MARINE Management News

A newsletter for everyone interested in the management and conservation of California's living marine resources.

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Review of In-Season Sport Fishing Regulation Changes for Federally Managed Groundfish

by DFG Staff

This spring, the Department of Fish and Game (DFG) changed recreational fishing regulations in-season to ensure that the catch of federally-managed groundfish off California remained at or within acceptable harvest levels set by NOAA Fisheries.

In March 2004, the California Fish and Game Commission voted to take emergency action to change California state regulations governing the recreational harvest of lingcod in order to conform to new federal regulations which took effect on April 1. The new regulations increased the lingcod minimum size limit to 30 inches, reduced the daily bag limit to one fish, and prohibited take during November and December.

The need for additional measures was determined by the Pacific Fishery Management Council (PFMC),

"In-Season Changes" *continued on page 14*

The canary rockfish is one of several "overfished" rockfishes that are subject to a federal fishery rebuilding plan. DFG file photo

Fishing Regulations 101: Why the Rules for Bottom Fishing Changed Mid-Season in 2004 – Part I

by Ed Roberts, Marine Biologist

Inside This Issue

- Regulation Changes 1
- Regulations 101 1
- RCG Bag Limits 2
- Abalone Bust.. 2
- Protected Areas 3
- Cowcod Cameo 3
- Salmon Season 4
- Salmon Status 5
- 05-06 Regulations 6
- Commercial Closures . 6
- CRFS Survey 7
- Marine Web Site 7
- ROV Survey 8
- Tagging Project 12
- Regulations Q & A 13
- DFG Interns 21
- MLPA Initiative 22
- ARMP Update 24
- Calendar of Events 25

There's no denying it: fishing has gotten more complex over the past few years. Aside from the usual concerns about weather and the tides, new and intricate regulations governing which species can be taken have caused frustration and confusion among anglers. In particular, this year seems to have been a banner year for regulation changes in the recreational groundfish fishery. Why did changes occur so rapidly during the year, and why are the regulations becoming so complex? Understanding the answer to this question requires a good understanding of how fishery management works.

The Basics of Fishery Management

The conservation and management of marine fisheries within the United States Exclusive Economic Zone (from 3 to 200 miles offshore) is primarily the responsibility of NOAA Fisheries, an agency of the National Oceanic and Atmospheric Administration, under the Department of Commerce. The legislation that directs NOAA Fisheries is the Magnuson-Stevens Fishery Conservation and Management Act, also known as the Magnuson Act. The Magnuson Act requires fisheries to be managed under fishery management plans (FMPs). The Act also created the Pacific Fishery Management Council (PFMC), which develops FMPs for the fisheries off of Washington, Oregon and California.

The Pacific Coast Groundfish Fishery Management Plan (or "Groundfish FMP") was approved by the Secretary of Commerce and

"Regulations 101" *continued on page 11*

Rockfish, Cabezon and Greenling Bag Limits Change, Standardize Statewide

by DFG Staff

Anglers no longer have to worry about the sport fishing sub-bag limit for shallow nearshore rockfish. This sub-bag limit was eliminated on May 1.

The shallow nearshore rockfish bag limit placed tighter restrictions on the take of five species of rockfish: black-and-yellow, China, gopher, grass, and kelp, within the Rockfish-Cabezon-Greenling Complex (RCG Complex) bag limit. Data from late 2003 indicated that take of these species was not successfully reduced by the sub-bag limit, as anglers were forced to discard dead and dying fish while rounding out their daily bag limit with other rockfish species. May 1 regulation changes removed the ineffective sub-bag limit, providing more flexibility for fishermen taking the 10-fish RCG Complex bag limit.

Also as of May 1, the RCG Complex bag limit is in effect statewide. Prior to May 1, northern California had a different bag limit structure, which contributed to recreational catches being too high for cabezon and black rockfish, especially.

Anglers should note that the northern California RCG Complex sub-bag limit differs from Central and Southern California for one species only: bocaccio. North of 40°10′ N latitude, fishermen may take two bocaccio within the RCG Complex bag limit; south of 40°10′ they may take only one.

"We try to balance the mandated obligations to protect species the federal government has designated as "overfished," while still providing anglers and divers with fishing opportunities," said Marine Region Southern California Ecosystem Manager, Marija Vojkovich.

Establishing the same RCG Complex bag limits in northern California should reduce the take of nearshore rockfish, cabezon and greenlings and help to meet statewide recreational allowances for 2004.

The RCG Complex Bag Limits
in All California Waters
(Includes all species of rockfish, cabezon, and kelp and rock greenlings)

10 fish in total, except as provided for cowcod, yelloweye, and canary rockfish, which is zero fish. The following RCG Complex sub-limits apply for the remainder of 2004...

North of 40°10′ N latitude:
bocaccio: 2 fish
cabezon: 3 fish
rock and kelp greenlings: 2 fish

South of 40°10′ N latitude:
bocaccio: 1 fish
cabezon: 3 fish
rock and kelp greenlings: 2 fish

From Section 27.60, Title 14, CCR

Now You See 'Em... Now You Don't!

Abalone Poachers Lose a Game of Hide and Seek with DFG

by Mary Patyten, Research Writer

When Warden Dennis McKiver spotted a red abalone partially hidden beneath commercial sea urchin gear in the hold of the F/V *Blind Strike* last May, he knew he'd found some lawbreakers. Only sport fishermen may legally take abalone in northern California; commercial abalone fishing has been banned statewide since 1997. On closer inspection, the magnitude of the infraction proved staggering. Northern California wardens counted 468 red abalone tucked in the hold of the *Blind Strike*. The bust, which occurred at Albion River Campground in Mendocino County, foiled the largest documented illegal haul of California abalone in 15 years.

Kurt Allen Ward, 43, and Joshua Holt, 34, commercial sea urchin fishermen from San Ysidro, were each sentenced to two years in prison. Ward's boat and fishing gear were forfeited and he was fined $40,000. Holt was fined $20,000. Both men were banned for life from commercial and recreational fishing in California.

The confiscated abalone, too weak to be replaced in their original habitat, were given to local charities, and to the University of California for academic studies.

Fish hold of the F/V Blind Strike, *with abalone hidden (above) and exposed (below). Wardens Gary Combes (pictured), Dennis McKiver, and Danny Reno arrested the abalone poachers, who now face prison terms. photos by D. McKiver*

Overlapping Protected Areas Can Cause Confusion

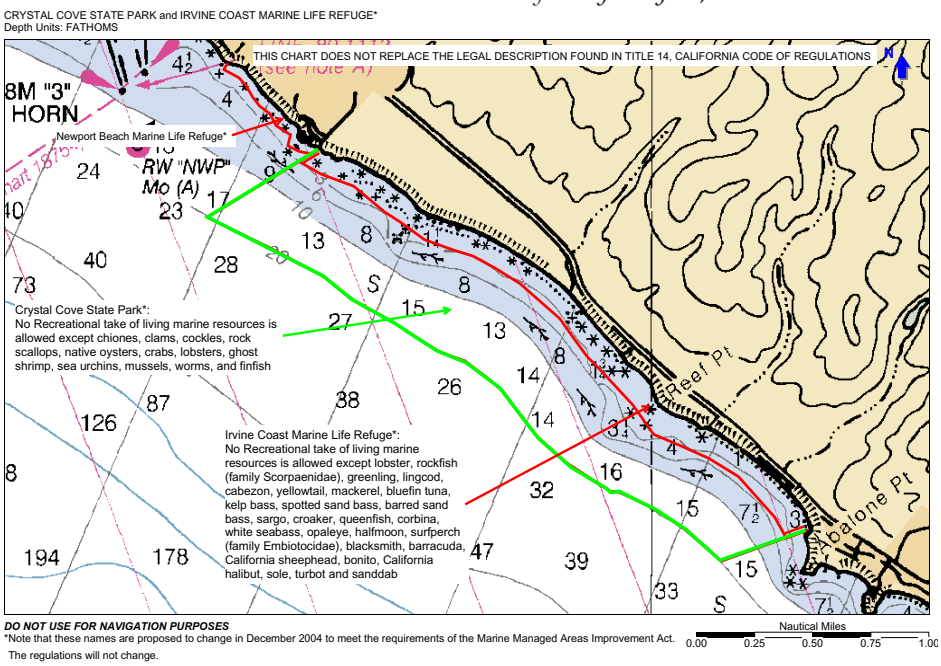
Which set of regulations should you follow? Find the answers here.

by Mary Patyten, Research Writer

Crystal Cove State Park, located off the Pacific Coast Highway near Corona del Mar in southern California, offers recreational opportunities that appeal to everyone. Amid its sand, surf, and rocky reefs, seaside enthusiasts can explore the tidepools, swim, surf, and dive in the Park's offshore waters. Fishing is also allowed… or, is it?

The answer is a little more complicated than you might think. Crystal Cove State Park is one of a handful of areas that share territory with other marine protected areas (see table, below, for marine protected areas with overlapping boundaries). Each area may have a different set of regulations regarding which marine critters it allows fishermen to take. This may confuse fishermen trying to figure out which set of rules they should follow.

In the case of Crystal Cove, a portion of the park's coastline is shared with Irvine Coast Marine Life Refuge. A basic rule to remember is that visitors must follow the more restrictive, "tougher" regulations for the species they plan to pursue, wherever areas overlap. For a summary table of fishing restrictions within California marine and estuarine protected areas, see pages 31 through 33 of the 2004 Ocean Sport Fishing regulation booklet, available at fishing license vendors, DFG offices, and online at **www.dfg.ca.gov/mrd/sportfishing_regs2004.html**. An updated summary table is also available online at **www.dfg.ca.gov/mrd/mlpa/mpa.html**.



Crystal Cove State Park (outlined in green) and the overlapping Irvine Coast Marine Life Refuge (outlined in red). NOTE: The more restrictive restrictions for any species apply in the overlapping area.
map and table courtesy J. Ugoretz

Marine Protected Area	Overlapping Area
Mendocino County	
Manchester State Park	Arena Rock Marine Natural Preserve
Sonoma County	
Salt Point State Park	Gerstle Cove Reserve*
Sonoma Coast Sate Beach	Bodega Marine Life Refuge*
Orange County	
Crystal Cove State Park	Irvine Coast Marine Life Refuge*
Laguna Beach Marine Life Refuge	Heisler Park Ecological Reserve*
Doheny State Beach	Doheny Beach Marine Life Refuge*

*Area with more restrictive regulations.
Note: The Mendocino County overlapping areas have identical regulations.

Cowcod Cameo

by Mary Patyten, Research Writer

Peeking out from behind the anemones and sea stars, this cowcod (*Sebastes levis*) gave researchers a rare glimpse of the fish in its natural habitat during the Cowcod Conservation Area Fish Survey, in October, 2002. This picture was taken by DFG Marine Biologist Robert Lea from the deep-diving submersible *Delta*, at a depth of 139 meters (456 feet). Fishing for cowcod was prohibited after catches declined steeply in the 1990s. Today's cowcod population represents only 5 percent or less of its original biomass. In January, 2001 Cowcod Conservation Areas were established off southern California to protect this species. For more information, log on to **www.dfg.ca.gov/mrd/cowcod.html.**

DFG Predicts Good Salmon Season, Council Sets Seasons for 2004-2005 Fisheries

by DFG Ocean Salmon Project Staff

The DFG anticipates a good 2004 ocean salmon season off the California coast. Although the ocean salmon abundance projections for this year were slightly down, the final commercial and recreational fishing seasons were set similar to last year with a 40-day reduction in commercial fishing time in the Fort Bragg area, and slight increases in the commercial minimum size limit beginning in August.

Reports from ports south of Point Arena (Monterey and San Francisco) indicate there was good salmon fishing during the commercial and recreational season openers with varied fishing success afterwards, primarily due to high winds and rough seas. Recreational salmon fishing in ports north of Point Arena (Fort Bragg to Crescent City) has been highly varied due to windy weather, but there has been successful fishing when the weather cooperates. High winds along the California coastline during spring are a normal occurrence every year.

photo by DFG Game Warden Bob Aldrich

As has happened in the past, a few pink salmon may be caught this season. Pink salmon are generally smaller than chinook and coho salmon and can be identified by the large, oval-shaped spots found on their back and on both lobes of the tail fin. Their scales are very small and number over 168 in the row above the lateral line. The minimum size limit in California for pink salmon is 20 inches total length. The daily bag/possession limit remains 2 salmon of any species except coho, for which the bag limit is zero.

The 2004-05 ocean salmon regulations, ocean abundance outlook, and a coho identification poster can be found on the Marine Region Web site at **www.dfg.ca.gov/mrd/oceansalmon.html**. Anglers may also call the **Ocean Salmon Hotline** at **(707) 576-3429** to hear the latest California ocean salmon sport regulations or (707) 576-2882 to speak to a biologist.

2004 Ocean Salmon Sport Regulations (Effective May 1, 2004)

Humbug Mtn (OR) to Horse Mtn (CA):

- May 15 - September 12
- 2 salmon per day of any species except coho
- minimum size limit: 20 inches total length (TL)
- Klamath Control Zone closed in August (12 mile square centered on Klamath River mouth)

Horse Mountain to Point Arena:

- February 14 - November 14
- 2 salmon per day of any species except coho
- minimum size limit: 24 inches TL through April 30; 20 inches TL thereafter

Point Arena to Pigeon Point:

- April 17 - November 14
- 2 salmon per day of any species except coho
- minimum size limit: 24 inches TL through April 30; 20 inches TL thereafter

Pigeon Point to U.S.-Mexico Border:

- April 3 - October 3
- 2 salmon per day of any species except coho
- minimum size limit: 24 inches TL through April 30; 20 inches TL thereafter

NOAA Fisheries Proposes Changes to Federal Status of Salmon Species

*by **Christina Schmunk, Marine Region Communications Intern***

As sunny fishing days off the California coast wane into autumn, change may be in the air for next summer's salmon fishing season. On June 14, NOAA Fisheries submitted their proposal to change the federal Endangered Species Act (ESA) status of four species of salmon, and change the salmon hatchery policy. The ESA status changes would affect two populations of California salmon: the Sacramento River winter-run chinook (king) salmon, and the central California coast coho (silver) salmon. The proposed hatchery policy would affect future listing determinations for salmon and steelhead that originate from a hatchery.

Chinook and coho salmon are no strangers to the ESA list. In 1987, NOAA Fisheries decided not to list the Sacramento River winter-run chinook after receiving a petition from the California-Nevada Chapter of the American Fisheries Society regarding their concern about small run sizes. However, by 1989 NOAA Fisheries had adopted an emergency rule and officially listed the winter-run chinook as threatened. In the *2003 Final Biological Review Team Report*, NOAA Fisheries outlines the decline from high escapement levels of 100,000 fish in the late 1960s to levels below 200 fish in the 1990s. After many proposals and emergency listings, the Sacramento River winter-run chinook's status was finally reclassified to endangered on Mar. 23, 1994.

The central California coho salmon was listed as threatened after NOAA Fisheries received petitions regarding the population in Santa Cruz County, California, on Oct. 31, 1996. Although data on this species are hard to come by, best estimates state that annual escapement numbers were 6,160 fish for naturally spawning coho salmon, and 332 for hatchery-spawned coho for the period from 1987 to 1991. These escapement numbers were significantly less than the estimated 50,000 to 125,000 fish per year that spawned in the state's coastal watersheds in the 1940s.

Petitions received by NOAA Fisheries from the California Fish and Game Commission, Santa Cruz

"Salmon Management" *continued on page 23*

2004 Commercial Ocean Salmon Regulations (Effective May 1, 2004)

OR/CA Border to Humboldt South Jetty:

- Sept 1 - 30 or 6,000 salmon quota
- all salmon except coho
- minimum size limit: 28 inches total length (TL)
- possession & landing limit of 30 salmon per day
- all salmon caught must be landed within area and within 24 hrs of any closure of the fishery
- Klamath Control Zone closed (12 mile square centered on Klamath River mouth)

Horse Mountain to Point Arena:

- July 10 - August 29; September 1 - 30
- all salmon except coho
- minimum size limit: 27 inches TL through Aug 31
  28 inches TL thereafter
- all vessels must land and deliver their fish within 24 hrs of any closure of the fishery

Point Arena to U.S./Mexico Border:

- May 1 - August 29; September 1 - 30
- all salmon except coho
- minimum size limit: 26 inches TL through Jun 30
  27 inches TL thereafter
- all vessels must land and deliver their fish within 24 hrs of any closure of the fishery

Central Valley Fall Fishery

Point Reyes to Point San Pedro:

- Oct 1; Oct 4 - 8; Oct 11 - 15
- all salmon except coho
- minimum size limit: 26 inches TL

UPDATES
Marine Management News

2005-2006 Recreational Bottom Fishing Seasons Set

The Pacific Fishery Management Council adopted the final 2005-2006 recreational groundfish management measures at their June 2004 meeting in Foster City, California (see table, below). Regulations apply to groundfish (with leopard shark and some flatfish exceptions) and associated state-managed species (rock greenling, California sheephead, and ocean whitefish). Lingcod size limit will be 24 in. with a daily bag limit of 2 fish. Notwithstanding other fishing opportunities for groundfish, lingcod may not be retained during January, February, March, and December. Visit the Council Web site at **www.pcouncil.org** for more information.

Commercial Cabezon Fishery Closed on Sept. 4; Commercial Greenling Fishery Closed on Aug. 15

The Department of Fish and Game (DFG) officially closed the commercial fishery for cabezon at 12:01 a.m. on Saturday, Sept. 4. DFG estimates that approximately 72,500 lb of the 75,000 lb allowable harvest had been taken by the end of August.

The commercial greenling fishery (for all greenlings of the genus *Hexagrammos*) was also closed recently, on Aug. 15. DFG estimates that approximately 3,100 lb of the 3,400 lb allowable harvest had been taken by close to the end of July. "Closures" *continued on page 7*

Recreational Groundfish* Fishing Seasons and Depths for 2005 and 2006

ROCKFISH AND LINGCOD MANAGEMENT AREA		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Northern	OR/CA border to 40°10' N lat.	closed to boat-based anglers (1, 2)	closed to boat-based anglers (1, 2)	closed to boat-based anglers (1, 2)	closed to boat-based anglers (1)	closed to boat-based anglers (1)	closed to boat-based anglers (1)	< 40 fm (1)	< 40 fm (1)	< 40 fm (1)	< 40 fm (1)	closed to boat-based anglers (1)	closed to boat-based anglers (1, 2)
North-Central and Monterey South-Central	40°10' N lat. to 37°11' N. lat. and 37°11' N. lat to 36°00' N. lat.	closed to boat-based anglers (1, 2)	closed to boat-based anglers (1, 2)	closed to boat-based anglers (1, 2)	closed to boat-based anglers (1)	closed to boat-based anglers (1)	closed to boat-based anglers (1)	< 20 fm (1)	< 20 fm (1)	< 20 fm (1)	< 20 fm (1)	< 20 fm (1)	closed to boat-based anglers (1, 2)
Morro Bay South-Central	36°00' N. lat to 34°27' N. lat.	closed to boat-based anglers (1, 2)	closed to boat-based anglers (1, 2)	closed to boat-based anglers (1, 2)	closed to boat-based anglers (1)	20-40 fm (1)	20-40 fm (1)	20-40 fm (1)	20-40 fm (1)	20-40 fm (1)	closed to boat-based anglers (1)	closed to boat-based anglers (1)	closed to boat-based anglers (1, 2)
Southern	34°27' to CA/Mex border	closed to boat-based anglers (1, 2)	closed to boat-based anglers (1, 2)	30-60 fm (1)	30-60 fm (1)	30-60 fm (1)	30-60 fm (1)	<40 fm (1)	<40 fm (1)	<40 fm (1)	closed to boat-based anglers (1)	closed to boat-based anglers (1)	closed to boat-based anglers (1, 2)
South Scorpionfish (3)	34°27' to CA/Mex border	closed	closed	closed	closed	closed	closed	closed	closed	closed	< 40 fm	< 40 fm	< 20 fm

* Except for designated flatfish (butter, curlfin, flathead, rex, rock, and sand sole; pacific sanddab, and starry flounder) caught with special sanddab gear and leopard sharks caught in specific enclosed bays, the proposed regulations apply to all federal groundfish species (including rockfish, lingcod, cabezon, kelp greenling and California scorpionfish) and associated state-managed species (rock greenling, California sheephead, and ocean whitefish).

KEY: < X fm means fishing is permitted in waters less than X fathoms.
X-Y fm means fishing is permitted only between X fathoms and Y fathoms.
Closed means fishing for the species or group of species is closed in all waters.

NOTES:

1. The closure or depth restriction only applies to boat-based anglers (anglers that fish from boats or vessels of any size or any other type of floating object, including kayaks and float tubes); the closure or depth restriction doesn't apply to shore-based anglers (anglers that fish from beaches, banks, piers, jetties, breakwaters, docks, and other man-made objects connected to the shore) and divers (divers using spearfishing gear entering the water either from the shore or from a boat or other floating object).
2. Lingcod – In addition to the general groundfish season and depth closures listed in the table, retention of lingcod is prohibited in January, February, March, and December. This provision applies to all fishing modes (boat-based anglers, shore-based anglers, and divers) in all ocean waters off California.
3. California scorpionfish - Retention of California scorpionfish is prohibited from January through September in the Southern RLMA. This provision applies to all fishing modes.

New Recreational Fishery Survey Under Way

*by **Ed Roberts, Marine Biologist***

In response to concerns expressed by fishery managers and constituents over the use of the Marine Recreational Fisheries Statistics Survey (MRFSS) for making in-season management decisions, the California Department of Fish and Game (DFG) and the Pacific States Marine Fisheries Commission (PSMFC) have developed and implemented a new method of estimating total saltwater recreational catch and effort in California.

The DFG and PSMFC began conducting the California Recreational Fisheries Survey (CRFS) in January 2004 . CRFS is a single, coordinated program that samples recreational anglers fishing from boats (private boats, rental boats and party/charter boats) and from shore (pier, jetty, beach and banks).

The CRFS program incorporates many changes and improvements over the existing MRFSS program. These improvements include: increased sampling, on-site estimates of private skiff effort, grouping of trips by target species, an emphasis on species of concern, dividing the state into smaller geographic regions for reporting purposes, and using an angler license database for effort estimates of the shore-based fisheries. The CRFS program will provide more accurate and timely information for making sound fishery management decisions.

As a result of the increased levels of sampling, recreational fishermen are more likely to encounter DFG/PSMFC representatives conducting the CRFS. Avid anglers may be approached several times per year. Angler cooperation is critical to the success of the survey – please take the time to participate. Every fishing trip is different – different target species, locations gear, etc. - so even if you have completed the survey before, please cooperate each time you are asked. Only you can help us improve recreational fishing data.

The Department is also asking for angler cooperation in establishing the angler license data base. One in 20 anglers will be asked to provide their name and telephone number at the time of their license purchase so they can be contacted later. It is anticipated that only one angler in 100 will be contacted to provide fishing information on the previous month's fishing activity.

"Closures" *continued from page 6*

Because harvest generally increases in the summer months, DFG estimated that the full harvest limits would be reached by the closure date. If not, DFG may evaluate the potential re-opening of the commercial fisheries later this year. For more information, contact DFG Research Manager Deb Wilson-Vandenberg at (831) 649-2892.

Get Hooked on the Marine Region Web Site!

*by **Aaron DelMonte, Marine Region Webmaster***

This is the first installment of a regular column that will appear in each issue of the Marine Management News *covering what's new on the Marine Region Web site. Check this column in each issue of the newsletter to discover some of the best new items added to DFG's digital marine resource.*

For the latest information on fishing regulations, marine resources, and news affecting natural resources on our California coastline, your first stop should be the Department of Fish and Game Marine Region Web site, located at **www.dfg.ca.gov/mrd**. This comprehensive information source currently contains over 1,700 Web pages readily available to the public. If you are new to the Marine Region Web site, we invite you to see what a truly valuable resource we have created. For those of you who have already visited our Web site, be sure to check back regularly, since new features, updates, and press releases are added every week. Here are a few of some recent noteworthy additions to our Web site:

In-Season Ocean Fishing Regulation Changes for 2004: www.dfg.ca.gov/mrd/inseason2004.html - A number of ocean sport fishing regulation changes have taken place since the 2004 Regulations Booklet was released earlier this year. This page contains a comprehensive list of press releases to keep you up-to-date with these changes. You will also find contact information for all Marine Region offices, as well as an opportunity to sign up for our mailing list, so you can receive notice of all future regulation changes automatically via e-mail.

Updated Summary of 2004 Ocean Salmon Seasons: **www.dfg.ca.gov/mrd/oceansalmon.html** - At the Pacific Fishery Management Council (PFMC) meeting in April, salmon management measures were adopted that established opening and closing dates for both commercial and recreational fishermen for the various regions in the state. A summary of these dates, as well as a summary of current salmon regulations can be found here.

Marine Life Protection Act (MLPA) Initiative: **www.dfg.ca.gov/mrd/mlpa.html** - This completely updated site contains background information on the MLPA Initiative, a complete list of California Marine Protected Areas (MPAs) with regulations information, a list of species likely to benefit from MPAs, and much more.

"Web Site Update" *continued on page 22*

New Partners, New Technology, New Monitoring Tools

DFG breaks new ground monitoring marine protected areas off Southern California

by Mary Patyten, Research Writer

The Department's ROV takes the plunge off the Channel Islands this past May.
photo by David Jeffrey

On a handful of brilliant, breezy days off the Channel Islands this past May, the crew of the NOAA research vessel *Shearwater* deployed a bright-red, remotely-operated vehicle (known as an ROV) off the stern of their ship. The blazing red vehicle, about the size of an overgrown laundry basket, was attached to the vessel by yellow and black umbilical cords. After bobbing on the surface for a moment, the ROV would come to life and putter away from the heaving boat, down into the opaque, green Southern California waters.

Each day, the vessel's research crew– a mix of state and federal biologists, managers, engineers, and environmentalists– carefully tracked the ROV's progress on a live video monitor. For the duration of this cruise (at least), the diverse group shared a single purpose: to find out how well the fish populations living in the marine protected areas – known as *MPAs* – could be monitored using an ROV.

The Channel Islands MPAs were designed to shelter a diverse array of marine life, including slow-reproducing rockfishes, invertebrates such as abalone and lobster, and lush undersea forests of giant kelp.

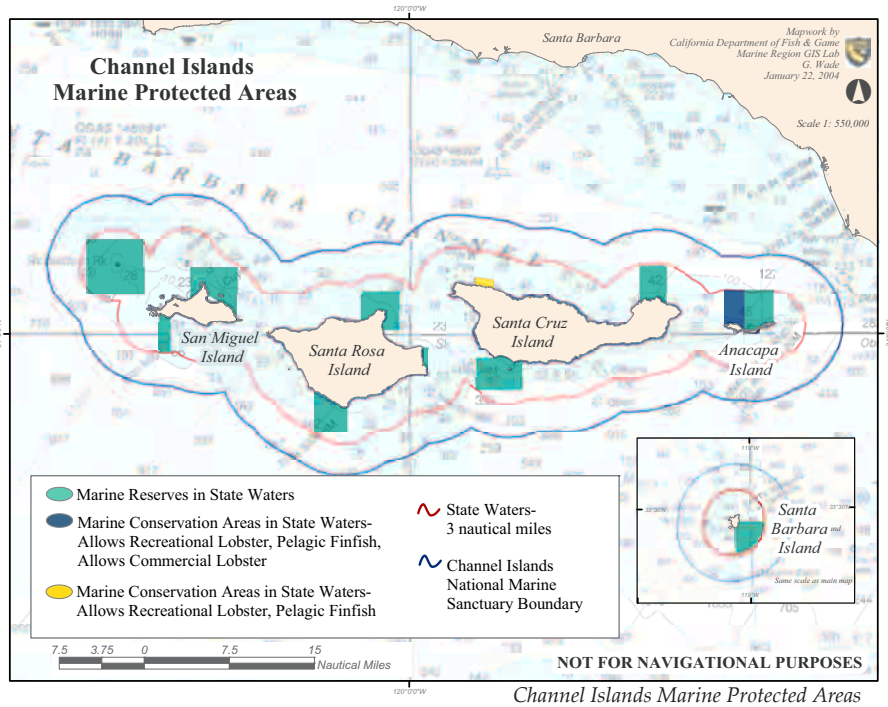
"Ocean management is important for California," said Resources Secretary Mike Chrisman recently in a June 4 press release. Chrisman was one of the observers aboard the *R/V Shearwater* this past May. "The health of our ocean resources and the economy they support benefits not only California, but also significantly contributes to national and international economies as well."

Support for ocean science goes all the way to the top in California's government. In comments provided to the U.S. Commission on Ocean Policy, Governor Arnold Schwarzenegger recognized the need for "greater emphasis on assessing state needs and developing management-oriented research to address these needs."

"ROV Survey" continued on page 9

The Department's Phantom® ROV, ready for deployment
photo by David Jeffrey

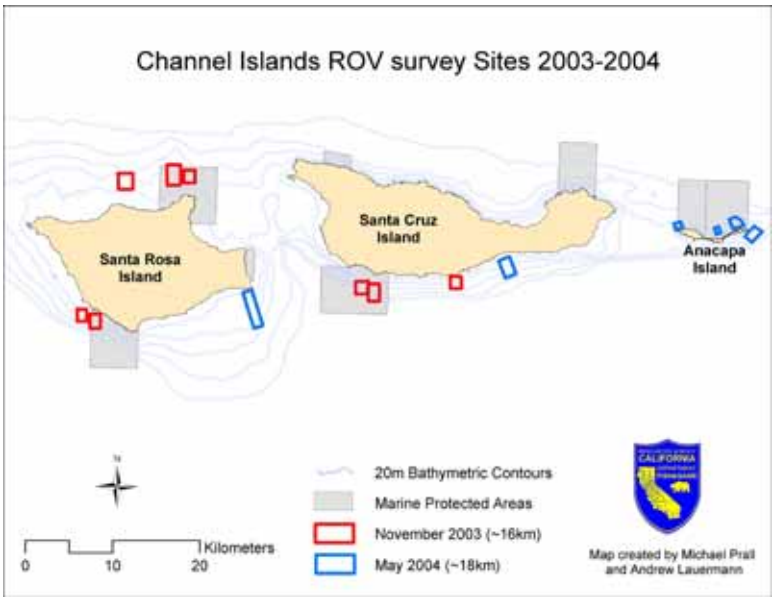
The State's most extensive network of MPAs was officially established in the Channel Islands National Marine Sanctuary, off the southern California coast in April, 2003.
134 square miles within state waters have been divided into 12 separate MPAs, 10 of which do not allow fishing.



Channel Islands Marine Protected Areas
map courtesy Marine Region GIS Laboratory

"California's approach to ecosystem management should be considered a national model in the final commission report," Governor Schwarzenegger told the commission. "The commission should consider the leadership provided by California through the Marine Life Protection Act and the Marine Managed Areas Improvement Act, which together provide a clear mandate for evaluating and designing an understandable and scientifically-based system of marine protected areas."

Answering biologists' questions about MPAs, and finding the funds to support the MPA researchers, are challenges being met by the Department of Fish and Game (DFG) with the help of a diverse group of people concerned about the marine environment. Through numerous collaborations (see box, bottom of page 11), DFG is breaking new ground during tough economic times to obtain solid scientific information for management of the Channel Islands MPAs and the surrounding areas.



Study sites in and around MPAs near Santa Cruz and Santa Rosa Islands

The ROV work, headed by DFG Senior Marine Biologist Konstantin Karpov, is the most rapidly developing, high-tech portion of the MPA monitoring process. Other important survey methods use submersibles, scuba divers, and other fishery-independent investigations, such as mark-and-recapture studies. "All of these studies work in conjunction with one another, and are necessary to assess whether MPAs are effective," notes Karpov.

DFG biologists work closely with researchers at CSU Monterey Bay's Seafloor Mapping Lab, which produced multibeam sonar maps of the Channel Islands seafloor topography. The maps helped to identify key reef areas for exploration.

"The fish species we are looking for in the reserves are typically associated with rocky reefs," said Dirk Rosen, president of the Marine Applied Research and Exploration Group (MARE), a prime supporter of the ROV work. "Most of the sea floor is sand in the five MPAs that we've explored so far. We could have wasted a lot of time looking for appropriate survey sites if we hadn't had the multibeam maps to consult beforehand."

Consulting the maps, survey paths (called "transects") are planned for each ROV run. Two team members — an ROV pilot and a navigator — guide the ROV through each transect, while the vessel pilot keeps the R/V *Shearwater* positioned on the surface above the ROV. Simultaneously, biologists

"ROV Survey" continued on page 10

"ROV Survey" continued from page 9

efforts. Watching the video monitors during the May cruise, Rosen was caught up in the thrill of exploration, seeing animals at depths beyond the normal limits of safe scuba diving. "It's fascinating that we're now able to quantify what we're seeing in a very useful manner," he said.

To date, DFG has surveyed the waters off Santa Rosa, Santa Cruz and Anacapa Islands in the Channel Islands National Sanctuary, establishing transects inside and outside of MPAs that will be revisited regularly by the ROV team and its research partners. Future plans for

"ROV Survey" continued on page 11

Above: Dirk Rosen, president of MARE (in the foreground) pilots the ROV while Andrew Lauermann, DFG biologist and ROV specialist (in the background), navigates. Right: Christine Pattison, DFG biologist, and Dirk Rosen of MARE view the ROV video and make species identifications in real-time. Lower Right: Map of Carrington Point survey site, showing ROV path and species encountered.
photos by K. Karpov

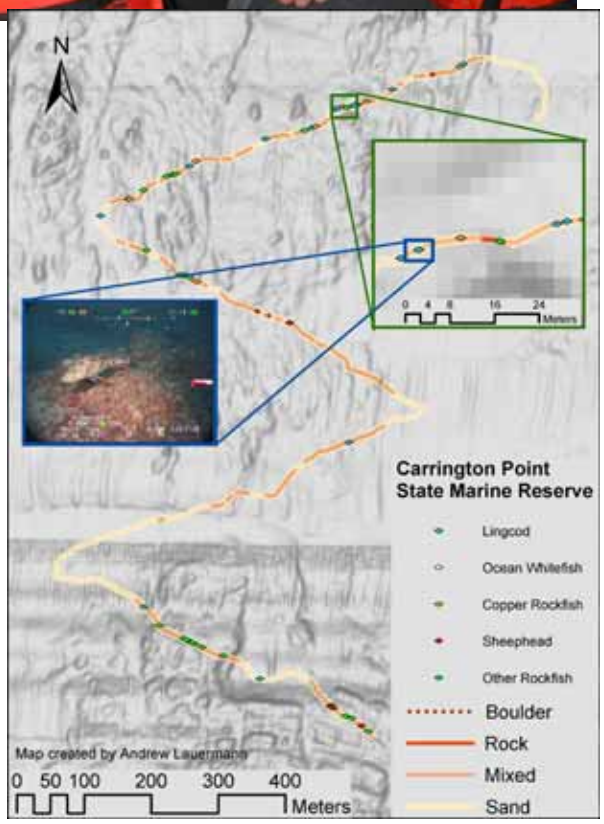
scan the live video on the monitor, checking off the number and variety of fish species they see.

The team's first cruise, in November 2003, surveyed almost 10 miles (16 km) of linear transects in eight sites during good weather over the course of a one-week cruise. The recent May 2004 cruise, however, exceeded everyone's expectations. In just four days, the team surveyed over 11 miles (18 km) within six sites despite blustery weather, proof of the rapid synergy between government and private agencies, and the refinement and improvement of ROV survey methods.

"Using the ROV, we can identify where fish live, survey those areas, and identify changes in the numbers of fish over time," said Karpov. "This is really something that has not been possible at these depths before."

Over time, monitoring fish and invertebrate populations in the MPAs may provide evidence of whether bottom-dwelling species such as rockfish, lingcod, and abalone respond to the no-fishing zones by repopulating areas both inside and outside of the MPAs. The videotape of the transects taken by the ROV serve as permanent records of the area, which can be reviewed multiple times to provide information on the habitat types, animals, and plants at the site.

DFG worked with an extensive list of partners to finance and support the ROV survey efforts. Dirk Rosen, for example, began working with Karpov's ROV team about 10 years ago. Inspired by the promises and challenges presented by California's new MPAs, he launched MARE to help fund and support the ROV team's



"ROV Survey" continued from page 10

the team include establishing transects off of all four of the northern Channel Islands. The R/V *Shearwater* is scheduled to ferry the researchers to the islands again from September 7 through September 21, 2004 and for four yet-unscheduled weeks in 2005.

"Regulations 101" continued from page 1

adopted into federal law in 1982. The Groundfish FMP covers over eighty species of fish, including twelve species of flatfish (such as Dover sole and petrale sole), six species of roundfish (such as lingcod and sablefish), six species of sharks and skates (such as spiny dogfish and big skate) and over 50 species of rockfish . The goals and objectives of the Groundfish FMP drive the management decisions of the PFMC:

Goal 1. Conservation. Prevent overfishing by managing for appropriate harvest levels and prevent any loss of the habitat of living marine resources.

Goal 2. Economy. Maximize the value of the groundfish resource as a whole.

Goal 3. Utilization. Achieve the maximum biological yield of the overall groundfish fishery, promote year-round availability of quality seafood to the consumer, and promote recreational fishing opportunities by:

- Setting harvest limits and allocating catch between the recreational and commercial sectors based on stock assessments
- Identifying problems in the fishery, and proposing management measures to correct the problems
- Defining "overfishing"
- Outlining actions to prevent overfishing
- Recommending actions to rebuild the overfished stocks in a specified period of time.

The PFMC works to achieve these goals by following rules set down in the Groundfish FMP for managing the groundfish fishery. Among other things, the Groundfish FMP outlines the areas, species, regulations, and methods that the PFMC and the federal government must consider and use to make changes to the fishery. Groundfish are managed through a number of measures including harvest guidelines, quotas, trip and landing limits,

"Regulations 101" continued on page 21

DFG's Marine Region would like to thank its many partners for their support of ROV exploration and monitoring in the Channel Islands MPAs:

- The National Oceanic and Atmospheric Administration (NOAA), especially: Channel Islands National Marine Sanctuary, Cordell Bank National Marine Sanctuary, and Flower Garden Banks National Marine Sanctuary
- The Nature Conservancy
- Marine Applied Research and Exploration Group
- Deep Ocean Engineering
- California State University, Monterey Bay
- University of California Santa Barbara
- Santa Barbara City College
- Institute of Fisheries Resources
- Natural Resources Defense Council
- Oregon Department of Fish & Wildlife

For more information about DFG's partners in this endeavor, log on to the following websites:

The National Oceanic and Atmospheric Administration (NOAA), **www.noaa.gov**
Channel Islands National Marine Sanctuary, **http://channelislands.noaa.gov**
Cordell Bank National Marine Sanctuary, **www.cordellbank.nos.noaa.gov**
Flower Garden Banks National Marine Sanctuary, **http://flowergarden.noaa.gov**
The Nature Conservancy,
http://nature.org/wherewework/northamerica/states/california/features/marine_mapping.html
Marine Applied Research and Exploration Group, **www.maregroup.org**
Deep Ocean Engineering, **www.deepocean.com**
Seafloor Mapping Lab, CSU Monterey Bay, **http://seafloor.csumb.edu**
University of California Santa Barbara, **www.ucsb.edu**
Santa Barbara City College, **www.sbcc.cc.ca.us**
Institute for Fisheries Resources, **www.ifrfish.org**
Natural Resources Defense Council, **www.nrdc.org**
Oregon Department of Fish & Wildlife, **www.dfw.state.or.us**

Leslie Grigsby landed a tagged vermilion rockfish during a trip on the M/V Dolphin *out of Mission Bay.*
photo by Ed Roberts

Nearshore Groundfish Tagging Project Reaches Completion

by ***Ed Roberts, Marine Biologist***

Begun in November 2002, the Nearshore Groundfish Tagging Project completed the tagging phase of the project in March 2004. Funded by federal groundfish disaster relief money, the project was a collaborative effort between Dr. Doyle Hanan of Hanan & Associates, the California Department of Fish and Game, and the Sportfishing Association of California to collect life history, growth, movement and fishery interaction information on several species of southern California groundfish of importance to recreational and commercial fisheries.

By chartering local commercial passenger fishing vessels (known as CPFVs), the project was able to use the years of experience and knowledge of charter boat captains and crews, and put money back into the portion of the sportfishing fleet dependent on the groundfish fishery.

During the course of the project, biologists, captains, deckhands, and volunteer anglers spent nearly 150 days at sea, and tagged more than 18,000 fish at fishing grounds from Piedras Blancas in San Luis Obispo County to the Mexico border, including San Miguel, Santa Rosa, Santa Cruz, Anacapa, Santa Barbara, San Nicolas, Santa Catalina and San Clemente Islands.

The project received enthusiastic support from most of the recreational fishing community in southern California, as skippers, crews and volunteers were excited about the opportunity to help collect information that may be used to help manage the groundfish fishery.

Even though the active tagging portion of the program is over, angler support is vital to the success of this project. Your help is needed to help us learn more about the life histories of groundfish. The directions below (see box) describe what to do if you catch a tagged fish:

WHAT TO DO IF YOU CATCH A TAGGED FISH

1. DO NOT REMOVE THE TAG!
2. Record the 5-digit tag number
3. Record the location (i.e. GPS or Loran) If you do not have GPS, write down the name of the fishing spot and/or landmark references
4. Record the depth
5. If you release the fish because it is not in season or it is not of legal size, take a photo if possible
6. If you keep the fish, please save the carcass for pick-up
7. Call the phone number on the tag to provide us with your catch information and to receive your reward

The staff of the Nearshore Groundfish Tagging Project would like to thank the owners, operators and crewmembers of the following sport fishing vessels for their support:

Amigo	Ellie M	Premier
Caliber	Endeavor	Princess
Cat Special	Fury	Redondo Special
Charger	Mallard	Sea Biscuit
Coral Sea	Mirage	Sea Jay
Conquest	Monte Carlo	Sea Star
Erna B	New Del Mar	Sea Watch
El Capitan	Pacific Dawn	Stardust
Electra	Point Loma	Tortuga

Thanks again for your support!

Tagged brown rockfish near La Jolla Shores.
Photo by Tracy Clark

What's On the Horizon?

DFG Answers Questions about the 2005-2006 Recreational Bottom Fishing Regulations

by Mary Patyten, Research Writer

This year has been marked with rapid and sometimes confusing changes to recreational bottom fishing regulations. The following question and answer session may help to clear some of the confusion about how regulations are set, and what to expect in the next few years.

Question: Why are regulations so confusing and constraining?

Answer: The Department of Fish and Game (DFG) and federal fishery management agencies are walking a tightrope between maximizing fishing opportunities and protecting marine resources for all Californians. Regulations could be made simpler by making the rules the same statewide, but that would provide one short season for everyone, and would not accurately reflect the condition of the fisheries in various regions of the state. For example, canary rockfish are much more common in the northern part of the state. With regional management, southern California fishermen need not be as severely restrained by regulations that protect canary rockfish, so the southern region has a slightly different set of regulations than the northern part of the state. In this way, different regions can enjoy maximum fishing opportunities while adequately protecting species of concern.

Regional management is just one tool used to manage fisheries – other tools include time-based closures, depth closures, areas closures, bag limits, size limits, gear restrictions and so on.

Question: How can fishermen keep up with in-season changes?

Answer: For any changes initiated by DFG, the following methods will be used to disseminate the new information:

- A news release will be sent to the media and everyone on the electronic Marine Region mailing list (sign up at **www.dfg.ca.gov/mrd/mlma/signup.html**).
- The DFG Marine Region website will post the new information on its Regulation Changes Web page at **www.dfg. ca.gov/mrd/inseason 2004.html**.
- Flyers will be made available that explain the recreational groundfish regulations. The flyers will be available:
  - In PDF format on the Marine Region Web site.
  - At all Marine Region DFG offices.

DFG is investigating other ways to deliver notice of regulation changes to the public as well, including wider distribution of flyers, enlisting the assistance of recreational fishing websites, and creating a dedicated phone number (a "hotline") for up-to-date information. The hotline will be added to the current Automated Information System at (831) 649-2801 sometime in the future.

Question: Will fishermen be able to keep canary, cowcod and/or yelloweye rockfish in 2005 or 2006?

Answer: No. There is no retention of canary, cowcod or yelloweye rockfish in 2005 or 2006. The federal allowance for the take of canary and yelloweye rockfish off California is so small that it only covers incidental take, or "bycatch" for these species in the recreational fishery. The most recent stock assessments indicate that we still need to protect these species for continued recovery.

Question: Will shore-based anglers and divers be exempt from bottom fishing closures again in 2005 and 2006? If so, why are they allowed to continue fishing, while boat-based anglers cannot?

Answer: Yes. Shore-based anglers and divers will again be exempt from bottom fishing closures for 2005 and 2006, except for the January through March, and December closures for lingcod. Catch statistics indicate that shore-based anglers and divers catch less than 5% of total nearshore rockfish harvest allowances. Exempting shore-based anglers and divers from bottom fishing closures provides more fishing opportunities throughout the year in California.

Question: Why have "depth ranges" become a part of ocean fishing regulations? Why can't anglers continue to fish all the way to shore?

Answer: The depth ranges that have been established (from 20 to 40 fm in the Central Management Area, Morro Bay South-Central Section, and from 30 to 60 fm in the Southern Management Area) beginning in 2005 are a new management approach designed to reduce fishing pressure on the nearshore fish stocks that live in shallow depths, while minimizing bycatch of canary

"Q & A" *continued on page 22*

"In-Season Changes" continued from page 1

in part from new information on fishing success during the last part of 2003, which was not available to fishery managers when the 2004 regulations were established.

"The federal regulations to which the state conforms are enacted in order to ensure resource protection and sustainability, which is in the interest of not just the federal fisheries agencies, but the states as well," said DFG Marine Region Manager, Patty Wolf.

The lingcod stock off the West Coast has been formally classified as "overfished" by the PFMC, and is currently managed under a rebuilding plan to achieve recovery of the stock. A key element of the rebuilding plan is constraining catches to allow the stock to increase to healthy levels within a specified period of time. In 2002 and 2003, coastwide lingcod catches exceeded allowable levels needed to achieve rebuilding of the stock. Recent data indicates that stocks may be recovering.

At a later meeting the Commission again voted to adjust California's recreational fishing regulations to conform to in-season groundfish management actions taken by the PFMC. These new regulations, which affect recreational fisheries for all rockfishes, California scorpionfish, cabezon, kelp greenling, lingcod, and some species of sharks, rays, and flatfishes, went into effect on May 1. (For a full list of federally managed species, check the Marine Region Web site at **www.dfg.ca.gov/mrd/groundfish_fedlist.html**).

The state has applied the same regulations to ocean whitefish, rock greenling, and California sheephead, which are not under federal management. Leopard shark in San Francisco Bay waters, and sanddabs have been excluded from this action.

Except for shore-based anglers and divers (spear fishermen), the new regulations apply to recreational anglers fishing in all waters off California. See the following tables (pgs. 15 through 21), which summarize the current groundfish regulations by area.

The PFMC adopted the in-season changes in early April. DFG subsequently adopted the changes after a review of projected fishery catches through 2004, which showed that harvest limits for lingcod, canary rockfish, and black rockfish would have been met or exceeded well before the end of the year without these adjustments. To limit the catch of these species, regulations also restrict fishing for species that live in the same areas. The broad scope of the regulation change will help to prevent the accidental catch of overfished species by fishermen who are not targeting them.

"All of these regulation changes are designed to protect overfished species and keep bycatch within federally established targets," said Marine Region Southern California Ecosystem Manager, Marija Vojkovich. "The goal is to provide vulnerable species with a chance to rebuild their populations, and to ensure their long-term sustainability."

Under existing law, PFMC manages and regulates 82 species of groundfish including rockfish, lingcod, California scorpionfish, some flatfishes, and some sharks in waters off California, Oregon, and Washington. However, under California law, the state Fish and Game Commission regulates sport fishing in California waters (0-3 miles off the coast) for all species, including those managed under federal fisheries management. To limit confusion, the state conforms its fishery regulations to regulations set for federal waters by the PFMC.

"These conformance actions by the Commission ensure that state and federal rules for these species are consistent and enforceable," said DFG Marine Region Manager Patty Wolf. "They ensure resource protection and sustainability. This is in the interest not just of the federal fisheries agencies, but the states as well."

For More Information About In-Season Regulation Changes, Visit the Following Web Sites:

In-Season Ocean Fishing Regulation Changes for 2004: **www.dfg.ca.gov/mrd/inseason2004.html**

Summary tables of California bottom fishing regulations: **www.dfg.ca.gov/mrd/bfregs2004.html**

List of federally managed groundfish: **www.dfg.ca.gov/mrd/groundfish_fedlist.html**

DFG Marine Region Web site: **www.dfg.ca.gov/mrd**

Pacific Fisheries Management Council Web site: **www.pcouncil.org**

California Fish and Game Commission Web site: **www.dfg.ca.gov/fg_comm**

For new and proposed regulations: **www.dfg.ca.gov/fg_comm/2004/proposedregs04.htm**

2004 Recreational Bottom Fishing Regulations: Northern Management Area

Ocean waters between the California-Oregon Border and 40°10' N. latitude (near Cape Mendocino)

These changes replace regulations listed in the 2004 Ocean Sport Fishing Regulations booklet.

Species	Time Period[2]	Depth Limit[2]	Daily Bag Limit[2]	Min. Size Limit[1,2,3]
RCG Complex (including all species of Rockfish that are not prohibited or restricted, Cabezon, and Greenlings as defined in Section 1.91)	Open all year	Jan-Apr: No depth restrictions May-Dec: May only be taken in less than 180 ft (30 fm)	10 fish in combination per person; see sub-limits for cabezon, greenling and bocaccio	See individual species below
Canary, Cowcod, and Yelloweye Rockfishes	CLOSED all year; NO RETENTION		NO RETENTION (zero)	
Bocaccio	Open all year	Same as RCG Complex above	2 fish per person; also included in the 10-fish aggregate RCG bag limit.	10“ total length
Black Rockfish	Open: Jan-May 15, June-Aug Closed: May 16-May 31, Sept-Dec	May 1-May 15, Jun-Aug: May only be taken in less than 180 ft (30 fm)	10 fish per person; also included in the 10-fish aggregate RCG complex bag limit	None
Cabezon	Open all year	Same as RCG Complex above	3 fish per person; also included in the 10-fish aggregate RCG complex bag limit	15“ total length
Kelp and Rock Greenlings	Open all year	Same as RCG Complex above	2 fish in combination per person; also included in the 10-fish aggregate RCG complex bag limit	12“ total length
Lingcod	Open: Jan-Oct Closed: Nov-Dec	Jan-Apr: No depth restrictions May-Oct: May only be taken in less than 180 ft (30 fm)	1 fish per person	30“ total length
Other Federal Groundfish (see list below this table, or go to *www.dfg.ca.gov/mrd/groundfish_fedlist.html*)	Open all year	Same as RCG Complex above	See regulations for individual species	See regulations for individual species
Sanddabs[4]	Open all year	No depth restrictions	No bag or possession limit	None

1 See regulations for information on gear restrictions and fillet lengths
2 Subject to in-season change. Check the Marine Region Web site at *www.dfg.ca.gov/mrd*, send an e-mail to *AskMarine@dfg.ca.gov*, or call your local DFG office for the latest information.
3 Total length is the longest straight-line measurement from the tip of the head (with the mouth closed) to the longest lobe of the tail. For a measurement graphic, go to *www.dfg.ca.gov/mrd/measurement.pdf*, or look on page 48 of the 2004 Ocean Sport Fishing Regulation booklet.
4 The sport fishery for sanddabs, using gear specified in federal and state regulations, is exempt from the in-season closures and depth restrictions placed on other federally managed groundfish as of May 1, 2004

Bottom Fishing Regulation Tables continued on page 16

2004 Recreational Bottom Fishing Regulations: Central Management Area

North-Central Section[4]

Ocean waters between 40°10' N. latitude (near Cape Mendocino) and 36°00' N. latitude (near Point Lopez, Monterey Co.)

These changes replace regulations listed in the 2004 Ocean Sport Fishing Regulations booklet.

Species	Time Period[3, 5]	Depth Limit[3, 2]	Daily Bag Limit[3]	Min. Size Limit[1, 3, 6]
RCG Complex (including all species of Rockfish that are not prohibited or restricted, Cabezon and Greenlings as defined in Section 1.91)	Boat-based Anglers[5]: *Open:* Jan, Feb, Aug-Oct *Closed:* Mar-July, Nov, Dec Shore-based Anglers, Divers[5]: *Open*: Jan, Feb, May-Dec *Closed*: March, April	Jan-Feb: May only be taken in less than 180 feet (30 fm) Aug-Oct: May only be taken in less than 120 feet (20 fm)	10 fish in combination per person; see sub-limits for cabezon, greenlings, and bocaccio	see individual species and groups below
Canary, Cowcod, and Yelloweye Rockfishes	CLOSED all year; NO RETENTION		NO RETENTION (zero)	
Bocaccio	Same as RCG Complex above	Same as RCG Complex above	1 fish per person; also included in the 10-fish aggregate RCG complex bag limit	10 " total length
Cabezon	Same as RCG Complex above	Same as RCG Complex above	3 fish per person; also included in the 10-fish aggregate RCG complex bag limit	15" total length
Kelp and Rock Greenlings	Same as RCG Complex above	Same as RCG Complex above	2 fish in combination per person; also included in the 10-fish aggregate RCG complex bag limit	12" total length
California Scorpionfish	Same as RCG Complex above	Same as RCG Complex above	5 fish per person	10" total length
Ocean Whitefish	Same as RCG Complex above	Same as RCG Complex above	10 fish per person	None
California Sheephead	Same as RCG Complex above	Same as RCG Complex above	5 fish per person	12" total length
Lingcod	Boat-based Anglers[5]: *Open*: Jan, Feb, Aug-Oct *Closed*: Mar-July; Nov, Dec Shore-based Anglers, Divers[5]: *Open*: Jan, Feb, May-Oct *Closed*: Mar, Apr, Nov, Dec	Jan-Feb: May only be taken in less than 180 feet (30 fm) Aug-Oct: May only be taken in less than 120 feet (20 fm)	1 fish per person	30" total length
Other Federal Groundfish (see list below this table, or go to *www.dfg.ca.gov/mrd/groundfish_fedlist.html*)	Boat-based Anglers[5]: Open: Jan-Apr; Aug-Oct Closed: May-July; Nov, Dec Shore-based Anglers, Divers[5]: Open all year	Jan-Feb: May only be taken in less than 180 feet (30 fm) Aug-Oct: May only be taken in less than 120 feet (20 fm)	See regulations for individual species	See regulations for individual species
Sanddabs[7]	Open all year	No depth restrictions	No bag or possession limit	None

continued on page 17

Leopard Shark[8]	Outside of San Francisco Bay: Boat-based Anglers[5]: *Open*: Jan-Apr; Aug-Oct *Closed*: May-July; Nov, Dec Shore-based Anglers, Divers[5]: Open all year Inside San Francisco Bay: Open all year	Outside of San Francisco Bay: Same as RCG Complex above Inside San Francisco Bay: No depth restrictions	3 fish per person	36" total length

1 See regulations for information on gear restrictions and fillet lengths
2 Around the Farallon Islands and Noonday Rock fishing is prohibited between the shoreline and 60 feet (10 fathoms); fishing is prohibited at Cordell Bank
3 Subject to in-season change. Check the Marine Region Web site at *www.dfg.ca.gov/mrd*, send an e-mail to AskMarine@dfg.ca.gov, or call your local DFG office for the latest information.
4 Prior to May 1, 2004, the Central Rockfish Lingcod and Management Area included waters between 40°10' N. latitude (near Cape Mendocino) and 34°27' N. latitude (Point Conception). As of May 1, this area has been split into two sections, the North-Central Section and the South-Central Section, at 36°00' N. latitude, near Point Lopez in Monterey County.
5 The following definitions describe boat-based and shore-based anglers, and divers.

- Boat-based anglers are fishermen that fish from boats or vessels of any size or any other type of floating object, including kayaks and float tubes.
- Shore-based anglers are fishermen that fish from beaches, banks, piers, jetties, breakwaters, docks and other manmade objects connected to the shore.
- Divers are spear fishermen entering the water either from the shore or from a boat or other floating object.

6 Total length is the longest straight-line measurement from the tip of the head with the mouth closed to the end of the longest lobe of the tail. See pg. 48 of the Ocean Sport Fishing regulation booklet for a diagram, or go to *www.dfg.ca.gov/mrd/measurement.pdf*
7 The sport fishery for sanddabs, using gear specified in federal and state regulations, is exempt from the in-season closures and depth restrictions placed on other federally managed groundfish as of May 1, 2004.
8 The sport fishery for leopard shark inside San Francisco Bay is exempt from the in-season closures and depth restrictions placed on other federally managed groundfish as of May 1, 2004.

Bottom Fishing Regulation Tables continued on page 18

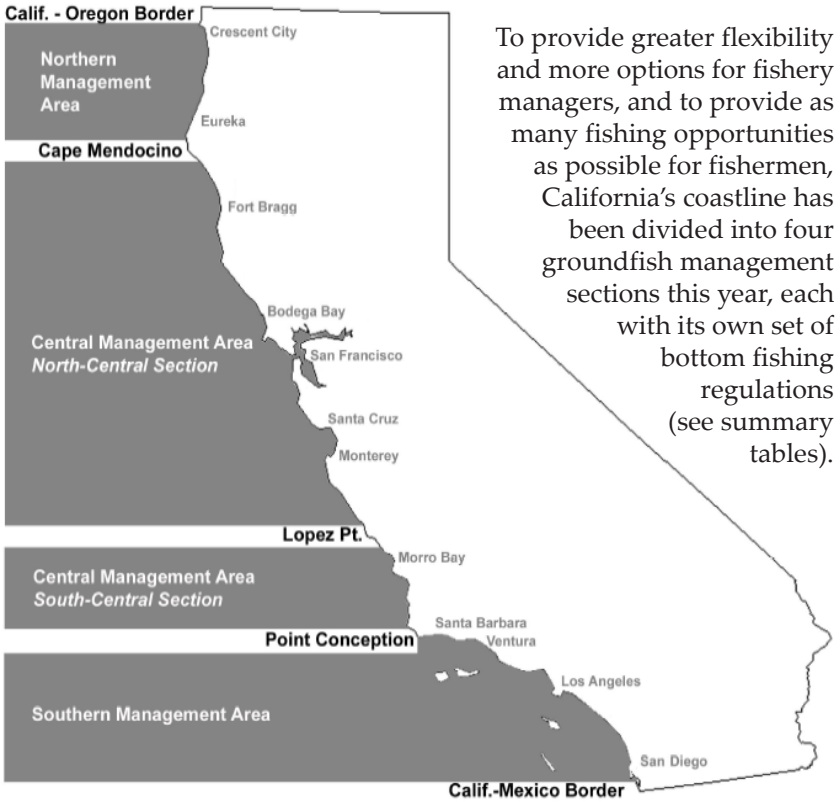
California's Fishery Management Areas for 2004

Northern Management Area
from the California-Oregon border to 40°10′ N. latitude (near Cape Mendocino)

Central Management Area, North-Central Section
40°10′ N. latitude (near Cape Mendocino) to 36°00′ N. latitude (near Point Lopez)

Central Management Area, South-Central Section
36°00′ N. latitude (near Point Lopez) to 34°27′ N. latitude (Point Conception)

Southern Management Area
34°27′ N. latitude (Point Conception) to the U.S.-Mexico Border



To provide greater flexibility and more options for fishery managers, and to provide as many fishing opportunities as possible for fishermen, California's coastline has been divided into four groundfish management sections this year, each with its own set of bottom fishing regulations (see summary tables).

2004 Recreational Bottom Fishing Regulations: Central Management Area

South-Central Section[3]

Ocean waters between 36°00' N. latitude (near Point Lopez, Monterey Co.) and 34°27' N. latitude (Point Conception, Santa Barbara Co.)

These changes replace regulations listed in the 2004 Ocean Sport Fishing Regulations booklet.

Species	Time Period [2, 4]	Depth Limit[2]	Daily Bag Limit[2]	Min. Size Limit[1, 2, 5]
RCG Complex (including all species of Rockfish that are not prohibited or restricted, Cabezon and Greenlings as defined in Section 1.91)	Boat-based Anglers[4]: *Open:* Jan, Feb, May, Jun, and Aug-Dec; *Closed*: Mar, Apr, July Shore-based Anglers, Divers[4]: *Open:* Jan, Feb, May-Dec *Closed*: March, April	Jan, Feb, May, Jun, Aug: May only be taken in less than 180 feet (30 fm) Sept-Dec: May only be taken in less than 120 feet (20 fm)	10 fish in combination per person; see sub-limits for cabezon, greenlings, and bocaccio	see individual species and groups below
Canary, Cowcod, and Yelloweye Rockfishes	CLOSED all year; NO RETENTION		NO RETENTION (zero)	
Bocaccio	Same as RCG Complex above	Same as RCG Complex above	1 fish per person; also included in the 10-fish aggregate RCG complex bag limit	10 " total length
Cabezon	Same as RCG Complex above	Same as RCG Complex above	3 fish per person; also included in the 10-fish aggregate RCG complex bag limit	15" total length
Kelp and Rock Greenlings	Same as RCG Complex above	Same as RCG Complex above	2 fish in combination per person; also included in the 10-fish aggregate RCG complex bag limit	12" total length
California Scorpionfish	Same as RCG Complex above	Same as RCG Complex above	5 per person	10" total length
Ocean Whitefish	Same as RCG Complex above	Same as RCG Complex above	10 per person	none
California Sheephead	Same as RCG Complex above	Same as RCG Complex above	5 per person	12" total length
Lingcod	Boat-based Anglers[4]: *Open:* Jan, Feb, May, Jun, Aug-Oct *Closed:* Mar, Apr, Jul, Nov, Dec Shore-based Anglers, Divers[4]: *Open:* Jan, Feb, May-Oct *Closed:* Mar, Apr, Nov, Dec	Jan, Feb, May, Jun, Aug: May only be taken in less than 180 feet (30 fm) Sept, Oct: May only be taken in less than 120 feet (20 fm)	1 per person	30" total length
Other Federal Groundfish (see list below this table, or go to *www.dfg.ca.gov/mrd/groundfish_fedlist.html*)	Boat-based Anglers[5]: *Open*: Jan-Jun; Aug-Dec *Closed*: Jul Shore-based Anglers, Divers[5]: Open all year	Jan, Feb, May, Jun, Aug: May only be taken in less than 180 feet (30 fm) Sept-Dec: May only be taken in less than 120 feet (20 fm)	See regulations for individual species	See regulations for individual species

continued on page 19

Sanddabs[6]	Open all year	No depth restrictions	No bag or possession limit	none

1 See regulations for information on gear restrictions and fillet length
2 Subject to in-season change. Check the Marine Region Web site at *www.dfg.ca.gov/mrd*, send an e-mail to AskMarine@dfg.ca.gov, or call your local DFG office for the latest information.
3 Prior to May 1, 2004, the Central Rockfish Lingcod and Management Area included waters between 40°10' N. latitude (near Cape Mendocino) and 34°27' N. latitude (Point Conception). As of May 1, this area has been split into two sections, the North-Central Section and the South-Central Section, at 36°00' N. latitude, near Point Lopez in Monterey County.
4 The following definitions describe boat-based and shore-based anglers, and divers.

- Boat-based anglers are fishermen that fish from boats or vessels of any size or any other type of floating object, including kayaks and float tubes.
- Shore-based anglers are fishermen that fish from beaches, banks, piers, jetties, breakwaters, docks and other manmade objects connected to the shore.
- Divers are spear fishermen entering the water either from the shore or from a boat or other floating object.

5 Total length is the longest straight-line measurement from the tip of the head with the mouth closed to the end of the longest lobe of the tail. See pg. 48 of the Ocean Sport Fishing regulation booklet for a diagram, or go to *www.dfg.ca.gov/mrd/measurement.pdf*
6 The sport fishery for sanddabs, using gear specified in federal and state regulations, is exempt from the in-season closures and depth restrictions placed on other federally managed groundfish as of May 1, 2004.

Bottom Fishing Regulation Tables continued on page 20

List of "Other Federal Groundfish"

The following is a list of federally managed bottom fish included in the "Other Federal Groundfish" category of the Recreational Bottom Fishing Regulations summary tables. It is not a complete list of federally managed groundfish.

SHARKS:
leopard shark, *Triakis semifasciata*
soupfin shark, *Galeorhinus zyopterus*
spiny dogfish, *Squalus acanthias*

SKATES:
big skate, *Raja binoculata*
California skate, *Raja inornata*
longnose skate, *Raja rhina*

RATFISH:
ratfish, *Hydrolagus colliei*

FLATFISH:
arrowtooth flounder (arrowtooth turbot), *Atheresthes stomias*
butter sole, *Isopsetta isolepis*
curlfin sole , *Pleuronichthys decurrens*
Dover sole, *Microstomus pacificus*
English sole, *Parophrys vetulus*
flathead sole, *Hippoglossoides elassodon*
petrale sole, *Eopsetta jordani*
rex sole, *Glyptocephalus zachirus*
rock sole, *Lepidopsetta bilineata*
sand sole, *Psettichthys melanostictus*
starry flounder, *Platichthys stellatus*

MORIDS:
finescale codling, *Antimora microlepis*

GRENADIERS:
Pacific rattail, *Coryphaenoides acrolepis*

ROUNDFISH:
Pacific cod, *Gadus macrocephalus*
Pacific whiting, *Merluccius productus*
sablefish, *Anoplopoma fimbria*

NOTE:

Pacific halibut (*Hippoglossus stenolepis*) is managed by the International Pacific Halibut Commission (IPHC). The Department supports all rules and regulations adopted by the IPHC.

All genera and species of the family Scorpaenidae that occur off California are also federally regulated. The Scorpaenidae genera are *Sebastes* (the rockfish), *Scorpaena*, *Scorpaenodes* (the scorpionfish), and *Sebastolobus* (the thornyheads).

For a full list of federally managed groundfish, go to ***www.dfg.ca.gov/mrd/groundfish_fedlist.html***

2004 Recreational Bottom Fishing Regulations: Southern Management Area

Ocean waters between 34°27' N. latitude (Point Conception) and the U.S.-Mexico Border

These changes replace regulations listed in the 2004 Ocean Sport Fishing Regulations booklet.

Species	Time Period[3]	Depth Limit[2]	Daily Bag Limit[3]	Min. Size Limit[1, 3, 4]
RCG Complex (including all species of Rockfish not prohibited or restricted, Cabezon and Greenlings as defined in Section 1.91)	Open: Mar-Dec; Closed: Jan-Feb	Mar-Aug: May only be taken in less than 360 feet (60 fathoms) Sept, Oct: May only be taken in less than 180 ft (30 fm) Nov, Dec: May only be taken in less than 360 feet (60 fathoms)	10 fish in combination; see sub-limits for cabezon, greenlings, and bocaccio,	See individual species and groups below
Canary, Cowcod, and Yelloweye Rockfishes	CLOSED all year; NO RETENTION		NO RETENTION (zero)	
Cabezon	Same as RCG Complex above	Same as RCG Complex above	3 fish; also included in the 10-fish aggregate RCG complex bag limit	15“ total length
Kelp and Rock Greenlings	Same as RCG Complex above	Same as RCG Complex above	2 fish in combination; also included in the 10-fish aggregate RCG complex bag limit	12“ total length
Bocaccio	Same as RCG Complex above	Same as RCG Complex above	1 fish; also included in the 10-fish aggregate RCG complex bag limit	10“ total length
Ocean Whitefish	Same as RCG Complex above	Same as RCG Complex above	10 per person	None
California Sheephead	Same as RCG Complex above	Same as RCG Complex above	5 per person	12“ total length
Lingcod	Open Mar-Oct Closed Jan, Feb, Nov, Dec	Mar-Aug: May only be taken in less than 360 feet (60 fm) Sept, Oct: May only be taken in less than 180 ft (30 fm)	1 per person	30" total length
California Scorpionfish	Open Mar, April, Nov, and Dec; Closed Jan, Feb, and May-Oct	Mar, Apr, Nov, Dec: May only be taken in less than 360 feet (60 fm)	5 per person	10” total length
Other Federal Groundfish (see list below this table, or go to *www.dfg.ca.gov/mrd/groundfish_fedlist.html*)	Open all year	Same as RCG Complex above	See regulations for individual species	See regulations for individual species
Sanddabs[5]	Open all year	No depth restrictions	No bag or possession limit	None

continued on page 21

"Regulations 101" *continued from page 11*

area restrictions, depth restrictions, size limits, seasonal closures, and gear restrictions. Often, as new scientific information becomes available, or as harvest guidelines are approached, reached, or exceeded, it becomes necessary to make regulatory changes during the course of the year, in order to remain in compliance with the Groundfish FMP.

Creating Fishing Regulations

Fishery managers use statistical models to predict the catch for the coming year. Based on catch levels of previous years, and knowledge of the fishery and the biology of the fishes, managers develop several regulatory options for protecting overfished stocks. Their goals are twofold: to ensure that the sport catch stays within the established annual harvest limits, and to provide as much fishing opportunity as possible. Combining these two goals often results in complicated regulations.

Because many species of rockfish are difficult to distinguish from one another, and many healthy species co-exist with overfished species, it's difficult to limit the take of overfished stocks while still providing fishing opportunities for species not under the same harvest constraints. As a result, managers often must limit fishing opportunities for healthy stocks in order to protect the overfished ones.

Overfished Stocks

West Coast groundfish stocks and harvests have declined significantly since the early 1990s. These declines have been partially attributed to natural changes in oceanic conditions, poor recruitment of young fish, over-capitalization of the commercial fishing fleet, and more restrictive management measures to protect overfished groundfish. The Secretary of Commerce declared the West Coast groundfish fishery to be in a state of disaster in 2000 because of declining catches and revenues. Currently, nine species of groundfish have been declared overfished by NOAA Fisheries based on criteria found within the Groundfish FMP. The nine overfished species include Pacific whiting (hake), widow rockfish, canary rockfish, yelloweye rockfish, darkblotched rockfish, bocaccio, Pacific ocean perch, cowcod, and lingcod. Under the Groundfish FMP, the PFMC must monitor catches and take action to rebuild these stocks.

Look for Part II of Fishing Regulations 101: Why the Rules for Bottom Fishing Changed Mid-Season in 2004, *to learn more about how fisheries are monitored, how data from monitoring helps managers to set harvest limits, why in-season changes happen, and what fishermen may expect in the future. Part II is set for publication in the next edition of the* Marine Management News.

DFG Interns Make a Difference!

The Marine Region would like to heartily thank its volunteers and interns, who assist the Department while gaining valuable work experience. Among this year's interns:

- **Keisha Simpson**, Southwest Middle College High School - ***CRFS Assistant Intern***
- **Christina Schmunk**, California State University, Monterey Bay - ***Communications Intern*** *(see the article written by Christina on page 5!)*
- **Erik Adams**, California State University, Monterey Bay - ***Cen-Cal Analysis Intern***
- **Shinobu Okano**, California State University, Monterey Bay - ***Cen-Cal Analysis Intern***
- **Monica Diaz**, California State University, Monterey Bay - ***GIS/Squid Intern***

Thanks again to all our Marine Region interns!

Get hooked on the Department of Fish and Game's Marine Region Web site!

The Web site provides an easy way to catch up on new regulations, groundbreaking research, and public meetings. Log on today and see what hooks your attention at *www.dfg.ca.gov/mrd* !

"Southern Management Area Bottom Fishing Regulations Tables" *continued from page 20*

1 See regulations for information on gear restrictions and fillet lengths
2 In Cowcod Conservation Areas fishing is prohibited in waters greater than 120 feet (20 fathoms).
3 Subject to in-season change. Check the Marine Region Web site at *www.dfg.ca.gov/mrd*, or call your local DFG office for the latest information.
4 Total length is the longest straight-line measurement from the tip of the head with the mouth closed to the end of the longest lobe of the tail. See pg. 48 of the Ocean Sport Fishing regulation booklet for a diagram, or go to *www.dfg.ca.gov/mrd/measurement.pdf*
5 The sport fishery for sanddabs, using gear specified in federal and state regulations, is exempt from the in-season closures and depth restrictions placed on other federally managed groundfish as of May 1, 2004.

Marine Life Protection Act Initiative Fueled by Partnerships

by DFG Staff

The California Resources Agency and California Department of Fish and Game are partnering with the Resources Legacy Fund Foundation and others in a new initiative to achieve Marine Life Protection Act (MLPA) goals. This public-private partnership will be guided by the advice of scientists, resource managers, experts, stakeholders and members of the public. The 1999 MLPA directed the state to design and manage a network of marine protected areas to, among other things, protect marine life, habitats, and natural heritage, as well as improve recreational, educational and marine ecosystems study opportunities. Marine protected areas include state marine reserves, state marine parks and state marine conservation areas.

Unlike previous efforts to implement the MLPA, this initiative will seek a high degree of involvement an input from stakeholders, ranging from environmental groups to commercial fishing operations. These groups and others will be part of an open, transparent process that commences this fall with a series of public hearings throughout the state. Please visit **www.dfg.ca.gov/mrd/mlpa/index.html** for more information.

"2005-2006 Q&A" *continued from page 13*

rockfish in deep water, and allowing for longer fishing seasons. The Council found that closing the shallow nearshore area for a portion of the season allowed for a longer season than if fishing were allowed all the way to the shore. Historically low catches of canary rockfish south of Lopez Pt. also allowed for a longer season in this area.

Establishing depth ranges is just one method of tailoring fishing seasons to meet regional needs.

Question: Will fishermen be able to keep black rockfish in 2005 and 2006, in the Northern Management Area, north of Cape Mendocino?

Answer: Yes. The black rockfish regulations for 2005 and 2006 return to a daily bag limit of 10, within the RCG Complex bag limit.

However, as with any fishery, in-season action may close this fishery in 2005 or 2006 if harvest allowances are in danger of being exceeded again. The high black rockfish catch in 2003 figured prominently in the creation of the shortened bottom fishing season for the Northern Management Area in 2005.

Due to State budget restraints, the *Marine Managemenent News* will only be published electronically until further notice. Sign up for automatic, electronic notification of new issues at:

www.dfg.ca.gov/mrd/subscribe

Copies are available for viewing or printing from the Marine Region Web site:

www.dfg.ca.gov/mrd/index_newsletter

"Web Site Update" *continued from page 7*

Here are some of our most popular pages:

California Ocean Sport Fishing Regulations Map: **www.dfg.ca.gov/mrd/fishing_map.html**- Going ocean fishing? This should be your first stop. Simply click the marine location where you plan to fish and you will access a compact list of sport fishing regulations for that area. The pages are printer-friendly, so you can print the regulations and take them with you on your next fishing trip. These pages are updated frequently, so you can be assured that they contain the most up-to-date information.

2004 Ocean Sport Fishing Regulations: **www.dfg.ca.gov/mrd/sportfishing_regs2004.html**- This page contains a PDF version of the complete 2004 regulations booklet. Electronic bookmarks make locating specific regulations in the booklet amazingly easy. Additional resources include the newly released 2004 Sport Fishing Regulations Supplement, maps and full-color illustrations.

Laws and Regulations Page: **www.dfg.ca.gov/mrd/regulations.html**- This page is your main source for information concerning commercial and sport fishing regulations. Over 30 links connect you to a variety of information concerning current regulations (including the two resources listed above).

A-to-Z Directory: **www.dfg.ca.gov/mrd/index_directory.html**- We receive frequent comments letting us know how easy it is to find information on our Web site. Can't seem to find what you're looking for? Don't worry! Just visit our A-to-Z Directory, and there you will see an alphabetized list of resources available to you on our Web site. Happy web surfing!

Since the tide is right...

Try surfing the Marine Region Web site!

www.dfg.ca.gov/mrd

"Salmon Management" *continued from page 5*

County Planning Department, Siskiyou Regional Educational Project, the Mendocino Environmental Center, and 21 other environmental groups requested that the species be listed on the ESA because of these dramatic declines. The petitions included information on the status of coho populations, and presented an argument for listing both the natural and hatchery-spawned populations as a single species under the ESA, in accordance with current NOAA Fisheries' policy.

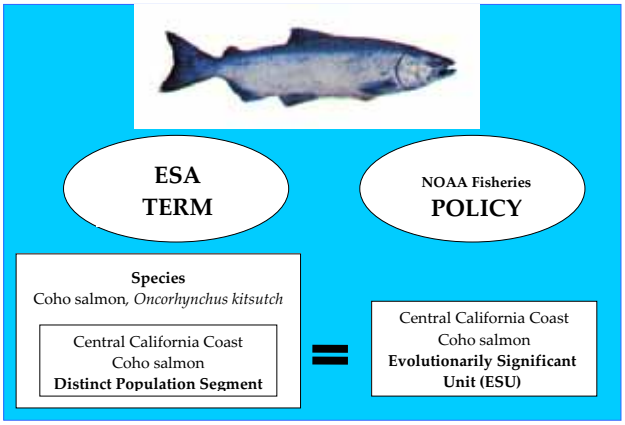
A Tangle of Terminology

NOAA Fisheries' definitions of "species," "population," "distinct population segment," and "evolutionarily significant unit" have undergone many revisions since the ESA was passed into law in 1973. The ESA definition of species currently includes "…any sub-species of fish or wildlife or plants, and any distinct population segment of any species of vertebrate fish or wildlife which interbreeds when mature."

In 1996, NOAA Fisheries defined a "distinct population segment" as being an "evolutionarily significant unit (ESU)" – all fish within a single population group that are substantially reproductively isolated from other fish within the same species, and that represent an important component in the evolutionary legacy of the species. Under the previous hatchery policy, NOAA Fisheries did not include hatchery fish in most of the listed ESUs even though they were biologically similar to natural-origin fish. The 1996 definition of ESU said that, for salmon, an ESU is the same thing as a "distinct population segment," however, the dispute became whether NOAA Fisheries could split the ESU into two components—hatchery and wild.

In Sept. 2001, a federal court in Oregon ruled that the NOAA Fisheries' hatchery policy was flawed. Following the current ESA definition of "species," and their own definition of an ESU, NOAA Fisheries was not allowed to exclude hatchery stocks from a defined population of natural-origin coho salmon off the Oregon coast, which was listed under the ESA. NOAA Fisheries was left with a choice: list both hatchery and natural populations under a single ESU, or don't list at all. As a result of this ruling, NOAA Fisheries received eight petitions affecting 17 listed populations of salmon and steelhead within Washington, Oregon, and California, requesting that the agency de-list groups of salmon, or re-define salmon populations to fit the Oregon court's ruling.

Under the pending proposal, hatchery fish will be protected with the same limitations as the rest of the ESU, although NOAA Fisheries hopes to allow fishing of hatchery fish without compromising the viability of the species.



The terms "distinct population segment" and "evolutionarily significant unit" are synonymous. *illustration by Christina Schmunk*

Implications for the Future

"The bottom line is that any hatchery fish that are part of any ESU will be listed under the policy," states Craig Wingert, Supervisory Fishery Manager at NOAA Fisheries Southwest Region, "but that we will generally work to allow harvest of the hatchery-origin component if it will not compromise recovery of the ESU."

While it is difficult for experts to say exactly what these proposed changes will mean for anglers and other concerned parties in California, Wingert says that "[NOAA Fisheries has] been actively involved in the management of these listed ESUs and that will not change, nor are we likely to take a more stringent management approach. The areas where there will be some changes are with hatcheries and at least some in-river fisheries. Since we have only proposed these changes and don't know how they will end up being finalized, it is hard to predict what will happen with much precision."

The Department of Fish and Game's (DFG's) official comments on the proposed policies will not be made public until they are presented to NOAA Fisheries. However, DFG Senior Fishery Biologist Alice Low observed that chinook salmon have been protected by state law for years.

"For winter- and spring-run chinook salmon in the Central Valley, listed as endangered and threatened (respectively), there have been many restrictions placed on recreational and commercial fisheries for their protection since the time of their listing," she said. And just this summer, central and northern California coho populations were placed on the state's endangered species list, as endangered and threatened, respectively.

The proposed federal policy changes are currently undergoing a public comment period that has been extended to Oct. 20, 2004. NOAA Fisheries expects to finalize the hatchery listing policy in January 2005, although there are no statutory deadlines for doing so. The agency will use that final policy in making its final ESA listing decisions. The final listing decisions must

"Salmon Management" *continued on page 24*

"Salmon Management" *continued from page 24*

Coho salmon evolutionary significant units (ESUs) in California. Figure from DFG's Recovery Strategy for California Coho, available online at ***www.dfg.ca.gov/nafwb/CohoRecovery/RecoveryStrategy.html***

be completed by June 14, 2005. If all the listing changes are accepted, "there will probably be a 60-day effective date tagged onto the end of the final listing changes, meaning they would become effective in August, 2005," said Wingert.

"The proposed listing changes are just that – proposed changes," Wingert adds, indicating that public comments may affect the outcome of the listing proposals or the hatchery listing policy. "However, they [public comments] must be substantive and provide new information or new analyses we have not considered in order to have much chance of affecting changes in the proposals."

NOAA Fisheries' proposed policy changes may be viewed online at the *Federal Register* Web site, **www.regulations.gov**. Written comments should be sent to Chief, Protected Resources Division, NMFS, 525 NE Oregon Street, Suite 500, Portland, OR 97232-2737. Comments will also be accepted by fax at (503) 230-5435, by e-mail at **salmon.nwr@noaa .gov**, or electronically through the Federal e-Rulemaking portal at **www.regulations.gov**. **Please include the following document identifier on all comments: 040525161-4161-01.** Comments must be received no later than 5 p.m. P.S.T. on Sept. 13, 2004. NOAA Fisheries has posted community meeting dates for Washington, Oregon, and Idaho; California hearings will be posted soon at **www.nwr.noaa.gov/AlseaResponse/20040528/meetings.html.**

For more information, log on to the following Web sites:

Federal Register: Policy Regarding the Recognition of District Vertebrate Population (61 FR 4722)
www.nmfs.noaa.gov/pr/readingrm/recoverguide/DVPRULE.PDF

Sacramento River Winter-run Chinook Salmon: Biennial Report 2000-2001
www.dfg.ca.gov/nafwb/pubs/2002/2002_03_chinook_wr_00_01.pdf

Sacramento River Spring-run Chinook Salmon: 2002-2003 Biennial Report
www.dfg.ca.gov/nafwb/pubs/2004/ChinookSR0203.pdf

Sacramento River Winter-run Chinook Salmon: Biennial Report 2002-2003
www.dfg.ca.gov/nafwb/pubs/2004/ChinookWR0203.pdf

DFG's Marine Region Salmon Resources
www.dfg.ca.gov/mrd/oceansalmon.html

NOAA Fisheries' Northwest Regional Office
www.nwr.noaa.gov

NOAA Fisheries' Southwest Regional Office
http://swr.nmfs.noaa.gov

Abalone Recovery and Management Plan Nears Completion

by Ian Taniguchi, Marine Biologist

The Abalone Recovery and Management Plan (ARMP) is nearing completion. The public comment period on the draft ARMP ended in June and the Department of Fish and Game (DFG) is now finalizing the plan for adoption at the December, 2004 Fish and Game Commission meeting in Monterey. During the public comment period, the Commission and DFG received oral comments on the draft plan through four public meetings, as well as written comments.

In preparing the ARMP for adoption, DFG is making editorial and clarifying changes as well as revising the plan based on public comment. The final document will be available for viewing once it is sent to the Commission. The final ARMP will be posted on the Marine Region Web site, and hard copies will be available at all Marine Region offices and all regional headquarters. For more information, contact Mr. Ian Taniguchi, ARMP Coordinator, at (562) 342-7182.

Calendar of Events

2004 Fish and Game Commission
www.dfg.ca.gov/fg_comm/2004/2004mtgs.html

October 21 - 22
Concord

December 2 - 3
Monterey

2004 Pacific Fishery Management Council
www.pcouncil.org/events/future.html

September 12 - 17
San Diego, CA

October 31 - Nov 5
Portland OR

For the latest information on upcoming fishery-related meetings, please go to our Calendar of Events at *www.dfg.ca.gov/mrd/calendar/index.html* or contact the Monterey DFG office at (831) 649-2870.

MARINE *Management News*

Marine Management News is published quarterly by the Marine Region of the California Department of Fish and Game for everyone interested in the management and conservation of California's living marine resources. Through this newsletter we hope to keep all associates and constituents interested in participating in and/or tracking the progress of the Marine Life Management Act (MLMA) informed of developments. The MLMA strongly emphasizes an open decision-making process that involves people interested in or affected by management measures.

For more information on the MLMA or to sign up to become more involved, please visit our web site at **www.dfg.ca.gov/mrd.**

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The Marine Life Management Act

California's 1998 Marine Life Management Act (MLMA) 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/mrd.**

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