

Proposed Hawaii Administrative Rule Amendments to the West Hawai_i Regional Fisheries Management, Hawai_i §13-60.3

In 1998 the Hawai_i State legislature passed Act 306, which established the West Hawai_i Regional Fisheries Management Area (WHRFMA) encompassing the near shore waters from Upolu point (North Kohala) to Ka Lae (Ka'u) a shoreline distance of approximately 147 miles.

The overall purpose of Act 306 was to:

Effectively manage fishery activities to ensure sustainability, enhance near shore resources and minimize conflicts of use in the WHRFMA.

Act 306 also required that management decisions within the WHRFMA be made with substantial community involvement via facilitated dialogs with residents and resource users. To provide community involvement and input, the West Hawai_i Fisheries Council (WHFC) was formed in 1998 drawing on members and work of an antecedent group, the West Hawai_i Reef Fish Working Group. In order to accomplish the goals and tasks of the legislation, DLNR empowered the WHFC to serve as an advisory body and a primary source for formulating and recommending West Hawai_i management actions to DLNR.

The WHFC consists of stakeholders as well as additional non-voting, ex-officio resource people. The voting members represent a broad spectrum of community interest, user groups, and geographic locale. Ex-officio members have included UH Sea Grant, DAR, DOBOR, DOCARE, the Governor's Liaison, Whale Sanctuary Representative, National Park Service and OHA. The WHFC strives to fairly represent the stake holder community and membership is open to all interested community members with knowledge and experience in the marine environment or issues concerning fishery management.

Some of the accomplishments of the Council to date are:

1. The WHFC established a network of nine Fish Replenishment Areas (FRAs) which prohibit aquarium fishing and fish feeding.
2. The Council recommended amendments to the initial FRA rule to enhance enforcement and initiate the implementation of a sustainable, limited entry commercial aquarium fishery.
3. The Council has worked with DLNR on the day-use mooring buoy program to site these buoys and inform communities of the value of such moorings to preserve our coral reefs.
4. The Council developed rule amendments to provide limited kupuna harvesting of wana within the Old Kona Airport Marine Life Conservation District (MLCD).
5. The Council developed a set of gill net rule recommendations focused on limiting impacts of large-scale commercial netting while providing for subsistence netting. Six no- gill net refuges have been established as well as a Hawaiian cultural netting area (hand constructed, natural fiber nets only). The Council's approach served as a subsequent model for state-wide gill net management.
6. The WHFC Youth Council distributed a petition for no-smoking at Kahalu'u Beach Park, wrote a Resolution (with the help of Councilperson Virginia Isbell) and got it passed by the County Council and then wrote an ordinance that was passed unanimously. Kahalu`u Beach Park is now the second beach in the state that is no-smoking.

Over the past eight years the WHFC has also been working on developing management recommendations for several other issues which have brought to their attention by DAR and the West Hawai_i community. These issues relate directly to the mandates of Act 306 (HAR §13-60.3) to ensure sustainability, enhance near shore

resources and minimize conflicts of use on West Hawai_i's coral reefs. Three specific rule amendments are proposed to accomplish these goals. They are:

- 1). Prohibition of SCUBA spearfishing within the WHRFMA
- 2). Closure of the area fronting Ka_ohē (Pebble Beach), South Kona to aquarium collecting and opening a similarly sized area to collecting within the Kailua-Keauhou FRA. Collecting within this newly opened area will be limited via a lottery system.
- 3). Management of species of special concern. This includes eliminating take on a number of vulnerable but ecologically and culturally highly important species and restricting aquarium harvesting to a limited number of species which nevertheless constitutes the vast majority (98%) of all species taken. In addition a bag limit on large reproductively mature yellow tangs, the most heavily collected aquarium species, is proposed.

As noted each of these efforts represents the culmination of many, many hours of community meetings and stakeholder input. Following are chronologies of the processes which developed the rule amendments as provided by the various subcommittees of the West Hawaii Fisheries Council.

Synopsis of WHFC Spearfishing Management Subcommittee Meetings

September 2001 to October 2007

Glennon Gingo, Chair

- 9/19/01** Presentation by Dr. Charles Birkeland re economics of coral reefs; stressed that the use of new technology (SCUBA, night lights, fishing equipment, etc), inexpensive commercial production of nets, and loss of traditional stewardship of marine resources all contribute to depletion of fish stocks from intense fishing.
- 12/19/01** Background information provided on a number of issues including spearfishing and moorings which the council will work on in 2002.
- 2/20/02** Miloli_i Local Resource Council meeting held 2/17/02. Community concerns voiced which included a ban on day and night spearfishing w/SCUBA for commercial purposes.
- Subcommittee formed to create informational network of people involved with, interested in, or impacted by spearfishing w/SCUBA.
- 3/20/02** Spearfishing subcommittee to research and collect information. Focus of subcommittee to organize, obtain information, set parameters to deal w/spearfishing w/SCUBA and present to council.
- 4/17/02** Continuing discussions on night spearfishing w/SCUBA at Miloli_i Local Resource Council (LRC) meeting held 4/7/02 and Kawaihae LRC meeting on 4/14/02. Spearfishing subcommittee: research continuing.
- 5/15/02** Spearfishing subcommittee held meeting on 5/8/02 with 7-10 commercial spearfishers.
- Input from fishers/public included:

- Ban spearfishing w/SCUBA but ‘grandfather in’ current commercial spearfishers
- Create commercial closure areas
- No action
- Need to discuss SF according to different aspects (eg. Scuba, night, spear, specific species, etc)
- Need scientific information to make management decisions

6/19/02 Kawaihae LRC meeting held 5/26/02; continuing discussions on Spearfishing. Spearfishing subcommittee presented information from Dr. Richard Brock:

- Roi/taape really only start taking over areas that are heavily altered by fishing pressure; they’re here to stay
- Most closed areas are too small; most targeted fish are highly mobile
- Reef changes and fish population changes stem from fishing pressures which is very efficient due to new technology; when targeted species are depleted in an area the reefs change over time and other species may replace the more targeted fish
- Spearfishing w/SCUBA is especially harmful due to efficiency
- Research data from fish/coral surveys collected for 15 years on and around Keahole Pt. will show Spearfishing has huge impact on the fishery
- If spearfishing w/SCUBA were to stop there would be a gradual but sure increase in targeted fish, increased habitat health (coral), and a decrease in invasive species

8/21/02 Council to develop strategies to foster communication, receive scientific/public input, and disseminate information regarding spearfishing management such as:

- Adhere to ‘ACBD’ Model of Conflict Resolution (A=air all view; C=clarify problem issues; B=brainstorm solutions; D=determine best solution)
- Host special informational meetings

10/16/02 1st Special Informational Meeting: Scientific research presentation by Dr. Charles Birkeland and Dr. Alan Friedlander (*see Minutes of 10/16/02*).

11/20/02 2nd Special Informational Meeting: Scientific research presentation by Dr. Bill Walsh (*see Minutes of 11/20/02*).

12/18/02 3rd Special Informational Meeting: Scientific research presentation by Dr. Steven Dollar (*see Minutes of 12/18/02*).

Preparation for January 2003 Meeting

Chair, Rick Gaffney, encouraged the members to review the Spearfishing Subcommittee's Recommendations/Possible Solutions which will be discussed in January. The Council received solid input on this issue and different aspects were discussed over a long period of time.

SPEARFISHING SUBCOMMITTEE'S RECOMMENDATIONS/POSSIBLE SOLUTIONS

Subcommittee was comprised of active West Hawai_i spearfishermen and council members.

<p>1. No Action</p> <p>+ Easy to implement,</p>	<p>2. Make closure Areas</p>	<p>3. Increase minimum size limits and bag limits</p>	<p>4. Ban night spearfishing with SCUBA</p>
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<p>low cost</p> <p>- Doesn't address decline in fish</p>	<p>+ Many benefits to closed areas</p> <p>- Perceived bias against user group</p> <p>- Many studies indicate that closed areas have to be much larger than public is willing to live with</p> <p>- Moderately difficult to enforce</p>	<p>+ Does not target particular user group</p> <p>+ Benefits the fishery with blanket law of all user groups</p> <p>+ Easier 'buy-in' of affected groups; everyone compromises</p> <p>+ Data is strong about reproductive sizes</p> <p>+ Easy to educate general public on new rules</p> <p>+ Easy to enforce</p> <p>- More people may be against</p> <p>- Possibly more difficult to pass at DAR level</p>	<p>+ Removes highly efficient fishing method.</p> <p>+ Ruins commercial spearfishing with SCUBA.</p> <p>- Removes user group that likely targets specific fish of larger size</p> <p>- This group most likely to follow management guidelines when not a total ban.</p> <p>- This group has low fish wounding and is highly skilled</p> <p>- Very difficult to enforce</p>
<p>5. Ban commercial spearfishing with SCUBA</p> <p>+ Removes resource user group</p> <p>- Removes fishers who likely target specific fish and larger sizes</p> <p>- This group most likely to follow management guidelines when not a total ban.</p> <p>- This group probably has lowest fish wounding; has hi skill</p>	<p>6. Ban recreational spearfishing with SCUBA</p> <p>+ Removes resource user group</p> <p>+ Group least likely to follow non ban fishery guidelines</p> <p>+ Higher fish wounding rate</p> <p>- Many fish only occasionally</p> <p>- May alienate large number of local subsistence fishers</p>	<p>7. Ban all spearfishing with SCUBA</p> <p>+ Removes a highly efficient fishing method.</p> <p>+ Any increases or lack of, in the nearshore fish stocks can be easily attributed to this decision</p> <p>+ Easy to enforce</p> <p>- Targets one user group while other fishers have the greatest impact on</p>	<p>8. Other:</p>

level	- Difficult to enforce	near shore fishery, i.e. shoreline casters, net users, trollers and free dive fishers.	
- Difficult to enforce			

01/16/03 Spearfishing Management

Dr. Bill Walsh referred to a report obtained from the State Archives regarding spearfishing on the Big Island that stated:

Replications of underwater transects made in 1952-53 off of Keahole Point, Honokohau Bay, and Kealakekua Bay on the island of Hawai_i show that a very sharp decline in fish abundance has occurred. It appears that fishing mortality through greatly increased fishing pressure precipitated the decline. It appears that this fishing pressure, particularly spearing and netting, is gradually being extended in the northeasterly direction beyond Keahole Point as each area becomes depleted of the more desirable species of fish.

Division of Fish and Game Annual Report,
Board of Agriculture and Forestry, 1958-1959.

Spearfishing was unregulated in Hawai_i up until 1971. Following is a brief history from that time:

- 1971: Act 82 prohibited the selling of speared fish and also prohibited the use of a speargun by anyone less than 14 years of age not accompanied by an adult.
- 1977: Act 185 modified Act 82 and permitted the selling of speared red u'u, uhu and kumu.
- 1979: Act 229 removed the ban and permitted the selling of all species of speared fish. It was a kind of trial period for 4 years; to revert back to prohibition after December 31, 1983.
- 1983: Act 62 removed the time limitation of Act 229 thereby permitting the selling of all species of speared fish.

From the late 1960s, information from commercial catch data indicates that there was a significant increase in diving catch (spearfishing) as compared to other activities such as handline, gillnets, other nets, traps, etc. The targeted species of commercial divers are parrotfish, surgeonfish, and red fish. The major increase of species caught which closely tracks the increase in overall diving catch has been uhu (parrotfish).

For FY 2002 there were twelve commercial spearfishers who filed catch reports. Of the 12 commercial spearfishers, 80.7% came from the Big Island of which 16.7% came from West Hawai_i and 64% came from other parts of the Big Island; a small amount also came from Oahu.

The Precautionary Approach is a means to manage our resources when there is insufficient scientific data. It basically says the State shall be more cautious when information is uncertain, unreliable or inaccurate. The absence of adequate scientific information shall not be used as a reason for postponing or failing to take conservation and management measures.

Now the data is being collected, scientific studies are being done, and the mining of catch statistics are all painting a clear picture of the decline of our resources. If the Precautionary Approach had been used back in 1955 when the Division of Aquatic Resources recognized that there were major declines, there would be less need to establish a network of marine protected areas today.

Spearfishing Subcommittee's Recommendations/Possible Solutions

The Spearfishing Subcommittee was comprised of active West Hawai_i spearfishers and council members. The subcommittee recommended seven possible solutions to manage spearfishing in the West Hawai_i Regional Fishery Management Area:

1. No action.
2. Make closure areas.
3. Increase minimum size limits and bag limits.
4. Ban night spearfishing with SCUBA.
5. Ban commercial spearfishing with SCUBA.
6. Ban recreational spearfishing with SCUBA.
7. Ban all spearfishing with SCUBA.

Discussions on the various options ensued. The visitors in attendance were encouraged to offer input. Other recommendations were voiced and added for consideration:

8. No taking by spear in Fish Replenishment Areas (FRAs) and Fishery Management Areas (FMAs).
9. Ban all spearfishing with SCUBA in FRAs.
10. Prohibit the sale of speared fish.

Council members were advised to select and vote for their top three options to manage spearfishing and the results are as follows (in no particular order):

1. Ban night spearfishing with SCUBA.
2. Ban all spearfishing with SCUBA.
3. No taking by spear in FRAs and FMAs.

Council members were urged to seek the opinions of their constituencies regarding the three options for continuing discussions at the February meeting.

SPEARFISHING MANAGEMENT VOTE RESULTS

January 16, 2003

No.	Recommendations	Votes Received	Percentage of Votes
1	No Action.	2	4%
2	Make closure areas.	3	7%
3	Increase minimum size limits and bag limits	0	0%
4	Ban night spearfishing with SCUBA.	13	25%

5	Ban commercial spearfishing with SCUBA	1	2%
6	Ban recreational spearfishing with SCUBA.	1	2%
7	Ban all spearfishing with SCUBA.	13	25%
8	No taking by spear in FRAs and FMAs.	13	25%
9	Ban all spearfishing with SCUBA in FRAs.	4	8%
10	Prohibit the sale of speared fish.	1	2%
	TOTAL	51	100%

2/20/03 Continuing discussions/public input. Synopsis given of previous meetings and scientific presentations relating to spearfishing management. Discussions ensued re consideration of establishing no-take/no-use areas as a management tool instead of restricting certain users which may seem discriminatory in nature and cause conflicts. Everyone shares a responsibility to sustain our resources and complete closure to all users may be an equitable solution. Comments also shared that certain low-impact activities should be allowed in protected areas.

3/20/03 Continuing discussions/public input. Beginning in October 2002 the WHFC held three special informational meetings on spearfishing management. In January 2003 the Council arrived at three recommendations as noted:

- Ban night spearfishing with SCUBA;
- Ban all spearfishing with SCUBA;
- No taking by spear in FRAs and FMAs; and

Dr. Bill offered insight on considering additional aspects of spearfishing, in particular what was decided on in the Miloli'i LRC report and from discussions from the floor at the last meeting. There are a few ways to approach this matter. One is to incorporate the elements of one recommendation with another, such as possibly including suggestions from Miloli'i into the final recommendations. This will allow for further refinement of the above recommendations. Second is whether or not to address issues concerning commercial use, no-entry, etc., which are not related to spearfishing, in the spearfishing recommendations. Spearfishing includes various aspects such as scuba, all take by scuba, and taking by spear (harvesting) at night. The overall tactical approach taken by the WHFC has been to address issues by specific gear and/or type of activity (aquarium collecting, netting, spearfishing). Both no entry and no commercial use are types of activities which deserve examination on its own merit apart from spearfishing.

Discussions ensued regarding various aspects to consider in assessing the issue of spearfishing management. Comments shared:

- There will always be conflict when working with heated issues and it is the Council's responsibility to undertake this task as set forth in Act 306 (to sustain and enhance nearshore marine resources, reduce conflict over competing uses, and community involvement in decision making).
- Reminder made that the entire west coast of the Big Island is legally referred to as the West Hawai_i Regional Fishery Management Area (WHRFMA).

- Address needs of different communities region by region.
- Consider complete no-take of all species by SCUBA.
- The problem of prohibiting the sale of speared fish in West Hawai_i is that most fish are being sold off island.
- Strike a balance between the desire for simple rules with rules that reflect the needs of various communities; necessary to negotiate and compromise with the various communities within the FMA.
- Rules will come under the scrutiny of the public and government. Must be able to address concerns and impact of rules on small business, commercial interests, maintaining livelihoods, especially in light of the new administration. Proposing rules that are specific to closing certain areas can be justified whereas a complete ban on scuba spearfishing will likely fail.
- Making closed areas more restrictive may cause user conflict though scientific research indicates that fish replenishment is successful when closed areas are established.
- Support given for the Miloli'i LRC spearfishing proposals which offer a good level of protection to the resource, limits commercial interest (supports subsistence fishing), and the area can function as its own replenishment area.
- The need to consider the impact of commercial activities when managing resources (for future discussion).
- Equal access and equal rights issues; scrutiny by attorney general and governor.

Miloli'i Local Resource Council Meeting Notes of 3/9/03:

- No night spearfishing in Miloli_i's FMA/FRA
- No day spearfishing w/SCUBA
- No day spearfishing w/arbalet speargun
- Freedive during day w/spear o.k.

4/17/03 Continuing discussions/public input. Spearfishing management became the focus of the WHFC in the latter part of 2002. Initially broad input was received from spearfishers, council members, and the public. A subcommittee was also formed to gather input. Special meetings were held to present scientific research information. When the WHFC concludes its information gathering, they then craft recommended language that is submitted through the administrative process to the Division of Aquatic Resources and eventually is acted upon by the Board of Land and Natural Resources. The opportunity for public input does not end at the Council meetings but continues on through the process. (See following Group Memory Notes).

Group Memory Notes - Spearfishing Management - April 17, 2003

- Mike Sakamoto - opposes ban on spearfishing of any type; manage (bag/size limits) it - not ban it.
- Dan Mersburgh - spearfishing can be regulated; it is selective; penalties should be stronger.
- Larry Keen (YMCA Freediving Club) - spearfishing is selective; take few fish; use alternatives (bag/size/season limits); ban all night spearing period - that's the problem and it's easier to enforce.
- D. Verbeck - used to SCUBA at night for profit; he could take in one night the number the club takes in one year; SCUBA divers can take many (at least as much) fish in the day; night spearing okay but not SCUBA anytime with spear.
- DOCARE - there are sufficient penalties; DLNR has not worked out the protocols; case can be civil/criminal against lawbreaker; needs more work.
- Commercial fishers flood market.

- How effective is enforcement? Most people pay the fine; whatever judge says. Is it working? DOCARE is short on people to cover all the illegal activities.
- Glennon Gingo - clubs were a mechanism for regulation.
- Clarification of spearfishing regulations which was unregulated in Hawai_i up until 1971:

1971: Act 82 prohibited the selling of speared fish and also prohibited the use of a speargun by anyone less than 14 years of age not accompanied by an adult.

1977: Act 185 modified Act 82 and permitted the selling of speared red u'u, uhu and kumu.

1979: Act 229 removed the ban and permitted the selling of all species of speared fish. It was a kind of trial period for 4 years; to revert back to prohibition after December 31, 1983.

1983: Act 62 removed the time limitation of Act 229 thereby permitting the selling of all species of speared fish.

- A large portion of fish are leaving West Hawai_i.
- We can't affect other areas outside West Hawai_i.
- 35% (FRAs, FMAs, etc.) covers a large percentage of accessible areas; use other ways to manage fish.
- Clarify FRA and FMA definition; describe what they are geographically.
- West Hawai_i Regional Fisheries Management Area does include subsets of managed areas (FRAs, FMAs and MLCDs).
- Not everyone is locked into all FRAs.
- Mike Nakachi – commercial fishers originally met to discuss this issue; no sport/freedive spearing was involved.
- Blue Water Hunter (Rob White) – against any type of ban on spearfishing; submitted signed petition opposing HB1407/SB1497 (marine reserves) & 705. Fish depletion is the concern; spearfishing is only one manner of collecting fish. Commercial spearfishing is done most profitably at night on SCUBA (very efficient way to fish); they cause the problem.
- Regulations are needed and money from licensing can be collected to be used to support ocean activities.
- There is not one thing that takes the largest breeders more than SCUBA spearing; must protect the breeding stock; ban any take on SCUBA.
- Past methods of fishing provided for the future availability of fish.
- There's a need to "kapu kapu" some places (no take; no go); easy to enforce.
- Must protect the resources.
- We need the public's help to arrive at decisions.
- People from other places (Hilo, Oahu) come here to take the resource; population is growing – taking more fish; we need to have some control to protect fish for future generations.
- Suggestion for #4 Other: Have "Slot Limits"; DAR is suppose to manage the fisheries; need to come up with the numbers to determine the reproductive breeding sizes.

5/22/03 Continuing discussions/public input. Dickie Nelson clarified that the WHFC did not take any action to remove any recommended options re: spearfishing management, namely *Ban spearfishing in FRAs and FMAs.*

In preparation for the June 19th meeting, the WHFC will be reviewing all scientific research information and public input collected from the October 2002 meeting to present. Initially three categories seemed to stand out from the information gathered early on: 1) Ban night spearfishing with SCUBA, 2) Ban all spearfishing with SCUBA, and 3) No taking by spear in FRAs and FMAs. Clarification made that additional input from subsequent meetings will also be considered as options and will be discussed. No recommendations have been made to DAR at this time. Based upon information gathered, the WHFC will be asked to consider management actions which may or may not apply to the West Hawai'i coastline, then consider what management actions may apply to individual FRAs, and so forth.

6/19/03 Spear fishing summary (Minutes from Oct 2002 – May 2003) distributed for review.
Other recommendations added for consideration:

- Establish slot limits for species that are currently regulated
- Prohibit SF at night w/SCUBA in FRAs and FMAs
- Revise 'Ban all SF w/SCUBA in FRAs *and* FMAs'
- Re-establish the kapu system

7/17/03 Presentation by Dr. Bill Walsh regarding historical perspectives on spearfishing in Hawai_i:

- Commercial catch data from 1949 to 2002 indicates a major decline in the landings of a number of valuable fish and invertebrate species. Information from commercial catch data indicates that there has been a significant increase in recent years in diving catch (spearfishing, scuba diving) as compared to other gear types. The targeted species of commercial divers are primarily parrotfish, red fish and, to a lesser extent, surgeonfish.
- In Hawai_i only commercial fishers are required to report catch information. There is a danger of managing fisheries based only upon commercial catch data that does not accurately reflect the actual number of commercial and non-commercial (subsistence/recreational) fishers, the quantity of fish landed, gear used, etc.
- One method used both nationally and internationally to manage resources when there is insufficient scientific data is the Precautionary Approach. It basically says the State shall be more cautious when information is uncertain, unreliable or inaccurate. The absence of adequate scientific information shall not be used as a reason for postponing or failing to take conservation and management measures.
- The mission of the Division of the Aquatic Resources with the assistance of the West Hawai_i Fisheries Council is to manage, conserve, and restore the state's unique aquatic resources and ecosystems for present and future generations.

8/21/03 Continuing discussions/public input

Spearfishing Management Options

1	No night spearfishing with SCUBA No commercial spearfishing with SCUBA No recreational spearfishing with SCUBA No spearfishing with SCUBA
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2	No night spearfishing with SCUBA in FRAs and FMAs No spearfishing with SCUBA in FRAs and FMAs No spearfishing in FRAs and FMAs
3	Make closure areas (outside of FRAs and FMAs)
4	Establish slot limits for currently regulated species Increase minimum size limits and bag limits Prohibit the sale of speared fish
5	No action
6	Re-establish the kapu system

Local Resource Council Input for Respective Areas

Miloli_i LRC:

- No night spearfishing in Miloli_i's FMA/FRA
- No day spearfishing w/SCUBA
- No day spearfishing w/arpalet speargun
- Freedive during day w/spear o.k.

Kawaihae LRC:

- No regulations for non-commercial spearfishing day or night
- Commercial spearfishing should be regulated

9/18/03

List of options presently under consideration:

- No action
- Make closure areas
- Increase minimum size and bag limits
- Ban night spearfishing with SCUBA
- Ban commercial spearfishing with SCUBA
- Ban recreational spearfishing with SCUBA
- Ban all spearfishing with SCUBA
- No taking by spear in FRAs and FMAs
- Ban all spearfishing with SCUBA in FRAs and FMAs
- Prohibit the sale of speared fish
- Establish slot limits for species that are currently regulated
- Prohibit spearfishing at night with SCUBA in FRAs and FMAs
- Re-establish the kapu system

- 10/21/04** Four spearfishing committee meetings as well as individual meetings with commercial spearfishers were held.. Numerous aspects of spearfishing were discussed and the committee ultimately reached a recommendation.
- “It was felt that, after a review of prior meetings and summary of the science presented and regulations existing in other countries and territories, the scuba take method of spearing with SCUBA was detrimental to the population of reef fish and should be banned within the WHFC’s geography, i.e. from Ka lae to Upolu Point.”*
- 11/18/04** West Hawai`i Fisheries Council approves spearfishing committee’s recommendation to prohibit SCUBA spearfishing within the West Hawai`i Regional Fisheries Management Area (Ka Lae to Upolu Point).
- 10/06-10/07** West Hawai_i rule amendment (HAR §13-60.3) incorporating WHFC spearfishing recommendations drafted by DAR with special assistance by Blaine Rogers, DAR Legal Fellow.
- 10/04/07** Draft rule amendment submitted to DAR (also includes provisions relating to adaptive management of the Fish Replenishment Areas (FRAs) – see following section).
- 06/12/09** Research memorandum developed on SCUBA spearfishing by DAR Legal Intern Laura Chen Allen under supervision of DLNR Marine Law Fellow Kamaile Nichols. The purpose of the memo is provide DAR staff with relevant background information on SCUBA spearfishing. Section I covers spearfishing laws in Hawai_i and the status of recreational and commercial SCUBA spearfishing in the islands. Section II includes a comprehensive review of SCUBA spearfishing laws in other states and territories and a cursory survey of relevant international jurisdictions. Section III discusses both more and less restrictive alternatives to a total ban on spearfishing using underwater breathing apparatus. An appendix reviews DAR's spear/dive catch data and analyzes and presents the data into a series of charts.
- 07/29/09** Draft rule amendment submitted to DAR (includes provisions relating to adaptive management of the Fish Replenishment Areas (FRAs) and species of special concern.
- 09/15/09** Draft rule package and background document transmitted to DLNR-DAR Marine Law Fellow Wayne Tanaka for internal review prior to submission to DLNR chairperson, Laura Thielen.

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**Synopsis of Work of WHFC Pebble Beach User Conflicts  
Subcommittee  
September 2004 to October 2007**

George Paleudis, Chair

- 9/22/04** Friends of Pebble Beach (FOPB) submit a letter and petition signed by 1432 people to Peter Young, DLNR Chairperson requesting that the State of Hawai\_i ban the commercial collection of aquarium fish off Ka\_ohe Bay (aka - Pebble Beach), South Kona, by extending the Ho\_okena FRA approximately 2 miles south to Au\_Au Point. Justification for their request cites “a dramatic decline in tropical fish”, “rampant aquarium fish collection”, and a conflict between the use patterns of recreational user groups (diving & snorkeling interests) and commercial aquarium fish collectors in Ka'ohe Bay.
- 10/8/04** Peter Young refers the conflict to the West Hawai\_i Fisheries Council (WHFC).
- 11/18/04** Petition to Protect Pebble Beach submitted to WHFC.
- 1/9/05** User Conflict Subcommittee (UCS) is established with the authority of WHFC (December 2004) and commission statement and chart of work is completed.
- 3/19/05** Public meeting held with Friends of Pebble Beach (FOPB) presentation.
- 5/21/05** Public meeting held with Commercial fish collectors presentation.
- 9/6/05** UCS meets with WHFC Executive Committee & DAR personnel to discuss points relevant to history of the Pebble Beach conflict, current aquarium fisheries management practices and possible recommendations.
- 9/15/05** UCS submits findings and recommendations to WHFC. Appendix A provides a fuller discussion on the background and issues involved in this conflict. Key points include:
- UCS finds that there is currently insufficient biological justification for extending FRA boundaries. Several key assertions made by FOPB cannot be supported by the subcommittee’s findings.
  - UCS recognizes that a conflict remains between the FOPB and aquarium fish collectors operating in the region.
  - UCS proposes an FRA exchange effectively closing the area directly off Pebble Beach and a short distance to the north and south (approximately 1000 feet) to aquarium fish collecting while opening an area of equal distance and equitable economic significance to aquarium fish collectors that is currently closed. This would serve the purposes of both eliminating collecting and related user conflict at Pebble Beach while maintaining the existing percentages of areas (35.2%) closed to aquarium fish collecting.
  - UCS feels proposal to be the most effective way to, 1) Resolve the current conflict and 2) Evaluate the intended flexibility of the FRA boundaries in conjunction with the results of DAR’s 5-year study. This might also provide an opportunity to evaluate the effects of opening previously closed areas and may have significant future management implications of Marine Managed Areas.
- 9/29/05** FOPB accepts the proposal of September 15, 2005 to negotiate an opening of an existing FRA in exchange for closing an equal area around Ka\_ohe Bay.
- 10/05** UCS, DAR & FOPB exchange dialog to define a reasonable and more functional closure area at Ka\_ohe Bay of 2000’.
- 10/05-2/06** DAR & UCS open dialog with Miloli\_i and Ho\_okena communities to request that each respective FRA be reduced by 1000’ to provide equitable closure at Ka\_ohe Bay.

- 3/06** Ho\_okena & Miloli\_i communities decline participation in the proposed FRA swap.
- 3/16/06** DAR proposes to the WHFC that a 2000' slice of the Kailua-Keauhou FRA be opened in exchange for the 2000' Ka\_ohē Bay closure. Specific recommendations include:
- Place 2000' of reef surrounding Ka\_ohē Bay in FRA status.
  - Remove 2000' of reef from FRA status in North Keauhou.
  - Aquarium fish collecting in this newly opened area would be by special permit only (special permit renewed annually).
  - Collectors fishing this area are mandated to file special monthly catch reports listing all animals caught within this zone.
- Supporting logic includes:
- This FRA is the largest and most successful in West Hawai\_i and could absorb a small reduction in protected area.
  - The proposed open area is directly off a golf course with very little residential housing overlooking the area (low probability of user conflict).
  - The shoreline is very rugged and does not serve as a major access point to the ocean (low probability of user conflict).
  - The proposed area encompasses an already existing DAR study site (and in following, baseline data), which will provide the opportunity to evaluate- the effects of opening the fishery in a previously closed area.
- 4/14/06** FOPB endorse the proposed Kailua-Keauhou swap in letter submitted to Peter Young.
- 4/20/06** WHFC votes on and approves the proposed FRA swap.
- 6/06** In an effort to receive community feedback on the proposed FRA swap, UCS drafts and distributes a document delineating the proposed FRA swap to the Homeowner's Association of Keauhou Surf & Racquet Condominiums (June 06). No public objection from this organization has been voiced to date.
- 10/06-10/07** West Hawai\_i rule amendment (HAR §13-60.3) incorporating Pebble Beach conflict resolution recommendations drafted by DAR with special assistance by Blaine Rogers, DLNR- DAR Legal Fellow.
- 11/29/06** Memorandum on Legal Implications of Establishing a Limited Entry Aquarium Fishery in North Keauhou, West Hawai\_i, received from DLNR-DAR Legal Fellow through Sonia Faust, Deputy Attorney General. Memorandum indicated that a limited entry aquarium fishery is legally sustainable provided that: (1) the administrative rules creating it are carefully drafted to preemptively address potential constitutional issues; (2) the permits, when distributed, clearly limit the permit holder's rights in the fishery; (3) notice and hearing are provided to current permit holders; and (4) the limited entry participants are chosen via blind lottery.
- 10/04/07** Draft rule amendment submitted to DAR (also includes provisions relating to SCUBA spearfishing— see above section).

**06/08-09/08** Aquarium collectors request reconsideration of Keauhou open area rules. WHFC works out compromise amendment. Passed by WHFC 09/18/08.

**10/27/08** Revised draft rule amendment resubmitted to DAR.

**07/29/09** Draft rule amendment submitted to DAR with additional provisions relating to species of special concern.

**09/15/09** Draft rule package and background document transmitted to DLNR-DAR Marine Law Fellow Wayne Tanaka for internal review prior to submission to DLNR chairperson, Laura Thielen.

Appendix A

### **Topic #1- History of Conflict- Claims and Discussion**

**(FOPB) “During the deliberations in 1998-1999, Ka\_ohē Bay was not included in the areas set aside for the Fish Replenishment Areas (FRAs) along the West Hawai’i coast. We feel that decision was an oversight. While we recognize some responsibility for that oversight by not voicing a strong enough expression of our interest in protecting Pebble Beach at that time, we deny that no one spoke up at that point for the inclusion of Ka\_ohē Bay in the new FRAs.”**

(UCS) The subcommittee found that several factors explain Pebble Beach/ Ka\_ohē Bay not having been included in the original FRA designations, 1) Of those who participated in the original planning (see minutes from West Hawai\_i Fisheries Council Meetings #1-6, 6/6/98- 10/14/98), only 3 individuals (of roughly 30 participants) requested the area be included. Ka\_ohē Bay was simply not an area of consensus for inclusion. Nine areas of general consensus were chosen with a general agreement that there may be some adjustment after the 5-year evaluation. 2) Additionally, Ka\_ohē Bay/ Pebble Beach had not been identified as a “hot spot” or area involving user conflict by either the West Hawai\_i Fisheries Council or its precursor, the West Hawai\_i Reef Fish Working Group. At the time of FRA designations there were no indications of user conflict. The evidence brought forth in our findings demonstrates that there was no oversight in Ka\_ohē Bay not having been included in the original FRA designations. The decisions made were done with focused deliberation in an effort to serve the greatest possible consensus for both biological and political considerations.

**(FOPB) “Looking at a map of the Big Island, it is easy to imagine making such an oversight. However, it is nearly impossible to imagine someone traveling in a boat south of Ho\_okena, especially during the spawning season, not recognizing Ka\_ohē Bay as a focal point of potential “user conflict” in regards to aquarium fish collection.”**

(UCS) Once again, at the time the FRA boundaries and study sites were delineated, Pebble Beach had not been identified as an area of user conflict.

### **Topic #2- Pebble Beach Public Use Patterns- Claims and Discussion**

**(FOPB) “Most of our petition forms start off with a basic predicate of our position: “Ka\_ohē Road is the only public ocean access point open to vehicles between Ho\_okena and Miloli\_i.”**

**(FOPB) “Hundreds of people throughout our neighborhood regularly use the beach for recreation and relaxation. It is a particularly convenient shore entry point for divers and snorkelers.”**

**(FOPB) “People swim in the ocean for exercise in the morning or just to cool off after a hot day. People snorkel over the reef looking at colorful tropical fish. Parents sit for hours in the shallow water with their young children, teaching them to be at home in the water. Fathers take their sons fishing off rocks pounded by surf. Groups of divers haul their scuba gear out from shore to explore the deep waters so close to our shoreline.”**

*Hawaii- The Big Island Revealed* has the following description of Pebble Beach. “*Located down a very steep road (you lose 1050 feet of elevation in 6,000 feet of driving- that’s almost as steep as the notorious road into Waipi’o Valley). It is at the bottom of Kona Paradise and is one of the most violent beaches we know of. Even when calm it will kick your okole. We’ve seen fish tossed out of the water on calm days (seriously!). The beach is actually countless water worn pebbles which make a great sound when the surf is up. If you’ve got the nerve, it is fun to let the surge pull you up and down the steep beach (but away from the shore break)”*

(UCS) Our subcommittee’s research shows there to be no signage from the highway to indicate beach access. There is limited parking (5 cars maximum) none of which appears to be specifically delineated for beach related use. There are no public restrooms. Photographs (included) showing use patterns of Pebble Beach (numbers of people on the same days at Pebble Beach, Ho\_okena and Pu\_uhonua o H\_naunau) demonstrate use to be nominal at most.

(UCS) The Friends of Pebble Beach indicate that “the public” is perhaps the principle stakeholder group involved in this conflict and that hundreds of people regularly use Pebble Beach for recreational purposes. Our subcommittee’s findings indicate that the descriptions of Pebble Beach, it’s accessibility, it’s recreational significance to the West Hawai\_i community and its use patterns are inconsistent with the position furthered by the Friends of Pebble Beach.

### **Topic # 3- Current Biological Status of Pebble Beach- Claims and Discussion**

**(FOPB) “There was no baseline established for Ka\_ohē Bay by the West Hawai\_i Aquarium Project (WHAP) in 1998. The nearest sites surveyed were Kalahiki Beach south of Ho\_okena and \_Au\_Au Point which is well south of Ka\_ohē Bay. We feel that decision was also a gross oversight.”**

(UCS) According to our subcommittee’s research Ka\_ohē Bay was not included as a study site for several reasons. 1) Pebble Beach is deeper (50’-60’) which logistically constrains monitoring possibilities. \_Au\_Au Point, approximately one mile south of Pebble Beach, was deemed to be a more suitable study site. At the time of WHAP site selection there were no other overriding reasons to specifically work at Pebble Beach. When asked if developing a comprehensive monitoring program was currently warranted, Dr Walsh indicated that DAR currently has considerable information on areas open to aquarium fish collecting. A formal study of this site was not likely to generate information that would not be represented in the current monitoring program. Our findings demonstrate that there was no oversight in Ka\_ohē Bay not having been included in the original FRA monitoring program. Study sites were carefully considered in an effort to generate sound scientific information that would aid in the management of the FRA’s.

(FOPB) **“The decline in tropical fish in our bay is dramatic”**

(FOPB) **“Today, November 18, 2004, the Friends of Pebble Beach submit to the West Hawai\_i Fisheries Council a petition signed by 1432 people urging the state of Hawaii to protect Ka\_ohe Bay/Pebble Beach from damage to the reef and depletion of marine organisms due to aquarium collectors.”**

(FOPB) **“Reducing the problem of the continued survival of a healthy coral reef down to whether ruining it makes enough money is absurd to most of us.”**

(FOPB) **“Within the past year commercial tropical fish collectors have been plundering the reef here with alarming regularity.”**

(UCS) DAR has conducted “reconnaissance” monitoring of Pebble Beach. Pebble Beach is a wave-impacted shoreline and coral is often damaged by storm action. Findings indicate, “It was clear to us and should be apparent on the photos that there has been substantial coral damage even down at least 70’. The extent and uniformity of the damage points directly to strong swells, which we’ve seen at a number of locations along the coast. There may have been one area in shallower water that was the result of anchoring but other than that, there was nothing that looked clearly like diver damage.”

(UCS) Additionally, DAR commented that “We also felt we could detect some impact of collecting, primarily because there was a significantly reduced population of small young of the year yellow tangs. We did see quite a few recruits from last year however, including butterflies and surgeons and there is a nice population of adults (including yellow tangs).”

(UCS) In our subcommittee’s Sept 6, 2005 meeting with DAR, Dr. Walsh indicated that the ecosystem at Pebble Beach is consistent with other areas open to aquarium fish collecting. There is a characteristic reduction in the small to intermediate size yellow tang population (which is the most heavily fished species-specifically in this size class), but other than that there appears to be little impact from the aquarium fish fishery.

(UCS) Tropical fish collectors who fish the area have pointed out that if there were no fish at Pebble Beach (as the Friends of Pebble Beach have asserted) there would be no reason for them to fish at that location.

(UCS) Our subcommittee’s findings suggest that the impact of aquarium fish collecting at Pebble Beach is consistent with that of other areas open to collecting and that the case for “damage to corals and an alarming decline in aquarium fish populations” at Pebble Beach has been largely overstated by the Friends of Pebble Beach.

(UCS) However, as the Friends of Pebble Beach point out, **“ There was no baseline (data) established for Ka\_ohe Bay by the West Hawai’i Aquarium Project (WHAP) in 1998”**. While the comments of all involved parties have been considered, the most weight must be assigned to the most objective credible, current information and those insights can only come from DAR. It is significant to note that both the Friends of Pebble Beach and Aquarium Fish Collectors endorse continuing research- each for different reasons. Fish Collectors want to insure a sustainable resource for harvest and Friends of Pebble Beach would like to use the same information to limit (or possibly eliminate?) harvest of aquarium fish.

(UCS) The discussion of sustainability is central to the evaluation of the issue of impact and future management. Regular monitoring by DAR (even if informal) in conjunction with organized public participation (Reef Watch) may be warranted in order to establish baseline information relevant to future resource management of the region.

## **Discussion and Recommendations**

(UCS) Our User Conflicts Subcommittee finds there is currently insufficient biological justification for extending existing FRA boundaries. The most recent and credible information available demonstrates that the aquarium fish fishery is currently being managed for a sustainable future. In as much as this is the case, the user conflicts subcommittee cannot endorse the Friends of Pebble Beach’s request to extend FRA boundaries to \_Au\_Au point.

(UCS) Our subcommittee does, however, recognize that a conflict remains between the residents of Pebble Beach and Aquarium Fish Collectors operating in the region. The user conflicts subcommittee would propose an FRA exchange effectively closing the area directly off Pebble Beach and a short distance to the north and south (approximately 1000 feet) to aquarium fish collecting while opening an area of equal distance and equitable economic significance to Aquarium Fish Collectors that is currently closed. This would serve the purposes of both eliminating collecting and related user conflict at Pebble Beach while maintaining the existing percentages of areas closed to aquarium fish collecting.

(UCS) our subcommittee feels this to be the most effective way to, 1) Resolve the current conflict and 2) Evaluate the intended flexibility of the FRA boundaries in conjunction with the results of DAR’s 5-year study. This might also provide an opportunity to evaluate the effects of opening previously closed areas and may have significant future management implications of Marine Managed Areas. A swap such as the one suggested may prove to be the cloud’s proverbial silver lining in this conflict.

(UCS) The Friends of Pebble Beach have indicated that, **“We do not seek a chunk of an FRA from somewhere else along the Kona Coast.”** The subcommittee suggests that we pursue the FRA “swap” and review available options only after having received confirmation from the Friends of Pebble Beach that these efforts will meet their objectives for resolving their use conflict.

Additionally, our subcommittee would like to endorse the continued involvement of the Pebble Beach community. The Reef Watch program should be continued and structured to provide specific baseline information regarding human use patterns and frequencies. Dr Walsh and Sara Peck are available to mentor the structure of these activities. This information may prove to be beneficial for future management considerations involving the Pebble Beach Community.



**Synopsis of Work of WHFC Species of Special Concern Subcommittee  
September 2004 to October 2007**

David Dart, Chair

**The West Hawaii Fishery Council  
Species of Special Concern Subcommittee Commission  
(DRAFT 9/16/06)**

**MISSION:**

The subcommittee will develop guidelines for the research and recommendations concerning the species of special concern within the West Hawaii Management Area.

**Authority and Relationships:**

The Species of Special Concern Subcommittee (SSCS) is a subcommittee of the West Hawaii Fishery Council (WHFC) and meets to perform those functions assigned to it by the WHFC and its actions are

subject to review and approval by the WHFC. The SSCS has the authority to establish, from time to time such ad hoc groups, as it may be necessary to carry out its work.

### **Duties of the program committee:**

The SSCS shall meet a minimum of one time per month to review the following:

1. To assess the positions of the aquarium/commercial/ traditional fishermen and women on limiting harvesting of certain species of special concern.
2. To research what fisheries make an impact on the species of special concern, and to research which species are of concern and why.
3. To investigate the positions of the DLNR and DAR relevant to limiting species of special concern.
4. To report all outcomes to the WHFC and the WHFC Executive Committee on a scheduled basis.
5. To analyze information and formulate opinions available for submission to the WHFC and its Executive Committee.
6. To present all information along with proposals to the WRFC in general.

### **The West Hawaii Fishery Council Species of Special Concern Subcommittee Chart of work (DRAFT 9/16/06)**

1. Contact all fishermen and women concerned (fishermen/wholesale/retail) by a letter app by the WHFC to get input on what species in which fishery is of concern and why.
2. Research other fisheries to see if no take/size limiting/or a daily limit of certain species has been successful.
3. Meet with DLNR and DAR about what would work for them.
4. Review all information discuss/brainstorm and come up with recommendations.

## **Annotated Chronology of West Hawai`i Fisheries Council Species of Special Concern rule proposal**

**10/20/05** Subsequent to the August 1, 2005 amendments to the 13-60.3 WHRFMA rule, DAR presents to the WHFC two opportunities for the Emerging Issues Sub Committee to consider: the potential for a limited entry fishery for AQ in West Hawaii, and a Species of Special Concern (SSC) List.

**11/17/05** Bob Owens, Neil Dart, Doug Herkes, Paul Masterjohn and Donna Goodale make up the SSC committee. Marni Herkes facilitates until chair is chosen. Manta Rays are discussed as an obvious choice for a SSC list.

**1/19/06** Tina Owens takes Bob Owens position, and George Paleudis is chair. Leonard Torricer expresses concerns that the aquarium collectors are the only fishermen without minimum size limits. Vern Yamanaka and Mike Henshaw discuss how turtles should be included in the SSC list.

**3/16/06** George Paleudis steps down as chair.

- 5/17/06** Neil Dart agreed to be chair of committee but was not present at this WHFC meeting.
- 8/17/06** Dr. Ivor Williams gave a presentation on what DAR has been discussing regarding SSC.
- 9/16/06** SSC subcommittee drafts guidelines and chart of work.
- 1/18/07** SSC subcommittee finalizes chart of work.
- 2/ 15/07** SSC Committee will look into commercial industries that require commercial licenses as well as what species they catch and why it may be a concern. The aquarium industry and hook fishing will be included. There are inquiries from Indonesia about the availability of manta rays and from China about a live reef fish fishery for roi which would be a certified product.
- 3/15/07** Dr. Bill Walsh suggests that the committee ask someone with manta ray expertise to join the committee.
- 4/16/07** Species of Special Concern briefing paper developed by Dr. Ivor Williams of DAR (Appendix B). This paper formed the basis of information and strategies presented to the WHFC at subsequent meetings.
- 4/19/07** Glennon Gingo reported that Tim Clark, UH Manoa Zoology graduate student researching manta rays, wants to be more involved with this committee and he will get him in touch with Neil Dart. Cody Chapin volunteered to help out also.
- 5/17/07** David Dart, in Neil Dart's absence, poses questions to the council and DAR regarding Dr. Ivor William's SSC list, such as, how does the committee determine how to set a standard, what is the concern, is there a shipping problem? Why are certain fish on the list? Etc. Dr. Bill Walsh suggests DAR discusses with SSC committee alternate strategy and how to simplify the process. The council asks to see something from the committee within the next quarter.
- 6/21/07** David Dart will send the WHFC a draft letter/form or chart to send to retail stores and public aquariums about what species may be of concern to them. He would like to fast track manta rays.
- 8/16/07** Letter and form were distributed and approved by the council. SSC subcommittee will work with DAR to mail questionnaire. Council felt the questions were good and wants to get their work done ahead of any federal rules coming down the pike.
- 9/20/07** David Dart introduced Wendy Laros of the Manta Pacific organization. The committee is expecting feedback from the questionnaires soon. Dr. Bill feels that an expanded purview for fishing regulations would be a mistake. The task is too large. DAR began this in the late 80's with the WHRFWG to focus on aquarium collecting, just that one thing.
- 10/18/07** Committee sent out questionnaires and got some feedback, even from \_Oahu. They then sent letters to fishing groups and commercial licensees. There may be species of fish – such as roi- that West Hawai\_i might want to encourage capture to reduce the numbers. Alpine air is donating the postage for these letters. Recommendation is probably quite a time away.

- 11/15/07** Committee sent out eight letters to wholesalers. They will be able to begin a list with the data collected.
- 1/16/08** The first responses were received by Neil Dart. David Dart plans interviews to get broad opinion base. Concern for lack of overall fishing regulations was expressed. Rob Shallenberger suggests a repetitive survey for SSC. Bob Hajek is to talk with West Hawai'i tropical fish collectors group.
- 2/20/08** David Dart invited to San Francisco meeting for aquarists. Subcommittee is working on a base list but has little feedback from local collectors. Hazards for collected AQ fishes were discussed.
- 3/19/08** Dr. Ivor Williams spoke on the Division of Aquatic Resources Perspective on Species of Special Concern for West Hawai'i. The decline from commonality to rarity has occurred for some species. DAR states the criteria for protecting species is not based on dollar value. DAR's preferred method of AQ fish management is a list of permitted species.
- 4/17/08** Neil Dart reported that the Subcommittee cannot agree upon list for SSC, requesting more scientific data. DAR wants the list to include all species, not just AQ fishes. Concern is expressed for 'opae 'ula in anchialine ponds (used as food for AQ fishes) and lack of restrictions for the "unmanaged and vulnerable species."
- 5/22/08** Subcommittee presents list specific to West Hawai'i, which excludes eels and inshore sharks. Problems are foreseen for enforcement of take due to import licensing outside WHRFMA. Dr. Bill Walsh plans to merge the two lists using the white list approach.
- 6/19/08** Focus returned to AQ fishes for the SSC subcommittee's list. A more detailed list of criteria and the importance of prioritizing resource protection were discussed. Forty-six percent of catch reports were not being filed. Recreational fishing licenses are suggested to increase data availability.
- 10/16/08** Presentation by Dr. Bill Walsh on the Species of Special Concern. The DAR recommended list of permitted AQ species was presented, representing 98.7% of the total value of the aquarium fishery in West Hawai'i averaged over three recent years. Motion is approved, which permits collection of fishes listed, limits take of yellow tang 5", and prohibits take of specified rays, sharks, and invertebrates (Appendix C). >
- 07/29/09** Draft rule amendment submitted to DAR (includes provisions relating to adaptive management of the Fish Replenishment Areas (FRAs) and SCUBA spearfishing).
- 09/15/09** Draft rule package and background document transmitted to DLNR-DAR Marine Law Fellow Wayne Tanaka for internal review prior to submission to DLNR chairperson, Laura Thielen.

Appendix B: DAR Briefing paper to West Hawaii Fisheries Council (4/16/2007)

## West Hawaii Fishery Council – Aquarium \Species of Special Concern

### Background

- Reef fish species have multiple values: to AQ trade, but also recreation, biodiversity, ecosystem function, even, in some cases, to other fisheries. Management needs to balance these values & uses.
- A number of fairly conspicuous species have declined in abundance over time – most obviously Bandit Angel. For other species which are naturally rare or very rare, it is very difficult and/or unfeasibly expensive to gather solid information on status/trends, but there is much anecdotal evidence that other species have also declined in recent decades (such as Hawaiian Turkeyfish).

=> There are grounds for at least being CONCERNED about potential impact of collecting on some species

### Identifying Candidate ‘Species of Concern’

- Selection criteria for considering species to be worthy of such extra protection would be that they
  - have declined OR are vulnerable to decline (by life-history, and/or natural low abundance) &&
  - value to aquarium species low relative to other values (so AQ\$ value low or other values high)
- Problem, as identified above, is that it is very difficult to gather sound evidence on status/trends of, and impacts of fishery on, majority of rare species. Those rare species are often the ones with most non-take values (they have biodiversity value, they are charismatic) and by virtue of being rare are potentially vulnerable to over-harvest even at relatively low levels of absolute catch.
- The West Hawaii AQ Fishery is VERY heavily focused on relatively small number of species (6 species make up 96% of value over last 3 years: Yellow tang, Kole, Chevron Tang, Achilles Tang, Clown Tang, Tinker’s Butterfly; & 22 species make up 99% of value), so the GREAT majority of species taken (141 species taken in West Hawaii in FY04-06) have very little individual or collective value. An alternative to listing ‘species of concern’ (those which cannot be taken), would be to limit take to a defined sub-group of taxa where there are not particular grounds for concern (making up e.g. 99% of total reported value).

Two alternatives are presented below.

#### (1) Limit Species (details in tables at end of document)

| Grouping Species                                                                                                                                                   | Cumulative Value (FY 04-06) |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| <u><b>Rare or charismatic species, for where there is evidence of population decline</b></u><br>Bandit Angelfish, HI Turkeyfish, Bluestripe Butterflyfish, Cowfish | _Oahu 1.1%<br>Hawai_i 0.2%  |
| <u><b>Charismatic &amp; rare species, for which total value of AQ catch is probably</b></u>                                                                        | Hawai_i 0.4%                |

|                                                                                                                                                                                                                                                                     |                                                                                              |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| <b><u>marginal relative to other values BUT no good data on population status/trends</u></b><br>Frogfish, Longnose Hawkfish, Flame Wrasse, Dragon Moray, HI Lionfish, Whitley's Boxfish, Hawaiian Anthias, Pipefish, Seahorses                                      | _Oahu 5.6%<br>(Flame Wrasse & Dragon Moray important on Oahu)                                |
| <b><u>Important Ecosystem value</u></b><br>Cleaner Wrasse                                                                                                                                                                                                           | Hawai_i 0.5%<br>_Oahu 6.6%                                                                   |
| <b><u>Moderately rare, charismatic or otherwise valuable species, but AQ fishery value is trivial</u></b><br><i>Coris venusta, Cheilio inermis, Chaetodon ephippium, Chaetodon reticulatus</i><br>Snowflake Moray, Zebra Moray, Bicolor Anthias, Thompson's Anthias | Hawai_i 0.6%<br>_Oahu 7.3% without Bicolor Anthias<br>11.4% if <i>P. bicolor</i> is included |
| <b><u>Others – Very little catch reported, but rare or otherwise potentially important</u></b><br><i>Coris ballieui</i> , Fire Dartfish, Velvetfish<br><i>(Questionable reports – but very rare)</i><br>Masked Angel, Chevron Butterflyfish                         | Hawai_i 0.6%<br>_Oahu 11.4%                                                                  |

(2) List Allowable Species

In West Hawai\_i

TOP 25 Species make up > 99% of TOTAL VALUE of FISHERY in FY06

|   | Common Name           | Taxa                  | # Caught | Reported \$\$   | % Value | Cuml % | \$/ Ea   |
|---|-----------------------|-----------------------|----------|-----------------|---------|--------|----------|
| 1 | Yellow Tang           | <i>Z. flavescens</i>  | 392,090  | \$ 1,113,930.35 | 73.4%   | 73.4%  | \$2.84   |
| 2 | Chevron Tang          | <i>C. hawaiiensis</i> | 7,550    | \$ 120,439.34   | 7.9%    | 81.3%  | \$ 15.95 |
| 3 | Achilles Tang         | <i>A. achilles</i>    | 13,480   | \$ 78,586.49    | 5.2%    | 86.5%  | \$5.83   |
| 4 | Kole                  | <i>C. strigosus</i>   | 41,556   | \$ 76,010.38    | 5.0%    | 91.5%  | \$1.83   |
| 5 | Tinkers Butterflyfish | <i>C. tinkeri</i>     | 446      | \$ 35,500.00    | 2.3%    | 93.9%  | \$ 79.60 |

|    |                         |                           |       |              |      |              |           |
|----|-------------------------|---------------------------|-------|--------------|------|--------------|-----------|
| 6  | Clown Tang              | <i>N. lituratus</i>       | 8,787 | \$ 32,716.40 | 2.2% | 96.0%        | \$3.72    |
| 7  | Forcepsfish             | <i>F. flavissimus</i>     | 2,604 | \$ 4,990.50  | 0.3% | 96.4%        | \$1.92    |
| 8  | Whitecheek Surgeonfish  | <i>A. nigricans</i>       | 1,010 | \$ 4,555.25  | 0.3% | 96.7%        | \$4.51    |
| 9  | Orangeband Surgeonfish  | <i>A. olivaceus</i>       | 2,306 | \$ 4,084.48  | 0.3% | 96.9%        | \$1.77    |
| 10 | Potter's Angelfish      | <i>C. potteri</i>         | 700   | \$ 3,613.50  | 0.2% | 97.2%        | \$5.16    |
| 11 | Bandit Angelfish        | <i>D. arcuatus</i>        | 39    | \$ 3,392.50  | 0.2% | 97.4%        | \$ 86.99  |
| 12 | Ornate Wrasse           | <i>H. ornatissimus</i>    | 1,479 | \$ 3,286.00  | 0.2% | 97.6%        | \$2.22    |
| 13 | Fourspot Butterflyfish  | <i>C. quadrimaculatus</i> | 1,183 | \$ 2,947.75  | 0.2% | 97.8%        | \$2.49    |
| 14 | Yellowtail Coris        | <i>C. gaimard</i>         | 838   | \$ 2,873.75  | 0.2% | 98.0%        | \$3.43    |
| 15 | Bird Wrasse             | <i>G. varius</i>          | 629   | \$ 2,079.97  | 0.1% | 98.1%        | \$3.31    |
| 16 | Thompson's Surgeonfish  | <i>A. thompsoni</i>       | 953   | \$ 1,883.00  | 0.1% | 98.3%        | \$1.98    |
| 17 | Unicorn sp.             | <i>Naso sp.</i>           | 643   | \$ 1,841.00  | 0.1% | 98.4%        | \$2.86    |
| 18 | Multiband Butterflyfish | <i>C. multicoloratus</i>  | 2,732 | \$ 1,602.22  | 0.1% | 98.5%        | \$0.59    |
| 19 | Brown Surgeonfish       | <i>A. nigrofuscus</i>     | 1,455 | \$ 1,437.25  | 0.1% | 98.6%        | \$0.99    |
| 20 | Gilded Triggerfish      | <i>X. auromarginatus</i>  | 159   | \$ 1,368.25  | 0.1% | 98.7%        | \$8.61    |
| 21 | HI Cleaner              | <i>L. phthiophagus</i>    | 354   | \$ 1,362.00  | 0.1% | 98.8%        | \$3.85    |
| 22 | Oval Butterflyfish      | <i>C. lunulatus</i>       | 83    | \$ 1,248.00  | 0.1% | 98.8%        | \$ 15.04  |
| 23 | Dragon Moray            | <i>E. pardalis</i>        | 4     | \$ 1,200.00  | 0.1% | 98.9%        | \$ 300.00 |
| 24 | Eye-stripe Surgeon      | <i>A. dussumieri</i>      | 944   | \$ 1,150.50  | 0.1% | 99.0%        | \$1.22    |
| 25 | Saddle Wrasse           | <i>T. duperrey</i>        | 963   | \$ 1,106.34  | 0.1% | <b>99.1%</b> | \$1.15    |

**99.1% of FY2006 value (\$1,503,205)**

108 Other species together make up \$14,213 in reported catch in FY 2006

**Total reported catch in FY 2006 \$1,517,419**

**ALTERNATIVE (A):** remove the following species from above: Bandit Angelfish, HI Cleaner and Dragon Moray. Add ALL other surgeons and triggers (plus Roi and Taape)

**98.8% of FY2006 value (\$1,499,134)**

**ALTERNATIVE (B) - SIMPLER (includes 21 of top 25 taxa)**

Surgeonfish ALL

Butterflyfish Forcepsfish, Multiband, 4-spot, Tinker's, Teardrop

Wrasse Saddle, 4-line, 8-line, Disappearing, Bird, Ornate, Yellowtail coris

Angelfish Potters, Fishers

Triggerfish ALL  
Others Roi, Taape

**98.7% of FY2006 value (\$1,497,883)**

**ALTERNATIVE (C) - MORE SUITABLE FOR OAHU & STATEWIDE)**

Surgeonfish ALL  
Triggerfish ALL  
Filefish ALL  
Wrasse ALL except Cleaner Wrasse and Flame Wrasse  
Butterflyfish ALL except Bluestripe, Saddleback, Reticulated, Speckled, Chevron (!)  
Hawkfish ALL except Longnose  
Angelfish Potter's, Fisher's  
Morays ALL except Dragon and Snowflake  
Damsel fish ALL  
Others Roi, Taape

**W. Hawai\_i: 99.3% of FY04-06 value**

**BUT FOR Oahu: 83.6% of FY04-06 value**