1. 10:30 – 10:50 **Introductions and announcements (Taniguchi)**

1.1 New RAAC LED representative – Lt. Joel Hendricks (Mendocino County)

1.2 Members: Ian Taniguchi (DFW science advisor/chair), Dennis Haussler (central), Brooke Halsey (north), Pete Haaker (science advisor), Steve Benevides (south), Rocky Daniels (north), Chris Voss (south), Doug Laughlin (central). Nancy Caruso (alternate south), Ed Schutze (alternate north), Joel Hendricks (DFW enforcement), on phone

1.3 Others Present: Jerry Kashiwada (DFW), Josh Russo (Watermans alliance), Cory Chang, Voelker Hoehne (SD Council of divers?), Jack Likins; by phone: Dr. Laura Rogers-Bennett (DFW), Dr. Cynthia Catton (DFW), Erin McBride (nominee), Brandi Easter, John Galeotti (nominee), David Lose (nominee)

1.4 Discussion: standing rules apply and discussion of agenda items limited to Committee. Public comment is provided at the end. Steve Benavides & Rocky Daniels still sitting until replaced. Secretary only speaks when needed. There may be a need to open up discussion to everyone on some agenda items during the meeting. Up to RAAC members to decide when that happens? Need to consider time schedule.

1.5 Steve Riske leaving RAAC due to job promotion. Lt. Joel Hendricks is his replacement. Joel has seven years on the job and is currently a patrol Lieutenant in Mendocino County. He is passionate about abalone; knowledgeable; understands local area and local wardens. Joel participated by phone and apologizes for not being here. He is pleased to be part of the committee and is open to suggestions and concerns. Always available. Contact: 707 964 7570 or joel.hendricks@wildlife.ca.gov

Steve Riske was on the RAAC from the beginning – thank you for your excellent and valuable service!

2. 10:50 – 11:30 **Budget 2016/17 and abalone dedicated account (Taniguchi):**

2.1 Current year (2015/16) budget update: state fiscal year is 1 July-30 June. Spring meeting sees proposed next years' budget. We are currently half way through current allotment for the 2015/16 Fiscal Year. 2015 Report Card sales were around 25,000 cards. Fund Balance is $440,000 and slowly reducing yearly. Reduction of expenses is needed keep the account solvent in the coming years. The spending budget was reduced by 15% in FY2014/15 and continues this FY to try to balance annual income and expenses. The Abalone Restoration and Preservation Account (where report card fees are deposited) currently funds 2.1 person years (PY) of scientific staff, 1 wildlife
officer PY and wildlife officers Over Time (OT) and other abalone related expenses. The reductions that were made in 2014/15 and carried over into this FY were cuts to scientific staff (0.4 PY) and LED OT, but some outside funds from MLPA were shifted to enforcement to cover the reduction in OT.

2.2 Budgeting process discussion: Annual budgeting is a complicated system and Ian only deals with the Abalone Restoration and Preservation Account. Response to requests for more dollars to enforcement has been mixed. There is limited flexibility to shift funding between budget items within the abalone budget. This is due to most of the annual spending allotment is tied up in staff salaries. Brooke & Steve Benavides went to Sacramento and spoke with the Director with mixed results. Steve reminded everyone that the original legislative intent was to provide dollars for guns & science and collect data in a balanced fashion. There was about one million dollars in reserve in the abalone account before the economic financial disaster.

Steve B: need to raise stamp fee and get control for funds. He is concerned that no money/effort spent on south California and more needs to be spent on protecting the northern red abalone resource. He recommends that a recreational member of RAAC be the committee president that may provide more control on spending. Need to use fall meeting to lay out budget for next fiscal year. Need more influence with director. Increase in administrative fee to 20%, the legal limit.

Ian: In response to Steve’s concern about no money/effort being spent in southern California, Ian pointed out that other funding streams outside of the abalone account go towards recovery efforts and research in the south. For example, white abalone recovery is funded through a federal species recovery grant program which compliments the Recreational Abalone Management Program that the abalone account funds.

Someone asked how the increase in annual report card fee is determined. The yearly fee increase is determined by the Implicit Price Deflator for State and Local Purchases of Goods and Services index published by the US Department of Commerce. Originally stamp was $12; it is now approaching $25

2.3 Initial budget 2016-17 Presented: The above budgeting problems continue with expenditures greater than income into the abalone account. The budgeting concerns have been brought to the attention of the marine managers and they are working on a solution. Current card sales are stable now for the last two years around 25,000 sold per year. The estimated budget is projected to spend $100,000 over the annual allotment.

Most expenditures are staffing which is very difficult to change; at current rate, will exhaust the account in a few years. Ian will keep RAAC informed and will schedule a call in meeting(s) on issues as things change. All staff working on FMP right now. It was suggested that a $10 stamp increase would cover deficit. Value of poached ab is $200/ea.

3. 11:30 – 12:00 Red abalone FMP development (Taniguchi)
3.1 CDFW staff are currently busy developing first draft of the management plan. The Nature Conservancy (TNC) is collaborating with CDFW in developing the framework for managing the fishery. A workshop is being scheduled in May. Adding this important workshop to the FMP development process will extend the timeline to complete a draft version of the FMP. A draft may be done by the end of this year. Once there is a draft FMP, the CEQA process will start along with an informal public input and peer review. The abalone team is incorporating the advice from the technical review of the Density methodology that was led by The Ocean Science Trust in creating the draft FMP.

Open Discussion – OST – Jack Likins supports the involvement of citizen science in the data gathering for managing the fishery. The TNC lead abalone working group is looking at length data for use in spawning potential ratio. Jack Likins and Josh Russo reported that their initial group of 3 or 4 divers collected 2000+ measurements last year. The group now has 8-9 divers collecting at Ft Ross and Van Damme. The intentions of this working group are to further develop other useful data streams that can be fed into the management structure for the fishery. The idea is not to get rid of density data but to include other data such as size frequency and fishery dependent data (i.e. ab cards, creel survey, etc.) into the management decision matrix. Jack also suggested that adding size of catch onto the report card information should be explored. An intense discussion ensued about the merits and drawbacks of all possible data streams. In the end there was agreement that utilizing sound multiple data streams in the management decision matrix was preferred over relying on just one. The progress on the FMP will be given in the update to the Marine Resources Committee in a couple of weeks.

12:00 – 13:00 Lunch

4. 13:00 – 13:30 Northern and Southern California RAAC nominees

4.1 Since the last RAAC meeting when both Rocky and Steve Benavides announced their resignations pending appointment of their replacements, CDFW conducted a process to gather nominations for the north and south RAAC positions. Some nominees were present in person at the meeting and some were on phone. Ian described the process that RAAC follows to interview nominees and provide a recommendation to the Director. The RAAC will set dates to hold phone conference interviews with each nominee. A different teleconference system will be used to insure each interview is conducted separately from each other. All nominees have been vetted and prequalified for geographic residence within the region of the state they have been nominated to represent. There are three nominees for the south and six nominees for the north. Ian will schedule phone interviews with each of the nominees via email.

4.2 Questions for the RAAC from nominees:
Nancy Caruso: What has the RAAC done/accomplished? What was Successful? The RAAC has recommended to the director additional dollars for enforcement. The additional funds have helped enforcement to bring in wardens from out of area as needed to increase presence during the season. Some members met with Director personally to emphasize issues and concerns. The RAAC is governed by the statute that created the organization. Thus there are limitations to the committee as either an advocacy entity for or against abalone issues in front of the Fish and Game Commission. The RAAC does provide contact, communication with constituents and informs DFW of abalone information related to the fishery.

4.3 Scheduling interviews: The RAAC will meet in closed session via teleconference on March 28 to organize interview materials etc. Teleconference interviews with each of the nominees will occur on April 6 and 7 with April 18 as a backup.

5. 13:30 – 14:15 **Abalone assessment updates - reports via phone with Power Point**

5.1 Red abalone Out Plant Project in southern CA (Rogers-Bennett) - Started last Fall and involves many partners collaborating on the project. CDFW abalone staff are the lead on the project. The out plant pilot project has three goals/objectives: 1) enhance red abalone in Southern California using hatchery reared abalone that are all tagged with colored floy tags 2) Maximize success for restoring endangered white abalone; 3) Gain knowledge on ways to optimize the methods for out planting abalone for successful restoration of all abalone species. Restoration knowledge will also benefit recovery of other abalone species including pink, green, threaded abalones.

Project is using lobster trap size artificial reefs (BARTs) as surrogate cryptic habitat to out plant abalone to the wild. There are four BARTs at each of three sites around Palos Verdes point (north, central and south sites). The North is the control site where no planting occurred. Habitat assessments were conducted at each site to characterize the temperature, algae, invertebrates, fish, substrate type and rugosity prior to out planting. All competitors (sea urchins) and predators (whelks and octopus) were removed from the sites as best possible. 3200 sabellid free red abalone from the Cultured Abalone Farm in Goleta were transported and acclimated at the Long Beach Aquarium of Pacific prior to out planting. Two size classes were used for out planting: 30 mm and 60 mm. The abalone were checked for Withering Syndrome bacteria and the bacteriophage, all were positive for both. Under the DFW out planting protocols this fact is not an issue n terms of out planting since WS is considered endemic to the area and the bacteriophage appears to modulate the virulence of the bacteria.

PVC tube Stocking modules were used to transport and out plant the abalone at the sites. The modules help minimize stress to the abalone by providing an enclosed space to hold many small abalone which can then be placed in the BART. The modules have a time release magnesium link that opens the module doors at night.
to release the abalone. Releasing the abalone at night minimizes initial predation and allows the abalone to disburse from the module into the cryptic habitat of the BART. Post out plant monitoring occurred after 24 hours, one week, and one month after. Monitoring will continue for the rest of the year with a combination of monthly noninvasive surveys coupled with quarterly invasive surveys. Invasive surveys consist of opening up the BARTS to look at each brick searching for abalone. Rocks are also turned in the surrounding site substrate to look for abalone. The first invasive survey is scheduled for later this month.

Preliminary results so far show that overall there is 7.5% and 17.4% survival of small and large abalone respectively. This is based on non-invasive surveys conducted so far. The hope is that the survival percentage will increase after the first invasive survey. Confirmed mortality so far is 2.7% for small and 11.8% for large size abalone.

5.2 White Abalone captive program: A spawning event was conducted this week at Bodega Marine Laboratory. The spawning was very successful, the most successful spawn so far in the history of the program. The full extent of the success of this spawn will depend on how many individuals survive hatching and settlement over the course of the next few months. With such a large spawning success initially the hope is that there will be good growth and survival at the later stages of development. This cohort of white abalone will be destined for release to the wild in the future. The red abalone out planting project is laying the ground work for a successful release of white abalone in the future.

5.3. 2015 Survey results and the Perfect Storm Phenomenon (Catton): This presentation to the RAAC is an update from fall presentation. There appears to be a major ecosystem change occurring along the north coast. This is based on observations from various monitoring platforms (including CDFW) and hearing from fishers on north coast about changes they are seeing in general. This perfect storm phenomenon presentation was given to the Fish and Game Commission in February. CDFW is seeing dramatic subtidal community structure changes at their index sites (10 CDFW index sites now, Sea Ranch, Sonoma County, and Russian Gulch, Mendocino county were added). Annual aerial kelp fly-over survey information show a dramatic decline in surface kelp abundance from 2008 to 2014 at four abalone index sites.

There are multiple large scale stressors that in combination have created this “Perfect storm” phenomenon that may be causing the significant and persistent decline of kelp forest:

1. 2011 harmful algal bloom (severe invertebrate loss at less than 30’)
2. 2013 sea star wasting disease event (almost eliminated all sea stars on whole west coast USA),
3- 2014 to present purple urchin explosion (60x higher densities of urchins which are creating barrens which are fairly stable) red urchins are also showing an increase in population

4 – 2014 to present persistent large scale warm water conditions – the ‘warm blob’ in 2014 blob plus El Nino in 2015 have helped reduce bull kelp. Bull kelp thermal tolerance is less than 17°C but urchins continue to thrive in warmer temperatures.

The result of all these stressors is that there is little food for abalone and they appear to be starving for last 2 years. Abalone are exhibiting bizarre behavior, they are moving around actively foraging for food and even climbing kelp stalks looking for food. Normally cryptic small abalone are coming out of hiding looking for food during the day. Low food and warm temperatures greatly impact reproduction. Male gonad index decreased. Males are not producing sperm in large amounts based on the spring 2015 gonad index survey. CDFW has plans to conduct another gonad index survey in spring of 2016. The explosion of purple urchins and the creation of barrens may greatly hinder bull kelp recovery. Urchin barrens can be stable and persistent for many years as seen in southern California. The ecosystem changes that are being observed may signal a regime shift to a period where kelp abundance may be low which will have negative impacts to the red urchin and abalone fisheries and possibly the rockfish populations. All of this may in turn cause profound socioeconomic impacts to the north coast local economy.

There was discussion on the opportunity to engage the public in reporting to the CDFW their observations of purple urchin populations, shrunken starved abalone or lack of kelp. Cynthia mentioned that CDFW is working with TNC on setting up a web portal for the public to report such information.

14:15 – 14:30 Break

6. 14:30 – 14:45 Other Business – Thank you to departing members of the RAAC! Steve Benavides, Steve Riske and Rocky Daniels

7. 14:45 – 15:15 Public Expression (please limit to 3 minutes per person)

7.1 Ed Schulze: wants RAAC to write official letter requesting to raise card fee to $30 and implement a fine for not returning cards.

7.2 Jack Likins: is pleased to see the increased interest in RAAC by the members and public. He is also pleased with the communication and reporting of RAAC business via the meeting minutes etc. RAAC needs to continue to increase its communication with the constituents and the public. The committee has more power than most think. Need more money for enforcement. He would like to see procedure established for selecting alternates and guidelines for their participation. RAAC members responded that there is nothing in the statute that either allows or forbids having alternates nor is there any guidance on selection and use. Jack is
concerned about the haphazard procedure that appears to occur in selecting alternates for RAAC representatives.

8. 15:15 – 15:30 **Wrap up, next meeting and Adjournment**

8.1 looking at Marin Rod & Gun **November 5** – Brooke will check on teleconference capability and possible reservation.