North Central Coast Recreational Fishing Groups:
1. Commercial passenger fishing vessels
2. Private boat recreational anglers
3. Kayak-based anglers
4. Pier and shore anglers

Recreational Fisheries:
1. California Halibut
2. Dungeness Crab
3. Salmon
4. Rockfish\Lingcod Complex
5. Striped Bass (Pier and shore anglers only)
6. Surfperch (Pier and shore anglers only)

Regions:
Region 1 - Ocean Beach in San Francisco County and south to include the main port at Pillar Point
Region 2 - San Francisco Bay access points to Point Reyes
Region 3 - Point Reyes north to Alder Creek to include the main harbor at Bodega Bay

Commercial Passenger Fishing Vessels

1. **NCC Study Region**
   a. California Halibut
   b. Dungeness Crab
   c. Salmon
   d. Rockfish\Lingcod Complex

2. **Region 1**
   a. California Halibut
   b. Dungeness Crab
   c. Salmon
   d. Rockfish\Lingcod Complex

3. **Region 2**
   a. California Halibut
   b. Dungeness Crab
   c. Salmon
   d. Rockfish\Lingcod Complex

4. **Region 3**
   a. California Halibut
   b. Dungeness Crab
   c. Salmon
   d. Rockfish\Lingcod Complex

Private Boat Recreational Anglers

1. **NCC Study Region**
   a. California Halibut
   b. Dungeness Crab
   c. Salmon
   d. Rockfish\Lingcod Complex

2. **Region 1**
   a. California Halibut
   b. Dungeness Crab
   c. Salmon
   d. Rockfish\Lingcod Complex

3. **Region 2**
   a. California Halibut
   b. Dungeness Crab
   c. Salmon
   d. Rockfish\Lingcod Complex

4. **Region 3**
   a. California Halibut
   b. Dungeness Crab
   c. Salmon
   d. Rockfish\Lingcod Complex

Kayak – Based Anglers

1. **NCC Study Region**
   a. California Halibut
   b. Dungeness Crab
   c. Salmon
   d. Rockfish\Lingcod Complex

2. **Region 1**
   a. California Halibut
   b. Dungeness Crab
   c. Salmon
   d. Rockfish\Lingcod Complex

3. **Region 2**
   a. California Halibut
   b. Dungeness Crab
   c. Salmon
   d. Rockfish\Lingcod Complex

4. **Region 3**
   a. California Halibut
   b. Dungeness Crab
   c. Salmon
   d. Rockfish\Lingcod Complex

Pier and Shore Anglers

1. **NCC Study Region**
   e. California Halibut
   f. Dungeness Crab
   g. Salmon
   h. Rockfish\Lingcod Complex
   i. Surfperch
   j. Striped Bass

2. **Region 1**
   a. California Halibut
   b. Dungeness Crab
   c. Salmon
   d. Rockfish\Lingcod Complex
   e. Striped Bass

3. **Region 2**
   a. California Halibut
   b. Dungeness Crab
   c. Rockfish\Lingcod Complex
   d. Striped Bass

4. **Region 3**
   a. Rockfish\Lingcod Complex
   b. Striped Bass

As part of the local knowledge interview process, recreational fishermen were also asked to complete a recreational fishing factors survey. The purpose of the survey was to provide a broader understanding of the factors that influence recreational fishermen's choices of where to fish. The ten factors included in the survey were reviewed for relevance, clarity and appropriateness by recreational fishermen prior to the use of the survey. The ten factors included in the survey were:

- Absence of commercial fishing presence
- Absence of other fishermen (i.e. seclusion)
- Availability of high numbers of fish
- Availability of large fish
- Boat size/type
- Communication with/suggestions of other fishermen
- Price of fuel
- Proximity to harbor facility/access point
- Travel time to the location
- Weather

An "other factor" option was also included, with space for the participant to write-in other decision variables.

The factors survey was conducted at the end of each interview. Participants were asked to use the one hundred pennies approach (i.e. the same approach used in the mapping component of the interview). In other words, each individual was asked to assign a value of importance to each factor in a list of ten factors. Participants were reminded in the instructions that the factor(s) that most influence his/her decision on where to fish should be given the largest value(s) and factors that do not influence his/her decision at all should be given a zero value. In addition, a completed example, describing factors that might influence a restaurant choice, was included.


Results

In total, 100 recreational fishermen completed the factors survey. Table 1 shows the breakdown by user group. Several fishermen interviewed belonged to more than one user group. For these fishermen, their interview data was included with the user group with which they identified most closely.

User Group	# Completed
CPFV	20
Kayak	13
Pier/Shore	18
Private Vessel	49

**Table 1: Survey Breakdown by User Group**

Across all user groups (see Figure 1), the factor most likely to influence the choice of where to fish was the availability of high numbers of fish, capturing 22% of total weight. Weather conditions (16%) and the availability of large fish (15%) were the second and third most weighted factors, respectively. The absence of commercial fishing presence at a site, and boat size/type, were the factors least likely to influence survey respondents' choices of where to fish.
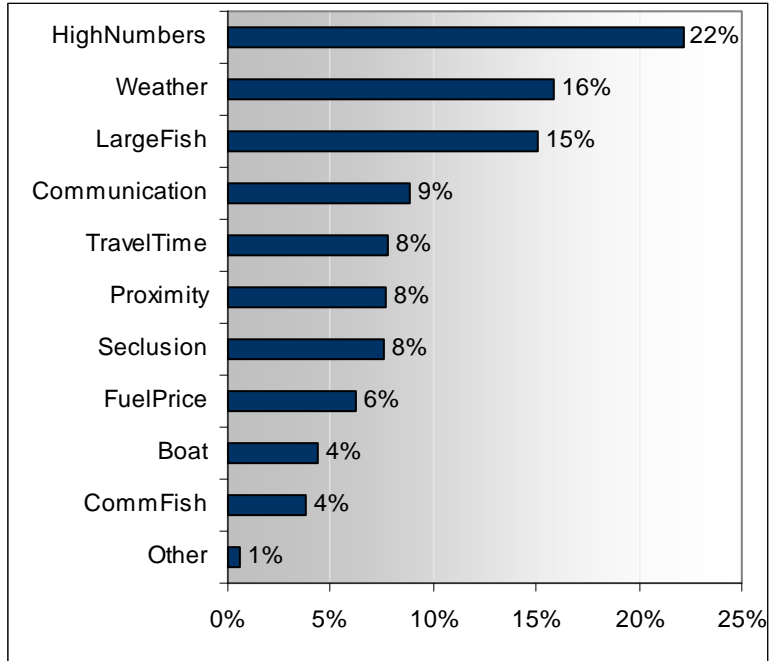
Figure 1: Survey Factors Weighting for All Users (n=100)

Within user groups of fishermen (see Figure 2), The availability of high numbers of fish was typically the most weighted factor, at 31% for CPFV, 21% for pier/shore, and 21% for private vessel fishermen. The least weighted factors were typically absence of commercial fishing presence and boat type.
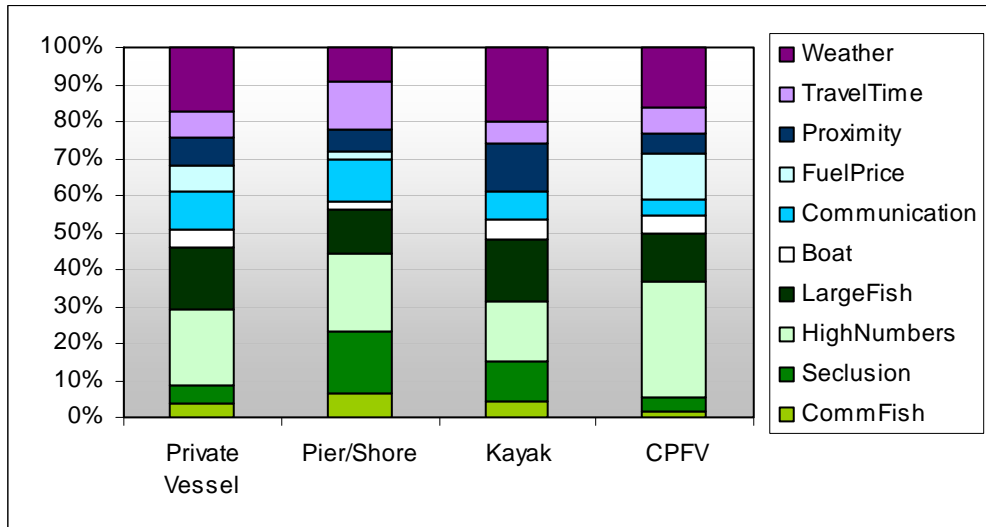
Figure 2: Survey Factors Weighting by User Group (n=100)

In addition to high numbers of fish, private vessel fishermen also heavily weighted weather (17%), availability of large fish (17%), and communication with/suggestions from other fishermen (10%). The least weighted factor for private vessel fishermen, like responses overall, was the absence of commercial fishing presence (4%).

Pier/shore fishermen favored high numbers of fish (22%) and the absence of other fishermen (16%). As expected, the least weighted factors for this user group were boat size (2%) and the price of fuel (2%). The fact that boat size appears as a factor at all for this user group reflects the data of a few fishermen, who are best categorized as pier/shore fishermen, but who also belong to at least one other user group that requires a boat.

Fuel price is a factor since it reflects not only fuel used by a boat, but also reflects fuel costs incurred in commuting to and from ocean access points.

Kayak fishermen ranked weather conditions foremost (20%), followed by availability of large fish (17%), the availability of high numbers of fish (16%) and harbor proximity (13%) as important factors in determining their choice of fishing locations. Fuel price was the factor least likely to influence kayak fishermen and received zero percent of the weight.

CPFV fishermen heavily weighted the availability of high numbers of fish (31%); weather conditions, the next influential factor received almost half that weight (16%). The availability of large fish (13%) and fuel prices (12%) were other influential factors. The least weighted factor for this user group was the absence of commercial fishing presence (2%).

Conclusions

The original survey data presented here were collected specifically for this study. The results greatly improve quantitative understanding of the factors controlling fishing site choices for different groups of recreational fishermen. In some cases the results may have been easily hypothesized, such as low weighting on fuel for kayak and pier/shore fishermen. In less obvious cases, such as gauging the importance of commercial fishing for a user group, or gauging just how important large numbers of fish are in relation to other competing factors, these survey data are more critical. Overall, these relative percentage data, collected from fishermen themselves, allows more robust modeling of quantitative impacts.