

Appendix I

Public Comments

KUIPER MARICULTURE, INC.

led Kuiper
P.O. Box 507
Bayside, Ca. 95524

Informal comments to HB Management Plan Task Force

As per agenda items.

9 April 2002

Thank you for the opportunity to comment on the HB Master Plan. Our company is Kuiper Mariculture a producer of single oyster and clam seedlings for sale to about 70 farms in the Pacific NW and internationally. We have operated in Humboldt Bay since 1978 on leased tideland from the HbHRCO. We have two shore sites for setting and early culture of 1.2 billion eyed larvae, two raft culture sites, and intertidal off-bottom site and an industrial site for intensive culture of clam and oyster seedlings. We have a continuous annual disease certification since 1978. To prevent transfer of invasive species, such as the green crab we soak all our seed in a 10 ppm chlorine bath for shipments outside California. We comply with import regulations from several international agencies including the European Economic Union.

The success of our business is credited to innovators and risk takers in industry and government that have preceded us. Some examples are biologists, Walt Dalstrom, Ron Warner, John Modin, Don Manzer with California Department of Fish and Game. Jack Alderson with the Harbor District and several commissioners, including Dr. James Gast, and Dr. Richard Ridenhour. Those that worked hard to protect Humboldt Bay water quality to develop both the regional plant and improvements in Arcata include: Dr. George Allen, Dr. Bob Gearhardt, Mr. Frank Kloop and Mr. Frank Phillios with State Health Services, and Bill Rodrigues and John Hannum with the Regional Water Quality Control Board. Although, the industry in the 70's and early 80's ridiculed our efforts to innovate and produce single seed, we received strong local support from Francis Douglas and Leonard La Branche from Coast Seafoods. The vision we had was before its time, but due to the support from those individuals mentioned and incredible innovation in the remote setting of shellfish larvae by Lee Hanson of Whiskey Creek in Oregon and Vance Lepovsky of Coast Oyster, the shellfish market is mostly now driven by single seed. I mention that, for what may appear today to be an impossible vision by new aquaculture companies may be the industry standard in a decade. Other examples, that some of you are now participating include: a shift to off bottom culture in Humboldt Bay to protect intertidal resources and compatible multiple use of industrial locations for intensive culture, such as paddle-wheel flupsies.

Humboldt Bay continues to play an important role in California shellfish culture in the production of Pacific oysters both seed and adults and manila clam seedlings for growout in B.C, Washington and Europe.

Several aquaculture industry innovations have part of their origin from the Humboldt Bay region, including:

1) Salmon farming: last year's landings exceed 1 million metric tons worldwide; much of the early work was done by Dr. George Allen. Worldwide, aquatic animal production in 1999 were estimated at 125 million metric tons. Of that capture fisheries were 92 million Metric tons and aquaculture reached 32 million metric tons. It is unknown whether capture fisheries can be sustained at that level. Aquaculture will grow to about 40 million metric tons by 2010.

Aquaculture accounts for about 30% of worldwide fisheries landings. The dominant aquaculture species are from freshwater including channel catfish, tilapia and trout. Tilapia has the highest increase in tonnage cultured in tropical countries worldwide, but is also being cultured in closed recirculating systems including, British Columbia and several other Canadian provinces. Salmon farming has been strongly rejected by Humboldt County stakeholders. You should rest easy that salmon farming is NOT likely to be proposed for Humboldt Bay in the future for several reasons including high turbidity, variable salinity, shallow depth, and the sewage discharges at the mouth of the bay and at Arcata. Worldwide, salmon farming is projected to reach 2 million tons in the next decade. Commercial fishermen should not view that supporting aquaculture is a disguise for supporting salmon farming. There are too many high quality sites in Norway, Chile, Scotland, BC, and Washington for there to be serious consideration for Humboldt Bay. Other marine finfish farming is certainly possible at Humboldt using technology developed in Europe or by the NOAA, Manchester, Washington aquaculture center, including Ling Cod, Black Cod and flat-fish.

2) CLAM FARMING : seed and techniques developed at Humboldt with the assistance of

Mr. Ron Warner and Jack Alderson now account for over 17,000 Metric tons in Europe employing over 8,000 processors and fishermen in that industry. Warner and Alderson received a

community development award from a region in Northern Italy. These culture techniques are now widely copied in Washington, British Columbia, Atlantic Northeast, and Florida with their own logical innovations. About 300 fisherman in the Indian River area of Florida are now farming hard clams due to an extension program initiated by Sea Grant and Harbor Branch Oceanographic. Landed value of that new industry is about \$15M. Even though clam seed production is both an important business for both Coast seafoods and ourselves, farming of clams will NOT be viable in Humboldt due to potential impacts on benthic resources.

3) MUSSEL farming: Humboldt was a leader in single mussel seed production that was widely ridiculed. Those techniques are now used in Australia, NZ and is the basis for two companies success in Washington. Essential! cooperation was received from Cal Fish and Game, George Trevelyan of UC Davis and Dr. Ralph Elston. Mussel production requires large rafts, which will NOT be permitted at Humboldt.

4) several other innovations have come from the industry vision at Humboldt include, geoduck clam settlement, kumamoto oyster culture and most surprisingly Sumonoe oyster culture. Coast Seafood has been the leader in kumamoto oyster culture. Geoduck clam culture has been a large R&D project in Washington, but due to the potential impact on the benthic environment, it is DOUBTFUL the geoducks will ever be cultured here.

You might enjoy the irony of the suminoe oyster story. This is an oyster that sets and grows well in a low salinity environment, there is a very low population of that oyster in the wild in Humboldt. An early innovator in developing the spawning and culture techniques for that species in Humboldt Bay is Ron Zebal. Ron Zebal is now working with a VIMS project that is part of a \$100 million program to re-establish the American oyster in the Chesapeake. So far restoration has had mixed results due

to disease. The suminoe is disease resistant and although it is a non-indigenous species the multi-agency task force views that the water quality benefits (oyster filter and clarify a large amount of water down to 1 micron), may outweigh the concern over a non-indigenous species. I

The vision that some groups now have to force out the shellfish industry because of concerns over view shed scenic resources, jet ski traffic or other imagined conflicts, may result after we are gone in a publicly supported restoration program because of the water quality benefits that are now not fully appreciated which oysters provide.

Speaking of water quality benefits, during the regional plant and Arcata project hearings I attended in the 70's, the preservation of the oyster industry was consistently named as the # 1 reason to discontinue dumping sewage into Humboldt Bay. The vision at that time was to improve water quality for recreation, commercial fishing, wildlife and sport and commercial shellfish culture. Since that time the industry has invested over \$100,000 in water quality monitoring, the municipalities have spent over \$40 million in sewage treatment improvements, and ongoing projects to improve and maintain municipal plants are significant. The health agency overhead to monitor the California coastal estuaries for sport and commercial harvest is data do not have, but it must be several million per year. Should the vision by some groups to force the shellfish industry out of Humboldt Bay be successful, the on-going monitoring of bacteriological quality and capital improvements for the sewage facilities are of a lessor priority.

What is a vision for the future of Humboldt Bay as it relates to the management plan and aquaculture?

a) the Harbor District has already demonstrated it support for shellfish culture in the form of CEQA review through the multi-agency Mariculture Monitoring Committee, assisting Coast Seafoods in the permit process to convert its culture techniques to off-bottom! permitting and leasing tidelands for low impact culture techniques, and sponsoring studies by the multi agency, industry, and university- Western Regional Aquaculture Consortium. Without the Harbor Districts vision of a sustainable industry there would be no Humboldt Bay aquaculture industry. Speaking of sustainability, a fact of about aquaculture in Humboldt that may not be clear is that we are not shellfishermen. We are growers of product that we plant as seed, culture to an appropriate size and condition and then harvest. Our industry is 100% sustainable, because we harvest NO wild product. Our broodstock is now 100% from cultured stock, we nurture and harvest only cultured product. Provided we have sites to culture our products, and bacteriological water quality continues to improve, the Humboldt Bay shellfish industry is sustainable for the several centuries. We do not rely on any tax payer support in the form of hatcheries, fisheries management or land based infrastructure. We are entirely privately funded with no public funds. Public support is substantial, however, in the form of highly technical sewage treatment plants, the health agencies to monitor there effectiveness and university research. Our view is that the phytoplankton resource (the small single celled and multiple chained flagellate and diatoms) are extremely abundant in Humboldt and can sustain a larger biomass of cultured shellfish. We back up that view with the high nutrient run-off from ag lands, and the macrophytic algae that any layman can see growing on the tidelands as the bright green or brown smudge you see on the mudflats as you drive around the bay. Much of that algae is Ulva and Enteromorpha. If the vision that some groups have of forcing out the shellfish industry succeeds, then Humboldt will likely feel the over eutrophication of macrophytes that several estuaries face in

Europe where bulldozers remove *Ulva* and *Enteromorpha* to prevent anoxia and algae fly infestations. Eutrophication will also lead to reduced habitat for migrating birds, not more. Commercial shellfish are now an important component for Humboldt Bay water quality and the view of some of "returning to the old days of a natural ecosystem", does not take into account the nutrient run-off from creeks, ag land and municipalities. Oysters are a useful species in that they remove the results of eutrophication (single cells microalgae), and convert it to a product that can be sold in Denver. The macrophytic plants including *Ulva* and *Enteromorpha* remove the nutrients from the water, die, and then re-release the nutrients into the water when they decompose. We spoke about the presence of anoxia from macrophyte decomposition during the last meeting.

b) In order to sustain and expand the aquaculture industry in an environmentally sound manner, the existing shellfish leases should be mapped and those areas that are now not in patented private ownership or under lease should be opened up to lease. The model for this is the methodology used by California Department of Fish and Game tidelands in Tomales Bay. This is of course easier said than done, since the trustee tidelands are now under the jurisdiction of at least three authorities: City of Eureka, Arcata, and Harbor District. In addition there are some patented tideland deeds that may be honored by Calf State Lands. As part of the management plan, MAPPING should be a priority.

c) A part of the NOAA aquaculture plan a goal is to increase aquaculture production in light of the balance of trade deficit on fisheries products at present over 7 billion annually second only to oil. In order to implement that goal, a NOAA policy is to "conserve existing aquaculture facilities". My vision is that existing aquaculture land that has been in production sometime in the last 25 years is not sold or removed from leasehold by transferring ownership to a government agency.

A statement, such as the Humboldt County general plan _____, regarding no net loss of agricultural land be included in the master plan as a policy guideline. This would be consistent with the NOAA plan and the Local Coastal Plan regarding coastal dependent uses. Para 14951 of the California Water Code declares that commercial shellfish harvesting is a beneficial use of the state's water and under the Shellfish Protection Act of 1993, protection of shellfish growing areas are a high priority. Conversion of areas that are now designated as a shellfish growing areas under the Health and Safety Code Section 112170 to uses that would not allow shellfish culture is not in the interest of the goals of the HB Management Plan.

d) in light of the beneficial use cited in the Shellfish Protection Act and the the goals of the NOAA Aquaculture Plan, my vision is that the shellfish growing areas in North Bay that are now administered by the Department of Health Services and under the jurisdiction of the NCRRegional Water Quality Control Board be designated as "AQUACULTURE ZONES". This designation would acknowledge that aquaculture is a beneficial use for those areas, and that future permitting for those areas, provided that the culture practices are consistent with previously addressed issues under CEQA (protection of eel grass ect) that permitting be streamlined.

e) for aquaculture sites outside the Health and Safety administered areas, that may lie within historic INDUSTRIAL locations (commercial docks, pilings, or tideland), aquaculture be designated as an acceptable secondary use to the priority industrial activities. This allows for several sites that do not meet bacteriological quality to put into production,

provided the owner or primary tideland industrial leaseholder finds that aquaculture may be a compatible use. This would also streamline permitting for those innovators that choose to locate their facilities inside the boundaries of light or heavy commercial activities (eg. municipal docks, marinas, pump mills, bulk oil storage facilities). This is a common practice in Virginia where financial incentives are awarded to shellfish culturists who locate upwells systems under existing marina docks. No financial incentives are requested here, just friendly wording in the HB Master Plan.

e) to keep my comments brief, a final vision comment is that in the "sphere of influence" of the Master Plan, a designation that aquaculture is a permitted activity within existing on-land commercial or industrial sites should be included. For example, the HEATED wastewater from Fairhaven Power, PG &E, Samoa Pacific Cellulose, the proposed coal fired plant, Bayshore Mall and others may be the sites for new innovative aquaculture. Examples of this are the proposed white shrimp facility in Fort Bragg, the widespread closed system tilapia farming in such places as Ontario and Vancouver, Canada. Since these are non-indigenous species, they are now not welcome at Humboldt Bay, but those innovators that successfully demonstrate their economic viability with environmentally sound techniques should be provided for in the Master Plan. Many ideas we have implemented over the years were disparaged at the beginning as impossible. One thing we can all count on is that future views of the importance of food resources will change. The aquaculture field welcomes risk takers and innovators, so I am confident what I think is impossible today will be standard practice in 50 years. The management plan should allow for those future innovators.

2. I will move on to Item 2. In the vision section I mentioned some specific projects including: aquaculture ZONING, acceptable SECONDARY uses, and the sphere of influence comments.

Other projects;

a) During the recreational meeting, CHANNEL markers in North Bay were requested. The industry will cooperate in placing channel markers, by providing labor and vessels at no charge. However, markers are an additional potential environmental conflict as a disturbance to the view shed, so we will take no action on this matter until the process is completed. We are happy to cooperate.

b) The jet skier was concerned about access to all parts of the bay with high speed personal watercraft. Since navigation is an important beneficial use and aquaculture is presently permitted along the edges on minor channels, we as an industry can post WARNING placards as approved by the management plan. Again, the disturbance to the view shed of posting warning signs may not be appropriate under the management plan.

c) Recreational fishing according to a recent article in the Times Standard citing the California Department of Fish and Game blue book is valued at about \$550 million in Ca. CDFG is now producing about 100,000 white sea bass juveniles at Carlsbad for partial growout in net pens by recreational sport group partners at a cost of about \$15 per fish with a 20% return to the sport fishery. The cost per fish is about \$75 per fish when landed. The value in tackle, lodging, fuel and travel may exceed \$150 per fish. Other coastal areas, including Homer, Alaska, Port Angeles, Wa., and Tillamook, Oregon have recognized the value of sport salmon fishing to the local economy especially in light of the endangered species act and the concern about dilution of genetic vigor associated with escapement

past hatcheries and interbreeding with wild stocks. Many of you may have read about the slaughter of coho at Oregon hatcheries and the controversy in the courts.

Some coastal areas that have hatcheries nearby like Mad River have elected to establish TERMINAL sport fisheries in their ports in lieu of a complete release of smolts into the parent rivers or streams. Humboldt is well situated with the several net pen sites for imprinting of Mad River smolts for 5-7 days in Humboldt Bay prior to release. The recent sport fishery for salmon inside the mouth of Humboldt Bay has shown the interest for a summer salmon bay sport fishery. Although anything to do with salmon aquaculture is high controversial, the components for successful sport terminal fishery are in place and worth investigating. In Homer, Alaska their terminal fishery is located alongside some of the most important wild salmon rivers. Their sports terminal fishery lands about 7000 fish per year. At a value of over \$150 per fish, the economic benefits to the Humboldt economy would be significant. I have included a copy of a paper on this subject for your review. The shellfish industry has nothing to gain from this type of proposal, however, any reason to continue to protect water quality does benefit the shellfish industry.

Another project that should be mentioned in the master plan is a PUBLIC oyster bed. This has been successful in other areas including the Dosewallips State Park at Brinnon, Wa. The economic benefit of locating a public bed with open and closed seasons, bag limits, and health closures may have a benefit to South Bay communities including King Salmon, Fields Landing and Loleta if a public sport fishing oyster bed were developed near the South Spit.

One of the first documented shellfisherman in the bay was Ned a Weott Indian that was murdered while clam digging near Bucksport shortly after the Indian Island massacre. The master plan should allow for CEREMONIAL shellfish areas at their site along the Eureka Channel. Coast and our company cooperates with several tribal groups in Washington and Canada with seed and technology. We will assist any tribal members who want to grow shellfish in Humboldt Bay.

Agenda Item # 3

Projects or activities not to be included:

1. As I mentioned in the Commercial fishing meeting, projects proposed for the MAD River should be examined carefully for their future impact on silt deposition in Humboldt Bay by flooding.
2. CONVERSION of shellfish growing lands to government projects that do not provide for aquaculture production should be discouraged.
3. REMOVAL of pilings in the commercial areas of Humboldt should be evaluated for their loss of a future aquaculture site. Piling placement costs about \$5000 each, plus extensive administrative and regulatory expense.
4. BUNKERING of ships with barge supplied black oil(bunker c) should not be considered.
5. Shellfish purification plants will undoubtedly be an important component to US shellfish aquaculture in the future, and potential sites should be cited, however, any plant construction should only be considered after a FULL financial commitment by industry.

6. Estuarine reserves have been mentioned as part of the Master Plan. They are also mentioned as a component of the NOAA aquaculture plan. However, further layers of agency jurisdiction over Humboldt Bay make an already lengthy permit process(the Abalone farm at Fort Bragg is into its 4th year of the permit process) even more CUMBERSOME. Since the agencies are already the main land owner around the bay, a further layer of bureaucracy including Marine Protect Areas make a confusing process even more complicated.

#4 Conflicts- mentioned above

#5 Regional Issues:

1. Aquaculture can continue to be a viable local industry provided the state shellfish growing waters(Cal Water Code 14951) continue to have conditional or open water quality. The municipalities, Water Q Board and Health Services continue to invest millions in enhancing and preserving HB Water Quality.

The new EPA effluent guidelines for aquaculture will be finalized in 2004, which should have little impact on shellfish culture since we enhance water quality through sediment filtration.

Aquaculture INCUBATOR sites have been popular in several bays to help new people get established at a site that has been fully permitted.

Thank you for the opportunity to comment. When you have discussions at future meetings about what to include in the HB Master Plan please consider the following:

1. mapping of leases, identification of vacant lease sites for new farmers.
2. aquaculture zones(this is being discussed nationally)
3. aquaculture incubator site
4. ceremonial shellfish sites
5. heated wastewater
6. state growing waters
7. public oyster bed
8. investigating a terminal sport fishery
9. conversion of growing waters(by code) to government ownership
10. secondary use by aquaculture in industrial areas

William c. Matson
287 S. Westhaven Drive
Trinidad, CA 95570

March 13, 2002

Mr Jeff Robinson
HBHR&CD
P O Box 1030
Eureka, CA 95502

Dear Jeff:

I enjoyed the exchanges last night at the stakeholder meeting. Its been a while since I was involved in fisherman politics, but I have a few observations.

I was involved in the early negotiations to manage the Salmon fishery. At the time none of us could ever conceive of a time when the fishery would be taken away from us. If we had known how far it would go we would have had more community support. At the time local support for our fight was weak. None of the communities realized how much the fishery contributed to the local economy until it was gone; then it was too late.

I write because I am encouraged by the stakeholder involvement. I don't know if the fishery will ever be healthy again, but a strong stand and message from you will help. Let me share a few thoughts of my own about Humboldt bay.

First never underestimate the power and resolve of the environmental community. I work with them everyday in my restoration business. They are constantly looking for leverage to accomplish their goals and are not concerned about the economy. Use of the endangered species act is the best example, but they also like to take land out of production to return it to a natural state. Most recently Del Norte County has felt the loss. (And they are well funded)

From my viewpoint the first and best use of Humboldt Bay must be commercial/industrial. To protect for this purpose will probably require a fight because environmental, recreational and land development groups may argue it decreases natural beauty, is noisy, dirty or a safety problem for recreational users.

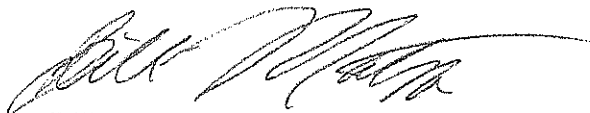
We have come a long way since the years of careless dumping and pollution of the bay. We still have problems, and will always have to be on the lookout for polluters, but none of us want to see a return to the early days of using it as a dump. Industrial use must take precedence. I never want to see recreational use discouraged. I do think we want to protect the Bay from development projects similar to Alsea Bay in Oregon, or become another Sausalito Houseboat Subdivision.

In closing let me say I see four main uses of the bay.

1. Economic/Industrial - Which includes commercial fishing and port development.
2. Recreation - Everything from sport fishing to sailing.
3. Environment - Protection of the marine habitat and biomass that uses the bay.
4. Aesthetic - The natural beauty can and should be considered in use decisions, but must never be used to stop commercial use.

You have tough challenge ahead of you and I wish you well. I look forward to a time when fishing boats once again have a place to fish and the fishing fleet becomes a viable part of our local economy and the infrastructure for the fleet is rebuilt. I hope I live long enough.

Sincerely,



Bill Matson

c.c. Paul Pellegrini
Humboldt Fishermans Marketing Association

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MAR 15 2002
H. B. H. R. & C. D.

Humboldt Bay Harbor Commission -- Recreation meeting
12 Feb 2002

Birding community:

Redwood Region Audubon Society	about 550 members
Active birders in the area	est. 65
Other non member bird aware people	10,000 (10% of 100,000)
Humboldt Co	about ³⁰⁰ 450 species of birds
Humboldt Bay Harbor Commission sphere of influence	about 250 species

Humboldt Bay is a destination for birders around the world.

When rare birds such as last fall's Greenshank or the Rustic Bunting or White-winged tern show up, birders come from all over the nation to see them. An estimated 400 birders came from around the nation to see the Greenshank. They buy food, gas, and lodging. If each person only spent \$50 in Humboldt County, that comes to \$20,000 just for that one bird. That doesn't count the tax-derived revenues from those who flew in from the east coast.

Regularly Redwood Region Audubon offers field trips 52 weekends a year at Arcata Marsh. Each trip averages about 12 people, that comes to 624 people. From October thru April we offer field trips monthly at Eureka Marsh and Hookton Slough. Those usually have about 20 people; the math comes to about 280 people. We probably offer a dozen other field trips each year at probably 10 people per trip- 120 people. Each Christmas Bird Count averages 50 people helping out- 100 people. About 4000 birding hours for organized trips.

In the 1980s and 1990s according to several outdoor and recreation magazines, Birdwatching was the fastest growing hobby in the nation. According to the information by ABA below, each birder spends an average of \$163 per year. That amounts to at least \$145,000 spent each year by birders in our area.

The following figures are based on the tables prepared by American Birding Association.

7% of U.S. population are hunters. \$10,150,000 spent by hunters in our area each year if we spend at the national average. Based on 7% at \$1450 per hunter each year. 17% of US population are anglers. \$18,000,000 spent by anglers each year if we spend at the national average. Based on 17% of our population spending \$1079 per angler each year.

This doesn't include bicyclers, kayakers and canoers, and surfers in our area.

BUT WE MAY BE ABOVE THE NATIONAL AVERAGE IN BOTH ANGLERS AND HUNTERS IN OUR AREA.

Businesses serving the birding, fishing, and hunting community in our county:

There may be some overlap between businesses

Feed and grain stores	8
Garden/Nursery	15
Sporting goods	13
Optics/Cameras	9
Bookstores	10
Bait and tackle	many

*based on Humboldt Co.
yellow pages*

That amounts to over \$28 MILLION each year spent in our area on birding, hunting and fishing.

Prepared by Chet Ogan, Redwood Region Audubon Society

FAST FACTS <http://www.americanbirding.org/programs/conseconf4.htm>

From American Birding Association:

- 63.1 m feed wildbirds at home
- 24.7 m took at least one trip a year (casual birders)
- One half of one per cent are 'serious birdwatchers', giving us a total of around 123,500 highly committed birders
- Wildlife watchers spent \$18.1 bn in 1991.
- Birdwatchers form 80% of this group.
- \$14.4 bn spent by birdwatchers
- \$6 bn on trip related expenses (food, lodging, transportation)
- \$7.6 bn for equipment (special vehicles, bird food, feeders, baths and houses; photography, binoculars, scopes, clothing, packs, camping equipment)
- \$240 m for magazines
- 560 m for membership dues

FAST FACTS <http://www.americanbirding.org/programs/conseconf5.htm>

From the 1996 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation

Fishing

- 35.2 million U.S. residents age 16 and older fished in 1996 (17 percent of the U.S. population)
- days spent fishing: 626 million
- fishing trips taken: 507 million
- dollars spent on fishing-related expenses: \$38 billion
- percent of anglers who are women: 27; men: 73
- number of freshwater anglers: 29.7 million; saltwater anglers: 9.4 million
- five states with the most anglers, in descending order: Florida, California, Texas, Michigan, New York
- top three most-fished species
 - freshwater areas other than the Great Lakes: black bass, trout, panfish
 - Great Lakes: walleye/sauger, perch, salmon
 - Salt water: flatfish (flounder, halibut), bluefish, striped bass

Hunting

- 14 million people 16 years old and older hunted in 1996 (7 percent of the U.S. population)
- days spent hunting: 257 million
- hunting trips taken: 223 million
- dollars spent on hunting-related expenses: \$20.6 billion
- percent of hunters who are women: 9; men: 91
- five states with the most hunters, in descending order: Michigan, Texas, Pennsylvania, Wisconsin, New York
- number of big game hunters: 11.3 million
 - small game: 6.9 million
 - migratory birds: 3.1 million
 - other game: 1.5 million
- three most popular species hunted:
 - big game: deer, wild turkeys, elk
 - small game: squirrels, rabbits and hares, pheasants
 - migratory birds: doves, ducks, geese

(over)

Wildlife Watching

62.9 million people 16 years old and older engaged in wildlife-watching (observing, feeding, and photographing wildlife) in 1996 (31 percent of the U.S. population)
 dollars spent on wildlife-watching-related expenses: \$29.2 billion
 residential wildlife-watchers (those who watch wildlife within a mile of their homes): 60.8 million
 nonresidential wildlife watchers (those who watched wildlife more than a mile from their homes): 23.7 million
 percent of residential wildlife watchers who are women: 54; men: 46
 percent of nonresidential wildlife watchers who are women: 50; men: 50
 five states with the most wildlife watchers, in descending order: California, Florida, Pennsylvania, Texas, Illinois
 top three residential wildlife-watching activities: feeding wild birds, observing wildlife, feeding other wildlife
 top three types of animals enjoyed by nonresidential wildlife-watchers: birds, land mammals, fish and other wildlife

Comparisons to 1991 Survey Results

[* No change at the 95-percent level of significance.]

	1991	1996	Difference
Angling			
Anglers	35.6 million	35.2 million	*
Angling days	511 million	626 million	22%
Expenditures	\$27.6 billion	\$37.7 billion	37%
Hunting			
Hunters	14.1 million	14 million	*
Hunting days	236 million	257 million	*
Expenditures	\$14.2 billion	\$20.3 billion	43%
Wildlife-Watching			
Participants	76.1 million	62.9 million	(17%)
Expenditures	\$21.2 billion	\$25.7 billion	21%

U.S. Fish and Wildlife Service Press Release

Please acknowledge the American Birding Association as your source of this information, but always quote the original reference also.

January 22, 2002

Humboldt Bay Management Plan Task Force
Humboldt Bay Harbor Recreation and Conservation District,
P.O. Box 1030, Eureka, CA 95502-1030

Dear Task Force representatives,
Thank you for providing the opportunity to comment.

A. If you could have anything you wanted in and around Humboldt Bay, with regard to the environment, what would it be?

I want the Harbor District to pro-actively protect the biological resources of the Humboldt Bay during planning and project review period, as the State law requires. The Harbor District should use sustainable development as its guide.

The Harbor District should support sustainable development as a top priority over economic development. Here I defined sustainable development as firstly protecting Humboldt Bay's land, water, wildlife habitat, and biological resources and secondly using Humboldt Bay in ways that protect it's land, water, wildlife habitat, and biological resources. In the long run, sustainable development will provide the most beneficial uses of the Bay to the public thus maximizing the public good.

Here is a list of Humboldt Bay's land, water, wildlife habitat, and biological resources

1. Eelgrass beds, and associated biota
2. anadromous salmonids, herring, native crabs, black brant, marine mammals, and shorebirds
3. Wetlands
4. Humboldt Bay is national treasure of global significance, and a critical nursery ground for many species commercial importance

Projects that are not sustainable development and do not protect Humboldt Bay's land, water, wildlife habitat, and biological resources include the following:

1. Mariculture activities that harm, restrict, or impair the eel grass beds or the sea life that use them
2. Filling of wetlands for any purpose
3. Point pollution of sediment or hazardous substances from dumping ^{or} caused from the erosion process and subsequent runoff from construction sites or other projects
4. Non-point pollution of sediment or hazardous substances from the erosion process and subsequent runoff caused from forestry and grazing operations thereby significantly increasing the sedimentation of wetlands, marshes, eelgrass beds, and the Bay, causing significant cumulative effects to the environment.
5. Shipping activity that will cause or an increase in the probability of introductions of invasive aquatic nuisance organisms, from the ballast water or freight on the ship, that may threaten the ecology integrity of the Bay or the forests surrounding the Bay.

I also request that the Harbor District to reconsider supporting designation of Humboldt Bay as a National Estuarine Research Reserve (NERR). Humboldt is the healthiest bay in California. It is essential that it is designated a National Estuarine Research Reserve to keep it ecologically intact into the future.



January 22, 2002

Humboldt Bay Management Plan Task Force,
Humboldt Bay Harbor Recreation and Conservation District,
P.O. Box 1030, Eureka, CA 95502-1030.

Dear Task Force representatives,

Thank you for providing the opportunity to share our visions, issues, and concerns for Humboldt Bay. While stakeholder meetings may provide valuable information from different user groups, we think that specific areas of Humboldt Bay should also be the focus of some of the meetings. We believe that you may be missing important issues by focusing on user groups without also considering hydrographic areas. We encourage you to add three additional meetings, one on each of the three bays (South Bay, Entrance Bay, and North Bay) open to everyone. At these meetings there would be the opportunity to share input from all user groups about the different geographic areas of interest together with the landscape as the focus, rather than just the user groups.

The following comments are presented for the environmental stakeholder meeting of the Humboldt Bay Management Plan task force. The five topics that were provided prior to the meeting are used as the framework for discussion of issues below.

1. If you could have anything you wanted in and around Humboldt Bay, with regard to the environment, what would it be?

We would like to see the Harbor District take a more pro-active role in protecting the public trust resources of Humboldt Bay, as mandated by the state, during planning and project review.

Protecting public trust resources of Humboldt Bay should include the following:

1. Protecting important biological resources, such as eelgrass beds, and associated biota, as well as anadromous salmonids, herring, native crabs, black brant, marine mammals, and shorebirds, salt marsh, etc. identify key areas to restore representing all estuarine habitat types.
2. The Harbor District as the trustee of the public trust resources needs to take responsibility for ensuring that mariculture activities are conducted in a manner consistent with aquatic resource values within Humboldt Bay.
3. Preventing illegal fill from occurring in the public trust lands and marshes of Humboldt Bay.
4. Preventing invasions of aquatic nuisance species from ballast water and other sources that may threaten the bay ecology.
5. Reducing sediment and nonpoint source runoff causing cumulatively impacts on bay resources and beneficial uses.
6. Reducing point source runoff of hazardous substances into Humboldt Bay that threaten the beneficial uses and the bay environment.

We encourage the Harbor District to reconsider supporting designation of Humboldt Bay as a National Estuarine Research Reserve (NERR). NERR status for Humboldt Bay could provide additional funding and status for Humboldt Bay through the Office of Ocean and Coastal Resource Management of the National Oceanic and Atmospheric Administration (NOAA). Designation of Humboldt Bay as a NERR would make Humboldt Bay more eligible for grant funding, while also increasing its profile as an eco-tourist destination.

2. *What topics should the HBMP address? Include specific projects, activities, or details that should be included.*

The HBMP will be based largely upon the Shapiro and Associates report that was completed in 1980, which is now over 20 years old. While this report is an excellent historical reference, we believe that using such out-of-date information may create problems for planning and implementation because a great deal of change has occurred over the last 20 years. The HBMP should identify critical information needs for the bay, and develop an action plan for acquiring that information in a timely manner. Some of the critical information needs include sedimentation rates within Humboldt Bay, the importance of estuaries for anadromous salmonids, as well as tidal fluxes and channel dynamics, to name a few.

We are concerned that the Harbor District is taking a fragmented approach towards planning within Humboldt Bay. The waterfront revitalization plan, the strategic plan, and the Humboldt Bay Management Plan are being developed in completely separate processes, and it is not clear whether they will be consistent with each other, and what information they will cover. The Harbor District is essentially undergoing a general plan revision similar to Humboldt County (who is preparing an EIR). Given the scope of the discretionary action being considered by the Harbor District - the waterfront revitalization plan, the strategic plan, and the Humboldt Bay Management Plan - an Environmental Impact Report (EIR) subject to the California Environmental Quality Act (CEQA) should be prepared.

We believe the Harbor District should aggressively pursue whatever measures are necessary to ensure that Humboldt Bay is protected from Aquatic Nuisance Species (ANS) introductions that occur largely from ballast water. We encourage the Harbor District to investigate the environmental impacts of using nitrogen as a means for controlling ANS, and if the environmental impacts are within acceptable levels, to require nitrogen treatment for all vessels entering Humboldt Bay with ballast tanks. It is important that all vessels, including those operating within the economic exclusive zone of the United States, be required to treat their ballast water, because San Francisco Bay now harbors so many ANS, and is one of the closest major ports.

The Harbor District should place more emphasis on supporting small boat owners in Humboldt Bay by improving the existing infrastructure they require, such as a small boat fueling dock, bilge pump improvements, and other measures that would provide better support for small boat use while also improving water quality.

The HBMP should address the feasibility of establishing Humboldt Bay as part of the NERR system. All the studies that are currently needed on Humboldt Bay could be funded out of the program, tapping into federal funding sources for facilities, research, and interpretation. The Harbor District should also support the Humboldt Bay Wildlife Refuge boundary, and promote acquisition within the defined areas.

3. *What specific projects or activities should not be included?*

We do not support the Harbor District channeling precious funds and resources into high-risk port development. We believe the Harbor District should support more sustainable, economically feasible projects that can provide a more secure future for Humboldt Bay. These projects should be concentrated within Entrance Bay. We do not want to see any more development in North Humboldt Bay. We do not want to see any more development in South Humboldt Bay, including dredging, fill, or any other activities at Fields Landing. South Humboldt Bay is a national treasure of global significance, and a critical nursery ground for many species of commercial importance. We believe South Humboldt Bay and North Humboldt Bay should be protected to the maximum extent feasible, with development concentrated in Entrance Bay.

We do not want any more diking or filling of wetlands around and within Humboldt Bay, which has already lost approximately 90% of its wetlands. As a result, we do not support permit streamlining for agriculture, although we do support agriculture as an open space use when it is done in a sustainable way. We do not support mariculture activities that are environmentally destructive to eelgrass beds in Humboldt Bay. We do not support any permit streamlining for mariculture. We hope that mariculture activities can be conducted in more harmony with bay in the future.

4. *Where do you see potential conflicts between your interests and the interests of other users?*

We see potential conflicts occurring with the Harbor District over the protection of public trust resources in Humboldt Bay, because we believe they are not carrying out their mandated responsibilities. At present, the major conflicts that are occurring concern aquaculture impacts on eelgrass beds, dredging, illegal filling of public trust tidelands, and degraded water quality due to point and nonpoint source runoff.


We do not want a marine terminal sited at Fields Landing or at Humboldt Bay Forest Products, a business located on illegal fill within state tidelands. We do not support any dredging in South Humboldt Bay. We believe future development should be sited at more appropriate locations in Entrance Bay.

5. *Are there regional issues you believe the HBMP needs to address?*

Humboldt Bay is not situated well for serving as a major import/export harbor for heavy cargo and industry; it is located too far away from other urban centers, and the environmental coast to the bay would be unacceptable. We believe the highest and best use of Humboldt Bay is as a major research facility on estuarine systems, as well as a tourism and recreation destination center for northern California. Humboldt Bay is extremely well positioned to serve this function.

Thank you for the opportunity to comment.

Sincerely,



Christine Ambrose
Coastal Advocate

April 29, 2001

Dear Jeff:

I wish to thank you for the opportunity to attend and speak at the Humboldt Bay Management Plan Task Force Meeting on Mariculture. It is was interesting to hear the comments from the different growers in the Bay. I would like to document my comments about the future of Mariculture in the Bay, some of which were said at the meeting and some are new.

1) I feel that Humboldt Bay has great potential for mariculture expansion but based on public opinion, number of permits needed, plus large number of agencies involved I doubt that there will be much expansion of mariculture in the Bay. I noticed the Greg Dale is a panel member and could elaborate about this problem. He had to change his whole system of growing oyster due to permit problems, environmental concerns, fishermen's objections, and a HSU MS study. Fortunately, Coast Seafood was able to survive but any new company initiating mariculture in the Bay would more than likely not even be able to get started.

2) I believe pen rearing of fish could be done in the Bay but public outcry would probable kill it especially if it is Salmonids. Canada is pen rearing steelhead which are sold at our local grocery stores. This could be done in the Bay.

3) I believe we should pen rear Chinook salmon smolts in pens to imprint them. The fish would then be released and two or three years later they would come back to the Bay for sportfishing (See attached article related to this). Actually, this is being done in

Freshwater Creek by the Fish Action Council. The young chinooks are released in the creek and they return several years later. This is called ocean ranching.

4) We should look at the possibility of reseeding our sport clam flats. Ted Kuipere's operation could be involved. Also you should look into the opening of some of South Bay to mariculture.

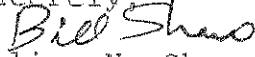
5) Look at the possibility of farming California Halibut. This would be a land bases operation since this species is not grown in floating pens. Research on this species would first be done by HSU Master students using the excellent HSU faculty at Trinidad. In fact HSU should be more involved with mariculture. I noticed that not one HSU fishery instructor was at the meeting.

6) I am not sure how much more oysters can be grown commercially in the bay. Studies need to be done on the carrying capacity of the Bay. There is only so much phytoplankton out there and if we increase oyster production we might not have enough natural food.

7) The establishment of a public oyster bar is an interesting concept but working out the logistics might be a nightmare.

8) Finally, get rid of all the cows grazing in our local coastal zone. They are polluting the bay with their e-coli after every rain.

Sincerely,


William N. Shaw

College of the Redwoods

Aqua/Fish Program

H.B.H.R. & C.D.

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