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Rocky Daniels
[redacted]

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Sonke Mastrup, Executive Director
California Fish and Game Commission
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re: **2+ Tier Abalone Report Card System**

Directors Bonham and Mastrup:

I am writing in regard to the Northern California Red Abalone Fishery Management Plan (FMP) currently being developed by the Department of Fish and Wildlife. The following proposal is the result of extensive exchanges within the recreational diving community that were triggered by the FMP public scoping sessions this past fall. I recognize that the proposal is late in arriving but would ask that its merits be given serious consideration.

I request that the FMP development team consider separate Abalone Report Cards for a Low-Limits/High-Impact 7" fishery and a High-Limits/Low-Impact N" fishery where N" is set to a size large enough that daily landing limits, annual landing limits and area closures have much diminished regulatory value based on the best available science.

Using an extreme example for illustrative purposes only, consider that either the purchase of a 7" or a 12" Abalone Report Card is allowed. The 7" report cards would have the daily and annual limits per today's regulations subject to future revision based on the Abalone Recovery Management Plan or the new FMP. The 12" report cards might instead allow 4 per day and unlimited annual landings (High-Limits/Low-Impact). The 12" landings under such a management regime would have no impact on the resource regardless of the higher daily and annual landing limits simply because, at most, only a few 12" abalone have ever been landed.

A 12" minimum-size limit is an absurd example but the concept becomes less absurd if the minimum-size limit is 10". Landings of a 10" fishery would have a larger but still very small impact on the fishery due to the relative rarity and difficulty in finding 10" abalone. Because of the small direct impact of a 10" fishery, conditions that would currently impose a 25% reduction on landings or complete fishery closure under the Low-Limits/High-Impact 7" fishery's current management regime should not be applied to a High-Limits/Low-Impact 10" fishery.

This proposal is based on the supposition that there must be a N" minimum-size limit above 7" but below 10" where daily and annual limits could be managed separately for the Low-Limits/High-Impact 7" fishery and a High-Limits/Low-Impact N" fishery.

Adding the High-Limits/Low-Impact N" fishery would impose no changes on rockpickers (or many divers) who would likely chose the 7" report cards of the Low-Limits/High-Impact fishery. Individuals would have the option of buying N" report cards motivated by higher daily and/or annual limits, more open areas and/or lower cost. Or they could continue to opt for 7" report cards and its lower landing limits. Thus, a 2+ Tier Report Card system would have no department-

imposed impact on participants in the fishery. It would, however, allow for a self-imposed size restriction that results in a more challenging fishery which many experienced divers would consider more satisfying than today's single tier 7" system.

Note that I am using the "2+" term to describe this system because the aforementioned discussions quickly evolved to include more than 2 tiers, for example:

- 7" 4 per day, 8 per year (at a reduced price for the once per year or new diver) and/or
- 7" 3 per day, 18 per year (current fishery) and/or
- 9" 3 per day, 36 per year and/or
- 10" 2 per day, 48 per year and/or
- ...

The permutations are virtually endless. I mention them only for completeness, not as any part of the proposal I am submitting here.

I anticipate that law enforcement and others will have concerns or objections. I would very much appreciate an opportunity to discuss those concerns with any interested individuals should you be in a position to arrange such discussions. Regardless, I have encountered enough questions about this idea that I have taken the liberty of attaching a write-up that I hope will be useful in further clarifying this proposal.

It is my belief that this proposal deserves serious consideration and I look forward to receiving and reviewing your response.

Thank you in advance for your time and effort on the Northern California Abalone FMP.

Sincerely yours,

Rocky Daniels

Representative (2001-present), **Recreational Abalone Advisory Committee**
Vice-President (1995-2005) & lifetime founding member, **Sonoma County Abalone Network**
Owner/moderator (2001-present), **freedive-list**
Past president, **Redwood Empire Dive Club**

Attachment: **2+ Tier Report Cards Proposal Frequently Asked Questions (FAQ)**

cc:

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2+ Tier Report Cards Proposal Frequently Asked Questions (FAQ)

WHAT IS ABALONE?

Abalone is a marine mollusk popular as a seafood delicacy. Red abalone (*Haliotis rufescens*) are the largest abalone species in the world and are native to the coastal waters of the eastern Pacific Ocean ranging from northern Baja Mexico to Oregon. All California abalone fisheries are closed except for red abalone found north of San Francisco to the Oregon border. In that region, red abalone is the focus of a vital and valuable recreational fishery.

Aside from wild red abalone, the only legal source of abalone in California is the product of commercial aquaculture operations that produce limited quantities of cultured red abalone for domestic and international consumption.

WHAT LIMITS ARE IN PLACE REGULATING ABALONE FORAGING?

The northern California recreational red abalone fishery is currently regulated by:

- ✓ A prohibition on the use of SCUBA or hookah gear.
- ✓ A **minimum-size limit** (7") that specifies the smallest legal-size abalone that a forager is allowed to keep once removed from the rock on which it is found. Any abalone smaller than the minimum-size limit must be immediately returned to the spot where it was found and is not counted against the daily or the annual landing limits. Any legal-size abalone removed must be counted against daily and annual limits whether or not that abalone is retained.
- ✓ A forager is required to stop removing abalone from the reef once they have removed the **daily landing limit** (currently 3 per day) of legal-size abalone.
- ✓ The **annual landing limit** (currently 18 per year, no more than 9 from the Sonoma County area) specifies the maximum number of abalone a forager may remove from reefs during any single year's season.
- ✓ An **open season** that runs from April 1 through November 30 excluding the closed month of July.
- ✓ A **start time** restriction that prohibits removing an abalone before 8:00 AM.
- ✓ **Area closures** prohibit foraging in specific geographic areas such as certain Marine Protected Areas. This management mechanism was used to close the Fort Ross area in 2014 due to the impact of a massive invertebrate die-off in the area caused by a red-tide event in 2011.
- ✓ Every abalone forager is required to purchase one and only one **abalone report card** each season. The report card includes a log portion for journaling landing dates and locations and a tags portion with 1 tag for each abalone allowed by the annual landing limit. There are regulatory requirements on how and when report cards are filled out and tags attached to abalone; these regulations are strictly enforced and are the major source of abalone fishing citations.

2+ Tier Report Cards Proposal Frequently Asked Questions (FAQ)

WHAT IS THE 2+ TIER REPORT CARDS PROPOSAL?

A proposal was submitted to California's Department of Fish and Wildlife in early 2015 ahead of completion of the Northern California Abalone Fishery Management Plan (FMP) under development as mandated by the California Fish and Game Commission.

The proposal was a letter to California's Department of Fish and Wildlife and Fish and Game Commission. In that letter, a request was made that consideration be given during the FMP development process to the idea of managing the northern California abalone resource as 2 (or more) different fisheries based on differing minimum-size limits. For the sake of simplicity, this FAQ restricts the discussion to 2 parallel fisheries:

1. A 7" minimum-size fishery without changes to current regulations. The existing abalone report cards sold at retail outlets could serve as report cards for this 7" fishery.
2. A larger N" minimum-size fishery. A new set of abalone report cards would be made available at retail outlets specific to this N" fishery.

Individuals would decide to participate in either the 7" or N" fishery when they buy their annual abalone report cards. One report card is purchased per person per year with each year's decision not binding on subsequent years' decisions. If a 7" report card is purchased, that individual can land any abalone larger than 7" including abalone N" in size and larger.

Enforcement of the minimum-sizes would be identical to today's regulations: *all abalone greater than the report cards-specific minimum-size must be retained while any undersized abalone must be immediately returned to the reef where they were removed.*

IS THERE A PROPOSED VALUE FOR N"?

The proposal does not include a specific value for N". That determination is left to the managers and scientists involved in the hands-on work of managing northern California's abalone resource.

However, there is an assumption that N" will be greater than 8.5" due to the high abundance of abalone in the 8" to 9" size range and a widespread understanding in the recreational community that 8.5" abalone are important to the reproductive health of the resource. An 8.5" minimum-size would not appear to offer much additional protection.

A 9" fishery would be more challenging than an 8" or 8.5" fishery and a more challenging fishery is widely considered a positive side benefit by the recreational diving community. Additionally, a 9" abalone appears to have very limited reproductive value to the resource population[1].

WHO FORAGES FOR ABALONE?

North of San Francisco[2], red abalone are sought by a diverse group of recreationally-licensed fishers from all over California and the United States. Who they are, how far they travel and how they forage determines their sensitivity to differing regulatory changes.

- **ROCKPICKERS**

  Whether considering the modern fishery or the history of abalone predating the 20th century, **rockpicking** (or shorepicking) is the traditional method used in foraging for abalone. Rockpickers search rocky reefs and boulder fields close to shore for abalone larger than the minimum-size limit. They do this by reaching into dark holes and blindly feeling for them, rarely able to measure before removing an abalone from the reef. They work in surging waters no more than chest-deep and they may be subjected to heavy, crashing waves. Rockpickers wear wetsuits and may use any

[1] Leaf R. and Rogers-Bennett L. 2008. North American Journal of Fisheries Management 28, **Exploring the Use of a Size-Based Egg-per-Recruit Model for the Red Abalone Fishery in California**, pgs. 1638-1647

[2] The abalone fisheries south of San Francisco were closed in 1998 and remain closed at the time of this writing.

combination of dive masks, snorkels and weight belts but they do not use fins. Rockpicking for 7" and larger abalone is a very challenging activity.

Because rockpickers are limited to nearshore reefs, they are very dependent on the timing of low-tides (the lower, the better) to get to the less-fished spots farther out. As a group, they are:

- extremely concerned about any increase in the 7" minimum-size limit because it would make it much more difficult to find a legal size abalone and, effectively, would close the fishery for many old-time rockpickers,
- very concerned with area closures that might affect access to the few places along the coast where rockpicking conditions are best,
- concerned about shorter open seasons that would curtail access to low-tide periods,
- concerned about more restrictive start times that might push early-morning ebb tides outside their legal harvest time,
- less concerned about decreases in daily landing limits and
- little concerned about annual landing limits.

- **DIVERS**

Divers rely on breath-hold, freediving techniques to find and locate abalone in water usually no deeper than 30' although the strongest, most competent divers can work in every depth where abalone can be found. Wetsuits, masks, snorkels, fins and weight belts are standard equipment. Use of SCUBA gear north of San Francisco for abalone diving has been strictly prohibited for more than 60 years[3].

A diver searches the tops, sides and bottoms of rocky reefs and boulder fields for abalone larger than the minimum-size limit. Divers almost always use eyesight to find their quarry, often with the assistance of flashlights, and they can usually measure their abalone before removal from the reef. They work in surging waters with visibility that ranges from 1-60 feet, commonly around 6-10 feet.

The challenge for divers is mastering freediving techniques adequately enough to be competent and, once competent, they only need find the bottom. It is not at all challenging for a competent diver to find a 7" and larger abalone in most any populated abalone habitat off the Sonoma County and Mendocino County coastline.

As a group, divers are:

- very concerned about area closures,
- somewhat to very concerned about decreases to daily landing limits,
- somewhat to very concerned about decreases in annual landing limits,
- concerned about shorter open seasons that would curtail dive seasons,
- little concerned about more restrictive start times and
- not at all concerned about raising the 7" minimum-size limit (abalone in the 8" to 8 ½" size range are almost as common as 7" abalone).

When it comes to landing limits, individual concerns often depend on how far they need to travel. Those who drive longer distances to the coast are understandably more concerned about reductions in daily landing limits. Individuals who live closer tend to be more concerned about decreases in annual landing limits. For those who enjoy the ocean at every opportunity, restrictive annual landing limits cast a shadow over their activities. Planning a glut of opportunities around a dearth of allowed landings deters trips to the coast.

[3] Daniels R. and Floren R. 1998. Journal of Shellfish Research Vol. 17, No. 3, **Poaching Pressures on Northern California's Abalone Fishery**, pg. 859

WHAT IS THE BASIS FOR A 2+ TIER REPORT CARDS PROPOSAL?

Today's best available science informs us that 7" red abalone have yet to achieve their maximum reproductive contribution to future abalone densities. We assert, therefore, that the 7" fishery is High-Value in a reproductive sense and that value necessitates restrictive landing limits (Low-Limits) to protect against overfishing a reproductively vulnerable resource.

Fishery-independent monitoring of northern California red abalone is required so that population density decreases are detected early enough for regulatory action to have an impact. Department of Fish and Wildlife scientists currently expend a large amount of time statistically sampling northern California's abalone populations. Over time, this vigilant fishery-independent monitoring has paid off in that decreasing densities have triggered regulatory decreases in landing limits in relatively short order.

Most abalone fisheries worldwide other than California's are managed based on methods that rely on models without much need for relatively expensive fishery-independent data collection. These methods emphasize size limits that "insure" long-term viability of the resource. Most abalone (and other mollusk) fisheries managed this way have collapsed. It may be that those methods inadequately "insured" a viable resource because minimum-size limits were set too low, no doubt due to pressure exerted by fishery participants.

But at least one study applying on-the-cheap, model-based management methods to northern California's red abalone suggests that a high degree of insurance is offered by a high-enough minimum-size limit[4]. At and above that higher minimum-size, harvest pressures have a very minor impact on the reproductive viability of the abalone population. Imposing landing limits on abalone above that size is not necessary to any effort toward protecting the resource. However, imposing a regulatory shift to that safe size would require a very large, politically-challenging increase over the current minimum-size limit.

Using an illustration, presume the minimum-size limit is 12". There is 1 known landing of a 12"+ abalone. Obviously, there is no value to abalone populations in imposing landing limits on abalone 12" and larger. The same is no doubt true if the minimum-size limit is 11" because, again, abalone that large are so rare that impacts are tiny and landing limits superfluous. As size is ratcheted down from the 11" range, landings increasingly impact the resource until a size is reached where the impact jumps dramatically.

Between the scientific study referenced above and anecdotal observations, it seems clear that scientists should be able to conservatively identify a size at which abalone no longer contribute enough to the long-term sustainability of the abalone as a population to justify landing restrictions[5]. The 2+ Tier Report Cards Proposal presumes that N" would be set equal to or greater than this scientifically conservative size.

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[4] Rogers-Bennett L., Dondanville R. and Kashiwada J. 2004. Journal of Shellfish Research, Vol. 23, No. 2, **Size Specific Fecundity of Red Abalone (*Haliotis Rufenscens*): Evidence for Reproductive Senescence?**, pgs. 553-560

[5] Note that there may be considerations outside the marine ecology arena that, at some point, take regulatory precedence. For example, issues of fairness and maintenance of opportunity may come into play. This proposal, however, does not consider or address issues other than best available science and the priorities held by recreational participants in the fishery.

2+ Tier Report Cards Proposal Frequently Asked Questions (FAQ)

WHAT IS THE INTENT OF THE 2+ TIER REPORT CARDS PROPOSAL?

The intent of this proposal is that participants in the northern California abalone fishery be as energized, enthusiastic and passionate tomorrow as they are today by offering a less restrictive regulatory option to the existing one-size-fits-all approach. The proposal is to allow each participant to optionally trade today's too easy fishery for a more challenging fishery that many participants would consider more satisfying. At the same time, the traditional, rockpicking fishery could continue with restrictions, as needed, that are not unnecessarily imposed on non-rockpicking participants.

Today's nearly 100 year old[6] minimum-size limit (7") is set too low to protect northern California's red abalone as demonstrated by its failure to protect the southern California red abalone resource[7] and the declining state of northern California's red abalone. These failures necessitate vigilant fishery-independent, in-water monitoring of the northern California fishery that relies on the 7" limit. The current cost of that vigilance is high and future costs promise to go much higher if new densities-based refinements[8] are mandated by the Fish and Game Commission.

Either an large increase in the minimum-size limit is needed or future decreases in landing limits can be anticipated based on long-running historic trends for the northern California resource. Any changes to any limits are an understandable anathema to one recreational abalone foraging group or another. In particular, changing the 7" minimum-size limit to something safer would require a 25% size increase and the burden of that increase would land almost entirely on rockpickers.

As an aside, it is worth noting that every additional restriction over the last 10 years has resulted in declining abalone report card sales and income.

The goal of the 2+ Tier Report Cards Proposal is to provide a mechanism that naturally and gradually shifts landing pressure from the reproductively more valuable 7" component of the red abalone resource onto a size that provides greater protection. Such a mechanism would, ideally, meet the following criteria:

- → Be based on solid science.
- → Allow each individual to select their own definition for what constitutes a "satisfying fishery".
- → Encourage fishery participation (and associated report card sales) by a broad cross-section of individuals.
- → Allow a higher landing limits option.
- → Continue fishery-independent data collection and in-water monitoring.
- → Sidestep the disruption of an agency-imposed increase in the minimum-size limit or decrease in landings.
- → Enable less disruptive agency-imposed changes in the future.
- → Use a framework that offers many new management options and opportunities.
- → Would not increase enforcement or management costs.

The 2+ Tier Report Cards Proposal could trigger just such a shift.

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[6] Lundy A. 1997. **The California Abalone Industry, A Pictorial History**, pg. 54

[7] Karpov K., Haaker P., Taniguchi I and Rogers-Bennett L. 2000. Canadian Special Publication of Fisheries and Aquatic Sciences 130, **Serial Depletion and the collapse of the California abalone (*Halitois* spp.) fishery**, pgs. 11-24

[8] Ideas for future regulatory changes floated by recreational participants tend to focus on the idea of management by zone. Northern California's abalone fishery has already been divided by a line between Sonoma and Mendocino Counties. Further refinement toward a cove-by-cove area management regime requires corresponding increases in fishery-independent data collection (and associated expense).

How might the 2+ Tier Report Cards Proposal impact landing limits?

Assuming that science can identify a size for N" as discussed above, this proposal asserts that 7" and N" fisheries should be managed differently, particularly in the areas of daily landing limits, annual landing limits and area closures. Higher limits for reproductively lower value individuals could create a Low-Value/High-Limits alternative N" fishery to the current High-Value/Low-Limits 7" fishery.

Based on long term trends as well as recent history, it is more likely than not that daily and annual landing limits of a 7" fishery will see future reductions. More area closures like that imposed on Fort Ross in 2014 are also likely.

But future reductions on daily or annual limits imposed on an N" fishery would, by definition, not improve the future prospects for abalone. It makes little sense to impose the same regulatory changes on the 7" and N" fisheries. Rather, it is anticipated that future regulation changes would increasingly differentiate between the two fisheries through reductions in 7" landing limits while N" limits remain unchanged or even increased.

Along with today's 7" 3 per day, 18 per year (9 per year off Sonoma County) fishery, a first or future year N" fishery might be:

N" 3 per day, 18 per year (9 per year off Sonoma County)
N" 3 per day, 24 per year (9 per year off Sonoma County)
N" 4 per day, 32 per year
...

What are the advantages of the 2+ Tier Report Cards Proposal?

There are many advantages to the 2+ Tier Report Cards Proposal:

+ **No agency-imposed regulatory changes** on experienced divers/rockpickers. The restrictions enabled by this proposal would be self-imposed.
+ **Few management changes** would be required. The 7" fishery is already being closely monitored by department scientists paid, in part, by the abalone report card fees. Monitoring required by and accomplished for the 7" fishery would be used in tracking impacts on the resource by the N" fishery.
+ **Fishery-independent, in-water monitoring** would continue. Though most abalone fisheries world-wide are managed using fishery models requiring very little scientific monitoring, the fact is that almost all of those fisheries have collapsed. The promises of models-based management have proven to be utterly inadequate.

  Northern California's abalone has been managed based on increasing levels of fishery-independent monitoring by marine scientists. Any management regime that threatens the continued collection of fishery-independent data unnecessarily jeopardizes the most successful, long-running abalone fishery in the world. The 2+ Tier Report Cards Proposal would allow for continued data collection without increased cost.
+ **Decreased impact on the resource** for every diver/rockpicker who decides to target N" abalone to the exclusion of anything smaller. The more divers who make the transition to N" and larger, the greater the multiplier in benefiting the resource.
+ **Easy to understand** by participants already familiar with the northern California recreational fishery:
  - Licensing requirements would be the same.
  - The limitation on buying just one set of report cards per year would be unchanged.
  - The requirement that all legal-sized abalone removed be retained and counted against daily and annual limits would remain unchanged.

- The requirement that all under-sized abalone be immediately returned to the location from which it was removed would still apply.

The only "confusing" change imposed by this proposal is the requirement that each individual make a choice between the 7" and N" minimum-size options.

+ **Simple to enforce** in that it requires no changes to minimum-size checking that has long been a feature of the fishery. This proposal would only add that wildlife protection officers determine whether to check for a 7" minimum or N" based on the report cards in use by the diver/rockpicker. The actual minimum-size checking process is otherwise identical to the existing 7" fishery.
+ **Expanded regulatory options** are possible with multiple, parallel fisheries.
+ **Better targeting of regulatory impact** is possible when a one-size-fits-all abalone management regime evolves into a regime that recognizes and accounts for wide differences in how various classes of participants enjoy the fishery.
+ **Easier regulatory changes** are possible if restrictions imposed on one fishery are not necessarily imposed on another. The ability to better target needed regulation changes and their resulting impact inherently lessens dissatisfaction with a regulatory process that many fishery participants currently consider to be unnecessary, disconnected from reality, and arbitrary.
+ **Conservative minimum-size limit** selection for the N" fishery would be encouraged in setting the tension between minimum-size limit and landing limits.
+ **Improved fishery satisfaction** as experienced, capable divers and rockpickers are encouraged to increase the challenge of their individual participation in a fishery that they often view today as too easy.
+ **Encourages resource conservation** by providing a tangible option that provides a diver or rockpicker the option of decreasing their personal impact.
+ **Individualized selection** by each diver/rockpicker between the 7" or N" fishery as individual goals and opportunities differ from year to year. Rockpickers and various classes of divers have different goals and widely varying opportunities. Rockpickers prefer the occasional to rare lower-than-normal low tides limiting their opportunities; they likely want to maximize their potential for success. The same is likely true of divers who might travel long distances only once or a few times per year and might want to maximize their success and daily landings. Conversely, local divers might be less concerned about success per trip and more concerned about how many trips per year. An individual's goals this year might change next season.
+ **Improved insight into fishery participation** for DFW scientists and wildlife protection officers as report card sale patterns help identify and quantify differences between 7" and N" participants.

WHAT ARE THE DISADVANTAGES OF THE 2+ TIER REPORT CARDS PROPOSAL?

Disadvantages of the 2+ Tier Report Cards Proposal include:

- **Changing who gets checked** when law enforcement officers are enforcing the minimum-size limit. It is a truth today that competent divers can quickly and easily take a 7" limit. A warden can easily assess various cues[9] to identify obviously competent divers and dismiss the need to check those divers' landed abalone sizes. Under a 2+ Tier report card system, that kind of assessment is no longer adequate and will require law enforcement officers check the report card's minimum-size criteria against the size of the abalone taken. This requirement changes how law enforcement would interact with the recreational community. Arguably, this could increase the burden on law enforcement.
- **A mistaken impression** that a 2+ Tier report card system intentionally benefits trophy hunters. There is no intentional connection between the fact that some people are insatiable trophy hunters and that the science strongly indicates trophy abalone do not contribute to the reproductive health of the abalone resource as a whole.
- **Increased modeling complexity** is inherent with a two (or more) minimum-size based fisheries. For example, existing models that predict the impacts of a N" minimum-size limit alone likely do not apply if the N" fishery exists in parallel with a 7" fishery.

WHY WOULD ANYONE CHOSE TO BUY THE N" REPORT CARD?

With 7" abalone easier to find and take than larger abalone, why would anyone chose to buy the N" report card?

The main reason is that, at some point, the daily and annual limits for the N" fishery would be higher than for the 7" fishery.

This proposal endorses different management decisions for 7" versus N" daily and/or annual landing limits. If N" and greater sized red abalone have little impact on the future densities of the fishery, it is easy to envision a future where 7" landing limits are lower than for the N" fishery (whether or not the N" report cards start their existence with higher limits). An obvious motivation exists for competent divers to choose the higher landing limits N" report cards over the 7".

There are numerous secondary reasons someone might choose N" regardless of limit considerations:

- Any diver who goes out with a group of experienced divers using N" report cards and gauges is someone who would soon want to "upgrade" to the N" fishery.
- It is common today for divers to target 9" or 10" abalone and want to take nothing smaller. However, if someone targeting N" abalone unintentionally takes an abalone short of N", they are currently prohibited from returning that abalone. It must be retained and counted toward their daily and annual limits. If that same diver were targeting an N" abalone and had an N" report card, they would be required to return that undersized abalone to the reef. This flip of the regulatory requirement would be a strong motivation for some.
- Many divers are very conservation minded and would choose N" report cards on that consideration alone.
- More inducements could be created if 7" fishery management sought to shift effort onto the reproductively less-important N" fishery:
  - Increasing the N" daily and/or annual landing limits relative to the 7" fishery's would provide a strong inducement for some people to select the N" report cards.

    Note that such a decision might or might not be associated with intent to actually take more

[9] Bottom time during dives and the gear being used are examples of cues that can quickly and easily identify a diver whose in-water skills are obvious enough that they would not bother with abalone not at least a full inch larger than today's 7" minimum.

abalone. For some divers, the specter of hitting an annual limit is enough to curb their dive activities in order to stretch out their diving season. The ability to buy report cards that offer higher annual takes would have value to those divers.

- It is conceivable that report cards for the reproductively more important 7" abalone might be priced higher than report cards for the N" abalone.
- Reopening of Fort Ross for only N" and larger abalone should, by definition, have no impact on the recovery of abalone in that area but would be a strong incentive for some fishery participants. The same could be said about reopened access to some Marine Protected Areas.

WHAT IS THE + PART OF THE 2+ TIER REPORT CARDS PROPOSAL?

The 2+ in the name of the proposal is a recognition that many options become apparent once the single abalone report card idea is abandoned in favor of two report cards differing only by minimum-size and landing limits. If two differing report cards exist, why not three different report cards? Or four? It is possible to tailor report cards so, for example, they might include all of the following:

$22	7"	3 per day,	18 per year (9 per year off Sonoma County) as currently available today,
$22	7"	4 per day,	12 per year benefiting once-a-year southern California or out of state visitors,
$16	9"	3 per day,	24 per year (9 per year off Sonoma County) incentivizing a shift from 7" to 9",
$12	7"	2 per day,	6 per year for new divers and/or multiple minor dependents[10]
$100	10"	2 per day,	50 per year report card option for trophy hunters

DOES THE 2+ TIER REPORT CARDS PROPOSAL BENEFIT TROPHY HUNTERS?

Because the 2+ Tier Report Cards Proposal would likely enable greater landing limits (presently or in the future), the higher minimum-size limit would inherently benefit trophy hunters[11] just as it would benefit anyone who opts for the greater size. The side effect that trophy hunters benefit might be considered a negative by some. However, it is not the intent of this proposal to address trophy hunting. It is considered sufficient that the best available science indicates that trophy abalone are very minor reproductive contributors to the continued viability of northern California's abalone.

WHERE DID THE 2+ TIER REPORT CARDS PROPOSAL ORIGINATE?

The 2+ Tier Report Cards Proposal coalesced out of months of often-heated discussions among recreational divers that were triggered by the Northern California Abalone FMP scoping sessions during the Fall of 2014. Those discussions motivated research into the best available science. The junction where best available science, recreational diver visions of a future fishery and decades of involvement in abalone resource management met is the place from which the proposal emerged. It is a best-fit solution to a multi-faceted challenge.

This FAQ was compiled and written by me, Rocky Daniels. I am currently 1 of 2 north coast recreational representatives on the Director's Recreational Abalone Advisory Committee. I was a founding member of the Sonoma County Abalone Network and served as vice-president from 1995 until 2005. Since 2001, I have been the owner and moderator of the freedive-list. And I served a few years as president of the Redwood Empire Divers.

I was very active as a diver in the fishery until a variety of factors led me to discontinue participation. One major factor in that disengagement was the enjoyment lost to ever increasing regulations and restrictions. For what it's worth, I am not now nor have I ever been a "trophy hunter" for red abalone. The same is almost certainly true of everyone with whom I have ever shared a boat ride, campfire or potluck.

I am easy to find on-line at norcadiver@sonic.net and also on the freedive-list and Northern California Underwater Hunters forums.

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[10] At $22 per family member, it can get prohibitively expensive for some families to be all inclusive when it comes to including their children's participation in the fishery.

[11] Trophy hunters try to self-impose a minimum-size limit of 10".