

COASTAL SERVICES

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LINKING PEOPLE, INFORMATION, AND TECHNOLOGY

NO-TRAWL ZONES: Using Private Money to Protect Seafloor Habitat in California

StriperTracker: Using New Technology to Learn about Fish in New Jersey

Giving Local Officials New Perspective in Minnesota and Wisconsin



FROM THE DIRECTOR

To quote Percy Bysshe Shelley, “Change is certain.” And change is what we as coastal resource managers have to do in order to better protect, restore, develop, regulate, mitigate, use, and enjoy our coastal and ocean resources.

The cover story for this edition of *Coastal Services* provides an example of two nonprofit organizations changing the way they do business to protect millions of acres of California ocean bottom while simultaneously addressing the economic issues facing fishermen who would have suffered if more stringent conservation regulations were imposed.

By partnering and unifying their interests with trawl fishermen and the fishing community, the Nature Conservancy and Environmental Defense improved their effectiveness.

We at the National Oceanic and Atmospheric Administration’s (NOAA) Coastal Services Center also are committed to using partnerships and collaboration as our mode of operation.

One of our partners is the California Coastal Conservancy. Recently, the Center provided funding and technical assistance for a study documenting regional technical and organizational needs of conservation agencies and groups in northern California, with an eye to better connecting marine and land conservation. To view the

needs assessment on the Web, point your browser to www.nrsrcaa.org/linkinglandsea/index.htm.

The Center’s work with the California Coastal Conservancy and others will continue with the formation of a coalition to determine how the various organizations might work together to support conservation efforts in the north coast region.

One thing that makes these efforts a little different is the role that NOAA is playing. Instead of the federal government leading the effort, the Center is playing a supporting role and letting the local organizations prioritize their needs and lead the charge.

Another example is NOAA’s sponsorship of October’s National Land Conservation Conference—specifically the conference’s Wetlands, Coasts, and Watersheds track. These sessions encouraged exploring creative solutions for coastal conservation by connecting land trusts’ efforts with those of the coastal, watershed, and hazards management communities.

Change may mean reaching beyond traditional partnerships to find solutions, or it may mean adjusting how we do business to allow change to occur. The result is the same either way. ❖



Margaret A. Davidson

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.



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NEWS AND NOTES

Tips for Making a Good Speech

A recent series of presentations at the National Oceanic and Atmospheric Administration’s Coastal Services Center really got the staff thinking. Even though the type of information was very similar, the way presenters delivered their ideas varied greatly, from good to—frankly—not so good.

Afterwards, a staff member compiled some of the comments from the audience to make the following public speaking tips. Hopefully, readers can use this information to start a conversation about what they feel are good communication practices and common pitfalls.

1. Prepare.

The quality of the speech is directly proportional to the thought and practice that go into the presentation. There is no way around this fact.

2. Don’t start with an apology.

“My throat is acting a little strange today.” “My plane was late, so I’m a little off this morning. . .” Statements like this usually don’t elicit sympathy from the audience. In fact, the audience may unconsciously begin to tune a speaker out after this heads-up about the possibility of a sub-par performance. Even if something

has happened, give it your best shot without the excuses.

3. Have a definite middle, beginning, and end.

An audience is only going to remember three to five key points. Decide in advance what those points are, and be sure to state them plainly and clearly at the beginning of your presentation. Use the middle of your talk to offer evidence for or further explanation of these points, and restate your case at the end.

4. Pay attention to the closing.

Many people neglect thinking about how they are going to end their presentation. This results in poorly chosen parting words and awkward moments. Don’t ruin the memory of your speech with a less than graceful exit.

5. Keep to the prescribed time limits.

Time your practice sessions, and have someone in the audience give you signals if necessary. It is better to cut out some facts than to go long.

6. Know your audience and your subject matter.

Don’t fall into the trap of telling the audience what you want



them to know. Focus on what they are interested in. Don’t use unknown jargon or acronyms.

7. PowerPoint can be evil.

It is difficult for the audience to pay attention to two sources of information (think of the news crawls that run on the bottom of the TV screen). If you need the crutch that PowerPoint provides, use it the way it works best, which is to show visuals or outline the main points of your presentation.

8. Practice, practice, practice.

This is the only way to improve your presentation skills. Practice among co-workers, find additional speaking opportunities, or better yet, join a local public-speaking club, or start one at your office. ❖



Bass Stephanie is shown at the moment of release after being tagged for StriperTracker.

STRIPERTRACKER: Using New Technology to Learn about Fish in New Jersey

After four years of tagging and tracking striped bass using acoustic transmitters, the answers appear to be “yes.” Scientists from the Rutgers University Marine Field Station have been able to track individual fish movements in detail and have gleaned new information

on habitat use. Researchers have expanded the tagging program to include bluefish, summer flounder, horseshoe crabs, and others.

The StriperTracker project and data also have been used to generate public support and promote education through fish “adoptions” and lessons for integration into the kindergarten through 12th-grade curriculum.

The next step, says De Luca, is to expand the project beyond the reserve’s boundaries to enlarge managers’ picture of what is happening beneath the waves.

Tagging On

The idea for StriperTracker, say Rutgers researchers Thomas Grothues and Ken Able, came out of the Sloan Foundation’s Census

of Marine Life project, which is a global network of researchers working on a ten-year initiative to assess and explain the diversity, distribution, and abundance of marine life in the oceans.

The foundation issued a challenge to scientists to “come on board at the local level,” says Assistant Research Professor Grothues. “We recognized the value of doing something like that, and the technology to do so was maturing.”

The scientists chose to look first at striped bass because they are a popular fish with Atlantic coast sport and commercial fishermen, and they feed and live in saltwater but move into freshwater to spawn. With their habitat ranging from Florida to the Gulf of St. Lawrence, Canada, they are able to swim long distances along the coast.

Previous studies, says Grothues, collected fish using nets and provided an aggregate-level assessment of the species. “They missed very important aspects of habitat use and fish dynamics. The idea of being able to look at the behavior and movement of an individual fish—no matter how you did it—is a unique thing.”

The researchers determined that by using acoustic tags on fish, they could track individuals by listening to them.

Listen and Learn

The acoustic transmitters are surgically implanted into the fish. Each tag produces a different sound pattern, which becomes an identification code for individual fish.

The transmitters have an external spaghetti tag that alerts any fisherman who catches one of the 106 tagged fish that it is part of the study. If a fisherman sees the tag too late, the internal tag carries an address for its return.

Hydrophones can hear the ultrasonic transmissions from the tags from more than a half mile away under good conditions. A series of hydrophone listening buoys were placed in strategic locations within the Jacques Cousteau Reserve.

Reaching Out

Generating public support and awareness and using the data for educational purposes has been a goal of the program since its inception in 2002.

StriperTracker data and information are part of educational activities for teachers to use with kindergarten through 12th-grade classes. The Web-based programs introduce students to issues associated with fisheries management and enrich basic skills.

“Adopt a Fish” is another means of engaging the public. Individuals or groups can donate \$315 to purchase an acoustic tag—thereby adopting the fish that gets that tag. The fish can be named and tracked via the StriperTracker Web site.

“The response has been great,” De Luca says. “Fish have been adopted by local fishing clubs, a

The next step is to expand the project beyond the reserve’s boundaries to enlarge managers’ picture of what is happening beneath the waves.

legislator, classrooms—it’s one way of not only engaging the public in the project, but of developing a source of program funding.”

Discovery Zone

The acoustic tracking has given the scientists insights into individual fish habitat use, migration, and other behaviors.

For instance, during the fall migration, many striped bass come back to “within yards” of the same spot they inhabited the year before, De Luca says. “That’s a pretty astonishing observation. No one knew they were so focused on homing in on their previous residence.”

Ken Able, director of the Rutgers Marine Field Station, notes that some fish migrate over great distances, while others don’t migrate at all, remaining residents of the estuary year-round.

“Their degree of residency is incredible,” Able says. “It’s entirely possible that many fish species do this and we don’t have that comprehensive understanding. . . This has implications for conservation and management.”

Expanding the Range

By shedding new light onto fish habitat use and behavior, StriperTracker has “demonstrated its

value to improving the management of coastal resources,” De Luca says. “We ought to embrace it.”

De Luca and the researchers envision other reserves and research groups starting their own tagging projects. As more hydrophones cover the coast, scientists will be able to share data about fish leaving one study area and entering another. As more species are tagged and tracked, a more ecosystem-scale approach to fisheries management will emerge.

“This is a real opportunity for the reserve system to provide science-based information to a user group that we have traditionally not served and help inform their decision making,” he says.

De Luca adds, “This is working, and we need to begin to expand it and start looking at a whole range of critters. Ultimately we will improve the management of our coastal resources.” ❖

For more information on StriperTracker, point your browser to www.stripertracker.org. You may contact Mike De Luca at (732) 932-6555, ext. 512, or deluca@marine.rutgers.edu. You may also contact Thomas Grothues at (609) 296-5260, ext. 262, or grothues@marine.rutgers.edu, or Ken Able at (609) 296-5260, ext. 230, or able@marine.rutgers.edu.



NO-TRAWL ZONES:

Using Private Money to Protect Seafloor Habitat in California

Protecting seafloor habitat often can result in lost income for some fishermen. Two nonprofit organizations have found a way to protect 3.8 million acres of California ocean bottom while simultaneously helping a troubled fishery.

For the past three years, the Nature Conservancy and Environmental Defense worked cooperatively with fishermen and other groups to decide on important Central California marine habitats to close off from trawling and presented those recommendations to the Pacific Fishery Management Council.

In exchange—and upon the council’s implementation of the suggested no-trawl zones—the Nature Conservancy agreed to buy fishermen’s trawl permits and vessels to help relieve the economic burden, making it the first private organization to buy Pacific fishing permits and boats for conservation purposes.

“The ocean is the brave new world of resource management,” says Rod Fujita, an Environmental Defense senior scientist and a partner in the program. “Governance in the ocean is evolving rapidly, so we need new tools like buyouts with quid pro quo attachments that embody a new social contract. In exchange for the privilege of profiting from the public’s fish and investments in the fishery, fishermen must share the responsibility for protecting the resources held in trust for all of us.”

While this agreement is specific to Central California, many of those interviewed express hopes that this type of cooperative fisheries management could be implemented elsewhere.

“It’s got to be driven by environmental groups and the fishing community,” notes Steve Copps, senior policy analyst with the National Oceanic and Atmospheric

“There had to be a way to offset the social and economic costs of closing areas and doing marine conservation.”

Chuck Cook, The Nature Conservancy

Administration’s (NOAA) National Marine Fisheries Service Northwest Region. “What managers have to do is stay out of the way and let the organic processes unfold.”

Troubled Industry

The Pacific groundfish trawling industry has seen hard times. NOAA has declared six species of groundfish depleted, and trawl fishing revenues have fallen from \$110 million in 1987 to \$35 million in 2003.

Part of the economic decline is because trawl fishing is the “most fuel-intensive way to catch fish,” says Christopher Kubiak, a Morro Bay fisherman for over 20 years who sold his permit and vessel to the Nature Conservancy. One of the reasons he sold, he says, is that for the past 10 years, expenses kept going up, but the amount he got for his catch didn’t.

Many fishermen blame regulations and fisheries closures for the industry’s economic hardships, but Kubiak, whose brother, father, and grandfather also were fishermen, says that wasn’t true in his case. “I was actually allowed to catch a lot more fish than I did, but if I caught

them I wasn’t able to sell them for enough money.”

Overcoming Conflict

As part of its Global Marine Initiative and the new California Coastal and Marine Program headed by Chuck Cook, the Nature Conservancy wanted to protect the waters off California’s central coast because they include large offshore banks, rocky reefs, kelp beds, coral gardens, and some of North America’s largest and deepest underwater canyons—all supporting a diversity of wildlife.

A 2002 National Academy of Sciences report that documented the negative environmental effects of bottom trawling became a “guiding light,” says Cook, and he and Fujita took to heart the report’s recommendations to protect seafloor communities by not only creating protected areas, but also reducing fishing outside those areas.

They knew, however, that this would be a hard sell for an already troubled fishery.

“There had to be a way to offset the social and economic costs of closing areas and doing marine conservation,” Cook says. “We

thought, ‘Why don’t we try to use private money to help forward the process of reducing pressure from the fishing industry and still allow for fishing opportunities?’”

“We came to the conclusion,” Fujita says, “that the solution would involve addressing the underlying economic issues facing fishermen, rather than just continuing to impose more stringent conservation regulations. We’re attracted to an approach based on consensus building, good science, and aligning market forces with conservation. We came up with a new way to achieve habitat protection goals that is also compatible with the goals of keeping areas open to fishing, healthy fishing communities, and economic benefits.”

Deal Making

Using computer-based models, the Nature Conservancy and Environmental Defense scientists mapped out three areas that could protect about two-thirds of the overall biodiversity along the ocean shelf off the coast of Central California.

With the Nature Conservancy’s portfolio of sites in hand, Cook and Fujita approached Morro Bay trawl fishermen to work together to develop a plan.

At first, the environmental groups’ request to work together was not viewed by many fishermen as a “good thing, but in the end it worked out to be a great thing,” says Jeremiah O’Brien, president of the Morro Bay Commercial Fisherman’s Organization.

Continued

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O'Brien notes, "These were two of the larger, more established organizations, and they didn't seem to be anti-fishing. They seemed to want to legitimately work with us."

Finding the Sweet Spot

The fishermen and environmental groups proposed protecting 3,835,000 acres of valuable habitat—about two-thirds of which is in the Monterey Bay National Marine Sanctuary—while preserving "sweet spots" of productive fishing grounds that will enable trawlers to continue their livelihoods, Fujita says.

They first brought the plan to central coast harbor masters and the Monterey Bay Aquarium's Center for the Future of the Oceans to address concerns and develop consensus for the plan. The group would come to be the Fishing Heritage Group.

"The consensus plan that emerged was based on good science, good conservation values, and good faith," Fujita says.

To offset economic impacts on the industry and to lessen the fishery impact outside the closed area, the Nature Conservancy committed to purchasing the permits and vessels of those wishing to get out of the business, if the no-trawl zones were approved.

"This was wonderful," O'Brien says. "In the past, they would have come up with a plan, and naturally we would have hated it. So we would have crafted a plan, and they would have hated it. We would have yelled and screamed and thrown

rocks, and the council would have designed a compromise between the two.

"In this case," he says, "we sat down at the table and jointly developed this plan and were able to present it to the Pacific Fishery Management Council with a nice ribbon around it. It was a win, win, win, all around the table."

Unanimous Approval

With the fishermen and conservationists in agreement, the plan easily made it through the NOAA and Pacific Fishery Management Council's normally contentious regulatory process.

In June 2005, the fishery council unanimously approved the no-trawl zone map, and the U.S. secretary of commerce signed the map and additional closed areas into regulation in May 2006. The Morro Bay agreement was accepted as part of a coastwide plan to protect nearly 150,000 square miles of essential fish habitat from Mexico to Canada.

"When you put this into the context of the larger coastwide action of implementing this massive network of closed areas," says NOAA Fisheries' Steve Copps, "what's different about this is the expenditure of private money to help offset the consequences of a public action."

Purchase Agreement

So far, the Nature Conservancy has purchased six federal trawling permits and four trawling vessels from commercial

fishermen in Morro Bay, says Cook. Negotiations are underway with fishermen on similar deals to protect areas off Monterey Bay and Half Moon Bay to the north.

For now, the Nature Conservancy is holding idle the permits and harvest rights it has acquired. Cook and Fujita have the idea, however, of developing a plan to lease back some permits to central coast fishermen who would use selective fishing gear that would provide a more sustainable way to harvest groundfish.

Fishermen are anxious for the opportunity to market more "ocean-friendly" seafood, but the plan will require the revamping of the current permit structure.

Wait and See Attitude

There is general enthusiasm expressed for the collaborative process and resulting agreement, and most believe the process could work in other places.

"It absolutely would apply to other areas," says Christopher Kubiak. "The first part is that fishermen would just have to think that it's possible."

"We need to wait and see how this works," Cook advises. "This was never designed as a model, replicable project. It was designed around a lot of situational analysis and current events specific to the central coast of California. I don't think we could walk into Oregon or Washington State and find a situation and replicate it. There's a different constituency and political situation."

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STUDYING STORMWATER PERMIT COMPLIANCE IN NORTH CAROLINA

To help limit the stormwater runoff that can pollute coastal waters, state permits often restrict impervious surfaces and require the installation of stormwater treatment systems. But with little funding typically available to determine developers' permit compliance and system maintenance, are coastal waters cleaner?

"Here's the sad part," says Gloria Putnam, coordinator for North Carolina's Coastal Nonpoint Source Program. "Despite the fact that we have a good program of stormwater regulations, we're seeing a lot of shellfish waters closed in North Carolina—a lot."

She notes that North Carolina has limited resources to conduct stormwater permit compliance inspections within its 20 coastal counties. "It just doesn't routinely happen," says Putnam.

To determine the level of stormwater permit compliance, the Coastal Nonpoint Program in 2004 collaborated with the Division of Water Quality permitting staff to conduct a permit compliance study within the five southern coastal counties.

Using Coastal Nonpoint Program and state funds, a staff person was hired to conduct a review of over 500 sites to assess stormwater permit compliance. The sites were randomly selected from over 3,600 permits issued between 1998 and 2002.

An important element of the survey was developing an inspection checklist, Putnam says. "Finding compliance isn't usually black and



An out-of-compliance, detention pond (left), and a well-maintained pond (right)

"Despite the fact that we have a good program of stormwater regulations, we're seeing a lot of shellfish waters closed in North Carolina—a lot."

Gloria Putnam,
North Carolina's Coastal
Nonpoint Source Program

white like it's written in the rules. For the study, it needed to be sound and defensible, and we needed to be able to compare inspections."

The study found significant violations in the installation and maintenance of stormwater treatment systems. In addition, it appears program requirements may be exacerbating sprawl as developers are choosing a permitting option with impervious surface limits and developing more land rather than the high density option that requires engineered treatment.

The numbers in the study were "lower than what I was thinking they might be, and that's positive," says Putnam, "but certainly it shows we need to work towards increasing compliance."

As a result of the survey, a staff member is being hired to develop outreach materials for stormwater system maintenance and installation. The permitting staff also will be able to use the survey checklist to review permits that are up for renewal, which are now receiving inspections.

While it may not be a result of the survey, Putnam says, the state has received funding from the U.S. Environmental Protection Agency for several stormwater compliance officers. She also notes that there are efforts underway to revise the state's regulations governing stormwater generated by new development.

"I think the compliance study was beneficial," Putnam says. "We've seen clearly that we have some problems, but there have been a lot of positives that have come out of this, and we're continuing to improve what we're doing."

She adds, "Any permitting program needs to be evaluated. How else do you know if you're reaching your goals?" ❖

For information, or to receive a copy of the survey, contact Gloria Putnam at (919) 733-5083, ext. 567, or gloria.putnam@ncmail.net.

Giving Local Officials New Perspective in Minnesota and Wisconsin

Sometimes what is required for improved understanding, planning, or even decision making is a slight change in perspective. Minnesota and Wisconsin coastal resource managers are giving local elected officials and planners, as well as coastal residents, a view of their community from a boat to help shed light on land use and water quality issues.

A survey conducted in 2005 shows that over 90 percent of participating municipal officials thought they would take action in their communities as a result of the voyage.

"We're giving folks a view of their community that many have never seen before. It literally gives them a different point of view," says Jesse Schomberg, coastal communities extension educator for Minnesota Sea Grant.

A View from the Lake is a collaborative program from Minnesota Sea Grant and the University of Wisconsin Extension Service to educate people—particularly local officials—about how human activities influence water quality.

Over the past three years, more than 1,200 people have boarded a former tugboat turned research vessel for a three-hour interpretive

tour of Lake Superior. Tour participants learn about and take part in hands-on activities related to the lake's ecology, watershed planning, and impacts of land use decisions on natural resources.

A booklet developed for tour participants, "Building Superior Coastal Communities," illustrates the importance of community planning and provides local examples of steps communities and others have taken to protect Lake Superior's water quality.

Surveys filled out by participants before disembarking show the tours are effective. A survey conducted in 2005 shows that over 90 percent of participating municipal officials thought they would take action in their communities as a result of the voyage.

Over four to five weeks in June and July, A View from the Lake tours launch from seven ports in Minnesota and Wisconsin, which share the lake's shoreline.

Local officials and staff receive invitations for free passage on the boat trips before the tours are announced to the public. About 70 public servants join the trips each year, Schomberg says.

News releases, postcards, and newsletter announcements spread the word to the public. The price of the voyage is \$15, and tours sell out quickly.

The admission price has been kept low, says Sue O'Halloran, water resource specialist for University of Wisconsin



Participants learn how land use decisions impact natural resources during A View from the Lake tour.

Extension, because for the first three years the project received grant funding from the Great Lakes Regional Water Quality Program and the Wisconsin and Minnesota Coastal Programs.

Grant funding has not been received for next year, but O'Halloran and Schomberg say they plan to continue the program. The cost of admission will probably have to increase, and public officials may no longer get a free ride.

All the scheduling, planning, and coordinating the program requires is worth the effort, Schomberg says.

"We're fulfilling an important role, and it feels good to watch the lightbulbs go off in people's eyes when they see the connection between the lake and their yard," he says. "It's exciting to see." ❖

For more information about A View from the Lake or for a copy of "Building Superior Coastal Communities," contact Jesse Schomberg at (218) 726-6182, or jschombe@umn.edu, or Sue O'Halloran at (715) 394-8525, or sohallow@uwsuper.edu.

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Fujita believes, "We may be able to replicate some aspects of the project down the line, under certain circumstances. This was about using private money to offset the social and economic cost of habitat protection. Traditionally, we've depended on the government to take that role. I think we'll see the private sector stepping up to make sure it's done, and make sure there's a public trust benefit."

"What we see from the federal perspective," says Copps, "is here's this group spending millions of dollars to purchase permits and build a collaborative team with fishermen. That's very different, and it's got enormous potential to be expandable to other regions. It takes money, it takes a commitment to work at the community level, and it takes a community willing to work like that."

He adds, "Our job as managers is to facilitate creative thinking and help bring it into the federal process."

"This might be a whole entirely new way of doing business," says Jeremiah O'Brien. "It would be good for everyone if it is." ❖

For more information on the Nature Conservancy's Global Marine Initiative, go to www.nature.org/initiatives/marine/. You may contact Chuck Cook at (805) 646-8820, or ccook@tnc.org, or Rod Fujita at (510) 326-6065, or rfujita@environmentaldefense.org. Contact Steve Copps at (206) 526-6187, or Steve.Copps@noaa.gov. Jeremiah O'Brien can be reached at (805) 772-9037. Contact Christopher Kubiak at (805) 441-4838, or ckub@sbcglobal.net.



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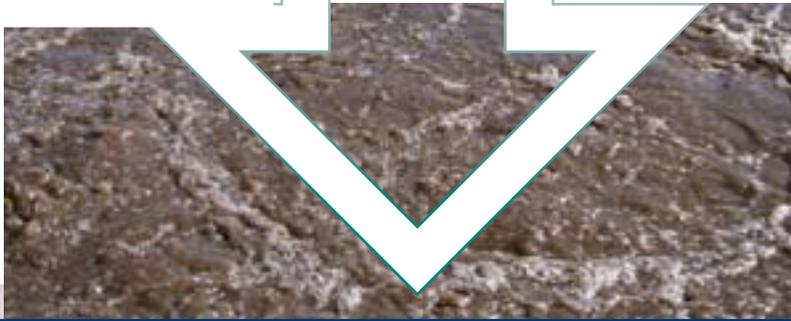
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