An Unprecedented Event:
How the M/V Cosco Busan Oil Spill Triggered
Fishery Closures in the San Francisco Bay Area
by Mary Patyten, Research Writer

The accidental release of bunker fuel from the M/V Cosco Busan inside San Francisco Bay in early November set off an unprecedented closure of all fisheries, commercial and recreational, in the Bay area. The closure resulted from Governor Schwarzenegger's Executive Order, and allowed time to determine whether consuming fish and shellfish (such as Dungeness crab) caught in the area impacted by the oil spill posed a significant human health risk. The area was re-opened to fishing on Thursday, Nov. 29. The following is a brief timeline of fishery closure-related events.

Nov. 7
The container vessel M/V Cosco Busan struck the San Francisco-Oakland Bay Bridge, releasing approximately 58,000 gallons of IFO 380 bunker fuel into San Francisco Bay.

Nov. 9
Governor Schwarzenegger proclaimed a State of Emergency in the City and County of San Francisco and the counties of Alameda, Contra Costa, Marin, San Mateo, Solano and Sonoma.

Nov. 13
Governor Schwarzenegger issued Executive Order S-14-07 directing the Office of Environmental Health Hazard Assessment (OEHHA), in consultation with the California Department of Public Health,

Fish and Game Commission Adopts New Reporting and Tagging Requirements for Sport Anglers
by Marci Yaremko, Marine Regulatory Unit

On Dec. 7, the Fish and Game Commission (Commission) adopted new reporting and tagging requirements for recreational anglers taking and targeting certain fish and shellfish species. The rules will become effective in the spring of 2008.

Report cards serve to provide information on catch and fishing activity (effort), and improve compliance with existing bag limits and other rules. For species of high commercial value, report cards can help reduce the potential for illegal take and commercialization.

The Department of Fish and Game (DFG) has report card requirements only for species of particular importance or concern. Before the new regulations were adopted, report cards were required for steelhead, salmon, sturgeon and abalone fishing. The new regulations add a card requirement for spiny lobster, and a requirement that any abalone taken in the recreational fishery must be tagged and recorded on the card.

For specific details on the new regulations, visit the Commission Web site at www.fgc.ca.gov/2007/proposedregs07.htm#1_74rc.
to “expeditiously review the available scientific information to determine whether a significant human health risk is posed by the human consumption of marine life caught in the area impacted by the oil spill.” The Executive Order suspended all fishing for human consumption in the spill area until Dec. 1, 2007, or whenever state agencies found that the fish and shellfish were safe to eat. The Department of Fish and Game (DFG) was named as a partner in determining the geographic area impacted by the spill, and in deciding when the suspension would be lifted. Use of live wells or holding tanks that draw in water from the outside (used to transport crab and other species) in San Francisco Bay was also prohibited, as well as commercial bait operations that use holding pens or nets in the bay.

OEHHA issued an interim oil spill advisory for fish consumption for San Francisco Bay and coastal waters between Pt. Reyes lighthouse and San Pedro Point, in northern San Mateo County. This advisory recommended against consumption of fish or shellfish from the area affected by the oil spill.

Nov. 14

DFG and the Office of Spill Prevention and Response officially delineated the area affected by the spill (see map online at [www.dfg.ca.gov/news/fisheries-closure.pdf](http://www.dfg.ca.gov/news/fisheries-closure.pdf)).

Nov. 15

State agencies and local fishermen cooperated in gathering samples of Dungeness crab, Pacific herring, shiner perch, black perch, red rock crab, and mussels from 23 sites inside and outside of the spill zone. Over the next two weeks, samples were tested for toxins that pose a human cancer risk, and several Dungeness crab samples were sent for sensory evaluations.

For more information about the effects of the M/V Cosco Busan oil spill on San Francisco Bay area fisheries, visit these Web sites:

DFG Office of Oil Spill Prevention and Response (OSPR)

Office of Environmental Health Hazard Assessment (OEHHA)
[www.oehha.ca.gov](http://www.oehha.ca.gov)

Nov. 29

Test results showed that the Dungeness crab, Pacific herring, shiner perch, and black perch sampled did not contain detectable levels of polycyclic aromatic hydrocarbons (PAHs), which may cause major human health concerns following an oil spill. In addition, a preliminary sensory evaluation of Dungeness crabs found no evidence that the taste and odor of the crabs had been significantly affected by the oil spill. Red rock crab from Berkeley Pier contained 0.4 ppb of PAHs, below the level of health risk concern. (44 ppb is considered the maximum acceptable risk level of toxins in the U.S. EPA’s Guidance for Assessing Chemical Contaminant Data for Use in Fish Advisories.)

Mussels at Berkeley Marina and Rodeo Beach were found to contain 53 ppb PAHs, and thus were above the limit of health concern. The advisory recommending against consumption of fish or shellfish from the area affected by the oil spill was revised to include only mussels at these two locations. This advisory will remain in place until testing indicates that consumption of mussels at these locations no longer poses a human health concern. Mussels at Angel Island and Baker Beach had levels of 12 and 2 ppb PAHs, respectively.

The Executive Order that had closed fisheries since Nov 13 was rescinded, and all pre-spill seasons, limits and other legal requirements were reinstated. The prohibitions on the use of live wells or holding tanks in the bay, and on commercial bait operations that use holding pens or nets in the bay, were also lifted.

Although the tests suggest no increased risk from eating crab or fish from the spill area because of oil contamination, it is possible that some fish or crab may have come into contact with pockets of oil. Sport fishers should avoid eating any fish or shellfish that have an oily smell or taste. It is possible that residual oil may remain on the water over the next several months. Recreational and commercial fishers should avoid exposure of their take to these residual pockets.

Since the tide is right...

Try surfing the Marine Region Web site!
[www.dfg.ca.gov/marine](http://www.dfg.ca.gov/marine)
Welcome to the Marine Management News Fish Identification Quiz for December, 2007! Here’s your chance to show off your knowledge and win an official Department of Fish and Game (DFG) fish tagging cap (left). To win, simply be the first to send an e-mail to AskMarine@dfg.ca.gov correctly identifying:

- The species of the fish pictured below (scientific name and an accepted common name)

Be sure to type “December 2007 MMN Fish Quiz” in the “Subject” portion of your e-mail.

This fish begins life during the March through July spawning period off California along with one to two million of its siblings. Exactly how it spends the first year of its life is a bit of a mystery, although young fish have been observed hanging around vertical walls and oil platforms at depths as shallow as 36 ft. It is generally a bottom dweller, preferring to live a solitary life around rocky crags, caves, and overhangs, although small groups have been observed. Adults are most commonly found at depths between 150 and 1,200 ft.

This species’ range extends from the Aleutian Islands of western Alaska in the north, to Ensenada, Mexico in the south. However, it is not frequently seen in southern California. Adults feed primarily on other rockfishes, herring, sand lance, crab, and shrimp.

This fish has one of the slowest growth rates of all rockfishes off the California coast. It matures late in life, at around 22 years of age (18 in. long), and lives to at least 118 years old. This species reaches a maximum size of around 36 inches in length.

Because they are residential in nature (they don’t migrate or travel much) and have been highly prized over the years by both commercial and sport fishermen, this species of fish is very vulnerable to overfishing. In fact, the Pacific Fishery Management Council (PFMC), which manages this and other groundfish species off the California coast, has designated it an “overfished” species. California sport fishermen have not been able to legally keep this fish since 2003, and regulations enacted by the PFMC restrict the type of gear used by commercial fishermen to reduce the amount of this species taken in bycatch. Federal rebuilding analyses estimate that it will take nearly 100 years for this fish to shed its “overfished” designation.

Sport anglers who catch this fish are encouraged to pull anchor and go elsewhere to fish, to reduce incidental catch and to allow the population to rebuild. Anglers fishing in northern California, where this species is most abundant, need to be especially careful about identifying and releasing this species. Methods for helping this fish return safely to its deepwater habitat may be found online at seagrant.oregonstate.edu/sgpubs/onlinepubs/g05001.pdf. For more information about this fish, go to the PFMC Web site at www.pcouncil.org/groundfish/gfcurmgmt.html.

If you think you know this species of fish, claim your prize by being the first to send an e-mail to AskMarine@dfg.ca.gov with its correct scientific and common name. Again, be sure to type “December 2007 MMN Fish Quiz” in the “Subject” portion of your e-mail.

The answer to the quiz and the winner’s name will be posted in the next issue of Marine Management News.
You may have heard about the Marine Life Protection Act (MLPA), and the resulting new marine protected areas (MPAs) being developed in California. While the Marine Life Protection Act was passed into law in 1999, it took some time to find an effective structure for implementation.

Since the end of 2006, the Department of Fish and Game (DFG) has been engaged in its third effort to implement the MLPA. For a variety of reasons, including the inherently difficult issues involved, insufficient funding, and minimal DFG staffing, the first two implementation attempts were not completed. The third effort uses a new public-private partnership approach, commonly referred to as the MLPA Initiative (MLPA-I), which should help overcome the problems experienced during previous attempts. The current MLPA-I approach would not have been successful without the hard work of people both inside and outside of DFG, and the lessons learned from previous efforts.

The goals of the MLPA are to re-align California’s current and future marine protected areas to increase their effectiveness in protecting and conserving the state’s marine life and habitats, marine ecosystems, and marine natural heritage, as well as improving recreational, educational, and study opportunities within marine ecosystems. This will entail evaluating, potentially re-designing, and finally managing the areas as a network of MPAs.

While it requires the MPAs to be designed and managed as a network to the extent possible, the MLPA also requires the structure, function, and integrity of marine ecosystems to be preserved. This holistic protection may be achieved by including different habitat types within a range of depths under the various levels of protection prescribed by the MLPA, including State Marine Conservation Areas (SMCA), State Marine Parks (SMP) and State Marine Reserves (SMR) (see box, right). MPAs are not designed to operate as fishery management tools, but future fisheries management decisions may be influenced by the presence of newly adopted MPAs.

The DFG will ultimately be responsible for enforcement, research, and monitoring activities within MPAs. One primary requirement of the MLPA is adaptive management, which includes a monitoring program with the flexibility to evolve and effectively monitor and evaluate both an MPA network and individual MPA goals. Another goal is to establish a robust monitoring program that is collaborative, inclusive, and provides information useful for fisheries management.

“MLPA” continued on page 5

Commonly Used Terms & Definitions

**Marine Protected Area (MPA)**
Named, discrete geographic marine or estuarine area seaward of the mean high tide line or the mouth of a coastal river, including any area of intertidal or subtidal terrain, together with its overlying water and associated flora and fauna that has been designated by law or administrative action to protect or conserve marine life and habitat.

**State Marine Reserve (SMR)**
The most restrictive classification, these are no-take areas (i.e. extractive activities are prohibited).

**State Marine Park (SMP)**
May allow recreational take, or limit it in some way, but does NOT allow commercial take.

**State Marine Conservation Area (SMCA)**
May limit recreational and/or commercial take to protect a specific resource or habitat.

**State Marine Recreational Management Area (SMRMA)**
A non-terrestrial marine or estuarine area designated so the managing agency may provide, limit, or restrict recreational opportunities to meet other than purely local needs while preserving basic resource values for present and future generations.
The MLPA-I is committed to working with and providing outreach to state and local stakeholders, the general public, and the scientific community, as well as consumptive and non-consumptive user groups. The goal of balancing stakeholder views with a science-based planning process is outlined in the MLPA. Rather than designing a single network for the entire state at one time, the MLPA-I plans to complete a network of MPAs over time using a series of five regional processes, within five study regions: South Coast, Central Coast, North-Central Coast, North Coast, and San Francisco Bay (see box, right). This regional approach helps to ensure that MPA design reflects local input and knowledge while taking user needs and opportunities into consideration.

During the past twelve months, three landmark events have occurred as part of the MLPA-I:

• **On December 21, 2006**, as the first phase of MLPA planning and implementation neared completion in the Central Coast Study Region (CCSR), and the Secretary for Resources announced the commencement of the second phase of MLPA-I in the North-Central Coast Study Region (NCCSR).

• **On April 13, 2007**, after multiple public meetings and thousands of public comments, the California Fish and Game Commission voted unanimously to adopt its preferred alternative of MPAs for the CCSR, which extends from Pigeon Point to Point Conception. The 29 MPAs adopted cover approximately 204 mi² (18%) of state waters within the study region, with about 85 mi² (7.5%) designated as “no-take” state marine reserves.

• **On September 21, 2007** a kick-off event at Point Lobos signaled the end of the CCSR planning process and the beginning of the implementation, monitoring, and evaluation phase for that study region. The 29 new Central Coast MPAs went into effect on that day.

The NCCSR planning process is currently underway. After months of preparatory meetings, the formally-established Regional Stakeholder Group (RSG), a regional body of stakeholders publicly nominated and jointly appointed by the Director of DFG and the Chair of the MLPA Blue Ribbon Task Force, is in the initial stages of submitting ideas for potential MPA networks within the NCCSR. The process of creating MPA proposals is a fluid one with several stages of development, and as with most working drafts, the proposals may change considerably over time. The RSG set of alternatives, and possibly a preferred alternative, will undergo a final scientific and policy review, after which it will be forwarded to the California Fish and Game Commission in March 2008 for review and public comment.

Public input is an important aspect to successful MLPA implementation. As a result, there are several potential avenues for public involvement in the current study region, which include the following:

• Communicating with members of the RSG
• Commenting at MLPA and Commission meetings
• Signing up for the MLPA mailing list
• Submitting written comments

Over the next few months, as the RSG continues to refine its MPA proposals, constituent and public comments will be taken into consideration in the development of a robust and thoughtful network of MPAs for the NCCSR.

For current process updates, outreach materials, meeting schedules, or to view archived and live MLPA meetings, we encourage you to visit [www.dfg.ca.gov/mlpa](http://www.dfg.ca.gov/mlpa). Current process comments can be directly submitted to [MLPAComments@resources.ca.gov](mailto:MLPAComments@resources.ca.gov). DFG invites you to get involved and make your comments heard!

For more information about the MLPA-I process, please contact Susan Ashcraft, MPA project supervisor, at (916) 651-7670 or e-mail [SAshcraft@dfg.ca.gov](mailto:SAshcraft@dfg.ca.gov).

---

**How will the MLPA be implemented across the state?**

Implementation has been split into five (5) distinct study regions that when completed will have assessed all state waters. The study regions, from north to south, are:

- **North Coast: Oregon/CA border to Point Arena/Alder Creek**
- **North-Central Coast: Alder Creek/Point Arena to Pigeon Point (Assessment started summer 2007)**
- **San Francisco Bay**
- **Central Coast: Pigeon Point to Point Conception (Completed 9/21/07)**
- **South Coast: Point Conception to CA/Mexico border**

---

**For automatic, electronic notification of in-season fishing regulation changes, sign up for the Marine Region mailing list at:**

[www.dfg.ca.gov/marine/subscribe.asp](http://www.dfg.ca.gov/marine/subscribe.asp)
One of the most diverse and successful groups of fishes in the eastern Pacific is the rockfishes (genus *Sebastes*), represented by more than 60 species in California waters. All rockfishes have a set of characteristics that distinguish them from other fishes, most notably the prominent head spines. Rockfishes have five spines on the rear cheek area, a continuous dorsal fin with 12–15 spines and 9–16 soft rays, and an anal fin with three spines and 5–9 soft rays. Rockfishes are generally long-lived, slow growing, late maturing, and mostly residential fishes. This combination of characteristics makes rockfishes extremely vulnerable to overfishing.

In addition to these life history characteristics, increased fishing pressure and unfavorable oceanic conditions have combined to reduce some populations of rockfish to extremely low levels. Two examples of important species under pressure are the canary (*Sebastes pinniger*) and the yelloweye (*Sebastes ruberrimus*) rockfishes. Canary rockfish have a potential lifespan of 60 years or more, while the yelloweye rockfish can live at least 118 years. Both species mature relatively late in life. NOAA Fisheries has designated these species as “overfished” and the federal Groundfish Fishery Management Plan mandates actions to rebuild their stocks to a healthy condition in the shortest time possible. In order to allow these stocks to rebuild, it is illegal to keep individuals of these species. Stocks are not expected to be rebuilt until 2017 and 2074, respectively. Unintentionally caught canary or yelloweye rockfishes should be returned to the water immediately to increase their chances of survival.

It can be challenging to identify any rockfish species, including prohibited species, when many of them are the reddish-colored and look very similar. In the past, anglers have typically misidentified canary (a prohibited fish) as vermilion rockfish (a permissible fish). The best way to distinguish a canary rockfish is by the bright orange coloration. The color can be compared to that of a road construction cone, a soda can of orange Crush®, or a bowl of Cheetos®. In northern California, the orange color pattern may be more reddish. However, all canary rockfish have a broad white or light grey band along the lateral line of the body that extends from the head to the tail. Canary rockfish also have a white belly, a slanted triangular-shaped anal fin, and a slightly forked tail fin. In smaller individuals, a dark grey or black spot can often be found at the base of the dorsal fin.
**“Red Rockfishes” continued from page 6**

fin, about halfway down the body. When all else fails, rubbing the thumb against the chin of the fish will give a clue; canary rockfish have a smooth jaw.

Vermilion rockfish are actually quite distinct from canary rockfish, once one knows what to look for. Vermilion rockfish possess a much deeper red color: envision the red of a very ripe tomato. Vermilion rockfish lack the broad white or grey band on the body, but may have a partial band, and the belly is never bright white. The anal fin is rounded in vermillion rockfish, and the edge of the tail fin is straight. Many individuals have black borders on the fins. The upper (dorsal) part of the body is mottled with dark grey to black speckles, especially in younger fish. Again, rubbing the chin of the fish can help distinguish it; vermillion rockfish have a sandpaper-like roughness to the chin.

Some anglers misidentify yelloweye (a prohibited fish) as vermillion rockfish (a permissible fish). Yelloweye rockfish reach a larger maximum size than either canary or vermillion rockfishes, and they have very big, strong head spines. The yelloweye rockfish goes though a rather dramatic color change with growth. Juveniles are reddish-orange with two solid white lines running the length of the body, one along the lateral line and one below it. During transition, the body is red with only one white stripe (the bottom stripe disappears first). Large, mature individuals lack the white stripes completely, and are more orange-colored with pinkish fins. The fins are tipped with black throughout growth. The yelloweye rockfish, not surprisingly, has prominent golden-yellow eyes. There is a rasp-like ridge of spines above the eyes of large individuals. Like the canary rockfish, the chin of the yelloweye rockfish is smooth.

With practice and patience, identifying the characteristics of canary, vermillion, and yelloweye rockfishes can become a straightforward task. A combination of characteristics such as the coloration of the lateral line, shape of the fins, chin texture, and body color can be used to identify each of these three “red” rockfishes. Proper identification is the key to reducing the accidental harvest and ultimately rebuilding the California stocks of overfished species in a minimum amount of time.

For more information about canary, vermillion and yelloweye rockfishes, visit the following Web sites:

**Frequently Asked Questions Regarding the Oct 1, 2007 Recreational In-Season Groundfish Closure of the Northern and North-Central Management Areas**

[www.dfg.ca.gov/marine/groundfishcentral/pdfs/faqs_groundfish.pdf](http://www.dfg.ca.gov/marine/groundfishcentral/pdfs/faqs_groundfish.pdf)

**A Primer on Groundfish**

[www.pcouncil.org/groundfish/gfprimer.html](http://www.pcouncil.org/groundfish/gfprimer.html)

---

**CRFS 2008—Changes, Challenges, and Opportunities**

by Sandra Owen, Senior Biologist Supervisor, Recreational Fishery Data Project

The California Recreational Fishery Survey (CRFS) is looking forward to an exciting year in 2008 with a focus on refining current methods and developing or implementing new methods, which provide for a number of changes, challenges, and opportunities.

The CRFS was initiated in 2004 to gather information on the sport catch of marine finfish, and the angler effort used to catch the fish, along the 1,100 plus miles of California coastline. The invaluable information is used for managing fisheries at the federal and state levels.

During the peak summer fishing months, as many as 45 CRFS samplers contact anglers on beaches, banks, piers, jetties, public launch ramps, and onboard commercial passenger fishing vessels (also known as party boats).

Samplers ask anglers questions about the day’s fishing activities and examine their catch. By looking at the catch, samplers determine the number and type of fish caught. Samplers may also measure and weigh the fish. The samplers who collectively interview hundreds of anglers on any given day provide an important, direct link between the Department of Fish and Game (DFG) and fishermen and their activities.

To broaden the sweep of the survey so it represents all marine fishery catch and effort in California, two telephone surveys are conducted to gather additional information on fishing effort: a telephone survey of partyboat operators and a telephone survey of licensed California anglers.

As the CRFS samplers and telephone surveyors go about their everyday jobs of gathering information on almost all conceivable aspects of marine sport fishing in California, work is going on to evaluate survey methods and results, develop more efficient ways to gather fishery information, and collaborate with scientists across the nation to develop guidelines for sport fishing sampling programs for coastal states with marine sport fisheries. The result of all this work will translate into improvements in the CRFS in 2008.

Some of the changes will be noticed by the fishing public and some will not:

**CRFS samplers will begin sampling on partyboats in Humboldt and Del Norte counties in 2008**

While onboard sampling has been conducted in all other coastal counties in California, it has not been conducted in the two northernmost counties because it was thought very little non-salmon fishing occurred on party boats in this area (salmon party boat fishing catch and effort is gathered at dockside when a boat returns to the California coastline). The invaluable information is used for managing fisheries at the federal and state levels.

Some of the changes will be noticed by the fishing public and some will not:

**“CRFS” continued on page 10**

---

**December 2007**

7
UpdaTes

Marine Management News

DFG Expands California Halibut Sampling

Statewide, California halibut is one of the most important state-managed fish species for recreational anglers and the commercial fishing industry. Every year, thousands of recreational anglers target California halibut, or catch them incidentally while targeting other fish. California halibut is also important to commercial fishermen and fish markets; in 2006 this species yielded approximately $2.7 million to the industry. The average price paid to commercial fishermen for California halibut has increased over the years to the current price of $4.57 per pound; from 2005 to 2006 the price increased by nearly $1.50 per pound. Fresh halibut is sold to local restaurants and fish markets, and in southern California it is the center of a valuable live-fish fishery.

Recognizing the importance of maintaining a sustainable California halibut fishery, the Department of Fish and Game (DFG)'s newly created State Finfish Management Project (SFMP) has undertaken a fishery-dependent sampling program along with fishery-independent trawl surveys to improve the DFG's knowledge of this valuable resource.

California halibut are landed at most major commercial ports, however DFG estimates that up to 60% of commercial landings occur at ports north of Point Conception, with San Francisco being the most important port. Prior to the inception of the SFMP, California halibut was sampled only at the ports of San Pedro and Terminal Island, with no directed commercial sampling at other ports. Beginning in March 2007, SFMP staff headquartered at Los Alamitos, Santa Barbara, Monterey, and Belmont began collecting life history data (length, weight, sex, age) from commercial California halibut landings in central and southern California ports. Project staff are also collecting data from halibut taken incidentally in other commercial fisheries, and collecting carcasses of processed fish to increase...
Surfperch: A Popular Sport Fish Under Investigation

by Ken Oda, Associate Marine Biologist

The surfperch family (Embioticidae) contains a colorful set of California’s most sought-after sport fish. Surfperch was the second most popular species group in terms of the number of fish landed (kept and/or released) by recreational anglers fishing ocean waters statewide in 2006. An estimated 3.1 million surfperch (522 metric tons) were landed, with barred surfperch comprising most of the catch (44 percent). Surfperch also support a comparatively minor hook-and-line commercial fishery, with an estimated total catch of 14 metric tons in 2006.

To gain a better understanding of state-managed species such as surfperch, the Department of Fish and Game (DFG) created the State Finfish Management Program. The program’s primary goal is to improve the status of fish species and the angling opportunities available to California anglers. Surfperch are a good example of a species that benefits from the program’s efforts.

DFG Web Sites Are Now Even Better!

by Aaron Del Monte, Assistant Information Systems Analyst and Marine Region Webmaster

You may have noticed a new look to the Marine Region Web site, and to all pages on the Department of Fish and Game (DFG) Web site. This is because the DFG recently completed a comprehensive upgrade of their entire site.

What are the advantages of these changes? Besides the clean new look, our Web pages now use a far superior search engine compared to the previous one. At the top of all DFG pages, you will see a text box that you can use to search for the topics of your choice on the DFG Web site.

You will also notice that the DFG Web site is organized by an easy-to-use set of tabs near the top of the page. You may click any tab to find what you are searching for. Of special note, there is a “Marine” tab, which you can use to quickly go to the Marine Region Web site, and the Marine Life Protection Act (MLPA) Web site. From the Marine Region Web site, you can also link to the California Fishing Passport Web site.

Here is a brief description of these three great marine information sources:

Marine Region Web Site [www.dfg.ca.govmarine]: For the latest information on fishing regulations, marine resources, and news affecting our California coastline, your first stop should be the DFG Marine Region Web site. This comprehensive information source currently contains well over 2,000 Web pages readily available to the public. If you are new to the Marine Region, would require the card on Free Fishing Days when fishing for these five species, just like any other day. In years past, some individuals have taken three abalone on Free Fishing Days in addition to the annual bag limit of 24 abalone because the rules did not make clear that the abalone report cards were needed on these days.

The DFG believes that by requiring the report cards for all individuals who fish for or take these species instead of just for licensed fishermen, the potential for exceeding daily and annual limits and the potential for bias and underreporting in the data will be considerably reduced.

DFG and Commission Crack Down on Abalone Poaching with Proposed New Abalone Tagging Requirement

DFG wardens rank abalone poaching among the most widespread and prolific of wildlife violations in California. And almost every year undercover efforts, abalone checkpoints, and CalTIP calls result in DFG wardens successfully making a significant abalone poaching case or two where fines are steep, and jail time is often imposed.

But despite winning a few battles, wardens are concerned they are losing the war on abalone poaching – due both to the shortage of game wardens in the state, and the motive of significant financial gain for the sale of even just a few abalone on the black market.

In an effort to keep catches within allowable limits and to make it more difficult for abalone taken in the recreational fishery to illegally make their way into the commercial market, the DFG has made a number of changes to current abalone fishing regulations.

The daily bag and possession limit on abalone is three per day, and not more than 24 abalone may be taken per person annually. Although abalone fishermen have been required to document their abalone catch on a report card for many years, beginning in 2008 abalone divers and shorepickers will need to have their card in their immediate possession when fishing.
California spiny lobster may be found from San Luis Obispo County southward off California. They prefer kelp beds and rocky areas off the southern California mainland, and around the Channel Islands, to depths of over 100 ft. Spiny lobster often hide in holes and crevices in rugged rock surfaces for protection.

Distinguishing Characteristics
Brick-red to brown. Shell (carapace) with numerous forward-pointing spines. Two heavy, spiny antennae longer than the body, with two shorter “antennules” in-between. Ten legs. Small eyes set on stalks beneath long, sharp head spines. Two large, golden “false eye” spots below the actual eyes. Segmented tail ending in rounded fins.

Life History and Other Notes
California spiny lobster feed on a wide range of plants and animals, and readily dine on most decaying materials.

Spawning occurs from March through August. Females may carry up to 800,000 coral-red eggs beneath their tails. Upon hatching, tiny young lobster drift with the currents for seven or eight months, going through twelve developmental stages, before settling to the bottom as juvenile lobster.

Many people catch spiny lobster using hoop nets (usually made of steel rings and netting) baited with fish remains, and set on the sea floor. Skin and scuba divers also capture spiny lobster with their hands.

In 2008, there will be a focused study to quantify fishing effort from boats that reside in publicly- and privately-owned marinas, moorings, and private docks where samplers do not have access.

CRFS samplers talk with boat anglers who return to public launch ramp sites that are accessible to everyone. The samplers cannot talk with boat anglers that return to non-accessible docking and mooring facilities, so the telephone survey of licensed anglers is used to learn about fishing effort that originates and ends at those sites. Even though the number of people surveyed by phone is relatively low compared to the number of licensed anglers and the number of field surveys, phone surveys provide information the program would not otherwise have.

The new study in 2008 will be conducted at selected sites in southern California. At the sites, samplers will count the number of boats returning to non-accessible marinas and moorings. This study will help to determine if the angler telephone survey produces reliable information or if new survey methods need to be developed for this segment of angling activity.

“CRFS” continued on page 11
California is collaborating with a national panel of experts from the Marine Recreational Information Initiative to review how sport fishing information is gathered, to evaluate what works and what doesn’t, and to develop guidelines for new ways to gather the information for today’s management needs.

California is honored to have biological and statistical specialists work with a national group of experts on sport fishery information collection. Two DFG staff, one an expert on the party boat fishery and one an expert on sample design, are currently working with others from the many aspects of sport fishing nationwide to examine, review, and develop guidelines for collection of sport fishing information. The CRFS is one of many programs being reviewed. By the end of 2008, we hope to have information from this national effort to judge how well the CRFS is achieving its goals of gathering sport fishery information. Details about this program can be found on the NOAA Fisheries Web site at www.st.nmfs.noaa.gov/mrii/index.html.

All of these changes, challenges, and opportunities mean that the CRFS is moving into 2008 with refinements and expansion programs to better fit the sport fishing public’s and resource managers’ needs for information. We hope you will take the opportunity to visit the CRFS Web sites to learn more:

California Recreational Fisheries Survey: www.dfg.ca.gov/marine/crfs.asp

Angler Telephone Survey: www.dfg.ca.gov/marine/newsletter/0507.asp#hello

Recreational Fishery Information Network (RecFIN): www.recfin.org

Southern California Surf Fish Study Begins

by Heather Gliniak, Marine Biologist

It was chilly and calm in the early morning hours of October 6, 2007. About 250 anglers lined the beach south of Huntington Beach pier, hoping their catch would win first prize in the largest surf fishing tournament on the West Coast. Fishes that live in the surf zone along sandy beaches in southern California support a very popular recreational fishery. In 2006, an estimated 429,000 fishing trips targeted croakers, surfperches, and California corbina from the shoreline in southern California. Despite the importance of these fishes to the sport fishery, the Department of Fish and Game (DFG) has very little information on the status of their populations.

However, a DFG study that began in May 2007 will help to correct this deficit in current information by providing data on the size, abundance, and movement of surf-zone species. The information will be used along with other DFG data collected in the 1950s and 1990s to analyze seasonal, annual, and decadal trends in abundance, and describe movement patterns based on tagged and recaptured fish. This study will provide the DFG with up-to-date scientific information needed to maintain sound management of surf fish sport fisheries.

One aspect of this study is the collection of surf fish species at several locations using a beach seine (net) measuring 100 ft. long and 10 ft. high. The seine is set in about 10 ft. of water, and pulled to shore to capture the fish. On the beach, DFG biologists identify, measure, and then release the catch. A variety of species, including California halibut, various croakers, Pacific barracuda, leopard shark, smoothhound shark, skates, and rays have been recorded. Some species, including California corbina, yellowfin and spotfin croakers, and larger surfperches are tagged before their release. The tags (about two inches long) are inserted into the dorsal musculature of the fish. The exposed portions of the monofilament tags are wrapped in yellow plastic tubing labeled with a tag number and DFG contact phone number.

Anglers who land a tagged fish should record when and where they caught the fish, the tag number, and the length of the fish, and call the DFG at the phone number on the tag. A t-shirt will be mailed to every angler who reports a tagged fish as a reward for helping the DFG with this study. Anglers should note that all fishing regulations still apply.

For more information, call the DFG at (562) 342-7174.
while seeking abalone, and will be required to tag each abalone they take in addition to reporting their catches.

So how does the card and tag system work?

Each abalone report card will be sold with 24 detachable tags that are affixed to the bottom of the report card. For each abalone taken, the cardholder must record the date, time, and location of catch on both the tag and the card. Each abalone taken must be tagged and the catch recorded immediately after the cardholder exits the water.

Because the new rules would require that every abalone taken or possessed be tagged, it will not matter if a person who possesses an abalone is the person who actually caught the abalone. Any abalone in possession must be tagged. This provision is designed to help ensure compliance with the limit of three abalone per day, per cardholder, and the annual limit of 24 per cardholder.

Regulations regarding the card and tagging procedures also ensure that all catches are recorded and that tags are not reused. Tags must be used in sequential order, and may only be used once. Each tag must be securely fastened to the shell of the abalone by passing a “zip tie”, string, line or other suitable material through a siphon hole on the abalone shell and also through the tag itself. Cardholders may not remove the tags from the report card until immediately prior to affixing to an abalone; once they are removed from the card they are considered “used”.

All 24 tags must be accounted for at all times. For tags previously removed from the report card, there must be a corresponding record on the Abalone Report Card that an abalone was taken at a specified date, time and location. Used abalone tags must be left affixed to the shell until the abalone is processed for immediate consumption. It is also a violation of the proposed regulations to possess any used abalone tags that are not attached to an abalone shell.

Stay tuned to the DFG Web site for more information, and a video demonstration of how to comply with the new Abalone Report Card regulations.

Coming in the Fall of 2008 – Spiny Lobster Reporting Requirements

New regulations also specify that those fishing for or taking spiny lobster must have a lobster report card. The purpose of the new reporting requirement is to monitor recreational catch, effort, and the gear used in the recreational lobster fishery. Although the DFG has considerable information on the commercial lobster fishery from landing receipts and logbooks, the DFG has very little reliable information on recreational catch and effort.

Regulations will require that in all instances of fishing activity, the cardholder must begin by recording the month, day, location, and gear code on the first available line on the report card. When the cardholder moves to another location, or finishes fishing for the day, he or she must immediately record on the card the number of lobster kept from that location.

Unlike Abalone Report Cards, if a lobster fisherman fills in all lines and returns a Spiny Lobster Report Card, an additional card may be purchased.

Proposed Changes to Salmon Reporting Requirements

Anglers fishing for salmon in ocean waters will no longer need a Salmon Report Card under the new salmon reporting requirements. In 2007, regulations required anglers fishing in ocean waters from Horse Mountain to the Oregon border to purchase and complete a Salmon Report Card documenting any fishing activity.

Beginning in 2008, a Salmon Report Card would be required only for anglers fishing in the Klamath-Trinity watershed.

Take Note! Things You Need to Know When Purchasing a Report Card

- All entries made on any report card or tag must be legible and in indelible ink.
- The cardholder is responsible for entry of the following information at the time of report card issuance:
  - The date that the report card is issued
  - The cardholder’s name, street address, city, state, zip code, home phone, and date of birth
  - The driver’s license or DMV identification number, if the cardholder has one
- If the cardholder is required to have a sport fishing license, the type of report card and the card number must be written on the fishing license, and the license number must be written on the report card
- Cardholders must return their card to the DFG by January 31 of the following year at the address specified on the card. Note that any person who fails to return his or her report card to the DFG by the deadline may be restricted from obtaining the same card in a subsequent license year or may be subject to an additional fee for the issuance of the same card in a subsequent license year.
- For abalone and sturgeon report cards, only one report card may be issued per person per license year, to ensure compliance with annual bag limits. While the proposed regulations do provide a mechanism for a replacement card in the event the original is lost, cardholders should be advised they will need both a photocopy of the original report card issued in the cardholder’s name, and proof of purchase of the original report card in the form of an itemized receipt, credit card billing statement, invoice, or other written business record expressly documenting that a report card for

“New Regulations” continued on page 13
the number of halibut “ear bones” – called otoliths – available for determining the age of harvested fish.

The SFMP’s fishery-independent halibut trawl surveys are collecting baseline data such as ratios of legal to sub-legal halibut, and life history data of legal-sized fish. In October 2007, project staff conducted a research trawl survey in an area recently closed to trawling in Monterey Bay; this area had been fished for approximately 75 years prior to its closure by the Legislature in 2006. One goal of this survey is to begin a monitoring program to document changes in species abundance in the recent absence of trawling.

In addition to halibut data, the trawl surveys will collect information about species found in close association with California halibut, and their relative abundance. A recent survey successfully completed 16 tows, documenting 33 associated species and their condition, and tagged and released 29 sub-legal halibut. Life history information was also collected from nine legal-sized halibut. Similar surveys will be performed in Monterey Bay annually for the next 5 years, and additional surveys are planned for southern California in 2008.

California halibut has been identified as a high-priority species for a stock assessment and fishery management plan. A goal of the SFMP’s sampling effort and research trawling, in addition to improving DFG’s knowledge of the halibut fishery, is to provide stock assessment staff with recent data on the status of halibut stocks and associated species. In addition, the trawl surveys will allow project staff to measure, tag, and release sub-legal halibut. This work will provide information on growth rates and movement patterns if tagged fish are subsequently captured and the tags are returned to the DFG with information on size of the fish and location of capture.

For more information on California halibut or the State Finfish Management Project, please contact Travis Tanaka, DFG associate marine biologist, at (831) 649-2881 or e-mail TTanaka@dfg.ca.gov.
Project (SFMP) in July 2006 with a full-time staff of seven biologists located in DFG’s Belmont, Monterey, Santa Barbara, and Los Alamos offices. The SFMP’s first task was to prioritize which state-managed finfish species needed study. Using a prioritization matrix from the Marine Life Management Act, the team evaluated life history characteristics, habitat needs, and vulnerability to environmental impacts and potential fisheries. California halibut and surf perch ranked highest in terms of need for study.

In the late 1950’s, the DFG conducted an intensive multi-year study on barred surfperch in southern California, and in 1979 DFG documented surf fishing effort and catch on sandy beaches in Monterey and Santa Cruz counties. After 1979 the DFG, in collaboration with National Oceanographic and Atmospheric Administration (NOAA) Fisheries, contracted with the Pacific States Marine Fisheries Commission to survey recreational anglers statewide; this survey was recently discontinued in California and a new, improved survey was rolled out in 2004, known as the California Recreational Fisheries Survey (CRFS). Unfortunately, surf perch anglers are surveyed much less frequently under the CRFS than anglers targeting salmon and rockfish. The lack of current fishery data on surfperch has made it a top-priority species group for SFMP studies.

The second major task of the SFMP was to collect data to develop more robust estimates of recreational surfperch fishing effort and catch using modified CRFS protocols. Currently the project uses two complementary survey methods: the Progressive Angler Survey (PAS) and the all-day On-Site Survey. For the PAS, a snapshot count is taken of anglers fishing at most known beach angling sites. At present, SFMP staff conducts the counts from Waddell Creek in Santa Cruz County to Carmel River State Beach in Monterey County, and in Orange County from Seal Beach to San Clemente. Twenty-five to 33 PAS studies have been completed every month in these study areas since April 2007.

The all-day On-Site Surveys are comprised of angler interviews and creel censuses at randomly-chosen, primary beach fishing locations from shortly after sunrise until dusk. The surveys include hourly angler counts, which can be compared to the PAS counts, and interviews using CRFS methods. About 20 On-Site Surveys per month have been completed since May 2007 in Santa Cruz and Monterey counties, and about 11 surveys have been completed in Orange County since Sept. 2007. The On-Site Surveys collect catch and effort data at a single location for one day, and the PAS collects angler-use data at all locations each day.

Based on the interview data, barred surfperch are the dominant species taken by beach anglers in Monterey and Santa Cruz counties; however, the bulk of interviewed anglers this spring and summer indicated that they were targeting striped bass. An abundance of striped bass appeared along Monterey Bay beaches, ranging from 8-10 inches (sub-legal) long to over 35 pounds. Some “unverified” surfperch were reported by anglers who could not identify the species; these were recorded in the “surfperch family” category. More than likely, these fish were barred or walleye surfperch. Approximately 50 percent of all fish landed in Monterey and Santa Cruz Counties were released. Anglers fishing this spring and summer targeted the early morning hours and evening hours, typically in conjunction with the incoming tide.

In Orange County, 11 On-Site Surveys were completed during Sept. and Oct. 2007. The dominant species targeted and taken by beach anglers was California corbina. Approximately 83 percent of all fish landed in Orange County were released.

The surveys are set to continue for approximately one year, after which the data will be analyzed. In 2008 the SFMP plans to shift efforts to other counties, including Santa Barbara, San Luis Obispo, and possibly San Mateo. Data collection efforts will intensify during the pre-spawning season to collect fisheries-independent samples with hook-and-line gear. The data may be used for a stock assessment to provide better understanding of this popular group of sport fish.

For further information about the SFMP surf perch study, contact Ken Oda, DFG associate marine biologist, at (831) 649-2884 or e-mail Koda@dfg.ca.gov.
Web site, we invite you to explore our site to see what a truly valuable resource we have created. For those who have already visited our Web site, be sure to check back regularly, since new features, updates, and press releases are added every week. Some of the most popular pages on this site include:

- California Ocean Sport Fishing Regulations Map
  [www.dfg.ca.gov/marine/fishing_map.asp](http://www.dfg.ca.gov/marine/fishing_map.asp)
- 2007 Ocean Sport Fishing Regulations
- Laws and Regulations
  [www.dfg.ca.gov/marine/regulations.asp](http://www.dfg.ca.gov/marine/regulations.asp)
- Fishing Resources
  [www.dfg.ca.gov/marine/fishing.asp](http://www.dfg.ca.gov/marine/fishing.asp)
- Fish Identification
  [www.dfg.ca.gov/marine/fishid.asp](http://www.dfg.ca.gov/marine/fishid.asp)

Marine Life Protection Act (MLPA) Web Site [www.dfg.ca.gov/mlpa](http://www.dfg.ca.gov/mlpa): The MLPA Initiative is a partnership between government agencies and private entities striving to achieve the original MLPA goals. The 1999 MLPA directed the state to design and manage a network of marine protected areas (MPAs) in order to, among other things, protect marine life and habitats, marine ecosystems, and marine natural heritage, as well as improve recreational, educational and study opportunities provided by marine ecosystems. This Web site, which includes many recent additions, contains up-to-date information about this exciting endeavor, including meeting information, public comments, and documents for review.

The first phase of the MLPA Initiative began along the central coast of California. Based on the work accomplished during this project, the California Fish and Game Commission adopted regulations to create a new network of MPAs designed for the Central Coast, which went into effect on September 21, 2007. For more information about the Central Coast MPAs, visit [www.dfg.ca.gov/mlpa/ccmpas_list.asp](http://www.dfg.ca.gov/mlpa/ccmpas_list.asp).

The second phase of the MLPA Initiative is focused on the north-central coast, from Alder Creek in Mendocino County to Pigeon Point in San Mateo County. For more information on the North-Central Coast Project, visit [www.dfg.ca.gov/mlpa/northcentralcoast.asp](http://www.dfg.ca.gov/mlpa/northcentralcoast.asp).

California Fishing Passport [www.fishingpassport.org](http://www.fishingpassport.org): This is a new fishing incentive and angler recognition program designed to highlight and promote fishing throughout the state. A California Fishing Passport serves as the basis of the program and lists 150 different species of popular fresh and saltwater finfish and shellfish that occur in California. With this passport book as a guide, anglers are encouraged to “Take the Passport Challenge” to get out, go fishing, and try to catch one of every species listed. For each successful catch, participants can receive a stamp in their passport book documenting each achievement and become eligible for additional recognition and awards. To learn how to obtain your passport, visit [www.fishingpassport.org](http://www.fishingpassport.org).

The California Fishing Passport program recently designed a challenge specifically for Fall 2007. To learn about the new Fall Challenge, go to [www.dfg.ca.gov/fishingpassport/fall2007challenge.asp](http://www.dfg.ca.gov/fishingpassport/fall2007challenge.asp).

The Passport program is intended to provide adventure-seeking anglers with years of recreational opportunities, and to highlight and promote the many unique and diverse fishery resources available throughout California.

We encourage you to continue using these Web sites as resources for news, information, regulations, and more!
The Marine Life Management Act

California’s Marine Life Management Act (MLMA) of 1998 is an innovative, collaborative, science-based approach to managing all of California’s living marine resources. One of its major goals is the long-term sustainability of our resources and our fisheries. The MLMA recognizes and values the non-consumptive benefits of healthy marine life as well as the interests of those who are economically dependent upon them. Implementation and enforcement of the MLMA is the responsibility of the California Department of Fish and Game, whose mission is to conserve wildlife and the habitats upon which they depend through good science and informed citizen involvement. For more information visit www.dfg.ca.gov/marine.

DFG Marine Region mission:
“To protect, maintain, enhance, and restore California’s marine ecosystems for their ecological values and their use and enjoyment by the public”