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*Comment Received From: Gene Nelson, Ph.D.*

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## **The Sea Life Around Diablo Canyon Power Plant (DCPP) is Thriving**

Hello, CEC Commissioners and Staff:

Don't believe the plant opponent's oft-repeated propaganda claims that sea life is struggling near Diablo Canyon.

The sea life around Diablo Canyon Power Plant (DCPP) is the healthiest it has been in a long time. The big problem along the California Central Coast has been over fishing.

As a consequence of security concerns, the area around Diablo Canyon presently serves as a marine sanctuary. The recurring mandatory sea life surveys show that the population numbers are good and the average age of the populations are increasing. The president of the local fisherman's association reports that fishing conditions are good in the area around Diablo Canyon. This attached headline article from 6 November 2014 in the local paper of record, The San Luis Obispo Tribune, provides detailed State of California statistics about fishing conditions reported at Morro Bay, which is the largest home port for fishing fleets in the area. Morro Bay is about 8 miles north of Diablo Canyon.

The plant opponents trumpet the large number of microscopic larvae that don't make it through the Diablo Canyon once-through-cooling system. A large fraction of those larvae are captured by filter feeders such as barnacles lining the 12 foot by 12 foot cooling water supply tunnels. Conditions are so good for the filter feeders that the tunnels need to be scraped clean at nine-month intervals!

Even after the cooling sea water has been used to remove heat from the secondary loop water by condensing steam to distilled water, it still supports life. Evidence of this is found in the abundant numbers of barnacles attached to the cooling water outfall rocks far above sea level. The only way the barnacle larvae could arrive at that point is to pass from the tunnels through the huge array of condensing tubes on their way to the outfall rocks.

One of our CGNP Board members, Raul Brenner, astutely noted in 2014 that at ANY power plant, the waste heat is ultimately removed via the vaporization of liquid water. In the case of Diablo Canyon, that evaporation typically occurs in a very thin (mostly less than two inches thick) lower density water layer at the surface of the Pacific Ocean.

For the reasons set forth above, if DCPP is forced to shut down as a consequence of (vocal, but small in number) nuclear power plant opponents who are employing a variety of strategies, including attempts to force DCPP to take the unprecedented and expensive step of retrofitting sea-water-cooled cooling towers instead of the present OTC, (the economic benefits would be a minuscule fraction of the multi-billion dollar cost of cooling towers.) sea life conditions would deteriorate once the DCPP marine sanctuary disappears.

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Attachment: Morro Bay's fishing industry reels in largest catch in 20 years 11 06 14.pdf

*Additional submitted attachment is included below.*

# Morro Bay's fishing industry reels in largest catch in 20 years

6.8 million pounds of fish landings were reported in 2013 in Morro Bay, [up from low of 668,866 pounds in 2007, study of data from Department of Fish and Wildlife reveals](#)



Jeremiah O'Brien, a member and past president of the Morro Bay Commercial Fishermen's Organization, aboard his 48-foot fishing boat Aguero in Morro Bay. DAVID MIDDLECAMP — [dmiddlecamp@thetribunenews.com](mailto:dmiddlecamp@thetribunenews.com)

By Nick Wilson *San Luis Obispo Tribune*

nwilson@thetribunenews.com Friday, November 6, 2014 Page 1, above the fold.

The fishing industry in Morro Bay has regained its sea legs, bouncing back from a 20-year low in 2007 to post its largest catch by volume since 1993, according to an economic impact report released this week.

[Lisa Wise Consulting Inc.](#) compiled the study, which showed a boost in earnings of more than 300 percent from about \$2 million in 2007 to about \$7.1 million in 2013 — the latest year of data accumulated.

The report documents a rise in fish landings from a low of 668,866 pounds in 2007 **to nearly 6.8 million pounds in 2013, the highest single-year landing total since the boom times of the early '90s.**

The report relies on figures documented under government regulations, including information provided by the fishing industry to the Marine Fisheries Statistical Unit at the [California Department of Fish and Wildlife](#).

This is the fourth consecutive year of the report, which was produced this year with \$6,000 in funding provided by the [Central California Joint Cable/Fisheries Liaison Committee](#). The [Morro Bay Commercial Fishermen's Organization](#) also partners in the project. "As fishermen, we have an understanding of the industry, but others often don't," said Jeremiah O'Brien, a member and past president of the Morro Bay Commercial Fishermen's Organization. "We do those reports to show people what's happening."

### **Lots of good news**

The latest data shows a steady trend of increased earnings and landings, although the figures haven't yet matched peak years of the 1990s, which topped 9 million pounds of landings in 1990 and eclipsed 10 million in 1993.

In 2008, the city of Morro Bay paid for an economic study that predicted a change from a once-thriving fishing industry to a primarily recreational fishing and boating area.

**However, the city has since recognized the recovery of the commercial fishing industry,** which "should continue to play a significant role in the social and economic future of Morro Bay," staff members wrote in a recent report.

One of the factors that contributed to the decade-long decline in Morro Bay's fishing industry — in addition to environmental closures and restrictions of fishing in certain ocean areas — occurred in 2006 with the purchase of Morro Bay's fishing quota.

**The [Nature Conservancy](#) bought out Morro Bay's entire trawl fishing industry in 2006 with the goal of protecting and growing fish populations while limiting fishing.**

About eight trawlers left the business, which exacerbated the decline in landings in those years, O'Brien said.

**Since that time, the local industry has steadily improved, and earlier this year, the Conservancy transferred the quotas to the [Morro Bay Community Quota Fund](#), which manages the fishing quota and leases fishing permits to local fishermen, who may trawl under specified environmental restrictions such as avoiding trawling in coral reef areas.**

## **How the catch evolved**

While the overall catch and earnings have climbed in recent years, landings of certain species have declined along with closures and regulations on uses of fishing equipment.

**The salmon catch, for example, dropped to 45,000 pounds in 2013**, from around 200,000 pounds per year in much of the 1990s.

And halibut, which must be fished outside of three miles from shore, has remained low for the past decade with a total of about 10,328 pounds landed in 2013 compared with takes of more than 40,000 pounds in the early 1990s.

But other species — including Dungeness crab and squid — have spiked.

**Crab accounted for 17 percent of 2013 earnings in Morro Bay, climbing to a 20-year high of more than 300,000 pounds in landings.**

**There were 170,000 pounds of crab caught in 2006**, which was the previous high in the past two decades. There was little to no crab caught between 2008 and 2011.

"The last couple of years we've seen a lot more crab," O'Brien said. "Crab is typically cyclical, and we'll have bigger catches usually about every six years. But they've been spawning in big numbers the past three in a row."

**The squid catch has also swelled, with landings of more than 4 million pounds in 2013.**

That total hasn't been matched since 1993, the only other year in the past two decades to top 4 million pounds of squid.

O'Brien said that a couple of fishing boats have made the investment in catching large numbers of squid along the Central Coast, which has kept squid processing companies from Watsonville and San Pedro, the closest around, returning to Morro Bay because it's worth their while.

Another factor in the boom in local crab and squid fishing has been a trending preference for the seafood in China, where local buyers are shipping their products.

Local fishermen including Bill Blue have seen their sales of live crab, transported to China, significantly boost income over the past few years.

Like fellow anglers, Blue fishes for a variety of species, including black cod, but the high price that crab fetches in China is too lucrative to pass up.

“It’s good for business, but sad in some ways because you don’t see as many local restaurants buying crab because of the high price (driven by the Chinese market),” Blue said. “That means local people can’t go and get them as easily

[http://www.sanluisobispo.com/2014/11/06/3337295\\_morro-bays-fishing-industry-reels.html](http://www.sanluisobispo.com/2014/11/06/3337295_morro-bays-fishing-industry-reels.html)