

Summary of the September 2007 Workshop on Assessing and Monitoring Private  
Coastal Uses

Prepared by

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## Introduction

In 2000, the National Survey on Recreation and the Environment (Leeworthy and Wiley 2001) conducted a nationwide poll on private recreational uses. At the time, the study found that more than 43% of the nation's population (over 16 years of age) participated in some form of marine recreation. In California, the proportion of the population participating in marine recreation is even higher. A 2003 study by the Public Policy Institute of California found that each year more than 70% of all Californians went to the sea coast for recreational reasons. With a population of more than 36.5 million residents, this translates into more than 25 million resident coastal users in the state that enjoy beach going, angling, wildlife viewing, diving, snorkeling, surfing, and a variety of types of boating.

Private coastal use represents an important economic resource for the state. Coastal areas represent important open-space and recreational sites for Californians. The literature shows that proximity to coastal beaches increases home prices, positively effects people's decisions about where to live, and contributes to their overall wellbeing. Private coastal users also contribute to local and regional economies. Private beach goers in southern California are known to spend in excess of \$25/person/day, Recreational anglers and divers spend even more. The political importance of the coast to Californian's and their state and local representatives also is apparent through notable pieces of legislation aimed at protecting, and improving the recreational opportunities provided by health coasts. The California Coastal Act, the Beach Water Quality Act (AB411), and the Marine Life Protection Act all include language that addresses specific aspects of coastal recreational quality and access.

Because of the economic, political, and cultural importance of coastal recreation, it is critical that we understand these users, their habits, their preferences, and how policy actions (and inaction) affect the quality of private coastal recreation. In 2007, the Santa Monica Bay Restoration Commission launched a study to provide better information about the spatial use of local coastal visitors with particular attention being paid to estimating the economic impact of these coastal visitors on the local economy. These data will prove useful in helping the Commission to better target restoration actions that can improve the recreational quality of the Bay. The data will also help local agencies (e.g. Los Angeles Department of Beaches and Harbors), state agencies (e.g. CA Department State Parks, CA Department of Boating and Waterways, CA Department of Fish and Game), and federal agencies (e.g. EPA) better account for coastal recreational needs.

While we envision many end users of the data we propose to collect, the most immediate policy need for the data may be for the future implementation of the Marine Life Protection Act (MLPA) in the Southern California Bight (see Harty and John 2006). With the potential data needs of the MLPA in mind, the Santa Monica Bay Restoration Commission held a workshop to explore methods for collecting data on private coastal uses. The Commission invited staff from the MLPA Initiative, the CA Department of Fish and Game, and experts on coastal user surveys to participate in the workshop which was lead by me - Dr. Linwood Pendleton. I have been contracted by the commission to lead this survey effort and a larger project to quantify local coastal economic uses in the Bay. I am a former Associate Professor at UCLA and is a Senior Fellow and Director of Economic Research at the Ocean Foundation. Additionally, I will

work with Chris LaFranchi ([www.naturalequity.com](http://www.naturalequity.com)) to design and carryout the survey of private coastal uses. LaFranchi and I are developing a similar survey for the Central Coast of California. A full list of participants and the agenda of the survey can be found at the end of this summary. Podcasts of the workshop can be downloaded from (<http://www.surfrider.org/chad/MPAworkshop.html>).

In the following summary, I summarize the most important points of our two day discussion. The summary is not meant to be comprehensive, but does capture important advice from the participants and steps that will be taken to incorporate this advice into the design and implementation of a survey on private coastal uses in Santa Monica Bay. The summary represents my views and interpretations and not those of the participants, although I have tried to give credit to the participants for ideas that I thought were original or were at least new to me. This is a living document. Workshop participants are invited to share their thoughts, correct my memory, and otherwise contribute further to our understanding of the matters discussed here. Likewise, members of the public also are welcome to share your comments with me at [linwoodp@coastalvalues.org](mailto:linwoodp@coastalvalues.org)

### **Political Realities of the Marine Life Protection Act**

Passed in 1999, the MLPA requires DFG to develop a network of MPAs. The existing array of MPAs in the state generally were perceived as useful, but in fact may not have had significant biological impacts because the system was developed largely *ad hoc*. Under the MPLA, the state is required to design networks of marine protected areas that will provide ecological benefit to CA, to make sure MPAs function as a network, to restore populations and habits, and to create “pristine” areas for research and comparison. While recreation and the enhancement of recreation is mentioned in the Act, there is no language that identifies the types of recreation that are to be targeted or what is meant by enhancement.

From a legal standpoint, the MLPA doesn't require much economic/socioeconomic analysis, although the language of the legislation and the master plan framework indicate that 1 member out of 13 may have expertise on economics/cultures of California. While CEQA does require economic analysis, CEQA related analysis require an estimate of the environmental impacts of economic actions, not the converse.

While the MLPA does not require economic/socio-economic analysis, the political reality is that stakeholders, policymakers, and members of the public are demanding more and better economic/socio-economic data for use in the design and monitoring of MPAs. In California, little previous work has been done to establish a baseline of economic uses of coastal and marine areas. Walter Milon, of the University of Central Florida, believes that California lags substantially behind Florida in the collection of economic data on coastal and marine uses. Florida and California lead the nation in coastal recreational activities and coastal economic activities. Like California, Florida has a national marine sanctuary and other state marine protected areas.

As a result of the lack of available data, the MLPA Science Advisory Team did not include economic and socio-economic data, other than data on commercial fishing and some types of recreational fishing, in the formal analyses of proposed MPA networks in the central coast. In the north central coast study area, the MLPA has contracted with independent organizations to conduct focus groups of the spatial use of private coastal users, but there are no plans to include more detailed and comprehensive data on the overall activity, expenditures, and non-market value of private coastal users.

As the MLPA moves forward, there is a perceived need to collect more and better economic data. The uses of these data fall into three primary areas: MPA design, development of baselines, and monitoring. Each level of use requires different kinds of data at different levels of spatial resolution. MPA design requires data on coastal uses that can be spatially resolved at a very fine scale (minimum of 1 minute x 1 minute or 1 nm x 1nm). Of course, collecting a comprehensive set of coastal use data on such a scale has proven difficult (see the Technical Realities Section of this summary for a discussion of the technical issues associated with collecting data at these scales.) Funding for such an effort generally has been limited in scale and time. Data required for the development of baselines and monitoring can be at a coarser geographic resolution, but the data need to be collected for a considerable amount of time before the policy action (e.g. the establishment of a marine protected area) and for areas both inside and outside the area affected by the policy action.

In the face of limited budgets, tradeoffs may need to be made in the collection of data. These tradeoffs fall along the following basic dimensions:

- 1) comprehensiveness of activities considered (e.g. all coastal uses vs. smaller subset)
- 2) geographical resolution of coastal use (1 nm X 1nm vs. known access points)
- 3) geographical extent of area examined (e.g. Santa Monica Bay vs. Southern California Bight)
- 4) frequency of data collection (for monitoring, data will need to be collected regularly)

As part of our discussion, John Ugoretz of the California Department of Fish and Game helped illuminate possible preferences that the DFG would have regarding the tradeoffs described above. While it is possible that all private coastal uses could be impacted in some way by marine protection, John felt that economic data on use, expenditures, and values associated with recreational fishing, spearfishing, scuba diving, snorkeling, and kayaking were activities that were likely to be of most interest to the MPLA process, while information on surfing, whale watching, swimming, beach going, and boating (including powerboating, sailing, and personal watercraft) were of less interest. John also preferred data that could be collected at fine scales (1nm x 1nm) for the purposes of MPA design, but recognized that other scales of data would provide more information than is currently available and could be used for the development of baselines and monitoring. All of the MLPA and MLPA Initiative staff present agreed that it would be preferable to have comparable data for an entire study region (e.g. the Southern California Bight) rather than a smaller sub-region within the study area.

As with all types of coastal policy monitoring, there is significant concern about our ability to discern the effects of marine protection from other factors. From my perspective, however, I believe the best way to discern the impacts of policy actions on coastal uses is to collect time series data (e.g. data on coastal uses, environmental conditions, and policy actions) over a large geographic area, where policy implementation and other measurable factors vary. In many cases, changes in policy implementation and environmental conditions are not subtle and shifts in coastal use data can be examined directly. When these driving factors are more subtle, a more comprehensive approach (in this case using panel data methods) gives us the opportunity to control for more factors and thus isolate the effects of any one policy action.

## Technical Realities and Possibilities for Collecting Data on Private Coastal Uses

Of course, collecting data on private coastal uses is not easy. Even though more than seventy percent of Californians visit the coast at least once each year (PPIC 2003), we know very little about where people go when they visit the coast, what they do, how much they spend, and what economic (non-market) value these activities generate. On a statewide level, the National Survey on Recreation and the Environment (see [www.marineconomics.noaa.gov](http://www.marineconomics.noaa.gov)) estimated coastal user activity days and participation rates for all of coastal California for the years 1999 and 2000. Beyond this, the only geographically explicit data available on private coastal uses in California come from isolated studies, largely of beach visitation (for instance, see the Southern California Beach Valuation Study at <http://www.marineconomics.noaa.gov/SCBeach/welcome.html>) or recreational fishing.

There are a number of challenges in using survey techniques to assess private coastal use. Challenges include:

- 1) Developing a survey that collects the most important information about coastal uses;
- 2) Dealing with flagging recall of coastal users for visits that occurred longer than 3 or 4 weeks before the survey;
- 3) Figuring out how to administer the survey to a representative sample of the population of coastal users;
- 4) Finding ways of asking people about the exact location of their coastal visits;
- 5) Collecting information on changing seasonal patterns of coastal use.

Given current budget constraints, we originally proposed to the SMBRC a comprehensive survey of many coastal uses for a limited stretch of coastline (from the Los Angeles – Ventura County border in the north to Palos Verdes in the south). The current proposal calls for a random telephone survey of approximately 1500 respondents in the Los Angeles area. The proposed survey would provide a representative sample of day-use coastal users for the Santa Monica Bay, but would be limited in its geographic precision to known coastal access points.

At the workshop, we reviewed the draft survey instrument developed by Pendleton and LaFranchi. Much of the methodology and question format in the draft survey instrument is standard. It was agreed that the primary unit of recall for detailed trip information should be the last trip. The demographic questions in the survey are modeled after both the US CENSUS and coastal user surveys developed for the Florida Keys National Marine Sanctuary. Specific recommendations with regard to additional categories of expenditures were made including the breakdown of food by restaurant and grocery store and the inclusion of types of trip-dependent equipment purchases (e.g. hooks and sinkers).

### *Discussion of Online Surveys*

Because of the standard nature of the survey format and questions, most of the discussion centered

around the tradeoffs between the comprehensiveness of scope (that is knowing about a full set of coastal activities) versus knowing more detail about a limited set of activities. The needs of the MLPA differ somewhat from the needs of coastal management in general. MLPA staff expressed interest in knowing more about a limited set of coastal activities. For the purposes of designing and analyzing proposals for networks of marine protected, the MLPA staff requested a geographic precision of spatial use that is not easily obtained through phone surveys. The MLPA staff did, however, indicate that the level of geographic precision that can be obtained through phone surveys would be of value in the monitoring the impacts of MPAs on coastal users.

Wally Milon noted that telephone surveys are becoming increasingly difficult and expensive to implement. The cost per survey continues to increase as more effort needs to be expended to make contact with eligible households. Further, many households now use only mobile phones. While methods to exist to correct for biases introduced by mobile-only households, this additional complication adds to the difficulty of implementing phone surveys.

A number of the workshop attendees have had recent success in using online surveys to collect spatial use data. Murray Rudd recently conducted a survey in Canada on passive use values for endangered species. LaFranchi and Pendleton are using online surveys to assess boater activity and spatial use in the Channel Islands. Nelsen and Pendleton are conducting online surveys of surfing activity in California. Because of the high saturation of online use in California<sup>1</sup>, survey firms such as InsightExpress have been able to develop panels of online survey respondents that these firms claim are as representative as those that can be achieved through random digit dialing, but at much lower cost. A recent proposal by InsightExpress to conduct the SMBay private coastal use survey found that as many as 5000 respondents could be surveyed for the same price that we budgeted for 1500 phone respondents.

Online surveys offer several important features that make them potentially important tools for valuing private coastal uses in California.

- 1) Because more than 70% of the California public visits the coast at least once each year, a representative panel of online respondents will provide considerable (and representative) feedback from many private coastal users. This improves the statistical accuracy of the survey results.
- 2) Because of the low cost, we can survey many more respondents than with a phone survey. This allows us to collect “representative” information from types of coastal users that are found only infrequently in the population and thus are difficult to contact using phone surveys. Further, because many of the participants in these “less popular” uses are well connected to the internet (through list-serves and online sites) we can supplement our representative online survey with more directed efforts.
- 3) We can use maps and mapping technologies to help respondents better locate the geographic position (site) of their last trip and other trips. We now have cost estimates and a web mock-up, please contact Linwood Pendleton of the URL, from Skytruth.org to incorporate Google Maps into

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<sup>1</sup> A recent study by the Annenburg School of Communication’s Digital Futures Project found that more than 78% of all Americans 12 and over now use the internet and more than 68% have online access at home. See <http://www.digitalcenter.org/pdf/2007-Digital-Future-Report-Press-Release-112906.pdf>

an internet survey. With the lower cost of conducting internet surveys, we can also cover the costs of the Google Map interface.

- 4) In addition, internet surveys (through mapping or just simple pulldowns) would simplify site choice responses by respondents. Because of newly added diving and fishing coastal access points, we now have more than 80 potential coastal access points for Santa Monica Bay. This is an unwieldy number of access points for a phone survey, but could be handled easily with an internet survey.
- 5) We can replicate our survey over time with little additional survey design effort.
- 6) We can easily expand an online study to quickly include all of the southern California bight if new funds become available.

Because of the promise of internet surveys and the potential for using internet surveys more widely in California, we intend to follow the suggestions of some of our workshop participants and conduct our survey using online methods.

### **Partnerships and Peer Review**

Workshop participants, especially Mike Weber, recommended that we use the peer review process as an opportunity to reach out to user groups to get their input on the survey design and questions. To date we have contacted Reefcheck, Pacific Anglers, and United Anglers of Southern California to ask for their input into our survey design. We also have contacted the United Pier and Shore Anglers of California - (<http://www.upsac.org/>), and plan to contact the Kayak Fishing Association of California (<http://www.kfaca.org/>), Western Sea Kayakers (<http://www.westernseakayakers.org/>) and the California Kayak Friends (<http://www.ckf.org/>).

### **References**

Harty, J.M. and D. John. 2006. Report on Lessons Learned From the Marine Life Protection Act Initiative.

PPIC. 2003. Special Survey on Californians and the Environment. Public Policy Institute of California. San Francisco, California

Leeworthy, V. R. and P.C. Wiley. 2001. Current Participation Patterns in Marine Recreation. National Oceanic and Atmospheric Administration.

**Workshop on Economic Evaluation of MPAs in Southern California**

**September 9-11, 2007**

**Agenda**

**Participants:**

**Economic Experts**

Chris LaFranchi, Channel Islands National Marine Sanctuary

Walter Milon, University of Central Florida

Chad Nelsen, Doctoral Student (UCLA)

Linwood Pendleton, The Ocean Foundation/UCLA (host)

Murray Rudd, Memorial University, Canada

Peter Wiley, NOAA National Ocean Services, Special Projects

**Coastal Professionals and State Officials**

Rebecca Studebaker, California Department of Fish and Game

John Ugoretz, California Department of Fish and Game

Mike Weber, Resources Legacy Fund Foundation

Ken Wiseman, California MLPA/Resources Agency

Sunday, Sept. 9

2:00 pm-8:00 pm (including dinner): Tour of Santa Monica Bay (optional)

Special Discussions by Tom Raftican (United Anglers of Southern California) and Bob Osborn

Claudette Dorfey (ReefCheck California)

Monday Sept 10

8:00 am Welcome by SMBRC staff and Linwood Pendleton (hotel)

- Introductions

8:15am – 9:00 am Introduction to the Workshop: Collecting Private Use Data for Marine Life Protection in Santa Monica Bay (hotel)

- MLPA Data Needs for MPA Design, Baseline Assessment, and Monitoring (John Ugoretz, CA DFG)
  - Who are CA's Private Coastal Users
  - Ongoing Efforts to Measure Private Coastal Uses in CA
- 9:00 – 11:45am Using Surveys to Measure Private Coastal Uses
- The National Survey on Recreation and the Environment (Pete Wiley, NOAA)
  - Wally Milon (U. of Central FL)– Private Coastal User Surveys
  - Internet Surveys (Murray Rudd, Memorial University)
  - Chris LaFranchi (CINMS) – National Marine Sanctuary Data Needs and the CINMS Boater Surveys
  - SMBRC Marina Del Rey Boating Survey
- 12:00 noon Leave Hotel for Catalina Express Terminal in San Pedro.
- Arrive Two Harbors on Catalina Island at 2:00 pm.
- 2:00pm – 3:00pm MLPA Data Needs – Geographic Scale
- MLPA Design
  - MLPA Baseline Assessment and Monitoring
- 3:00pm – 5:00 pm Asking the Right Questions
- 1) Internet vs. Phone Surveys
  - 2) Designing questions about frequency of use for coastal activities – Last trip vs. seasonal or annual trips
  - 3) Designing questions about expenditures
- 5:30 pm Wine and cheese Reception
- 6:00pm Dinner
- Tuesday Sept 11
- 7:30am - 8:00 am Breakfast
- 8:15am – 10:45am Designing Questions about non-market value – original research or leveraging the literature
- 10: 45am – 12:00pm Survey repeatability and comparability to other types of economic data used in MPA analysis -
- Phone/internet surveys
  - On-site surveys
  - Focus groups
- Noon- 1:30pm Box Lunch and Free Time on the Island

1:30 pm

Prompt departure from WMSC to go to Two Harbors\*

2:00 pm

Leave Catalina Express Terminal in Two Harbors. Arrive San Pedro at 4:00 pm

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