

STAFF SUMMARY FOR JUNE 22-23, 2016

10A-B. MASTER PLAN FOR MARINE PROTECTED AREAS**Today's Item**Information Action

- (A) Receive and provide direction concerning incorporation of information related to traditional ecological knowledge (TEK) into the master plan for marine protected areas (MPAs); and
- (B) Adopt proposed final master plan for MPAs and the Marine Life Protection Program pursuant to the Marine Life Protection Act (MLPA) (Section 2850, et. seq., Fish and Game Code).

Summary of Previous/Future Actions

- Receive draft proposed final master plan Dec 9-10, 2015; San Diego
- Discuss proposed final master plan Feb 10-11, 2016; Sacramento
- Discuss final master plan; close comment except TEK Apr 13-14, 2016; Santa Rosa
- Tribal Committee review of draft TEK language Jun 21, 2016; Bakersfield
- **Today adopt final master plan June 22-23, 2016; Bakersfield**

Background

The MLPA calls for creating an improved network of MPAs, redesigned to increase its coherence and effectiveness at protecting the State's marine life, habitats, and ecosystems (Fish and Game Code Section 2853(a)). To help achieve its goals, the MLPA directs DFW to prepare, and FGC to adopt, a "master plan" to guide the design, implementation, and management of a redesigned network of MPAs in California (Fish and Game Code Section 2855). FGC adopted a draft master plan in 2008, with the intent to adopt an updated final master plan at the conclusion of regional MPA planning efforts. Background on the development on the master plan is detailed in previous staff summaries (Exhibit 1).

In Dec 2015, FGC received a DFW overview on the draft updated master plan and set a Jan 28, 2016 deadline for written public comment. In Feb 2016, DFW provided an update to FGC, including summary of comments received, and requested that staff develop TEK language to incorporate into the proposed final master plan as related to MPA management and monitoring. In Apr 2016, DFW provided a draft proposed final master plan as modified based on public input. However, a review of the staff-drafted TEK language was still underway and not yet available. Following discussion, FGC adopted a motion to: 1) close public comment on the draft final master plan with the exception of comment on TEK; 2) direct staff to send a letter to Tribes requesting input on TEK language; 3) authorized staff to publish notice of the submitted input on or around Jun 1; and 3) continue the decision on the draft final master plan to the Jun meeting. FGC further authorized staff to determine whether the master plan be presented as a whole for final vote at the Jun meeting or to notice everything except the portions related to TEK and continue the TEK portion to a future meeting. This motion effectively closed comment on the final draft 2016 master plan for MPAs, while providing more time for tribal input on TEK.

FGC and DFW mailed a joint legal notice to all federally recognized tribes requesting input by Jun 1 (Exhibit 2). No formal response or input was received from tribes. Given the lack of formal submittals from tribes, staff did not publish notice of proposed TEK text. However, informal inter-tribal input was provided from collaborators on the Traditional Ecological Knowledge of Keystone Marine Species and Ecosystems project, which is part of the North Coast MPA Baseline Monitoring

STAFF SUMMARY FOR JUNE 22-23, 2016

Program project. This input responded to proposed draft TEK text developed to address the FGC request in Feb 2016 by DFW and FGC staff and facilitated by Commissioner Hostler-Carmesin, as highlighted for FGC in Apr. DFW has submitted a document detailing the staff draft text and informal inter-tribal input for receipt by FGC today (Exhibit 3).

Note that the Tribal Committee (TC) meeting agenda for Jun 21, 2016 includes a review of the draft TEK text and informal inter-tribal workgroup suggested modifications to that text; that discussion may have a bearing on the discussion under this agenda item.

Today provides FGC the opportunity to:

- (A) consider information received concerning TEK and provide direction concerning its inclusion in the proposed final 2016 master plan; and
- (B) consider adoption of the master plan, as updated with TEK language under item (A), as final, thereby formally enacting the Marine Life Protection Program (program) pursuant to MLPA (Fish and Game Code Section 2850, et. seq.).

Significant Public Comments

One public comment was received via email on future long-term management and monitoring, and science of MPAs, including from tribes (Exhibit 4).

Recommendation

FGC Staff:

- (A) Staff recognizes that several opportunities for Tribal input on the master plan have been provided. While no formal input concerning TEK has been received from tribes, staff considers the draft TEK text and informal inter-tribal input to provide an adequate basis for FGC to approve text for inclusion in the master plan; but recommends soliciting input from the TC and DFW for “real-time” recommendations for any text modifications before approval.
- (B) Adopt 2016 Master Plan today as final including TEK language as modified, if needed, through Tribal, Tribal Committee discussion and resulting and DFW recommendations, and recognizing that once the MPA planning process for the San Francisco Bay is completed an additional appendix detailing that regional process and information will need to be added to the Master Plan appendices.

TC: TC discussed at Jun 21 meeting and may have a recommendation.

Exhibits

1. [Staff summary, for Apr 13-14, 2016 meeting](#)
2. [Joint FGC/ DFW letter to Tribes soliciting TEK language input](#)
3. [Informal Intertribal Input on the Final draft Master Plan for MPAs through Jun 1, 2016, regarding TEK](#)
4. [E-mail from John Corbett, dated May 20, 2016](#)

STAFF SUMMARY FOR JUNE 22-23, 2016

Motion/Direction

- (A) Moved by _____ and seconded by _____ that the Commission closes comment on TEK related to the proposed final 2016 master plan for Marine Protected Areas, and approves the draft TEK language as modified.
- and***
- (B) Moved by _____ and seconded by _____ that the Commission approves and adopts the final 2016 Master Plan for Marine Protected Areas and the Marine Life Protection Program pursuant to Section 2850, et. seq of the Fish and Game Code, and directs staff to notify .

STAFF SUMMARY FOR APRIL 13-14, 2016

10. MASTER PLAN FOR MARINE PROTECTED AREAS**Today's Item**Information Action

Adopt proposed final Master Plan for Marine Protected Areas (MPAs) and the Marine Life Protection Program pursuant to the Marine Life Protection Act

Summary of Previous/Future Actions

- Receive draft proposed final master plan Dec 9-10, 2015; San Diego
- Discuss proposed final master plan Feb 10-11, 2016; Sacramento
- **Today discuss and adopt final master plan Apr 13-14, 2016; Santa Rosa**

Background

The Marine Life Protection Act (MLPA) calls for creating an improved network of MPAs, redesigned to increase its coherence and effectiveness at protecting the State's marine life, habitats, and ecosystems (Section 2853(a), Fish and Game Code). To help achieve its goals, the MLPA directs FGC to adopt, a "master plan" to guide the design, implementation, and management of a redesigned network of MPAs in California (Section 2855, Fish and Game Code). A draft master plan for MPAs was adopted by FGC in 2008 (available at www.dfg.ca.gov/marine/mpa/masterplan.asp) as a "living document" with a focus on providing consistent guidance for designing California's MPAs through a regional approach.

With regional design and adoption phases completed in 2012 (except for San Francisco Bay region, which will be completed at a later time), focus shifted from planning to implementation and management of the coastwide MPA network. To reflect the new focus, DFW prepared a draft updated master plan for FGC adoption as a *final master plan* pursuant to Section 2859, Fish and Game Code, and to serve as a foundation for managing the Marine Life Protection Program statewide (Exhibit 3). The proposed final master plan also includes five appendices that memorialize the planning and design phase, tribal consultation policies, and regional MPA network details and monitoring plans. A preliminary draft was made available by request to California tribes and tribal communities in Sep 2015.

In Dec 2015, FGC received an overview of the draft 2015 master plan and set a public comment deadline of Jan 28, 2016. In Feb 2016, FGC received another update and an overview of comments received to date. After discussion concerning the value of adding content related to tribal traditional ecological knowledge (TEK) as it relates to MPA management and monitoring, FGC requested that DFW staff develop draft text related to TEK for review by tribal representatives, and to return to the Apr 2016 meeting with a revised draft final master plan reflective of public comments and the TEK language.

As requested, DFW has integrated changes based on public comment, which are reflected using track changes in the Mar 2016 version (Exhibit 3). Exhibit 4 contains a summary of the public comments and changes made in the Mar 2016 revised version. However, the draft TEK language is still under review and therefore not included in the

STAFF SUMMARY FOR APRIL 13-14, 2016

revised draft; DFW has indicated that the language can be ready for the Jun 2016 FGC meeting.

DFW has collaborated extensively with staff from FGC, the Ocean Protection Council, and the California Ocean Science Trust to tie together MPA management, monitoring, research and evaluation concepts and priorities across statewide and regional scales. One notable proposed change is to establish a 10-year management review cycle for evaluating the statewide MPA network for efficacy and adaptive management. This change from the 5-year cycle identified in the 2008 draft master plan is designed to promote an improved scientific understanding through a more biologically appropriate time scale.

Significant Public Comments

One new comment was received in support of the revised 10-year evaluation timescale (Exhibit 5).

Opposition to revising the evaluation timescale from 5 to 10 years has previously been expressed by commenters including California Sportfishing League (CSL) based on an expectation that more frequent reviews were set as a “promise” within the 2008 draft master plan. A CSL online posting to TheFishingWire.com, titled *California Anglers Question Whether Fishing Bans will Ever be Lifted on Apr 5*, and an online petition submittal form *MPA Petition: Keep the Promise!*, are expected to generate form letter submissions in late comments (see links under exhibits 6 and 7).

Recommendation

FGC Staff: Staff supports the revised 2016 draft final master plan in its current form, but recommends that adoption be rescheduled to Jun 2016 to allow for TEK language review to be completed and integrated prior to adoption.

Exhibits

1. DFW presentation
2. Transmittal memo from CDFW
3. Draft Final Master Plan for MPAs, revised Mar 2016
4. *Summary of Proposed Changes since February 2016*, dated Mar 30, 2016
5. E-mail from Tina To, received Apr 1, 2016
6. California Sportfishing League online posting to TheFishingWire.com , *California Anglers Question Whether Ban will Ever be Lifted*, posted Apr 5, 2016 (available at <http://www.thefishingwire.com/story/371569>)
7. Online MPA petition submittal example (available at <https://calprop.wufoo.com/forms/q1gpx0c90dy0jnw/>)

Motion/Direction (N/A)

STATE OF CALIFORNIA
EDMUND G. BROWN JR., GOVERNOR

NATURAL RESOURCES AGENCY



California Department of Fish and Wildlife
1416 Ninth Street, #1205
Sacramento, CA 95814



California Fish and Wildlife Commission
1416 Ninth Street, #1320
Sacramento, CA 95814

May 5, 2016

Honorable [Name, Title
Federally recognized tribe name
Address]

Dear Honorable Tribal Representative:

The California Fish and Game Commission (Commission) and the California Department of Fish and Wildlife (Department) respectfully request your Tribe's comments regarding the incorporation of information from tribes in the final draft Marine Life Protection Act Master Plan for Marine Protected Areas (Master Plan for MPAs). The Department has been working on updating the Master Plan for MPAs.

To facilitate the planning and scoping process, the Department on February 6, 2015, sent a letter to your Tribe inviting your input regarding the update prior to the public comment process. A follow up letter was sent by the Department on September 25, 2015, to inform you that a preliminary draft Master Plan for MPAs was available for your review and input prior to the Department's release of a draft document for public comment. These letters also welcomed your additional input during the public comment period. The Department has incorporated tribal input received up to the date of this letter into the draft Master Plan for MPAs.

The Department presented the draft Master Plan for MPAs to the Commission at their December 9, 2015, meeting, and the Commission set a public comment deadline of January 28, 2016. At the Commission's February 10, 2016, discussion hearing, the Department provided an overview of public comments received, and the Commission directed Commission staff to work with Tribal leaders and the Department to incorporate traditional ecological knowledge (TEK) into the Master Plan for MPAs as it relates to MPA management and monitoring.

The Department revised the draft Master Plan for MPAs to address comments received and minor errors identified, and submitted the final draft Master Plan for MPAs to the Commission for their April 13, 2016 adoption hearing.

Honorable [Name, Title
Federally recognized tribe name
Address]
Insert current date
Page 2

At their April 13, 2016, meeting, the Commission closed all comments on the final draft Master Plan for MPAs except for tribal comments regarding the incorporation of TEK. The Commission held open this aspect of the comment period through June 1, 2016, to allow more time for tribal input.

The Commission and the Department respectfully request your input regarding the final draft Master Plan for MPAs by June 1, 2016. The final draft Master Plan for MPAs is available on the Department's website:

<https://www.wildlife.ca.gov/Conservation/Marine/MPAs/Master-Plan>. If you would like more information on the final draft Master Plan for MPAs, please contact Environmental Scientist Adam Frimodig by email Adam.Frimodig@wildlife.ca.gov or by mail at Department of Fish and Wildlife, 619 2nd Street, Eureka, California, CA 95501.

To request formal government-to-government consultation with the Department, please contact the Tribal Liaison Nathan Voegeli by email tribal.liaison@wildlife.ca.gov or by mail at California Department of Fish and Wildlife, 1416 9th Street, Suite 1341, Sacramento, CA 95814. To request formal government-to-government consultation with the Commission, please contact Acting Deputy Director Susan Ashcraft by email Susan.Ashcraft@fgc.ca.gov or by mail at California Fish and Game Commission, 1416 9th Street, Suite 1320, Sacramento, CA 95814.

We look forward to receiving your response and input on the final draft Master Plan for MPAs.

Sincerely,



Craig Shuman, D. Env.
Regional Manager
Department of Fish and Wildlife



Mike Yaun
Acting Executive Director
California Fish and Game Commission

ec: FGC Commissioners

Nathan Voegeli, Tribal Liaison
Office of the General Counsel
Department of Fish and Wildlife

Becky Ota
Environmental Program Manager
Marine Region
Department of Fish and Wildlife



California Marine Life Protection Act
MASTER PLAN FOR MARINE PROTECTED AREAS

**Informal Inter-Tribal Input on the Final
Draft Master Plan for Marine Protected
Areas through June 1, 2016 Regarding
Traditional Ecological Knowledge**

Document prepared for
California Fish and Game Commission Meeting

June 13, 2016

ABOUT THIS DOCUMENT

The California Department of Fish and Wildlife (CDFW) solicited open communications with California Tribes and Tribal governments, beginning with a letter sent on February 6, 2015, about an approach to update the *draft 2008 Marine Life Protection Act Master Plan for Marine Protected Areas*¹ (Draft 2008 Master Plan for MPAs). CDFW sent a follow up letter on September 25, 2015, to inform tribes that a Preliminary Draft 2015 Master Plan for MPAs was available for review and input prior to public release. These letters also welcomed tribal input during the open public comment period. The Draft 2015 Master Plan for MPAs² was made available to the public on December 3, 2015 and presented to California Fish and Game Commission (Commission) at their December 9-10, 2015 meeting in San Diego. The Commission set the public comment period deadline on the draft 2015 Master Plan for January 28, 2016. At the Commission's February 10-11, 2016 discussion hearing, CDFW prepared and presented a detailed written summary of all public comments received. Following discussion, the Commission directed their staff to work with tribal leaders and CDFW to incorporate traditional ecological knowledge (TEK) into the Draft 2015 Master Plan for MPAs as it relates to MPA management and monitoring. CDFW worked with Commission staff to develop proposed draft text to potentially address the Commission's request and provided it to Commissioner Hostler-Carmesin (Table 1). Commissioner Hostler-Carmesin informally shared the proposed draft text with collaborators on the Traditional Ecological Knowledge of Keystone Marine Species and Ecosystems project,³ which is part of the North Coast MPA Baseline Monitoring Program. This informal review was still underway at the time of the April Commission meeting and therefore language was not available for the Commission's review of the *Final Draft 2016 California Marine Life Protection Act Master Plan for Marine Protected Areas* (Final Draft 2016 Master Plan for MPAs)⁴.

CDFW submitted the Final Draft 2016 Master Plan for MPAs to the Commission for their April 13-14, 2016 adoption hearing in Santa Rosa. At the adoption hearing, the Commission closed all comments on the Final Draft 2016 Master Plan for MPAs except

¹ California Department of Fish and Wildlife. (2008). *Draft Marine Life Protection Act Master Plan for Marine Protected Areas*. February, 2008. Retrieved June 10, 2016 from <https://www.wildlife.ca.gov/Conservation/Marine/MPAs/Master-Plan>

² California Department of Fish and Wildlife. (2015). *Draft 2015 California Marine Life Protection Act Master Plan for Marine Protected Areas*. November, 2015. Retrieved March 17, 2016 from http://www.fgc.ca.gov/meetings/2015/Dec/exhibits/13_MPA_MasterPlan.pdf, Exhibits 3 and 4

³ Rocha, M., Rosales, H., Sundberg, R., and T. Torma. *Traditional Ecological Knowledge of Keystone Marine Species and Ecosystems*. Retrieved Feb 18, 2016 from <https://caseagrant.ucsd.edu/news/new-projects-to-take-snapshot-of-north-coasts-mpas#keystone-marine-species>

⁴ California Department of Fish and Wildlife. (2016). *Final Draft 2016 California Marine Life Protection Act Master Plan for Marine Protected Areas*. March, 2016. Retrieved May 3, 2016 from http://www.fgc.ca.gov/meetings/2016/Apr/FGC/exhibits/SS_0413_Item_10_MasterPlan_MPAs.pdf, Exhibit 3

to allow more time for tribal input through June 1, 2016 regarding the incorporation of TEK. CDFW and the Commission mailed a joint notice to all federally recognized tribes requesting their input by June 1, 2016, regarding TEK in the Final Draft Master Plan for MPAs. No formal input was received by June 1, 2016; however, informal inter-tribal input was received by the Commission from the collaborators on the Traditional Ecological Knowledge of Keystone Marine Species and Ecosystems project. The informal inter-tribal input responded to the proposed draft text developed by CDFW and Commission staff (Table 1). The purpose of this document is to inform Commission discussion and potential action at their June 22-23, 2016 meeting in Bakersfield as requested.

Table 1. Informal inter-tribal input received by the Commission through June 1, 2016, in response to proposed draft text developed by CDFW and Commission staff to address the Commission's request at their February discussion hearing to incorporate TEK into the Draft 2015 Master Plan for MPAs as it relates to MPA management and monitoring.

Comment Number (Date Received)	Commenter (Organization)	Document section (page numbers) ⁵	Proposed draft text developed by CDFW and Commission staff (strikeout/underline)	Informal inter-tribal input received (double strikeout/underline)
1 (5/12/2016)	Megan Rocha (Tolowa Dee-ni' Nation), Hawk Rosales (InterTribal Sinkyone Wilderness Council), Rachel Sundberg (Trinidad Rancheria), Thomas Torma (Wiyot Tribe)	Acronyms (page v)	Suggest adding <u>TEK (Traditional Ecological Knowledge)</u> to the Acronyms table.	Preferred term used here and throughout the document is " <u>traditional knowledge (TK)</u> ", rather than " traditional ecological knowledge (TEK) "
2 (5/12/2016)	Megan Rocha (Tolowa Dee-ni' Nation), Hawk Rosales (InterTribal Sinkyone Wilderness Council), Rachel Sundberg (Trinidad Rancheria), Thomas Torma (Wiyot Tribe)	Chapter 1.1, 2 nd paragraph (pages 5-6)	California's inhabitants <u>and indigenous peoples</u> have depended on the state's marine and coastal resources for at least 11,500 years, with some estimates indicating 19,000 years or more (Walker & DeNiro 1986, Pritzker 2000, Erlandson et al. 2005, Rick et al. 2008). For countless generations, California Tribes have <u>stewarded and utilized marine resources and stewarded</u> marine and coastal <u>ecosystems across California's approximately 1,400 mile coastline</u> resources in the region. Many California Tribes <u>continue to regularly harvest marine resources within their ancestral territories and maintain relationships with the coast for ongoing cultural uses, including spiritual and ceremonial purposes, and building traditional ecological knowledge (TEK).</u> ³¹ Today, California's inhabitants and visitors continue to gain significant benefits from the state's oceans and coasts, including economic, nutritional, recreational,	California's inhabitants and indigenous peoples have depended on the state's marine and coastal resources for at least 11,500 years, with some estimates indicating 19,000 years or more (Walker & DeNiro 1986, Pritzker 2000, Erlandson et al. 2005, Rick et al. 2008). For countless generations, Since time immemorial, California Tribes have stewarded and utilized marine and coastal resources in the region. Many California Tribes continue to regularly harvest marine resources within their ancestral territories and maintain relationships with the coast for ongoing cultural customary uses including spiritual and ceremonial purposes, and building traditional ecological knowledge (TEK). ³⁴ Today, California's inhabitants and visitors continue to gain significant benefits from the state's oceans and coasts, including economic, nutritional, recreational, cultural, spiritual and educational, as well as climate regulation and protection from coastal hazards.

⁵ Page numbers correspond to the Final Draft 2016 Master Plan for MPAs: <https://www.wildlife.ca.gov/Conservation/Marine/MPAs/Master-Plan>

Comment Number (Date Received)	Commenter (Organization)	Document section (page numbers) ⁵	Proposed draft text developed by CDFW and Commission staff (strikeout/underline)	Informal inter-tribal input received (double strikeout/underline)
			<p>cultural, spiritual, and educational, as well as climate regulation and protection from coastal hazards. Many California Tribes continue to regularly harvest marine resources within their ancestral territories and maintain relationships with the coast for ongoing cultural uses, including spiritual and ceremonial purposes.</p> <p>³¹ See Chapter 4.2 and Chapter 4.3 for more <u>information regarding incorporating TEK into monitoring and adaptive management</u></p>	
3 (5/12/2016)	Megan Rocha (Tolowa Dee-ni' Nation), Hawk Rosales (InterTribal Sinkyone Wilderness Council), Rachel Sundberg (Trinidad Rancheria), Thomas Torma (Wiyot Tribe)	Chapter 4.3, 2 nd paragraph (page 43)	<p>This need is described in the MLPA, which requires “monitoring, research, and evaluation at selected sites to facilitate adaptive management of MPAs and ensure that the [MPA] system meets the goals.”¹²⁷ Therefore, monitoring results and additional information potentially collected from other scientific data, governance and management review, workshops, <u>tribal science</u>, and public forums is an accumulation of information that could be used to inform adaptive management which is a response to that information (see Chapter 4.5). <u>For example, the North Coast Regional MPA Baseline Monitoring Program is the first regional MPA baseline monitoring program in California to incorporate a TEK research project (see Appendix C, Section 5).</u>¹²⁸ <u>TEK can be defined as the cumulative body of scientific knowledge through cultural transmission by indigenous people over many generations,</u>¹²⁹ <u>and incorporating TEK and tribal science may improve the understanding of historical and current ocean conditions.</u> The MLPA, together with policy guidance including the Partnership Plan and the MSLT Work Plan, have guided and will continue to guide the MPA monitoring approach outlined in this section, which will be used to inform adaptive management of</p>	<p>This need is described in the MLPA, which requires “monitoring, research, and evaluation at selected sites to facilitate adaptive management of MPAs and ensure that the [MPA] system meets the goals.”¹²⁷ Therefore, monitoring results and additional information potentially collected from other scientific data, <u>including TK, in addition to</u> governance and management review, workshops, tribal science, and public forms is an accumulation of information that could be used to inform adaptive management, which is a response to that information (see Chapter 4.5). For example, the North Coast Regional MPA Baseline Monitoring Program is the first regional MPA baseline monitoring program in California to incorporate a TEK research project (see Appendix C, Section 5).¹²⁸ TEK can be defined as the cumulative body of scientific knowledge, <u>passed down</u> through cultural transmission by indigenous people over many generations,¹²⁹ and incorporating TEK and tribal as a science <u>may will</u> improve the understanding of historical and current ocean conditions. The MLPA, together with policy guidance including the Partnership Plan and the MSLT Work Plan, have guided and will continue to guide the MPA monitoring approach outlined in this section, which will be used to inform adaptive</p>

Comment Number (Date Received)	Commenter (Organization)	Document section (page numbers) ⁵	Proposed draft text developed by CDFW and Commission staff (strikeout/underline)	Informal inter-tribal input received (double strikeout/underline)
			<p>California's MPA network.</p> <p>¹²⁸ Rocha, M., Rosales, H., Sundberg, R., and T. Torma. <i>Traditional Ecological Knowledge of Keystone Marine Species and Ecosystems</i>. Retrieved Feb 18, 2016 from https://caseagrant.ucsd.edu/news/new-projects-to-take-snapshot-of-north-coasts-mpas#keystone-marine-species</p> <p>¹²⁹ Ibid.</p>	<p>management of California's MPA network.</p> <p>¹²⁸ Rocha, M., Rosales, H., Sundberg, R., and T. Torma. <i>Traditional Ecological Knowledge of Keystone Marine Species and Ecosystems</i>. Retrieved Feb 18, 2016 from https://caseagrant.ucsd.edu/news/new-projects-to-take-snapshot-of-north-coasts-mpas#keystone-marine-species</p> <p>¹²⁹ Ibid.</p>
4 (5/12/2016)	Megan Rocha (Tolowa Dee-ni' Nation), Hawk Rosales (InterTribal Sinkyone Wilderness Council), Rachel Sundberg (Trinidad Rancheria), Thomas Torma (Wiyot Tribe)	Chapter 4.3, Using a Partnership-Based Approach, 3 rd paragraph (Page 46)	<p>To date, the partnership-based approach to MPA management has involved more than 70 agencies, California Tribes and Tribal governments, and organizations in regional baseline MPA monitoring programs. Long-term monitoring will build on this experience, continuing to leverage capacity and establish partnerships to build a cost-effective, sustainable monitoring program statewide. <u>For example, incorporating TEK and tribal science may improve the understanding of historical and current ocean conditions.</u> The MSLT has developed an MSLT Work Plan that emphasizes the ongoing need to build partnerships, broaden participation, include knowledge from diverse sources, and build a deeper understanding of ocean health. The MSLT Work Plan reflects the philosophy that all quality science may be useful in building a robust monitoring program, including academic, local, traditional, and citizen science contributions. Citizen science programs provide monitoring support through activities such as trainings to gather biological data in key habitats and recording observations of consumptive and non-consumptive uses of MPAs.</p>	<p>To date, the partnership-based approach to MPA management has involved more than 70 agencies, California Tribes and Tribal governments, and organizations in regional baseline MPA monitoring programs. Long-term monitoring will build on this experience, continuing to leverage capacity and establish partnerships to build a cost-effective, sustainable monitoring program statewide. For example, incorporating TEK and tribal <u>as a science</u> may will improve the understanding of historical and current ocean conditions. The MSLT has developed an MSLT Work Plan that emphasizes the ongoing need to build partnerships, broaden participation, include knowledge from diverse sources, and build a deeper understanding of ocean health. The MSLT Work Plan reflects the philosophy that all quality science may be useful in building a robust monitoring program, including academic, local, traditional, and citizen science contributions. Citizen science programs provide monitoring support through activities such as trainings to gather biological data in key habitats and recording observations of consumptive and non-consumptive uses of MPAs.</p>

From: [REDACTED]
To: [FGC](#)
Subject: Comments on Proposed Regulations: Incorporation of Traditional Ecological Knowledge
Date: Wednesday, May 25, 2016 7:33:44 PM
Attachments: [Fish and Game Commission Incorporation of Traditional Ecological Knowledge.docx](#)

To whom it may concern:

Please see the attached document for comments regarding the incorporation of traditional ecological knowledge.

John Corbett
[REDACTED]

Fish and Game Commission Incorporation of Traditional Ecological Knowledge
P.O. Box 944209

Sacramento, CA. 94244-2090

May 8, 2016

Dear Commission:

Personal Comments John Corbett

Incorporation of Traditional Knowledge

Dear Commission:

I want to thank the Commission that throughout the MLPA process you were a standout in fairly treating the Tribes and allowed all members of the public to speak and submit written materials. These comments are directed to guidelines to give to future panels of scientists.

One concrete step the Commission can take is to adopt a policy statement that requires Tribes be given the opportunity to present science including both TEK and analytical science to future science panels. A concrete step to implementing this policy is to repudiate the legal opinion in Footnote three of the original FEIR for the Master Plan which rejected an inclusionary process on the grounds it was too high a science standard to be met. The opinion held that the word readily in the phrase MLPA statutory phrase best available science meant that the National Science Guidelines of 2004 for best available marine fisheries science and the Best Available Science standard of the Magnuson Act provisions which provide for inclusionary provisions for anecdotal evidence such as Traditional Ecological Knowledge (TEK) were too strict. In a lessons learned write up funded by the Resource Legacy Foundation, Harty in 2006 noted two aspects of this legal opinion. The first was a concern that the inclusionary input provisions for the public input were dropped and that the decision rested on an inaccurate reading of the Best Available Science guidelines. This provided the basis for the SAT and initiative to establish some twenty plus criteria for censorship.

As far as can be determined from the record around 98% of the examples of the SAT discretionary censorship involved denying oral and written submittals were applied to Native American presentations of both Traditional Ecological Knowledge and analytical science. The Yurok Tribe had six PH.D. candidates, numerous Masters degree, and cultural leaders all of whom had marine experience rejected for getting on the SAT agenda 15 times, the non-acceptance of over 300 pieces of peer reviewed scientific, cultural literature presented by the Yurok Tribe, and the SAT Advisory Team being completely unresponsive to ten separate Tribal inquiries as to what types of science could be introduced. Tribal members and scientists were summarily rejected as "not being credible" without any inquiry as to their name, education level, position in the Tribe, publications, and marine research and survey activities.

The inclusionary provisions of the National Science Foundation¹ are:

Scientific advice should be sought widely and should involve scientists from all relevant disciplines.

¹ National Science Foundation

The goal should be to capture the full range of scientific thought and opinion on the topic at hand. Critiques and alternative points of view should be acknowledged and addressed openly. Anecdotal e (experience, narrative, or local information should be acknowledged and evaluated during the process of assembling scientific information. When no other information is available anecdotal information may constitute the best information available. In addition, anecdotal information may be used to help validate other sources of information and identify topics for research.

Fortunately others have spoken to this issue. The California legislature in Section 33 general provisions defining credible science included the Executive Summary paragraph titles of the National Science Foundation best available science guidelines into legislation. This lowers the MLPA FEIR science legal definition below the minimal standards of “credible science.”

The Ocean Protection Council and the Department of Fish and Wildlife have repudiated the FEIR General Response #3 exclusion of Tribes by letter in 2015.

Sincerely:

John W. Corbett

Enclosures:

FEIR General Response 3

National Science Foundation Best Available Science Guidelines Executive Summary

Section definition of credible science 33 Fish and Game Code

Letter from OPC and Department of Fish and Game repudiating the prior statutory interpretation
February 2015

Prior submitted Legal brief from the Yurok Tribe to OPC and Fish and Game

ENCLOSURE Number One

FEIR General Response 3

With respect to Naval exercises involving the use of sonar, no evidence has been discovered or provided during the preparation of this EIR to suggest that the Proposed Project would contribute to the impacts of sonar. As described earlier, an EIR need not evaluate cumulative impacts to which the project would have no contribution.

Potential cumulative impacts emissions of criteria air pollutants, greenhouse gas emissions, and biological resources were addressed in Chapter 7, Section 7.5.3. For further information regarding that analysis, please refer to that discussion in the DEIR.

In this respect, the EIR considered the impacts of other activities within the Study Region in accordance with CEQA requirements. The Commission has fully met the requirements for evaluation of potential effects of the Proposed Project when added to other closely related past, present and reasonably foreseeable probable future projects, per State CEQA Guidelines Sections 15130 and 15355. No evidence has been provided as part of the public comments to suggest that the project would contribute to cumulative impacts which were not described in the DEIR. Therefore, no changes to the DEIR are necessary.

Master Response 3 – Inadequacy or Application of Data Gathered During the MLPA Initiative Planning Process, and Adequacy of the Science Standard

Many comments were concerned that the EIR analysis did not adequately utilize the information gathered during the MLPA Initiative process. Many comments also expressed concern regarding the MLPA Initiative data gathering process and how that information was used to develop the proposed network of MPAs. Comments centered around specific topic areas such as: the MLPA Science Advisory Team (SAT) and the Levels of Protection (LOP); biological resource modeling; missing data about kelp and urchin beds; and the science used for the MLPA planning process versus the CEQA data-gathering process. The general recurring theme questions the adequacy of the science driving the MLPA process, asserting that the science being used is not the Best Available Scientific Information (BASI) and recommending that the process not continue until more research and study is conducted. However, state law emphasizes timeliness over certainty or perfection. By way of review, in 2004 the National Academy of Sciences sponsored a major discussion of BASI in the context of the Magnuson-Stevens Fishery Management Act, and noted that "best" explicitly suggests that there is no better scientific information available and implicitly suggests the use of the most relevant and contemporary data and methods. However, the MLPA process is expressly based "on sound scientific guidelines" and "the best readily available science" (FGC, Sections 2853[h][5], 2855[a]). The MLPA use of best readily available science is an important qualification that emphasizes timeliness over certainty or perfection. Similarly, the Marine Life Management Act, which predates the MLPA, qualifies its application of BASI with the language: "...on other relevant information that the department possesses, or on the scientific information or other relevant information that can be obtained *without substantially delaying the preparation of the plan*" [emphasis added] (FGC, Section 7072[h]).

The MLPA emphasis of timeliness over certainty or perfection of information is further underscored by the concept of adaptive management, which recognizes that this process proceeds in the face of "scientific uncertainty" and prospectively contemplates that "monitoring and evaluation shall be emphasized so that the interaction of different elements within marine systems may be better understood" (FGC, Section 2852). The

ENCLOSURE II

National Science Foundation Guidelines

EXECUTIVE SUMMARY

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stronger basis for defending controversial management decisions in court. More specifically, guidelines that address issues of relevance, inclusiveness, objectivity, transparency, timeliness, peer review, and the treatment of uncertainty are consistent with the procedural cues that have been sought by the courts. They will promote consistency in both the production and the use of scientific information without unduly constraining the ability of scientists to adopt new scientific protocols for data collection and analysis. Guidelines should remain sufficiently flexible to accommodate the strong regional differences in fisheries and the amount of scientific information available.

Guidelines

Relevance—Scientific information should be representative of the fish stock being managed, although the data need not be site specific or species specific. In some cases, analogous information from a different region or the biological characteristics of a related species or species with similar life-history strategies will be informative and relevant, and may constitute the best information available.

Inclusiveness—Scientific advice should be sought widely and should involve scientists from all relevant disciplines. The goal should be to capture the full range of scientific thought and opinion on the topic at hand. Critiques and alternative points of view should be acknowledged and addressed openly. Anecdotal (experiential, narrative, or local) information should be acknowledged and evaluated during the process of assembling scientific information. When no other information is available, anecdotal information may constitute the best information available. In addition, anecdotal information may be used to help validate other sources of information and identify topics for research.

Objectivity—Data collection and analysis should be unbiased and obtained from credible sources. Scientific processes should be free of undue nonscientific influences and considerations.

Transparency and Openness—Congress has enacted laws intended to give the public full and open access to the development of federal policies, including advisory meetings, background documents, and other sources of information. Accordingly, the public should have information about each phase of the process from data collection to data analysis to decision making. Decision makers should provide a clear rationale for the choice of the information that they use or exclude when making management decisions. The processes of collecting data and selecting

READILY

“Readily:”The biggest legal issue under the MLPA is the meaning of the word readily in the standard of “best readily available science.” Agency determinations must be given deference. *Chevron U.S.A. Inc. v. Natural Resources Defense Council, Inc.*, 467 U.S. 837 (1984), 759 F.3d, at 376. An act must be considered ambiguous and subject to at least two different legal interpretations to give the agency deference. It is the position of this analysis that there were many specific provisions within the Marine Life Protection Act (MLPA) that set precise science standards that are not subject to different legal interpretations. If the legislature wanted to delegate this decision to the Department of Fish and Game it would have done so explicitly. Instead the clear legislative intent was to specify a scientific approach and scientific standards. The Final EIR adopted a contrary legal standard that the general term “readily” completely overrode all the specific science standards and either specifically lowered the science standards.

Key portions of the Final EIR setting forth the Department of Fish and Game legal opinion on Best Readily Available science standards under the MLPA.²

Final Environmental Impact Report (FEIR) MASTER RESPONSE 3: BASI refers to Best Available Science Information.

By way of review, in 2004 the National Academy of Sciences sponsored

a major discussion of BASI. In the context of the Magnuson-Stevens Fishery

² Final EIR Marine Life Protection Act North Coast Study Region, Cal Fish and Game Commission, Cal Department of Fish and Game, Master Response,3, pp 3-7,3-8 , May 29, 2012, State Clearing House Number: 2011092029, Prepared by Horizon Water and Environment, L.L.C, 1330 Broadway, Suite 424, Oakland, CA. 94612. California Law requires that an Environmental Impact Report be prepared. The EIR is a two-step process with a draft EIR which receives comments and then a final Environmental Impact Report (FEIR). Questions can be answered either separately or generally. The general answer to questions was in this process labeled the “Master Response.” Master Response number three described the legal basis for the science used by the North Group SAT.

Management Act, and noted that “best” explicitly suggests that there is no better

scientific information available and implicitly suggests **the use of the most relevant**

and contemporary data and methods. However, the MLPA process is

expressly based “on sound scientific guidelines and “the best readily available science”

(FGC, Sections 2853 (b) (5), 2855 (a)). The MLPA use of best readily available science is an

Important qualification that emphasizes timeliness over certainty or perfection. ³....allows the

submission to peer review of documents that include but are not limited to (marine Living Resource

Management documents). ...**However, such submissions (for peer review) are discretionary.**⁴

The provision has far greater implications than making peer review discretionary, not having to use the most up-to-date information and not requiring the most relevant scientific evidence. The term best available science is considered a legal phrase of art and is essentially used by the Courts in the same way from statute to statute. The lower than BAS standard of the EIR means that the BAS science standard of the Marine Life Protection Act are far less stringent than those of the federal Marine Mammal Act, The Clean Water Act, The Porter-Cologne Act, the federal endangered species act, the Magnuson Stephens Fishery Act, the State Endangered Species Act, Marine Management Act and The State of Washington land use act. The simultaneous rejection of the National Academy of Sciences Best Available Science guidelines excluded provisions for inclusiveness. Inclusiveness provisions include hearing from all ethnic groups,⁵ As put by one Fish and Wildlife attorney in 2014 there was no legal requirement to hear from Native Americans or anyone else so there was no problem excluding them from the SAT. The National Science Foundation further defines inclusiveness as the seeking out of scientific advice, capturing a wide range of scientific thought and opinion. Critical comments and alternative points of view should be acknowledged and addressed openly. Anecdotal narrative and or local knowledge should be acknowledged and evaluated during the process.⁶ Traditional Ecological Knowledge and fishery logs used in almost all marine planning programs had become under the new standard as anecdotal and hence completely discretionary with the science panel. This includes federal; and state agency catch

³ FEIR General Response # 3, 3-7.

⁴ FEIR General Response # 3, 3-8

⁵ Hearing by all ethnic groups was added by the author. It seems clear it never occurred to the National Academy of Sciences that an entire ethnic group like Native Americans would be excluded and further it is mandated by both the State and Federal Constitutions.

⁶ National Science Foundation Improving the “Best Scientific” Standard in Fisheries Management, 2004 p.5.

data as well. The SAT retained authority as a public body to exclude public comment. It is important to recognize that what is anecdotal depends on what is being studied and the actual model assumption. For example a marine survey studies and subsequent peer review may be used to monitor base line information but for a statewide model assumption such science was considered by the NCSAT SAT to be considered anecdotal.⁷ An assumption of intense take of resources is based on survey data and other data while a model assumption of take based on the maximum allowed by State and federal law is not. This legal opinion was used to exclude published peer review studies of analytical science and to prevent testimony and papers on the modeling. This was a sweeping legislative reinterpretation that did not leave much science on the table. The premises for the legal science conclusions of the FEIR are laid out and will be examined one by one.

Requirements	MLPA FEIR	Fish and Game Section 33	National Science Foundation Standards	Magnuson BAS
Up to date Information	NO	YES	YES	YES
Most Relevant Information	NO	YES	YES	YES
Independent Peer Review	NO	YES	YES	YES
Anecdotal Information	NO	YES	YES	YES
Trad Ecological Knowledge	NO	YES	YES	YES
Censorship Rights	YES	NO	NO	NO
Diverse Science viewpoints	NO	YES	YES	YES

Premise Number One: The FEIR concludes that criticism and comments on the science was limited to “recommending that the process not continue until more research and study is conducted.” This simply does not comport with the facts from a Native American perspective. Native Americans wanted to present existing information and never asked for a delay. The Tribes offered both hard copies and electronic filing. The broad brush statement of the EIR that the concerns with the LOP were based on request for delays until further information can be gathered were simply incorrect from the Native American perspective. The FEIR never identified the sources for this conclusion.

Premise Number Two: The FEIR states the National Science Foundation Guidelines and Magnuson Act require certainty and perfection prior to action. This is based on a complete misunderstanding of these

⁷ Such was repeatedly the case with the North Group LOP

documents as the very purpose of BAS and the 2004 National Science Foundation Guidelines is to facilitate timely decisions in the face of uncertainty.

J. Michael Harty and John DeWitt write up of the “Role of science in the Initiative Process” summarized the issue of concern here and openly questioned the alleged *factual basis used to justify the legal conclusions*.

A familiar standard in fisheries management is “best scientific information available”

(National Standard 2), Magnuson Fishery Conservation and Management Act of 1976).

A NRC report on Improving the Use of Best Available Scientific Information Available

Standard in Fisheries Management (2004) suggests using the following criteria rather

than a specific definition: relevance, inclusiveness, objectivity, transparency and openness,

*timeliness, and peer review. (Page 55) **Inclusiveness**⁸ has as its goal to “capture the full*

range of scientific thought and opinion on the topic at hand, and means that “critique

and alternative points of view should be acknowledged and addressed openly.

The ED differentiated the MLPA standard and Magnuson Act standard as follows: MLPA

emphasizes timeliness over quality; when science is not available the bias is to action

*not analysis. (BRTF Meeting Summary, p. 4.)⁹ **This statement may not fully acknowledge***

⁸Ibid. The National Science Foundation Best Available Science Guidelines inclusiveness guidelines include the following provisions: ...“Scientific advice should be sought widely and should involve scientists from all relevant disciplines. The goal should be to capture the full range of scientific thought and opinion on the topic at hand. Critiques and alternative points of view should be acknowledged and addressed openly. Anecdotal (experimental, narrative, or local information should be acknowledged and evaluated during the process of assembling scientific information. When no other information is available, anecdotal information may constitute the best information available.” pp 5-6.

the timeliness criterion proposed in the NRC report: “Management actions should not be delayed indefinitely on the promise of future data collection or analysis... Except under extraordinary circumstances, FMP implementation need not be delayed to capture and incorporate data and analyses that become available after plan development.” (p.57)¹⁰

A sharper criticism is simply that the National science Foundation Report states the opposite of what the FEIR legal argument stated. This conclusion of Harty and Dewitt is further strengthened by a careful review of explicit statements in the National Science Foundation Guidelines.¹¹ (Guidelines)

National Standard 2¹² **embodies the idea** that decisions regarding management and conservation should be made in a timely and effective fashion with available information **despite recognized data gaps.**¹³ (*Emphasis added*)

Not only is this an explicit statement of the National Science Guidelines to make timely decisions with recognized data gaps it states the Guidelines “**embody**” this concept of timely decision making. This is the first and foremost finding of the Guidelines and is the exact opposite of the conclusion of the FEIR science which concluded that timely decisions under the guidelines could not be made until there was “perfect” science.

⁹ BRTF July meeting 2005. This cite needs to be read in conjunction the SAT meeting of July 7, 2005. (The clarity of the video and other technical issues make a review text hard to follow and not subject to transcripts. However, the Department of Fish and Wildlife clarified that the North Coast Group FEIR incorporates the full and complete legal statement including that back to the 2005 adoption. It is also the last interpretation in time and represents the official view of the Department in the important FEIR legal document. The legal opinion was defended until February 22, 2015 when it was finally rescinded. nearly ten years later.

¹⁰ *Report of Lessons Learned from the Marine Life Protection Act Initiative* August 17, 2006. J. Michael Harty Principal, Harty Conflict Consulting and Mediation, Davis, CA., John Dewitt, Director of Environmental Studies Boudoin College, Bowdoin, ME., Commissioned by the Resources Legacy Foundation (RLF).

¹¹ *Improving the Use of “Best Scientific Information Available” Standard in Fisheries Management*, Committee on Defining the Best Scientific Information Available for Fisheries Management, National Research Council, Ocean Studies Board, Division on Earth and Life Studies, National Research Council, ISBN: 0-309-53347-3, 118 pages, 6 X 9, (2004), The National Academies Press, Washington D.C.. (Guidelines)

¹² National Standard 2 refers to the BAS or BASI language of the Magnuson Act.

¹³ Guidelines p. 4

Best available science, best available information reviews date back to the Marine Mammal Protection Act of 1972. This was followed by the Endangered Species Act “best scientific and commercial” in 1973. This has allowed a considerable period of time to distill the meaning and approaches under the best available science statutory language in regard to uncertainty or data gaps. Again turning to the language of the actual guidelines:

*There is little doubt, given the context of the times and the paucity of knowledge of fish populations, that the original intent of National Standard Number 2 was that management and conservation measures would proceed in a timely fashion despite recognized uncertainties in the scientific information.*¹⁴

Congress has periodically reviewed BAS and BASI in federal legislation and consistently found that BAS decisions can be made in a timely basis.

*The Commerce Committee recognized that if certainty were required before a management action could be taken in the inherently uncertain arena of natural resource ecology, policies already recognized as detrimental would be continued under the guise of doing no harm.*¹⁵

A review of the Congressional hearing record shows an unusual if not unanimous level of agreement that BAS and BASI agencies can act quickly. The overriding concern raised over the years is whether the standards allow too fast decision making when more information may be called for.¹⁶ This is the exact opposite of the FEIR position.

The United States General Accounting Office Report to Congressional Requesters Endangered species¹⁷ found that delays were caused by non-science issues¹⁸ and that the number one complaint of scientists was that BAS actions were often taken based upon little data even if it meets BAS standards. Again this conclusion is in total contradiction with the FEIR position.

In contrast, while external reviews are based on the best available Science, experts and

¹⁴ Guidelines p 18

¹⁵ Guidelines p 18

¹⁶ U.S. Congress, House of Committee Natural Resources , Subcommittee on National Parks, Forest and Public Lands. The Danger of Deception: Do Endangered Species Have a Chance?, Oversight Hearing, 110th Cong. 2nd sess., May 21, 2008. H. Hrg. 110-72.

¹⁷ GAO Report to Congressional Requesters, Endangered Species August 2003. Minority peer review scientists expressed concerns how the standard allowed action before having adequate data. “The reviewer also said it was premature to select those sites given the lack of information about the species. Zapata Bladderpod P29

¹⁸ GAO p. 21....”disagreements over the Endangered Species Act do not appear to be based on science issues.”

*others we spoke to expressed concerns over the adequacy of the information.*¹⁹

Congress itself has specifically clarified that their interpretation is a bias towards action.

*This phrase drawn from the conference report on the 1979 amendments to ESA, which states that the “best information available” language was intended to allow FWS to issue biological opinion even when inadequate information was available, rather than being forced by that inadequacy to issue negative opinion, thereby unduly impeding proposed actions.*²⁰

The Congressional Research Office is in accord.

*One court has held that the statutory phrase does not require ; and hence a court can not order FWS or NMGS (the Services) to conduct a additional studies to obtain missing data, and that the agency must rely on even inconclusive or uncertain information if that is the best available at the time of a listing decision.*²¹

It is hard to imagine a more specific repudiation of the FEIR contention that scientific perfection is required under the National Science Foundation Guidelines for BAS and or the Magnuson Act.

There are four principal federal acts with “best available science” (BAS) . They are the Marine Mammal Protection Act of 1972, The Endangered Species Act of 1973, The Magnuson Fishery Conservation and Management Act of 1976 and the amendments to the Safe Drinking Water Act of 1996. All of the agencies have interpreted their BAS language to mean that timely decisions can be made in the absence of certainty and have promulgated federal CFR regulations to that affect. Over a time span of 19 to 43

¹⁹ Page 3

²⁰ U.S. House, Committee of Conference, Endangered Species Act Amendments. H.Rept. 96-697 (Washington. D.C.): U.S. GPO, 1979). P,12,

²¹ M. Lynne Corn Specialist in Natural Resources Policy, Kristina Alexander Legislative Attorney, Eugene H. Buck Specialist in Natural Resources Policy, Congressional Research Office, The Endangered Species Act and “Sound Science”, January 23, 2013.

years since their enactment there has been no variation of the conclusion that under BAS they are authorized to make decisions even though there is significant scientific uncertainty.

Actual agency actions support the conclusion there is adequate authority to make decisions in a timely fashion. The Pacific Coast Fisheries Management Council operating under the Magnuson Act issues timely annual regulations for Northern Anchovy, market Pacific Mackerel, Jack Mackerel, certain types of squid, sardines, krill, Pacific Halibut, Salmon, Rockfish, Flatfish, Round Fish, Sharks, skates, ratfish, Fine scale Codling, and Pacific rattail grenadier. The Council regularly produces ecological based plans. There is a robust public participation program by the Council, science panels and policy making bodies that include open access for **scientists**, fisherman and **Tribes**. Written submittals are encouraged. The perceived constraint on decision making without complete data does not exist.

The Courts have strongly supported the rights of an agency to act on limited data and great uncertainty under BAS.

Blue Water Fishermen’s Association v. National Marine Fisheries Service upholding the use of scientific judgment to close 2.6 million square nautical miles of ocean to longliners to protect endangered loggerhead and leatherback sea turtles (conclusions do not need to be airtight and indisputable”) *Blue Water Fishermen’s Association v. National Marine Fisheries Service*, 226 F. Supp. 2d 330, 338 (D. MA 2002); Magnuson-Stevens Act and Endangered Species Act).

Recreational Fishing Alliance v. Evans deferring to the use of “aggregated” and incomplete” data in setting retention limits for highly migratory species; courts cannot sidestep responsibility by imposing an obligation on the Secretary to find better data.” (*Recreational Fishing Alliance v. Evans*, 172 F. Supp. 2d 35, 43, 44 (D.D.C. 2001) Magnuson-Stevens Act

Blue Water Fishermen’s Association v. Mineta---approving imposition of shark quotas over objections that they were unsupported by catch-rate data sufficient for stock evaluation purposes; “regulation is permissible even if the agency lacks complete information.” (*Blue Water Fishermen’s Association v. Mineta*, 122 F. Supp. 2d 150, 166 (D.D.C. 2000); Magnuson Stevens Act.

Alleged Marine Life Management Act (MLMA) support for the MLPA FEIR science interpretation is were based on the following statements in the FEIR interpretation of MLMA legislation and practice as supporting the agency MLPA interpretation.

Similarly, the Marine Life Management Act, which predates the MLPA qualifies its

application of the BASI language : “...on other relevant information that the department

possesses, or on the scientific information or other relevant information that can be obtained

without substantially delaying the preparation of the plan. (Emphasis Added) FGC, Section

7072 (b).²²

Unlike the MLPA, there never has been an instance under the (MLMA) that has excluded anecdotal, peer review publications, the use of most relevant and updated information readily available. There are provisions under the act to formally waive peer review by a Commission finding of necessity but they have never been used. The Marine Mammal science guidelines declare that catch and gear type data and other anecdotal data is considered **essential** for marine management.²³ By comparison with MLMA the North Group SAT excluded all such catch and gear type for the “take” assumption including Fish and Game figures, statistics and publications as being anecdotal and not to be used to review the take assumption²⁴ In referring to the MLMA the FEIR correctly states the test is whether the information can be obtained without substantially delaying the preparation of the plan. This is exactly the standard the SAT violated in not considering Native America data for the “take” assumption. The MLMA guidelines further state that there is to be “constituent involvement in designing and conducting research”²⁵ i.e. the modeling. The MLMA Act high science standards are completely inconsistent with the MLPA FEIR legal reasoning “low bar” science and strongly uphold the best available science interpretations posited by the Yurok Tribe.

Similarly, the State of Washington Land Use statute that requires BAS for siting terrestrial reserves and the California Endangered Species Act support the interpretation that timely decisions can be made in the face of uncertainty under the Best Available Science standard.²⁶

In conclusion the BAS and BASI standard has a widespread in resource legislation for the very reason that it provides for timely decisions in the face of scientific uncertainty.²⁷ This opinion is based upon the actual legislative language, the Guidelines, Congressional hearings on the BAS and BASI language, opinions by the Congressional Research Office, opinions by the General Services Administration, federal²⁸ and state agency interpretations of their own statutory language, agency rule making, actual

²²Final EIR p 3-7

²³ Weber, Heneman “Guide to California’s Marine Life Management Act, December 2000. The Healey, Larson, Appendix 1 Science and the MLMA states the same standard as Weber, Heneman.

²⁴ For example the SAT refused to accept the information of the California’s Living Marine Resources: A status Report, California Department of Fish and Game 2001. All other SATs accepted catch and take data in reviewing the LOP take assumptions.

²⁵ Ibid., Weber, Heneman.

²⁶ Ferry County v. Ferry Concerned Citizens of Ferry County, 155 Wn 2d. 824, 12 P.3d 102, (2005).

²⁷Statutes with BAS or BASI: U.S. Marine Mammal Act, Magnuson Stephens Fisheries Act, Clean Water Act, U.S. Endangered Species Act, California Marine Life Management Act, State of Washington land use act, and the California Endangered species act.

²⁸FWS Endangered Species Consultation Handbook: Procedures for Conducting Consultation and Conference Activites under Section 7 of the Endangered Species Act (Washing, D.C: Fish and Wildlife Service and National Marine Fisheries Service, March 1998, p 1-6.

agency actions and the Courts. It is clear that the FEIR legal analysis is based on taking one sentence out of context and reaching conclusions contrary to the overwhelming evidence including the full text and conclusions of the document cited. The FEIR conclusion that BAS and the National Science Foundation Guidelines require scientific perfection cannot be factually supported.

The word readily is a very general word and before it can be used to overturn specific statutory language elsewhere in the act it must be justified by the basic structure of the MLPA and the purposes to be accomplished by the legislation.²⁹ The legislative intent must be very clear to override specific statutory provisions. This is a clash between two fundamentally different views of the MLPA. The public image is that the MLPA is pro science legislation that sets the very highest standards which are to be used to establish a scientifically based reserve system. The scientific approach was to correct the hodge podge reserve system in existence at the time the act was passed. The FEIR for the North Group region presents the view that the SAT science standards are minimal and the legislature put the word readily into the phrase best readily available science as a means to dummy down the science. The purpose was to insure that a reserve system be established regardless of the quality of the science. It was admitted this might be poor policy but that is what the legislature wanted.³⁰ As interpreted in the FEIR the standards do not meet the current definition of credible science in the Fish and Game Code.³¹

The courts usually apply specific provisions versus the general language and grand picture painted in the purposes of an act. This is because it is not uncommon that the legislature puts in something for everyone in the purposes and over promises the scope of an act. An analysis needs to begin with the purposes of the Act and in some cases the courts have given broad latitude to general purposes laid out in the beginning of any act.

The legislation defines the problem to be solved by the legislation is that “California’s marine protect areas (MPAs) were established on a piecemeal basis rather than according to scientific guidelines”³² This phraseology is essentially a scientific concept. This is followed by a more explicit advantage of reserves is to “provide a reference point against which scientists can measure changes elsewhere in the marine environment.”

²⁹ U.S. Supreme Court King v. Burwell June 25, 2015.

³⁰ I can only opine on a thing’s legality, on its wisdom. Fish and Game Legal Department November 17, 2014, E-mail to Corbett. Phone conversations Corbett and the Fish and Wildlife legal department @ November early November 2015.

³¹ Fish and Game Code definitions Credible Science. This was admitted but held to not matter as the standards passed after the MLPA and the MLPA had its own lower science standards. The Fish and Game Code credible science standard requires up to date and most relevant data be used, peer review and inclusiveness. The author of the legislation Jarod Huffman believes it should be given a broad interpretation. In any case the MLPA science definition clearly does not comply with the credible science definition of Section 33 of the Fish and Game Code.

³² MLPA Section 2851

The Marine Life Protection Act is a “science-based, and even science driven statute.”³³ The California Department of Fish and Wildlife describes the MLPA process as a “science based” effort.³⁴ Statutory interpretation should be the language of the statute itself and depends on the context of that language and the design of the whole statute.³⁵ The goal is to ascertain the intent of the legislation so as to effectuate the purpose of the law.³⁶ One must examine the words of the statute for their ordinary meaning and viewing them in their statutory context, because the statutory language is usually the most reliable indicator of Legislative intent.³⁷ In the MLPA the legislature defines the problem to be solved by the legislation is that the existing California marine reserve system as being piecemeal and that there is a need to establish a scientifically based comprehensive reserve system.³⁸ This defined problem can only be solved by applying high science standards not by lowering them. The legislature further declared that a scientific use of the reserves is to provide a “reference point against which scientists can measure changes elsewhere.”³⁹ The Act then sets up a legislatively created scientific public body called the master team.⁴⁰ The act requires scientific experts be appointed to the master plan team.⁴¹ The purpose of the master team is to advise the Blue Ribbon Task Force and Stakeholder groups of science in the development of a Master plan. The master plan team name was changed to become the North Group SAT.⁴² The act extensively details science requirements that SATs in all regions are to utilize. For example, the most up to date and relevant scientific information must be used.⁴³ There are two provisions directly referencing the requirement to use best readily available science.⁴⁴ The Act requires scientific independent peer review of the model used for selecting reserves. The act provides for a review of the history of fisheries and other resources. There are provisions to include local citizen input. Seven of the fifteen sections of the act specifically refer to science or establish science standards. A

³³ Harty et. Al. Lessons Learned August 17, 2006 pp 38.

³⁴ Marine Protected Areas, California Department of Fish and Wildlife general description, website <http://oceanspaces.org/priorities/marine-protected-areas?gclid=C,,,>

³⁵ City of Santa Monica v. Gonzalez (2008) 43 Cal. 4th 905, 919. Brower v. Evans, 257 F.3d 1058, citing Group Life & Health Ins. Co. v. Royal Drug Co., 440 U.S. 1058, citing Group Life Ins. Co. v. Royal Drug Co., 440 U.S. 205, 210, 59 L. Ed. 2d 261, 99 S.Ct. 1067 (1979) and Holway v. United States, 526 U.S. 1, 7, 153 L.Ed.2d 1, 119 S. Ct. 966 (1999) P

³⁶ People v. Jefferson (21 Cal 4th 86, 94, (86 Cal.Rptr. 2d 893, 980, 980 P.2d 441).

³⁷ City of Santa Monica v. Gonzalez (2008) 43 Cal. 4th 905, 919). In re Reeves (2005) 35 Cal.4th 765, 771, fn 9, People v. Lawrence (2000) 24 Cal.4th 219, 230, (99 Cal Rptr. 2d 570, 6 P.3d 228)

³⁸ Marine Life Protection Act (MLPA) Findings and Declarations 2851 (a).

³⁹ MLPA, IBID., 2851 (f), 2851 (h) (h) (3), 2851 (h) (5)..”To ensure that the California’s MPAs have clearly...based on sound scientific guidelines.”

⁴⁰ MLPA 2855 (3) (b) Master team to have 5-7 scientists. Appoint sea grant advisers 2855 (3) (c). 2855 (b) (1) ...take full advantage of scientific expertise. 2855 (c) (5) authorized to engage other scientists. 2855 (c) (4) consult with Pacific Marine Fisheries Service, U.S. Geologic service and sea grant researchers.

⁴¹ MLPA 2855

⁴² The master team was renamed to the Science Advisory Team. Ibid., Report on Lessons Learned Marine Life Protection Initiative, Harty, DeWitt August 17, 2006) p, 39. See also Ibid., Jan Minsuk Ph.D. p. 114 who gives the background on a SAT reorganization increasing the size the membership to better have the SAT perceived as as neutral and objective body in order to improve credibility. Minsuk was quoting Fox et al. 2013; Gleason et al. 2010, Saarman et al. 2013.

⁴³ MLPA 2855 (c) “...to ensure that the guidelines reflect the most up to date science.

⁴⁴ MLPA 2855 (a) (1) “The department and team shall use the best readily available scientific information. 2856 (a) (1) “The department and team shall use the best readily available scientific information in preparing the master plan...”

clear and overwhelming purpose of the Marine Life Protection Act was to apply high science standards. It is hard to imagine how a legislature could more clearly and comprehensively require a high level of science than the comprehensive approach of the MLPA.⁴⁵ The State of California has promoted MLPA as being “world class” science. The clear intent is to have a high quality of science drive the process. This interpretation is universally accepted except in the Final EIR Master Response Number three for the North Coast SAT. It is fundamental tenet of statutory construction that the Court must give the statute a reasonable construction conforming to the legislation.⁴⁶

The first impression is the sheer number of specific legislative provisions that are proposed to be over-ridden by the word readily. This makes it unlikely that a court would void all of them based upon such a general and vague word as “readily.” The basic structure of the Act is to ensure that science is prominent in the development of the Master Plan by having the Master Plan Team consist of scientists. Independent peer review is required in two separate provisions, relevant science in one, best readily available science two times, most up to date science,⁴⁷ provides for scientific research in otherwise no take marine reserves and requires that scientific programs for follow up adaptive management be developed. It hard to imagine a more scientifically orientated detailed science standards in a legislative act. The basic structure is a scientific one and the stated purpose for the act was to rectify the lack of science in California marine reserves.

Reasonable alternative definitions of the word “readily” that don’t require rewriting the statute exist. A clear an obvious alternative purpose of the word “readily” in “best readily available science” is the provision was designed to restrict arguments against delaying the MLPA process until future scientific research is completed.⁴⁸ This is consistent with the experience in other fishery regulatory proceedings where it was often argued by the public and some fishing interests that the lack of data was the basis of requesting regulatory delays until more data can be collected. This proposed interpretation can be harmonized with the legislative purpose, all specific statutory science provisions of the MLPA, and the ordinary meaning of the statutory language. It is consistent with BAS experiences in other statutes. Clearly, this is a superior interpretation that is consistent with court statutory construction precepts.

There is no justification to a complete rewriting of the entire act based upon the word “readily” in the phrase best readily available science. There is no legislative purpose or structural mandate in the Marine Life Protection Act to require low science standards. To the contrary the act requires high science standards. The position of the FEIR is not legally tenable.

⁴⁵ In re Reeves (2005) 35 Cal.4th 765, 771, fn. 9, and cases cited. It is a fundamental tenet of statutory construction that the Court must give the statute a reasonable construction conforming to the legislative intent.”

⁴⁶ Ibid., Cited approvingly by Gurney v. California Department of Fish and Game et al., Superior Court of Mendocino County, #scuk cvg-10-57448; June 26, 2012 the Initiative and North Coast stakeholders group. Minute Opinion, p. 4.

⁴⁷ MLPA 2855 © to ensure the guidelines reflect the most up to date science.

⁴⁸ FEIR specifically noted that requests for delays for more information were improperly raised.

Relevant and Current Scientific Information. The FEIR in rejecting the need to use relevant and up to date information not only contradicts the MLPA it runs counter to the logic of scientific and legal reasoning. There is no known logical construct that can function without the use of the most relevant and up to date data available. The core of the scientific method requires comparing (updating) the hypothesis with the experimental data to verify or not the prediction. To legally exclude the need to review such information is inconsistent with all known scientific and legal approaches. The approach constitutes a serious erosion of due process of law, (is the proceeding fair to interest groups and members of the public), principles. The proposed interpretation of “readily” in BRAS is contrary to the specifics and general scientific principles of the MLPA.

The FEIR legal opinion lowers the MLPA science requirements to be the lowest standards in recent California history and places the required science quality below all other statutes that use the Best Available Science Standard.⁴⁹ Until reversed on February 22, 2015 Fish and Wildlife maintained the FEIR legal opinion general response 3 justified the SAT not having to review the most relevant and updated information. This was true even if that information was based upon peer reviewed published science articles in scientifically reputable journals. The required independent peer review charge given to the SAT was changed to being discretionary peer review. According to the FEIR The SAT had the discretionary right to refuse access to the agenda and the submittal of written, peer reviewed, published scientific reports since the inclusiveness standards of the National Science Foundation Guidelines had been rejected. Anecdotal evidence including all fish catch data collected by the California Department of Fish and Wildlife, the Tribes, the federal government, and fishermen did not need to be acknowledged, considered, or reviewed. The admission that the FEIR legal opinion was wrong came from a Fish and Wildlife and Ocean Protection Council joint letter of retraction of February 22, 2015 retracted the Final FEIR Master Response #3 was dated February 22, 2015 approximately four years later. The letter was addressed to Tribal Chairman Thomas P. O’Rourke Sr., Yurok Tribe. signed by Catherine Khulman, Deputy Secretary of the Department of Oceans and Coastal Policy, California Natural Resources Agency and Craig Shuman, Regional Manager, Marine Region, California Department of Fish and Wildlife⁵⁰

The Marine Life Protection Act requires the use of “best readily available science” (Fish and

Game Code Section 2855(a)). Master Response 3 in the FEIR interprets this term

⁴⁹ In rejecting the Best Available Standard (BAS) as setting too high a standard the MLPA automatically has a lower science standard than acts using the BAS standard. Magnuson Stevens Fisheries Management Act, the U.S. Marine Mammals Act, the Federal Endangered Species Act, the Clean Water Act, the State of Washington Planning Act, California Endangered Species Act and the California Marine Life Management Act.

⁵⁰ February 23, 2016 letter cc to Fish and Wildlife Director Charles Bonham, John Laird Secretary California Natural Resources Agency, Thomas Gibson, Deputy Secretary and Chief Counsel among others.

*to emphasize timeliness over certainty or perfection. However it is not the position of the Department of Fish and Wildlife (Department) or California Natural Resources Agency (Agency) that Master Response 3' emphasis on timeliness over certainty was intended to limit inclusiveness or the ability of interested entities—including Native American tribes—to contribute scientific information. Further, neither the Department Nor the Agency now interprets the language in Master Response 3 to in any way actually preclude the ability of the Yurok Tribe, or other interested parties from presenting analytical science under the statutory mandate of best readily available science.....We recognize the Yurok Tribe's long history of scientific expertise and look forward to working collaboratively with the Tribe into the future on marine resource management issues.*⁵¹

Inclusiveness vs. Anecdotal Exclusions

The prior discussion of the rejection of data was from the standpoint of the public meeting laws of the State of California and the Tribal perspective of being denied the right to present. The anecdotal analysis of this section will be covering the policy, scientific method, and legal analysis of such data rejections by the SAT/MPT. The SAT used the legal discretion described in the FEIR to reject anecdotal data so broadly that ultimately it lacked credibility. The vast majority of the minimum list of 317 documents rejected were agency issued reports or independently peer reviewed published documents.

Inclusiveness: The FEIR legal interpretation rejects the inclusiveness provisions of the 2004 National Science Foundation Best Available Science for Marine Fisheries Guidelines.⁵² Those

⁵¹ Ibid., Letter 2-23, 2015 p. 1.

guidelines provide that in exchange for being able to make scientific decisions based on uncertainty that the decision making body must reach out to different points of view. Presumably this also applies to ethnic groups as well as different scientific perspectives.

The goal should be to capture the full range of scientific information
the full range of scientific thought and opinion on the topic at hand.
critiques and alternative point of view should be acknowledged and
addressed openly.

The waiver of the National Science Foundation best available science guidelines provision was used to legally justify the ongoing rejection of Tribal presentations and submittals. Since there was no need to be inclusive there was no need to hear from Native Americans.⁵³ The same logic could apply in the future to fishermen. This view was only corrected in 2015 nearly four years after the completion of the initiative. Up until that time the legal interpretation was the MLPA provided the legal basis to not hear Tribes. A key lesson learned from prior marine planning was the need to involve groups in the process in order to support the final reserve system. The reverse is true that the exclusion of a group creates rejection and lack of support.

The second provision of inclusiveness relates to anecdotal data. As a preface almost all marine resource management legislation provides for the use of agency catch data and the right of fishermen to present fishing logs and other relevant information. This trend towards providing for the use of catch data gathered by fishermen has been ongoing since the 1970's.⁵⁴ Of course, all such data is anecdotal.

The opinion of the National Science Foundation requires a review of anecdotal data:

Anecdotal (experiential, narrative, or local) information should be
acknowledged and evaluated during the process of assembling scientific
information.⁵⁵ When no other information is available, anecdotal

⁵² Harty et al. Lessons Learned 2006

⁵³ Cal Fish and Game legal department November 2014 defining the exclusion of native americans based upon the modification of BAS by the word readily which excluded inclusionary requirements. "Maybe it is not good policy but that is what the legislature intended."

⁵⁴ There is an excellent discussion of this in Sayce et al, "Beyond traditional stakeholder engagement: Public participation roles in California's statewide marine protected area planning process, Ocean and Coastal Management, "Addressing this challenging set of conditions requires flexible and transparent decision-making that embraces local knowledge and a diversity of values" pp 1-2.

⁵⁵The Courts of course require a rationale methodology, timely recording of data and a system designed to produce reliable information. "Improving the Use of the "Best Scientific Information Available" Standard in Fisheries Management. Committee on Defining the Best Scientific Information Available for Fisheries

information may constitute the best information available.⁵⁶

SAT REJECTION OF DATA AS ANECDOTAL violates the law.

There was a fundamentally different view between the SAT and Tribal presenters. The Tribes believed that public participation was allowed on all SAT matters including modeling. This was furthered by the public nature of the SAT and Initiative statements that the public was invited to participate in the science. The Yurok, Karuk, and Hoopa Tribes all had a history of being active participants in the modeling for water flows and other science for fish in the Klamath and Trinity Rivers with State and Federal Agencies. It was not uncommon for water flows to be changed based upon these Tribal scientific presentations. Even though the parties often met in court, there was a comradery amongst the scientists. Native Americans were regularly brought in by the federal family of agencies and modelers to make detailed science based comments. The parties were very familiar with regulatory best available science. Due to the federal trust relationship with Tribes there was no possibility of not being allowed to present on the science.

There was a firm belief amongst the Yurok Tribal policy makers and legal department that good science favored the Tribe versus reliance on a transitory and almost always worse political process. The Tribes would win in court based on science not politics. Be The Yurok Tribe was a leader on ocean warming and the effects on algae blooms. This fervent belief in science by the large natural resource tribes is almost the exact opposite of the Initiative which wanted all Native American matters treated as political policy issues to be channeled into the SG and BRTF.

The SAT may have been informed it was a private body and primarily responsible to answering questions and addressing issues generated by the SG and BRTF. It also appears that SAT members were by and large unfamiliar with the large resource and science based Northwest California Tribes who had significant vestiges of sovereignty. Approaches that would work with smaller and weaker Tribes needed to be scientifically upgraded. The SAT had difficulty understanding the differences between very specific Tribal science requests from the science tribes and the more general political protests from the smaller tribes. Many of the smaller Tribes distrusted science because of historical reasons and the fact that they did not have staffs that could compete. The SAT role on regional and statewide models and an engaged scientific public was poorly defined. The concept of sovereign governments outside of state government who would engage across the board with well based science based programs with the SAT was just not contemplated as a possibility. The SAT tended to have a view there were conservationists and exploiters and viewed the Tribes as exploiters. It is far more complex with Tribes as they both traditionally harvest and also are the responsible for much of the environmental protection of the environment and have a record of protection that is competitive and often more protective than California. By and large, the SAT members especially the eco-system biologists thought of themselves as the protectors.

Best Available Science when used to establish regulations such as marine reserves does not provide an exemption to reject anecdotal information from the science process. While vast quantities of scientific data was used by the SAT/MPT none was allowed for amendments to the

Management, National Research Council, ISBN: 0-309-53347-3, 118 pages, 6X 9. (2004), p. 5. <http://www.nap.edu/catalog/11045.html>.

⁵⁶ Ibid. p 5.

LOP take model assumption. In the Connor case⁵⁷ a wildlife federation filed an action claiming that the sale of oil and gas leases without an EIS violated both the National Environmental Protection Act and the Endangered species Act. Appellees argued that the Fish and Wildlife Service (FWS) failed to prepare biological opinions based on the best data available.. This lack of consideration resulted in the failure to comply with the statutory requirement of a comprehensive biological opinion using the best information available. The Court summarized the ruling by stating.

In light of the ESA requirement that the agencies use the best scientific and commercial data available to insure that protected species are not jeopardized, 16 U.S.C. Section 1536 (a)(2), the FWS cannot ignore available biological information or fail to develop projections⁵⁸ of oil and gas activities... We hold that the FWS violated the ESA by failing to use the best information available to prepare comprehensive biological opinions...⁵⁹

Best available science is a term of legal art and the courts apply cases even though from different statutes which have the same phrase best available science. . It is not uncommon to have additional words added to the phrase between the different statutes but that has not stopped the courts from treating them as the same as BAS. The SAT seemed unaware of legal BAS requirements in general and in particular the requirement to consider anecdotal information. Many on the SAT were of the opinion they were the scientists and best available science was what they said it was under procedures they deemed appropriate. The Courts simply do not agree.⁶⁰ The additional concept of the SAT having the right to censure or prohibit scientific presentations they did not like is simply inconsistent with regulatory BAS and basic scientific principles. The SAT consistently considered the same science types and in fact sometimes the same information used for other science purposes which then became anecdotal when considered for application to the LOP In Tribal presentations.⁶¹ In addition the information to be presented by the Tribe covered the newest updated and most relevant information as well as a review of prior literature submitted to the SAT/MPT. The overwhelming pattern was the SAT simply refused to accept presentations challenging the LOP model and attempts to present science from Native Americans.⁶²

⁵⁷ Connor v. Burford, 848 F.2d 1441 (9th Cir. 1988).

⁵⁸ The SAT never publically or in writing entered any written materials in the record about the reasons for changing the take assumption

⁵⁹ Connor v. Burford 48 F.2d 144` (9th Cir. 1988) p. 1454

⁶⁰ Ferry County v. Concerned Friends of Ferry County, 155 Wh 2d 824, 12 P.3d 102, 2005

⁶¹ The MLPA act specifically directed that the Team address "interested parties", "commercial and recreation fishermen", "the history of fishing effort," "shall take in account relevant information from local communities", "the advice, assistance, and involvement of participants in the various fisheries", "practical information in the relevant history of fishing" MLPA Sections 2855 2853, 2856,2857. This exclusion was not legislatively based and may well have been inconsistent with the MLPA legislative advisement to use local and catch information.

⁶²Specifically anthropological reports on take were denied in addition to model assumption materials. Fishermen also encountered difficulties although not at the same scale. " One of the most deep-seated issues that has been repeatedly been addressed by our constituents, and has yet to be effectively addressed by the MLPA process , involves the disconnect between the formally recognized (and largely externally-based) Science Advisory Team and the experiential knowledge based held by coastal residents, especially by our more senior residents. These experts

. As noted previously very high officials for the three agencies involved Fish and Wildlife, Ocean Protection Council, and Fish and Wildlife Commission have all confirmed there was a “cram through” “rammed through” “a directive that measures be taken” (referring to Native Americans and Science) from very high places.⁶³ An obvious motivation of the SAT was to protect models from scientific scrutiny. This has been confirmed by the SAT and initiative implementation process. These policies or factors would explain the perfunctory rejection of Tribal Ph.D. marine scientists and contractors (3 biology degrees including a professor emeritus who had studied the north coast marine environment since 1976), (2) modelers, (2) anthropologists and (1) chemist and written reports they prepared on behalf of the Tribes. In addition there were qualified speakers with Masters Degrees in marine oceanography and fisheries. None of the rejections ever involved reviewing the qualifications of the presenters, their marine science work or reading the data proposed to be submitted. Stacks of studies were rejected as anecdotal in short thirty second conversations with SAT staff. There was the sudden cancellation of agreed to Native American presentations before the SAT. The directive to finish up or ram it through is probably a key explanation of what happened. There is substantial reason to believe the SAT leadership was aware of the staff denials.

Why doesn't the story end there? The basic reasons that require further analysis are that all the rejections of the proposed science presentations were based upon scientific reasons, not policy or political reasons. Science panel leaders have publicized that their science was world class and is a model for bottom up science including the LOP.⁶⁴ While the bottom up claim may be true of the other SAT regions it is simply false concerning the North Group review of the LOP and the denial of Native Americans right to present. The North Group SAT/MPT also distinguished itself in making significant changes to the LOP statewide model assumptions.⁶⁵ There was absolute resistance to allowing testimony on the assumption changes which was the thrust of Native American science testimony. The result is these assumption changes were never vetted. The failure to consider Native American amendments to the assumptions has come back to haunt the SAT as a close examination of the LOP model shows it is fatally defective under BAS standards. This will be discussed later.

Some initiative leaders continue to this day to defend the SAT action of denial by ongoing criticism of Tribal science and scientists even though they have never at any time over the years taken the time to review the curriculum vitae of the scientists or review their marine research work nor read the materials requested to be considered.

There is an important precedent for future fishermen and Native Americans to present catch data a right dating back to the 19th century in marine matters and for Native American traditional ecological knowledge to be introduced.

Since the 1970s, requirements have been embedded in virtually all U.S.

include conservationists and educators who have been actively involved in resource and species conservation issues for decades; multi-generational commercial and recreation fishermen...Seaweed Stewardship Alliance, and tribal...representatives. Letter from Mayor Doug Hammerstrom on behalf of the City of Fort Bragg City Council to Honorable Cindy Gustafson, Cahir, MLPA Blue Ribbon Task Force, May 10, 2010.

⁶³ Names will be released after the individuals retire from State government.

⁶⁴ Saaraman, E., et al., The role of science in supporting marine protected area network planning and design in California, *Ocean and Coastal Management* 2013) (Impact Factor.1.77).03/2013.74 pp 45-66.

⁶⁵ SAT February 11, 2015 meeting.

Environmental legislation...to ensure the public's involvement and full access to policy information.⁶⁶

It should be made very clear since many respond to the Tribal science request by **LIMITING THE PRESENTATION TO TRADITIONAL ECOLOGICAL KNOWLEDGE**. What was turned down by the SAT was Native American presentations of analytical science, marine surveys, and model assumptions.⁶⁷ A contrary strategy for the initiative is to admit an error was made and it won't happen again. This would have allowed Native American governments to move on years ago.

One SAT justification is that the LOP is a statewide model and so marine studies on a lessor scale are therefore anecdotal. Since no studies exist on the level of the 1,100 miles of the California coast line this approach of the SAT essentially excludes all marine science data. What is being requested is a review of the underlying model assumptions not the regional applications of the model. The first problem with this approach is that it does not provide falsifiability in that there is no marine scientific data available or possible to prove or disapprove the assumption. It then is not a scientific conclusion but a belief.⁶⁸ Best Available Science provides making decisions in the face of uncertainty by use of anecdotal data in such circumstances when it is the best that can be found. This is especially true as many of the rejected analytical studies are high quality peer reviewed published articles by scientific leaders in marine science, i.e., the very definition of best available science. No other SAT LOP took this approach. The Courts in evaluating the credibility of a model regularly require that model predictions be compared to what data exists and reject models that are contrary to all known data. The argument totally fails when one realizes the scale is not really statewide. In that it predicts the take within a relatively small scale area of a particular proposed marine reserve and or between reserves. In addition none of the data supported such high harvesting levels. The SAT often talked past the point of the proposed testimony as merely being population studies subject to change instead a review of the plausibility of model assumptions. The Native American objections were not to the statewide take assumption used in all other regions but the significant changes the North Coast SAT made to those assumptions. This SAT/MPT approach was inconsistent with all other MLPA SATs who heard catch and take data.⁶⁹

The anecdotal rejections can be characterized by the quick dismissal of proposed submittals, the large number and scope of denials, and the quality of the science rejected. Throughout the process private and publically oral questions during SAT meetings, e-mails, the SAT Tribal Subcommittee and by letters to the Initiative, SAT, and BRTF the Tribe continued to ask in the face of anecdotal rejections what analytical data could be submitted.

⁶⁶ Sayce, K., Beyond traditional stakeholder engagement: Public participation roles in California's statewide marine protected area planning process, *Ocean and Coastal Management* (2012) 74, 1-23, p 1, or <http://dx.doi.org/10.1016/j.ocecoaman.2012.06.012>.

⁶⁷ E-mail Corbett to Wertz August 6, 2010.

⁶⁸ Tribal concerns about falsifiability only received one response at the last SAT meeting after public comment raising the issue. Ironically, it is clear the speaker was referring to the prior take LOP assumption and not the changed one made by the SAT. The flaw was further reaffirmed by the April 10, 2012 letter from Fish and Wildlife to the Yurok Legal Counsel stating that even if there was data from every mussel bed in the entire North Coast region it probably would not be allowed to address the model assumption.

⁶⁹ Saraaman, et. al., 2012 The article specifically noted that the MLPA science considered such factors in the North Central Coast Region. (check the region)

After being turned down, the Tribe asked many times what types of scientific data could be presented regarding LOP assumptions and the recently amended take assumptions in particular.⁷⁰ Many other requests were made and not recorded. A sampling is provided below:

*The LOP as now constructed is completely safe from any data driven quantifiable science process. We have repetitively asked and have yet to receive an answer for a science pathway to review the LOP.*⁷¹

Yurok Agenda Request to Indian Sub-committee:

*What science can the Yurok Tribe present on the LOP?*⁷²

Yurok E-mail to SAT member Astrid Scholz:

*One of the reasons for the tension at the last meeting is the Yurok tribe was denied getting on the agenda for Western Science issues well before the meeting.*⁷³

Yurok Testimony:

*So now there's more harvested in one day under this formula that was put on the Tribe than in the entire commercial catch for the year. It's clearly impossible and so one of our concerns would be an ongoing concern with the LOP is to get a system where it's possible to introduce scientific data.*⁷⁴

Yurok Second Agenda request by e-mail to Satie Airame for the Indian Sub-committee:

Should presumptions be subject to a Plausibility test, if not plausible to survey data results, and if contrary to the survey data, to a review of quantifiable and identifiable alternative explanations?

*Discussion of what data driven scientific methodologies are available to Native Peoples to establish resource levels now and in the future.*⁷⁵

Yurok Written Letter to Wiseman:

⁷⁰ From 2008 the take assumption was entirely different. It was not changed to the take assumption of concern to the Tribe until the February 11, 2010 SAT meeting.

⁷¹ Yurok letter to the SAT (January 12, 2011).

⁷² Yurok hand-written note, hand delivered to Satie Airame (June 2010).

⁷³ Yurok e-mail to Astrid Schultz (July 13, 2010).

⁷⁴ Public Comment SAT January 13, 2011. Transcripts available.

⁷⁵ Agenda Question for the Tribal subcommittee. The notice of the SAT Tribal work group from Satie Airame 10-13-10 to the Yurok Tribe specifically requested suggestions for additional discussion topics besides the SAT Native American survey. The Tribe sent a request for a discussion of "data driven scientific methodologies" and "a plausibility test" required by the courts in an e-mail from Corbett to Satie Airame, October 13, 2010, 9:53 a.m. An e-mail from Satie Airame sent October 13, 2010 11:33 am confirmed receipt of the e-mail and stated the proposed agenda item would be discussed with the SAT working group members. Subcommittee members were Steven Morgan, Kevin Flemming, David Hankin, Astrid Scholtz and Karina Nielson. However, Yurok requests were not put on the agenda and were never discussed. E-mail from Corbett to Satie Airame 11-6-10 requested the Tribal Subcommittee minutes and requested confirmation that the denied Yurok agenda requests would be presented to the SAT. The Tribe offered to pay costs of such notice to the SAT members. No response was made to this e-mail.

*Whenever a model has massive predictability problems as the LOP Model, it suggests that a reasoned scientific examination of the model's shortcoming is warranted.*⁷⁶

Yurok Written Letter to the SAT

*The LOP ratings are different than past history, prior scientific findings and or risk assessments of other knowledgeable marine scientists and other marine sanctuaries. That so many others have been wrong is unlikely. This suggests that a careful review needs to be made of the LOP assumptions and data driven scientific approaches be adopted. The Yurok Tribe regrets it was not allowed to present such data to the SAT.*⁷⁷

E-mail to SAT member Steve Wertz

*While we understand the importance of recognizing and taking into account subsistence harvesting, the Yurok Tribe also desires full participation at the science panel level on science panel issues and is disappointed at the lack of access.*⁷⁸

E-mail Corbett to Satie Airame

*The Yurok Tribe is also puzzled that the format which we proposed earlier of presenting a Tribal paper to the SAT as an agenda item changed without notice, to no Tribal input. At no time did Megan and I receive a communication that our question was to be put on the agenda and that the process was going forward without the presentation of our paper.*⁷⁹

Yurok Public Comment to the SAT

*We cannot find, and we've asked the question and we've never received an answer, what quantifiable scientific data could be introduced to show the model is wrong? And there is none...It (referring to the LOP) has nothing to do with science. Science requires the ability to apply quantifiable data to test the hypotheses. It doesn't exist.*⁸⁰

In addition to examples above, there were additional e-mails requests, written requests, and oral requests made by the Tribe. All requests were denied or went unanswered.

⁷⁶ Yurok letter to Ken Wiseman, Executive Director of the Initiative (August 27, 2010).

⁷⁷ Yurok letter to the SAT (January 12, 2011).

⁷⁸ John Corbett email to SAT member Steve Wertz (August 6, 2010). Steve Wertz is the Senior Marine Research Scientist for the California Department of Fish and Wildlife.

⁷⁹ John Corbett email to Satie Airame (August 11, 2010).

⁸⁰ Yurok public comment to the SAT January 13, 2011 Meeting. In combination the non-answers to these questions does not create the transparent process so often cited by the SAT and Initiative about the MLPA process. Ibid, Jan Minsuk p196.

No answer was ever given only the ongoing rejection of the data as anecdotal. As an approach the Yurok Tribe began to systematically ask to use each type of scientific data that exists.⁸¹ This was used to both find what would be allowed and to document the vast size and scope of the denials. No data could be found that was allowed to be presented. There was no guidance from the SAT or SAT staff to how the Tribe could participate.

One of the more extreme denials of the submittal of anecdotal data involved the proposed use of satellite pictures for a power point presentation by the Yurok Tribe. The satellite photo at the scale of the entire state of California showing the difference in sediment levels and visibility between Northern and Southern California. SAT staff answered that would be anecdotal. The Yurok Tribe indicated, to no effect that the illustrative example was backed by published peer reviewed studies on North coast river sediments and the north/south effects of the Davidson current which had the sediments hug the coast.⁸² The Yurok Tribe inquired what level of review would be required. After great hesitancy by SAT staff said reviewing photos each and every day for three years. The Tribe indicated the huge expense of buying the satellite photos and the process could cost \$12,000 to \$40,000. SAT staff questioned whether the study could be completed on time before SAT proceedings concluded. The Yurok Tribe indicated it could. SAT staff pointed out without the exact height of the satellite at the time of photographs being taken they would be of “dubious” scientific value. Then the Yurok Tribe asked the question whether they would be guaranteed the right to use the photographs if the three years of data was completed. The question was asked because in other circumstances studies had been completed and not allowed to be introduced. The answer was no presentation rights could be guaranteed..

⁸¹ Data that was rejected without review included: Pacific Coast Fisheries Management Commission fish models and supporting documents, all historical catch data, marine fisheries statistical unit audit of commercial fishery landing receipts, Aquaculture and Bay Management Project monitoring and assessment data, Invertebrate Management Project data, State Finfish Management Project data, all surveys of State and International marine protected areas, Recreational Fishing Data Project, Fishery Independent ROV Assessment Project data, SCUBA Assessment Project data, Research Vessel Operations Project data, PCFMC Ground Fish Data Team, Marine Fisheries Statistical Unit data, Ocean Salmon Project data, Coastal Pelagic Species/Highly Migratory Species Project analysis of Fish and Game license and license survey data, showing the largest category of license holders were exclusively fresh water fisheries, data showing impossible travel distances for license holders, the need for multi tree model response over the binary choice of the SAT model for complex natural resources modeling, Native Americans as part of the base line, Native American take reviews including anthropological studies specially prepared for the SAT by qualified PhDs in Anthropology, the entire 591 pages of California’s Living Marine Resources: A status Report prepared and published by the California Department of Fish and Game, all scientific marine surveys and science papers of the Redwood National park for marine resources for thirty plus years, published peer reviewed studies of existing California reserves, peer reviewed studies of International reserves, any and all papers prepared by Tribal scientists or work contracted by the Yurok Tribe of scientists including many PhD scientists on behalf of the Yurok Tribe including a study showing an inverse correlation between the LOP take assumption and Fish and Game Commission wildlife decisions, suggestions favoring a multi-choice LOP decision making tree rather than the simple binary LOP evaluation system, a review and different conclusion of the mussel studies used by the SAT, engineering studies and geotechnical reports by Cal Trans and the National Highway administration showing both short and long term road access restrictions contrary to the LOP assumptions, U.S.G.S. topographical and soils maps, California Coastal Commission reports, sediment and turbidity reports for the Eel, Mad and Klamath Rivers.

⁸² For example: Bertain, W and Ritter, J., . Sediment Transport and Turbidity in the Eel River Basin, California, 1986 U.S. Geological Survey water supply paper 1986 prepared in cooperation with the Department of Water Resources. Others were submitted as well. (They were all denied for submittal) Dr. Largier, a great scientists had used such a picture of the sediment flowing out of Northcoast Rivers and hugging the coast. This in fact was the origin of the idea to use the Satellite picture came from the Dr. Largier presentation to the SAT. The California scale of the photograph was an attempt to respond to the criticism that previously proposed data was of too small a scale and hence was anecdotal.

A letter was sent noting for the record the Yurok Tribe would not be conducting the study without such a reassurance.⁸³ This shows that even preparing a power point with an illustrative picture could prove a more costly, time consuming and challenging to public participants than one might expect. A cursory review would show SAT scientists regularly presented illustrative photographs in power points which did not meet the standards required of the Yurok Tribe. This is an excessively high burden on effective public participation and takes anecdotal objections to a higher level.

The Smith study⁸⁴ reviewed an existing California reserve with twenty three comparison sites along the California Coast including marine reserves, U.C. reserves, State Park or Beach reserves, and State Marine Reserve Conservation areas. A majority of these sites were established in the 1970's and thus been protected for several decades. The twenty-three sites spanned eleven California counties. The study comparison sites included those located in Humboldt County⁸⁵ within the North Group SAT area. The results of the Smith Study are consistent with other studies within Redwood National Park. The study revealed no consistent pattern suggesting that California no-take regulatory reserves may have limited effectiveness in protecting mussel communities. Despite a review of vast portions of the California coast the study was immediately dismissed as anecdotal. This appears to be an excessive application of anecdotal rejection.

The Ruis⁸⁶ study covered 160 km of the South African Coast. The study was to compare various areas subject to intense indigenous peoples harvest and remote areas. No statistical basis could be found on the mussel populations. The large area and comparison of reserves with indigenous harvesting was clearly high quality relevant information. The summary anecdotal determination seems to be misplaced.

The Yurok Tribe asked SAT staff and members whether the future marine survey and adaptive management studies to be developed by the Marine Monitoring Enterprise (MME) could be used to review the changes made by the North Group SAT to the LOP. Individual SAT members

⁸³ Yurok Tribe letter to Initiative, 10-8-2010. "The Yurok Tribe searched for Google satellite pictures of the California shoreline. The pictures clearly showed clearly showed that you could actually see the bottom of the ocean in San Diego and the waters were cloudy in the North Coast. We discussed an approach with Satie Aramie. She pointed out that without details as to the height of the photo information about the camera and film, such photos would be of dubious scientific value. She also pointed out that a single picture or even a group of pictures would not be enough to establish a significant year around pattern. The Tribe was worried about SAT disagreement of probability theory, (in other words even if three years of photographs were taken would the probability of accuracy be sufficient for the SAT to accept the pictures after all the work was completed.) The Tribe considered getting hundreds of satellite photographs over the years and conducting a full fledge survey pictures over a three year period of time. (the three years had been suggested by Satie Arame.) (There is also an e-mail to Satie Airame which is proving difficult to locate on the same subject.. It is believed that the E-mail must be electronically misfiled somewhere and will turn up. The e-mail pointed out that the reason the Yurok Tribe was abandoning the use of the satellite photo for the power point was because it cost too much money if there was no guarantee it could even be presented to the SAT. The previously cited letter implicitly makes the point.

⁸⁴ Smith, J., Fong, P., Ambrose, RF, The Impacts of Human Visitation on Mussel Bed Communities Along the California Coast: Are Regulatory Marine Reserves Effective in Protecting These Communities. Environmental Management (2008) 41:599-612, DOI 10.1007/s00267-007-9066-2.

⁸⁵ Ironically, the Smith Study was using the North Coast area as an example for minimal to no harvesting.

⁸⁶ Ruis, M., S. Kachler, and C.D. McQuaid. 2006."The relationship between human exploitation pressures and the condition of mussel populations along the south coast of South Africa. South African Journal of Science, 102:130-136. (http://eprints.ru.ac.za/357/1/sajs_Kaehler_relationship_between_human_exploitation.pdf).

expressed the belief that all such studies would be considered anecdotal and as a consequence could not be used to review the model. The FEIR reflects this view with the following sentence of qualification:

*The objective of adaptive management under the MLPA is not to reduce uncertainty through increased scientific rigor, but rather to produce practical information that guides management decisions.*⁸⁷

Science to improve the scientific vigor in the above statement would include the models which are then made clearly off limits. The California Department of Fish and Wildlife has restated this position.

For example even if detailed historical records of take (ie., how many mussels were taken from each cove each year along the whole North Coast) was available to the SAT, it is still uncertain how this may change in the future (e.g. establishment of of a new access⁸⁸ point.)⁸⁹

The Marine Monitoring Enterprise (MME), a subcommittee of the Ocean Science Trust, has become the chief implementing agency for science studies of MLPA reserves. In contrast to the SAT, Traditional Ecological Knowledge (TEK) science MLPA grants have been granted. The MLPA process has been willing for some time to allow traditional Native American harvesting to be presented. What they have prohibited is Native American analytical science modeling, and marine science policy participation by Tribes. The Yurok Tribe started completed TEK studies five to seven years ago. A good number of Tribes have sought and received TEK grants from the MME for their initial studies. There have been some grants of co-partnered analytical science but with significant restraints. Conversations with the MME have made it clear that their mission is to support the MPA reserve system as designated⁹⁰ and therefore will not fund research that can challenge the location of reserves or the models that were used for the designation of reserves. The MLPA SAT and Department of Fish and Wildlife maintained for years after the completion of the MLPA that all the MME funded research on the MPAs of the North Coast will be considered anecdotal to the LOP model assumptions. That means that it cannot be introduced as data to refute the LOP model assumptions. By letter, the California

⁸⁷ FEIR MLPA North Coast Study Region, General Response 3, pp 3-7-8, Project No. 11.002,

⁸⁸ The Yurok Tribe was prepared to call Cal Trans witnesses that the current level of coastal access cannot be maintained for North Coast Roads. While the SAT deliberations were ongoing Coastal Drive was shut for safety reasons by the National Park Service based upon a Federal National Highway Report and the California Coastal Commission despite a strong record of preserving coastal access approved the road closure. Alternative inland routes are being considered because highway 101 is not considered sustainable as currently situated along the coast.

⁸⁹ April 10, 2012 Information Regarding Peer Review and Assumptions of the Levels of Protection used by the CA Marine Life Protection Act, Master Plan, Science Advisory Team, Prepared by the Department of Fish, Requested by legal counsel for the Yurok Tribe. April 10, 2012.

⁹⁰ By comparison, the MLPA legislation states a broader goal for the science: "A process for the establishment, modification, or abolishment of existing MPAs or new MPAs established pursuant to this Program." Cal. Fish and Game Code § 2853 (c)(5).

Department of Fish and Wildlife informed the Tribe that even if we had data on every mussel bed in the North Coast region for many years, it is unclear if it could be used to refute the LOP assumptions.⁹¹ No study exists or will exist that is as comprehensive as proposed by Fish and Wildlife. Even if such a study existed of the whole coast it remains unclear whether it could even be introduced to review the MLPA SAT LOP model assumptions.

This approach of the SAT may have prevented Native American presentations and protected the model in the short term but it comes with a very high long term legal cost. The failure to review the proposed data is of itself grounds for reversal.⁹² The courts generally require a rationale for the rejection of long held past model assumptions such as the take assumption. There was none. The SAT charter states that revisions of guidance such as the LOP “should be based either on new scientific information brought forward by the SAT or differences specific to the North Coast Group.”⁹³ All the old information was rejected as anecdotal and the record does not reflect any new information being introduced. The isolated North Coast specifics would support a lesser take standard than used for Southern California not a much greater use assumption that was adopted. The approach was clearly outside the SAT Charter guidelines. Since according to the SAT there is no type of data that can be used that has not been rejected by the SAT is cut off from using such data in defending the LOP take assumption. The position of the SAT and Department of Fish and Game have pre-excluded the use of the adaptive management surveys and studies. The courts generally want supporting data to support model assumptions. When supporting data is not available the model science needs to evaluate the range of error and facial plausibility. No range of error calculations were ever made. The goal of the Court is to ensure the reliability of the model. SAT decisions leave the sole remaining way to validate the model is to run the take model numbers for facial plausibility.

The amount of time the SAT needed to keep Native Americans from testifying was considerable. A simple alternative solution would have been for the SAT to allow a twenty minute presentation pre-accompanied by a scientific paper that could reasonably be limited to twenty-five pages for interested Tribes on the LOP. The time the SAT saved could have been spent on obtaining an independent peer review. The SAT could have used that process to develop a list of model assumptions and would have benefited from reviewer comments. The worst case for the SAT would have been to go back to the take assumptions used by the statewide LOP model for all the other marine regions. The question remains why the SAT was willing to fight so hard and what was so different about the North Coast Region. The two obvious differences are the remote

⁹¹ Department of Fish and Wildlife letter to Yurok (April 20, 2012). “For example, even if detailed historical records of take (i.e. how many mussels were taken from each cove each year along the whole north coast) was available to the SAT it is still uncertain how this may change in the future (e.g. establishment of a new access point.”

⁹² *Ferry v. Concerned Citizens of Ferry* 155 Wn2d 824, 12 P.3d 102 (2005), *Brower v. Evans* 257 F. 3d 1058, 1071 (9th cir. 2001) “If the agency failed to consider an important aspect of the problem, offers an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a different point of view” the decision will be reversed as contrary to BAS.

⁹³ California Marine Life Protection Act Initiative Charter of the 2009-2011 Master Plan Advisory Team 1-1-09, North Group SAT charter, Charge p. 3.

nature of the area⁹⁴ and the strong intact Native American populations still sustainably harvesting. The effect of the model change was to negate these two factors.

Traditionally marine resource planning provides a robust role to fishermen (includes Tribal members) both as stakeholders and in the provision of scientific information in the form of fishing logs. This dates back as far as the 1800s⁹⁵ Aside from building support and trust from a key constituency there is a practical side to such programs. Done properly voluntary fishing logs immediately recorded when the catch is made, in conjunction with other fisherman, according to recording protocols and in numbers sufficient to constitute statistical validity can constitute high quality information that is used by scientists to check their models and the courts in determining the plausibility of model assumptions.

The participation often builds mutual trust and buy in by both scientists and fishermen. This traditional role reflects the importance of the fishing constituency in marine management. Since Native Americans are fishermen they should presumably have the same rights. Generally, the governmental agencies such as the Pacific Coast Fisheries Management Council⁹⁶ and California Department of Fish and Wildlife have an interest in using as a background to marine science studies the extensive catch data that they have. The whole national if not international trend has been to build cooperative data relationships with fishermen. The rejection of such information for any aspect of marine planning is a very important change in policy. Native American traditional ecological knowledge is equally important.

The MLPA provided strong support for the use of fishermen and department of Fish and Wildlife anecdotal data with provisions specifying their use.

*The Master Plan shall be prepared with the advice, assistance, and involvement of participants in the various fisheries and their representatives.*⁹⁷

*...The Department and team,⁹⁸ in carrying out this chapter, shall take into account relevant information from the local community.*⁹⁹

...The workgroup shall after appropriate consultation with members of the

⁹⁴ There are many coastal areas that are simply so remote and inaccessible they are immune from the take fishing pressures of Southern California. One cannot help but immediately notice the MLPA statute is better suited for urban and quasi urban areas of the southern and middle sections of the state.

⁹⁵“On the most basic level, including additional participants (fishermen) and additional vessels in the research process provides an opportunity to gather a greater quantity of data. In addition, cooperative efforts will help scientists collect and create better quality data.” For an excellent discussion of cooperative scientific relationships between scientists and fisheries see Vellucci, Margreta, Fishing for the Truth: Achieving the “Best Available Science” by Forging a Middle Ground Between Mainstream Scientists and Fishermen, UC Davis Environmental Policy Journal, Spring 2007 31 environs.law.ucdavis.edu/volumes30/2 Vellucci

⁹⁶ “data provided by fishermen is ‘absolutely critical’ to fishery science. Dr. John Hoey, director of the Northeast Fisheries Science Center’s Cooperative Research Program. <http://capeandislands.org/post/cooperative-research-improve-fishery-science-and-relationships..> 9-1-15.

⁹⁷ 2855 (4) MLPA

⁹⁸ Team refers to the MPT which includes the SAT. In court papers in the Gurney case have the State and Initiative argued that this is met by the Stakeholders group whose recommendations were sent to the BRTF and SAT. This is taking into account fisheries information but does not create a mandatory right to present to the science panel on science matters directly.

⁹⁹ 2855 (c) MLPA

*public to determine future actions for implementing actions in the final report.*¹⁰⁰

*...(In reference to the MPT/SAT) shall take into account ...practical information on the marine environment and the relevant history of fishing and other resources use, areas where fishing is currently prohibited.*¹⁰¹

*...The department and **team** shall develop a preferred siting alternative that incorporates information and views provided by people who live in the area*¹⁰² ...

The problem was not a legislatively created one but by the Initiative and SAT. One reason the SAT panel declared so many things anecdotal was because under the procedures established and legal opinions that they were given they could. The FEIR legal opinion held that the SAT was exempted from the inclusionary provisions of the National Science Foundation¹⁰³ guidelines and BAS requirements as well as court cases that required the acknowledgment and analysis of anecdotal information.¹⁰⁴ The SAT and Initiative reserved the right to review questions, paper submittals, and agenda access. The SAT operated in an organizational context of the Initiative that was to provide public participation as they wanted but was specifically designed to provide no actual public rights that could be enforced. The SAT members appear to have had no training or conception that regulatory BAS did not provide an anecdotal exception. Perhaps this is why the SAT consistently portrayed the Tribes as merely trying to show population levels rather than the marine surveys were being used to show the model failed to meet the legal requirements for “facial plausibility.”

The stakeholders group was clearly the Initiatives desired administrative location for fishing and Native American interests and data was the Stakeholders group. For Tribes there was a clear instruction that the Initiative made the decision to handle Tribal interests as being a policy not scientific issue.¹⁰⁵ To convert Tribal testimony to policy required not having the Tribes present scientific data. The SAT did not want the LOP model assumptions challenged. The SAT was under tremendous pressure to finish the process. The SAT was culturally insensitive to Native Americans and to hear Native American analytical science required going outside a comfort level. It is unfortunate that the SAT was given the legal advice that it was discretionary who they had to consider.

¹⁰⁰ 2854 MLPA

¹⁰¹ 2855 (c) (1)

¹⁰² 2857 (a)

¹⁰³

¹⁰⁴ Anecdotal (experimental, narrative or local information should be acknowledged and evaluated during the process of assembling scientific information. The National Science Foundation guidelines were explicit that the procedures took into case law and were to provide a “stronger basis for defending controversial management decisions in **court**. Improving the Use of the “Best Scientific information Available” Standards in Fisheries Marine Management, National Science Foundation, <http://www.nap.edu/catalog/11045.html>, Published by the National Academy of Sciences, 2004 p. 5 Also see Perry

¹⁰⁵ Letter to Initiative from Yurok Tribe pointing out “These are matters of quantitative science that make more sense to submit to the SAT than to the Blue Ribbon Task Force (BRTF). These questions were typed up as questions since the SAT has steadily declined to let us make presentation to the Panel or get on the agenda in any other way. October 8, 2010.

The usual science definition of anecdotal connotes a low quality of science that involves a) information not based on facts or careful study, observations by unscientific observers, casual observations rather than rigorous scientific analysis and information not documented scientifically.¹⁰⁶ The law is primarily concerned with reliability as determined by tests of the model, the range of error, comparisons to past data collected, the acceptance by the broader scientific community, and peer review. The Yurok submittals in each case met the legal tests for reliable information and reflected the highest level of scientific modeling and survey studies published in peer reviewed scientific publications. The Yurok Tribe attempted to introduce a 1977 study of the North Coast by an esteemed marine biologist. The Tribe was told the study was anecdotal¹⁰⁷ because it was one study for a short period of time. The Tribe then introduced follow-up studies of the same intertidal area over a thirty year time span. The SAT still claimed the studies in combination were anecdotal.¹⁰⁸ Another peer-reviewed article studied an existing California marine reserve by comparing mussel beds in eleven counties at thirty sites, including sites within the North Group. The study was summarily dismissed as anecdotal.¹⁰⁹ The Rius study of Marine Reserves in South Africa, which used aerial analysis of nearly a hundred miles of coastline with mussel beds including reserves, areas of low levels of exploitation and areas of intense exploitation for comparison, was also dismissed as anecdotal.¹¹⁰ The study had robust methodology and data comparing different intensities of take on mussels and the placement of reserves, which was clearly relevant to the MLPA mission

¹⁰⁶ Wikipedia quoting definitions from the Cambridge Dictionary, Merriam-Webster and Your Dictionary. Wikipedia <http://dictionary.reference.com/browse/anecdotal> evidence, p 2 in a scientific context.

¹⁰⁷ It is interesting that one of the SAT members applied earlier for a grant to build upon the work of Dr. Boyd and received PISCO funding and funding under MME. Yet, the same study was summarily dismissed as “anecdotal” when the Tribe tried to submit it.

¹⁰⁸ Boyd, M., DeMartini, J., 1977. The intertidal and subtidal biota of Redwood National Park. Unpub. Report submitted by Humboldt State University Foundation in fulfillment of National Park Service Contract # CX8480-4-0665; Boyd, M., DeMartini, J., Pic’l, Greg, Reconnaissance Survey of Redwood National Park Areas of Special Biological Significance; A report to the California Department of Fish and Game and to the California State Water Resources Control Board (January 30, 1981); Cox, McGary, Mulligan, Craig, Marine Resources of Redwood National and State Parks (2004-2005); Borgeld, Crawford, Craig, Morris, David, Anderson, McGary, Ozaki, Assessment of Coastal and Marine Resources and Watershed Conditions at Redwood National and State Parks. (California) Natural Resources Report, 2007/368. Amman, Raimondi, 2008 Long Term Monitoring Protocol for Redwood National and State Park Natural Resources Report NPS/KLMN/NRRR2008; Amman, K.N., P.T. Raimondi, and D. Lohse, 2009. Monitoring of Rocky Intertidal Communities of Redwood National and State Parks of California, NPS/MWR/NRTR 210-001 It should be noted Dr. Raimondi was a member of the SAT. Little Bay Lobster established anecdotal data such as fishing logs were admissible as Best Available Science. Little Bay Lobster co. v. Evans 352 F.3d. 462 (1st Cir. 2003).

¹⁰⁹ Smith, J.R. P. Fong and R.F. Ambrose. 2008. The impacts of human visitation on mussel bed communities along the California coast: are regulatory marine reserves effective in protecting these communities? Environmental Management 41:599612. The study showed less effectiveness of reserves protecting mussels than projected. During a break at a joint meeting between the BRTF and the SG the mike was accidentally left on and SAT members were heard discussing the Santa Barbara study and “we are not going to let that happen again.” This does not appear to be an unbiased scientific conversation.. (Alica McQuillan for the Yurok Tribe clarified that the study being referred to was

¹¹⁰ Rius, M., Kaehler, S., and McQuaid, C., “The relationship between human exploitation pressure and condition Of mussel populations along the south coast of South Africa, South African Journal of Science 102, March/April 2006.

The courts are clear that there needs to be some form of science to prove or disprove a model or the courts cannot consider it scientific information.¹¹¹ In the case of the LOP take assumption, the SAT did not allow any form of peer reviewed marine science to be introduced to refute the non-peer reviewed LOP take assumption. In all other federal and state marine legislation there are provisions for the submission of historical fish catch data, surveys, and statistical analysis from State Fish and Game Departments and fisherman as part of the science process. These submittals are considered to be scientific data.¹¹² Science standards for the California Marine Management Act list such data as essential for agency science deliberations.¹¹³ The SAT denied them for the purpose of reviewing their last minute changes to the Statewide model assumption.

In developing the Habitat and Spacing models, the SAT reviewed marine literature to determine best available science and to check on the rate of error and the predictability of the models. This was not followed for the LOP model maximum take assumption. *See* Exhibit B for hundreds of presentations of scientific and other literature by the Yurok Tribe that were summarily turned down. There was a complete dichotomy or “schizophrenia”¹¹⁴ of information. The SAT considered thousands of scientific documents except in the case of Native Americans and data to be used to bear on plausibility of the LOP assumptions. The SAT regularly encouraged both fisherman and academics to come forth and present data for the SAT to use in LOP reviews and steadily complained that it did not have enough information.¹¹⁵ SAT Co-Chair Dr. Carr stated at the 2009 SAT meeting regarding the LOP: “[t]his is a great opportunity for stakeholder to designate data sets. Anybody familiar with any data for any of these systems should come forward as we are very interested in the data.”¹¹⁶

Dr. Carr again encouraged fisherman to gather up their data and present it to the SAT as part of the LOP review process.¹¹⁷ Despite these persistent requests for more information to fill data gaps the SAT refused to review or consider any of the written submittals from the Yurok Tribe, the Northcoast Tribal Chairmans Association or from other Native American Tribes.¹¹⁸ The

¹¹¹ Daubert, v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579, (1993); *see also* Adelman, David E., “Scientific Activism and Restraint: The Interplay of Statistics, Judgment and Procedure in Environmental Law, Notre Dame Law Review, Volume 79, Issue 2, Article 2, p 525.

¹¹² Fish and Wildlife Service (FWS) was overturned for ignoring available, relevant biological information. Delta Smelt Console Cases v. Salazar, 760 F. Supp. 2d 855. *See also* Connor v. Bufford, 848 F.2d. There is no anecdotal exception under BAS and the failure to consider relevant, up to date, anecdotal information is reversible error.

¹¹³ Weber, Heneman “Guide to California’s Marine Life Management Act”, Dec. 2000, Also Healey, Larson, Science and the MLMA, 12-14-2009, Appendix 1, p. 1.

¹¹⁴ Slang use of the term Schizophrenia

¹¹⁵ February 11, 2010 SAT Meeting discussion. The SAT complained about the lack of anthropological studies of Native American harvesting.

¹¹⁶ Quote from the October 30, 2009 SAT Meeting. The Yurok Tribe could not help notice that fisherman had challenges in getting their voice heard as well.

¹¹⁷ SAT Co-Chair Dr. Carr at February 11, 2010 SAT Meeting. Transcripts pending.

¹¹⁸ Data that was rejected without review included: Pacific Coast Fisheries Management Commission fish models and supporting documents, all historical catch data, marine fisheries statistical unit audit of commercial fishery

rejections were summary in nature without the documents being reviewed. The two stated reasons were data is subject to change and the study is anecdotal. The Tribe was often publically criticized by the SAT as trying to establish the abundance of mussels or other population of species. This allowed the information to be discounted as subject to change. The Yurok Tribe clarified many times that the data was to show the error in the LOP take assumption which projected take in many magnitudes in excess of the total number of species that existed within the proposed reserve or conservation area.

The SAT rejections were vast in scope and excluded all types of science ie. surveys of marine resources, reports on the effectiveness of marine sanctuaries all historical catch and gear data, entire publications of the Department of Fish and Game designed to advise for marine management, and every study of the Redwood National for the last forty years were dismissed without review by the SAT as both subject to change and anecdotal.¹¹⁹ Long after the last SAT meeting, (15 months later), Becky Ota of the California Department of Fish and Game subsequently explained,

“[f]or example, even if detailed historical records of take (i.e. how many mussels were taken from each cove each year along the whole North Coast) was available to the SAT it is still uncertain as this might change in the future.”¹²⁰

The exclusion of these studies showing less success of marine reserves is troubling.

MLPA STATUTORY REQUIREMENTS FOR BEST AVAILABLE SCIENCE AND PEER REVIEW

BAS language in the MLPA statute are legal words of art put in by the State Legislature to have a distinct legal meaning. SAT scientists seemed unaware that their discretion to define BAS and

landing receipts, Aquaculture and Bay Management Project monitoring and assessment data, Invertebrate Management Project data, State Finfish Management Project data, all surveys of State and International marine protected areas, Recreational Fishing Data Project, Fishery Independent ROV Assessment Project data, SCUBA Assessment Project data, Research Vessel Operations Project data, PCFMC Ground Fish Data Team, Marine Fisheries Statistical Unit data, Ocean Salmon Project data, Coastal Pelagic Species/Highly Migratory Species Project analysis of license data, Native American take reviews, anthropological studies specially prepared for the SAT by qualified PhD scientists, the entire 591 pages of California's Living Marine Resources A status Report prepared and published by the California Department of Fish and Game all scientific marine surveys and science papers conducted by Redwood National Park of marine resources for thirty plus years, published peer reviewed studies of existing California reserves, peer reviewed studies of International reserves, any and all Tribal scientists or contracted scientists including many Ph.D. scientists on behalf of the Yurok Tribe. (Exhibit B). The North Coast Tribal Chairman's Association also requested to be heard on behalf of Tribal entities.

¹¹⁹ Boyd, M., DeMartini, J., "The intertidal and subtidal biota of National Redwood National Park, U.S. Department of the Interior, National Park Service CX8480-4-0665 (1997). Dr. Milton Boyd, professor emeritus of Humboldt State University, is one of the most knowledgeable marine scientists on the North Coast.

¹²⁰ Becky Ota Department of Fish and Wildlife Marine division to Yurok legal Counsel John Corbett April 10,2012. P.2. (miscellaneous exhibit)

the process were governed by the statutory BAS law.¹²¹ Best Available science and the MLPA require independent peer review of major models, a review of the available science including anecdotal data from all sources, the use of the most relevant and up to date information available, using data tested for the range or error or otherwise calculating it. As a public body compliance with open meeting laws, public record acts, the federal Human Research Act of 1974 and equal treatment of all ethnic groups is required. The MLPA required the SAT to develop and consistently adhere to “sound science principals. Courts require a comprehensive list of model assumptions for review. The SAT members concluded that best available science to be distinguishing scientific issues from non-scientific issues , creating a transparent and participatory process for identifying the best information available to inform decision making and articulating uncertainty and its consequences for management decision.¹²²

The paragraphs that follow will review the actions of the North Group SAT against these legal procedural requirements.¹²³

“Regulatory Science” was a term developed in the 1970’s by A.A. Moghissi describing issues the newly formed U.S. Environmental Protection Agency was confronting under the Clean Water Act. Based on the unique needs of regulatory science, Moghissi et al developed the concept of BAS and metrics for evaluating scientific claims.¹²⁴ Regulatory Science is a distinct scientific discipline constituting natural, scientific foundations of regulatory, legislative, and judicial decisions.¹²⁵ NOAA Fisheries science centers consistently interpret BAS as, “data systematically collected through established procedures and analytical products based on commonly accepted statistical techniques or models developed specifically for resource management.”¹²⁶ BAS is a

¹²¹ The background of many SAT scientists was a fierce multi-decade science dispute over a reserve eco-system approach versus fishery management approaches to protect marine resources. The MLPA legislation provided for both approaches. Often the dispute was couched in terms of which constituted Best Available Science. The scientists had spent decades in this dispute defining a scientific BAS and this re-enforced a belief that they were the top down deciders of best available science process. The concept of legal requirements governing BAS was a completely foreign one. They had received no BAS legal training and rarely were represented by lawyers. This resulted in the wrong legal tests being used throughout the MLPA process. For example there was a widespread belief that if a model assumption was possible that is all that was required. In fact the courts reject such a standard as speculative and require plausibility at a minimum. The SAT had provisions for pre-screening submittals which is in violation of BAS inclusiveness provisions, Bagley-Keene public meeting law, and an open public process. Harty in lessons learned recommended that future SAT charters should refer to a standard for best available science to improve SAT best available science deliberations. Harty 2007 p. 73. Three excellent discussions of the scientific disputes are contained in Jan Minsuk Ph.D. thesis, 2014, Harty 2007 Lessons learned, and Jones 2007.

¹²² Saaraman, E., et al “The role of science in supporting marine protectd area networkplanning and design in California”, Ocean and Coastal Management, September 25, 2012, p. 47 citing Fernades et al. 2009, Meffe et al., 1998, NRC, 2004; Sullivan et al., 2006, and Meffe et al., 1998; NRC 2004; Sullivan et al., 2006.

¹²³ There exists, per request, supporting exhibits of 226 pages.

¹²⁴ Moghissi, AA, Swentnam M, Love BR, Straja SR, *Best Available Science, Its Evaluation, Taxonomy, and Application*, Second edition, Arlington, V.A. Potomac Institute Press 2010.

¹²⁵ *Sid.*, See also Wikipedia, http://en.wikipedia.org/wiki/Regulatory_science (last visited Dec. 11, 2014)

¹²⁶ The National Academies Press, National Standard 2, as Interpreted by NOAA Fisheries Science Center, p. 25 (2004)

specific legal phrase that has increasingly been used in legislation and defined by the courts.¹²⁷ State and federal courts have given the same definitions and standards for the phrase best available science in different statutes.¹²⁸ The term “best scientific information available” originated in legislation protecting marine mammals.¹²⁹ BAS is the method the courts rely on to insure good science supports policy decisions, especially when addressing the uncertainty required to adopt environmental regulations when there is a lack of sufficient scientific information.

Both regulatory science and BAS require scientific claims be evidence-based and the evidence must be available for review. Furthermore, the scientists who review such evidence must remain objective in their review. Court supervision of BAS proceedings are greatly increased when an agency or Science Advisory Panel is deciding regulatory matters, which also have due process considerations.¹³⁰ The same due process considerations require increased court scrutiny of models that are based on assumptions, rather than reviewable data.¹³¹ Because of the inherent limitations of modeling, courts have required agencies to, “explain the assumptions and methodology used in preparing a BAS model and, if the methodology is challenged, provide a complete analytic defense.”¹³² Agencies must review the range of error of any proposed model.¹³³ This was never done for the LOP model.

¹²⁷ National Research Council of the National Academies, *Improving the use of the ‘Best Scientific Information Available’ Standard in Fisheries Management*, ISBN 0-309-09263-9 (2004).

¹²⁸ Best Available Science has since appeared in the Endangered Species Act of 1973, Federal Marine Mammal Protection Act of 1972, the Magnuson Fishery Conservation and Management Act of 1976, National Standard, Amendments to the Safe Drinking Water Act of 1996, Porter-Cologne Act, California Marine Management Act, California Marine Life Protection Act, California Endangered Species Act, and Washington State Growth Management Act (GMA) Chapter 36.70A RCW.

¹²⁹ Marine Mammal Protection Act, 16 U.S.C. §§1361-1407 (1972).

¹³⁰ For an interesting discussion of the different kinds of science considered under BAS, and regulatory BAS considerations, see Kristin Carden, *Bridging the Divide: The Role of Science in Species Conservation Law*, Harvard Environmental Law Review (2006). That article cites Dan Tarlock as identifying a third type of BAS science, regulatory science, unique to the environmental realm. “Regulatory science is a new form of applied science driven by the need to provide scientific answers to causal questions implicit in modern environmental regulatory programs. **This challenges scientists because the issues are framed by legislatures and regulators and force the scientific community to adopt its process and protocols of inference and proof to answer them.**” A. Don Tarlock, *Who owns Science?*, 1 Penn. St. Envtl. L. Rev. 135, 145-146 (2002). Holly Doremos, discusses the need in dynamic natural systems to maintain ways to update best available science and some trends to the contrary in ESA regulatory remedies such as Habitat Conservation Plans. “The Endangered Species Act: Static Law Meets Dynamic World, Volume 32 New Directions for Environmental Law” 32 Wash. U.J.L. & Policy (2010)

¹³¹ Mary H. Ruckelshaus, *The Pacific Salmon Wars: What Science Brings to the Challenge of Recovering Species*, 33 Ann. Rev. Ecological Sys. p. 696 (2002) (providing a basic framework by noting there are four basic categories of science: measured data, extrapolated data, modeled data, and expert opinion).

¹³² *United States Air Tour Assn. v. Fed Aviation Administration*, 298 F.3d 997, 1008 (D.C. Cir. 2002), quoting *Small Refiner Lead Phase-Down Task Force v. United States Environmental Protection Agency*, 705 F.2d 506, 535 (D.C. Cir. 1983).

¹³³ The Courts require an analysis of the range of model error in order to avoid mere speculation or possibility approaches to science. *Meyers v. Ill.Cent. R.R. Co.*, 679 F. Supp.2d 903. Physicians testimony was overturned despite expertise because it was speculative. “mere speculation of potential harm is not sufficient.” *Arizona Cattle*

The State Legislature defined a key purpose of the MLPA as the following: “... [t]o insure California MPAs have clear objectives, effective management measures, and are based on sound scientific guidelines.”¹³⁴ To ensure policies are based on sound scientific guidelines, the MLPA required Best Available Science (BAS) and independent peer review to be used throughout the policy-making process¹³⁵ of the MLPA initiative¹³⁶ The requirement for BAS was clear throughout the document:

“The Department and team (reference to science team) shall use the best readily available scientific information in preparing the master plan.”¹³⁷

“The Commission shall adopt a master plan.... The Master Plan shall be based on best available science.”¹³⁸

On February 23, 2015,¹³⁹ the Yurok Tribe received a letter stating:

The Marine Life Protection Act requires the use of “best readily available science” (Fish & G. Code Section 28555 (a)). Master Response 3 in the FEIR interprets this term to emphasize timeliness over certainty or perfection. However, it is not the position of the Department of Fish and Wildlife (Department) or California Natural Resources Agency (Agency) that Master Response 3’s emphasis on timeliness over certainty was intended to limit inclusiveness or the ability of interested entities—including Native American tribes—to contribute scientific information. Further, neither the Department nor the Agency now interprets the language in Master Response 3 to in any way actually preclude¹⁴⁰ the ability of the

Growers Association v. United States Fish and Wildlife Service, 273 F.3d 1229 (9th cir. 2001), Daubert v. Merrell Dow Pharmaceuticals 509 U.S. 579 (1993)

¹³⁴ Cal. Fish and Game Code § 2853 (h)(5).

¹³⁵ Cal. Fish and Game Code §2856 (a)(1); §2858.

¹³⁶ The Final Environmental Impact Report for the MLPA North Coast Group Reserve and Conservation Reserves cited both the 2004 National Academy of Science guidelines and the Magnusson Best Available Science interpretations as being applicable to MLPA BAS. *See Final Environmental Impact Report, Marine Life Protection Act-North Coast Study Region, Project No. 11 002, May 2012. See also A Best Available Science Legal Survey, Professor William H. Rodgers, Jr. University of Washington Environmental Law for the National Research Council Jul7-161-7 2003. This is an excellent summary of BAS under the Magnuson Act.*

¹³⁷ Cal Fish and Game Code §2856 (a)(1).

¹³⁸ Cal Fish and Game Code §2855 (a).

¹³⁹ Letter 2-23-2015 to Thomas p. O’Rourke Sr., Chairman of the Yurok Tribe Signed by Catherine Kuhlman Deputy Secretary for Ocean and Coastal Policy, California, Craig-Shuman, Regional Manager, Marine Region, California Department of Fish and Wildlife, with a cc to John Laird Secretary of Resources, Thomas Gibson, Deputy Secretary and Chief Counsel, California Natural Resources Agency, Charlton Bonham Director of California Department of Fish and Game, Stephen Ingram, Acting General Counsel & Tribal Liaison California Department of Fish and Wildlife. The Secretary of Resources and Deputy Secretary for Ocean and Coastal Policy is important as the Ocean Protection Council (OPC) is responsible for implementing the SAT. This is through a budgetary process. (Harty 2006), the authority of the Secretary to coordinate state agencies and the legislative creation of the OPC

¹⁴⁰ Rather than the State doesn’t preclude tribal scientific participation the Federal government affirmatively requires: “biologists should seek out available information from credible sources such as...state/**tribal** wildlife and plant experts.” *Ibid.*, Endangered Species Consultation Handbook, Also see the Congressional Research Service *Ibid.*, p. 16 on the role of Tribes in BAS science. The OPC has provided for improved Tribal participation with the collaborative approach. Adopted on Dec. 2, 2014 highlights include: Provides for a Tribal Stewardship roles, Incorporates Traditional Knowledge-Education, Collaboration with scientific and technical committees to provide,

*Yurok Tribe, or other interested parties, from presenting analytical science under the statutory mandate of best readily available science.*¹⁴¹

The Department of Fish and Wildlife, the Ocean Protection Council, and Resources agency are to be thanked for their action on this fundamental science interpretation under the MLPA.

The FEIR legal interpretation is no longer supported by the Department, is contrary to the legislative purpose of the Statute, improperly re-writes the specific strong science provisions of the MLPA, is based on a false premise, and results in an across the board exclusion of relevant and timely scientific studies and data. This opinion was used to justify not hearing the Yurok Tribe in SAT proceedings up until February 22, 2015. In summary the opinion meant the SAT was not applying the correct legal standard.¹⁴² It has now been corrected approximately four plus years later.

but is not limited to, traditional knowledge. (The statement in the above letter did not precluding analytical testimony is similar.) Tribal Comments to the Collaborative draft to insure tribal opportunities to participate in all forms of science and modeling did not make it into the final draft. The California Collaborative Approach: Marine Protected Areas Partnership Jan December 2, 2014 p 14-15, p 31. Tribes were given ample opportunities to participate in the Collaborative Approach and this reaching out is definitely a positive step forward.

¹⁴¹ Letter from Ocean Protection Council and California Department of Fish and Game to John Corbett of the Yurok Tribe February 22, 2015.

¹⁴² Incorrect legal standards will cause a reversal and remand back to the agency by the Courts to redo the deliberations. Delta Smelt Consol. Cases v. Salazar, 760 F. Supp 2d 855. "Because we shall hold that the City Council applied the wrong standard in considering appellants' validation request we shall reverse and remand for further consideration under the appropriate standard. Baiza v. City of College Park, 192 Md. App. 321.