of a showcase," says Morton, who regularly helps conduct tours of the neighborhood for



The experimental Jordan Cove project features (clockwise from top) a narrow road made of permeable paving blocks, rain gardens that absorb roof runoff, and grass swales.

*continued from Page 5*

"We learned that this type of development doesn't cost more and may cost less in the longer term, particularly as products become more accepted and there is a greater demand," Cote says. "By and large, we feel if BMPs were on a level playing field, a green neighborhood would be less expensive to build than a traditional one."

## So Far, So Good

Not only may BMPs be cost effective, monitoring is showing that they also are working.

"The early results are, 'absolutely.' We've had a year now to monitor the BMP site and the results are extremely positive. We are seeing what we expected and maybe even a little better," Cote says.

# Doing Something about Doggie Doo on Georgia's Beaches

It's an unsightly problem. Beachgoers bring their pets along to frolic in the waves, and Fido leaves more than footprints behind. Not only is it unpleasant for others sharing the shore, but it also poses a real health threat to swimmers and other animals.

When visitors began to complain about the surprises dogs, horses, and other animals were leaving behind on St. Simons Island beaches, Bill Tipton, executive director of the Brunswick and Golden Isles of Georgia Convention and Visitors Bureau, knew he needed to pick up where pet owners were leaving off, or rather, needed to help owners do the picking up.

**"It's a privilege having an animal on the beach and there's a responsibility that goes with that."**

**Bill Tipton,  
Brunswick and Golden  
Isles of Georgia Convention  
and Visitors Bureau**

By ordinance, St. Simons Island welcomes animals before 9 a.m. and after 4:30 p.m. during the peak vacation months of May through September. Animals are allowed on the beach any time during the rest of the year.

While there was signage at all beach access points listing beach rules, Tipton says, "it didn't seem to be strong enough."

Since it was time to refurbish the existing beach signage, Tipton got permission from the nonprofit organization that had erected the

signs to take over the responsibility.

His plan was not only to make the signage more eye-catching, but to have plastic bag dispensers installed alongside it for owners to use to clean up after their canine companions. Tipton notes, "Burial at sea doesn't count."

At no charge, an advertising agency came up with new signage, which begins with, "If your animal leaves more than prints in the sand . . ."

The county already had portable trash cans on the beach that were attached to wooden poles embedded in cement-filled tires, which provided ideal places to put additional signage and bag dispensers, all in one unit. A group of local residents volunteered to restock the dispensers.

Information on the new canine waste disposal units is featured in a visitors' guide and on rack cards at welcome centers. A press event to announce the units resulted in a number of newspaper articles.

Three different types of dispensers were tested last summer. The unit style that was found to be best was made of high impact plastic and featured bags on a roll. Tipton notes the bags are degradable and each dispenser costs about \$200 apiece.

Tipton says there have been some challenges with the program. Locks on the dispensers

rusted shut after a week and half and have to be oiled, one of the dispensers was vandalized, and volunteers don't always think to let him know if there is a problem with one of the units.

The benefits, however, have outweighed the challenges, he says. A nearby neighborhood association has copied the idea, and people are becoming bolder about letting offenders know they have to pick up after their pets.

"We want everyone to have a positive experience when they come to our beaches," Tipton says. "It's a privilege having an animal on the beach and there's a responsibility that goes with that." ❖

*For more information on the canine waste disposal units, contact Bill Tipton at (912) 265-0620 or [executivedirector@bgicvb.com](mailto:executivedirector@bgicvb.com). To order a copy of a visitors' guide, point your browser to <http://bgicvb.com>.*



Portable trash cans were retrofitted with signage and bag dispensers to help dog owners with their beach etiquette.

Photo courtesy of Brunswick-Golden Isles Convention and Visitors Bureau

## Ideas for the Next Issue

As you are planning for 2004, do you see new issues and challenges on the horizon? Do you anticipate taking new approaches to old problems?

Here are a few of the articles our writers are looking at for the New Year. Does one of your projects fit the topic? Are there other subjects that would better meet your management needs?

- **Mapping and Monitoring the Undersea Landscape**—How are the data and information that are being generated by rapidly expanding ocean observing systems being used by coastal resource managers? Are there management issues for which these data will be vital?
- **Megahomes**—In coastal areas around the country, many small houses have been demolished and replaced by larger houses that often are out of scale with surrounding homes. Have coastal managers found a way to balance community character and the desires of developers?

Make contacting us by e-mail or telephone one of your resolutions for 2004, and voice your opinion on the topics and articles we should cover.

*To share an idea or provide feedback, contact Hanna Goss via e-mail at [Hanna.Goss@noaa.gov](mailto:Hanna.Goss@noaa.gov), or by mail at 2234 South Hobson Avenue, Charleston, SC 29405-2413. You may also contact her by phone at (843) 740-1332, or fax at (843) 740-1313. To read past editions of Coastal Services, point your browser to [www.csc.noaa.gov/magazine/](http://www.csc.noaa.gov/magazine/).*

### STORM SURGE, EROSION, FLOODING is your community ready?

Find out with the Risk and Vulnerability Assessment Tool.

[www.csc.noaa.gov/rvat/](http://www.csc.noaa.gov/rvat/)

## A BIMONTHLY TOOL FOR COASTAL MANAGERS

**SUBSCRIBE TODAY!**



Each issue of *Coastal Connections* looks at a tool, resource, or methodology that coastal resource managers can use to get the job done. Topics include needs assessments, building effective Web sites, the ABCs of beach nourishment, and other issues as requested by the coastal resource management community. Get on this mailing list today by e-mailing the NOAA Coastal Services Center at [CoastalConnections@noaa.gov](mailto:CoastalConnections@noaa.gov).

## YOUR INFORMATION PORTAL FOR SHORELINE DATA AND INFORMATION.

[WWW.CSC.NOAA.GOV/SHORELINE/](http://WWW.CSC.NOAA.GOV/SHORELINE/)



# Impervious Surfaces can degrade Water Quality



**Do you know how much of your community is covered by roads, parking lots, and buildings?**

The correlation between impervious surfaces and water quality has been well established, but calculating this ratio can be difficult. Use the Impervious Surface Analysis Tool (ISAT) for this task. ISAT information can play a significant role in your water quality protection efforts.

**Impervious Surface Analysis Tool**  
[www.csc.noaa.gov/crs/is/](http://www.csc.noaa.gov/crs/is/)

NOAA Coastal Services Center  
2234 South Hobson Avenue  
Charleston, SC 29405-2413

**PRST STD  
POSTAGE & FEES PAID  
NOAA COASTAL  
SERVICES CENTER  
PERMIT NO. G-19**



**This paper is made with 100% recycled fiber and contains at least 25% post-consumer waste.**

www.csc.noaa.gov/crs/is/

www.csc.noaa.gov/crs/is/