

California Fish and Game Commission Meeting Presentations



**April 15-16, 2020
Teleconference**



Marine Resources Committee

March 17, 2020 Recommendations

1. Recreational red abalone fishery management plan (FMP)
2. Recreational Dungeness crab
3. Commercial wild kelp and algae harvest
4. Change date of July MRC from July 21 to July 29
5. Schedule supplemental MRC meeting for April 29

California Fish and Game Commission Meeting

April 15-16, 2020



1. Red abalone recreational FMP:

- (a) Continue discussion of red abalone administrative team report to July MRC;
- (b) Request that DFW (1) clarify which recommendations require immediate and/or specific decisions from FGC, and (2) suggest options for tribal engagement in data and management;
- (c) Formally disband the abalone management integration teams – tasks completed!



2. Recreational Dungeness crab:

Advance a proposed rulemaking for notice in June 2020, with the following :

- (a) Enhanced gear marking with small buoys or unique floats;
- (b) Trap limit: 10 per angler (Nov 1 - Mar 31) and
5 per angler (Apr 1 to season end);
- (c) Service interval: 9 days
 - Option for severe weather extension
 - Request that DFW clarify criteria for determining when extension would be granted



2. Recreational Dungeness crab (cont):

- (d) Validation stamp: all participating anglers and option to sunset this requirement in five years
- (e) Surface gear requirements for buoys and line length;
- (f) 'Note fishing' – sent by text, allows rebaiting traps;
- (g) Fair start provision - no less than five to nine days; and



2. *Recreational Dungeness crab (cont):*

(e) Delegated authority to DFW director:

- delay the season's start, or close the season early, when entanglement risk is high
- based on triggers (yet to be defined)
- zonal option
- required FGC notification
- *Request DFW propose to FGC criteria to evaluate and trigger action under director authority*



3. Commercial kelp and algae regulations:

- Request DFW to conduct additional outreach with affected industry members, tribes and other interested parties and
- Continue the item to the Jul 2020 MRC meeting.



4. July 2020 MRC meeting date:

- Change date from July 21 to July 29 in San Clemente.

5. Final (Staff) Recommendation:

- Schedule supplemental MRC meeting for April 29 for incomplete topics from March 17 meeting.



Marine Region Update

April 15, 2020

Presented by:

Craig Shuman, D. Env.

Marine Regional Manager

California Department of Fish and Wildlife



Electronic Reporting

- July 1, 2019
 - Mandatory e-Reporting
 - 476 Fish Businesses now using E-Tix
- Total through 2/29/2020
 - 35,043 electronic fish tickets submitted
 - 82% Submitted between 0 and 3 Business Days
 - 18% Submitted on the 4th Business Day or later



More Information

- Commercial Landings Resources

<https://www.wildlife.ca.gov/Fishing/Commercial/Landing-Resources>

- Marine Fisheries Statistical Unit

(562) 342-7130

ElectronicFishTicket@wildlife.ca.gov

- PSMFC E-Tix Portal

<https://etix.psmfc.org/Account/Login>



Department Drift Gill Net Transition Program

- Department has received 44 Declarations of Intent to participate from current permittees
- The Ocean Protection Council has approved \$1 Million in funding
- No funds have been received to date from non-State sources
- Total cost for full participation is \$3.3 Million



Marine Region 2019 Reports

2019 Year in Review

MARINE REGION 2019 YEAR IN REVIEW

Ocean Sportfish Map

The Marine Region created a new [web-based interactive map](#) optimized for quick and easy access to ocean sport fishing regulations on mobile phones and other devices. The application organizes regulations for different species and management areas throughout the state, including all marine protected areas (MPAs). The map shows the user's position to help anglers link to relevant regulations in their area or any other state location.

Sharing Confidential Data

State data security requirements were incorporated into new data sharing agreements. Seven data-sharing agreements and three memoranda of understanding were approved to allow federal, academic, fishery, and socioeconomic scientists to incorporate confidential state fisheries data into their project analyses.

Data Management Project

A new Marine Region Data Management Project was formed as a result of the 2018-2019 Sustainable Funding Budget Change Proposal. A new supervisor and Environmental Scientist were added to seven existing positions to form the team. The Data Management Project leads the development of centralized data systems and expanded electronic reporting, improved data sharing and data security procedures and products, management of all our commercial fisheries data, and supports our regional spatial mapping efforts. In addition, two new Information Technology positions allowed the creation of a dedicated Marine/Fisheries Application Development team (one supervisor and four staff) within the Department's Data and Technology Division. This significantly increases our capacity to develop the software and data development tools that the Marine Region needs for fisheries management activities.

Fishing Gear Innovation

Invertebrate Management Program: Whale Safe Fisheries

Marine Region staff drafted proposed regulations and a conservation plan to support new Incidental Take Permits for whales and sea turtles. The conservation plan describes a comprehensive approach to minimize entanglement risk while allowing for a robust and sustainable commercial Dungeness crab fishery. To help support this, two funding proposals were submitted to NOAA Fisheries to expand aerial survey operations for large whales and satellite tagging for sea turtles.

Entangled whale
NPS NMNORP Permit #18786-03
Photo credit: Jodi Frediani

The Department also established a Commercial Dungeness Crab Trap Gear Retrieval Program and standardized marking requirements for other state-managed commercial trap fisheries. To support new gear innovations that help reduce entanglement risk, Marine Region staff hosted a Gear Innovation Open House. Working in partnership with the Dungeness Crab Fishing Gear Working Group and gear innovators, the open house focused on innovations to help reduce entanglement risk.

Deploying a Smart Bury on Demo Day. Photo credit: Blue Ocean Gear

2019 By the Numbers

MARINE REGION 2019 BY THE NUMBERS

2019 California Commercial Fishing Weight and Ex-Vessel Value¹ of Commercial Landings by Port

Ex-Vessel Value is the amount paid to the fisherman at the dock.

Port Area	Pounds	Ex-Vessel Value
Eureka	20,061,257	\$38,466,505
Fort Bragg	4,162,620	\$4,752,019
Bodega Bay	2,751,205	\$9,549,155
San Francisco	8,920,063	\$23,480,929
Monterey	27,430,713	\$10,068,075
Morro Bay	1,695,118	\$4,090,524
Santa Barbara	14,424,189	\$24,142,390
Los Angeles	25,520,584	\$18,023,804
San Diego	5,088,144	\$11,370,053
Total	110,053,534	\$148,143,454

Data Source: Department's Marine Region Marine Fisheries Statistical Unit

Top Commercial Fishery Numbers

Total Commercial Landing Fees Collected: **\$880,486**
 Top Ex-Vessel Value: **Dungeness Crab**
 Top Weight: **Market Squid**



Herring Eggs on Kelp (HEOK) Regulations

16 April 2020

Presented to:

Fish and Game Commission

Presented by:

Thomas Greiner

**Environmental Scientist
Marine Region**



Overview

- Pacific Herring Fishery Management Plan Cleanup Package for HEOK Fishery Regulations
 - Title 14, Sections 163 and 164





Proposed Amendments

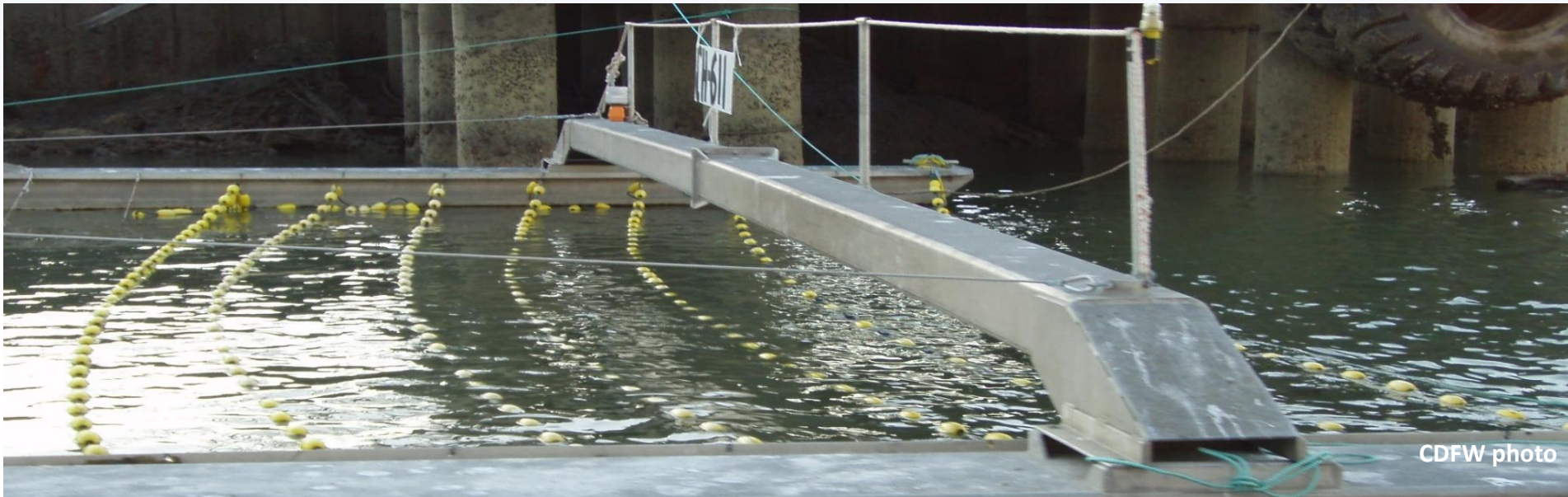
- Replace permittee 'on board vessel' with 'immediately present during' during suspension of kelp and breakdown of lines – §163(e)(3)(B)
- Include time of suspension in definition of fishing – §164(a) and §164(a)(1)
- Include 'rinsing' in definition of processing – §164(a)(3)





Proposed Amendments (continued)

- Clarifying corkline marking requirements – §164(d)(1)(E)
- Modify noise rule language – §164(f)
- Allow some marine mammal deterrent devices – §164(g)
- Allow weekend landings – §164(h)(4)





Timeline and Next Steps

- April 2020
 - Notice Initial Statement of Reason for Regulatory Action
- June 2020
 - Discussion / Adoption hearing
- October 1, 2020
 - Requested Effective Date



CDFW photo

Thank You

Thomas Greiner

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(707) 576-2876

Please contact the Fish and Game
Commission: fgc@fgc.ca.gov
to provide comments


Biological Fishery Proposal for Red Abalone



Red Abalone abundance survey in Tyler Bight, San Miguel Island.
February 12 2020



<https://youtu.be/qcHhnyDJe2s>



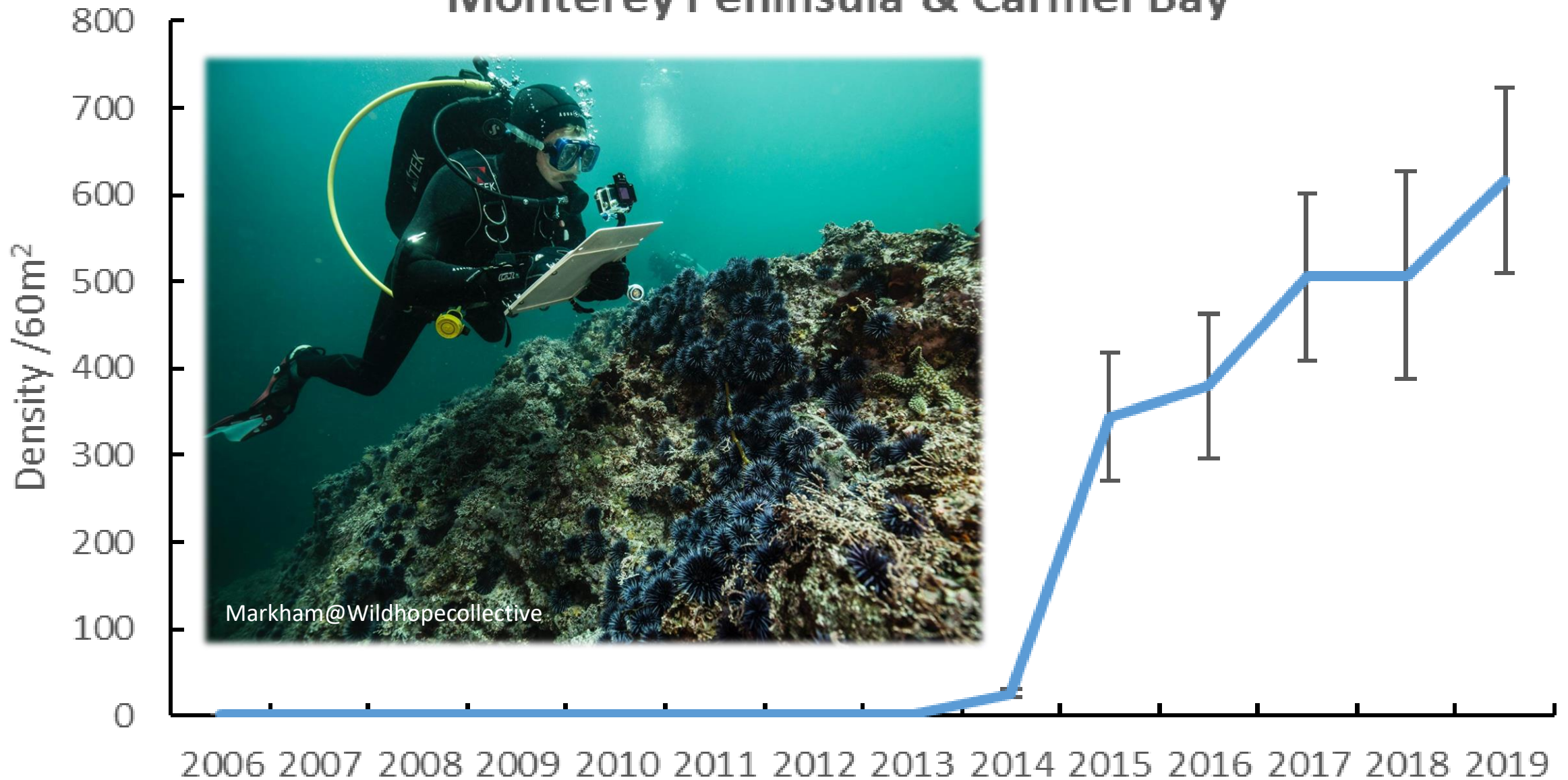
Recreational Diver
Central Coast Urchin Removal
Regulatory Language Change

Fish and Game Commission

PETITION 2020-001

APRIL 15, 2020

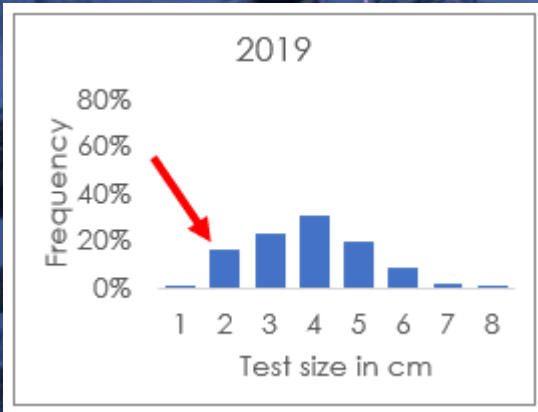
Average Purple Urchin Density at Reef Check Sites Monterey Peninsula & Carmel Bay



Purple urchin density
doubled in 2019

21 purple urchins / m²

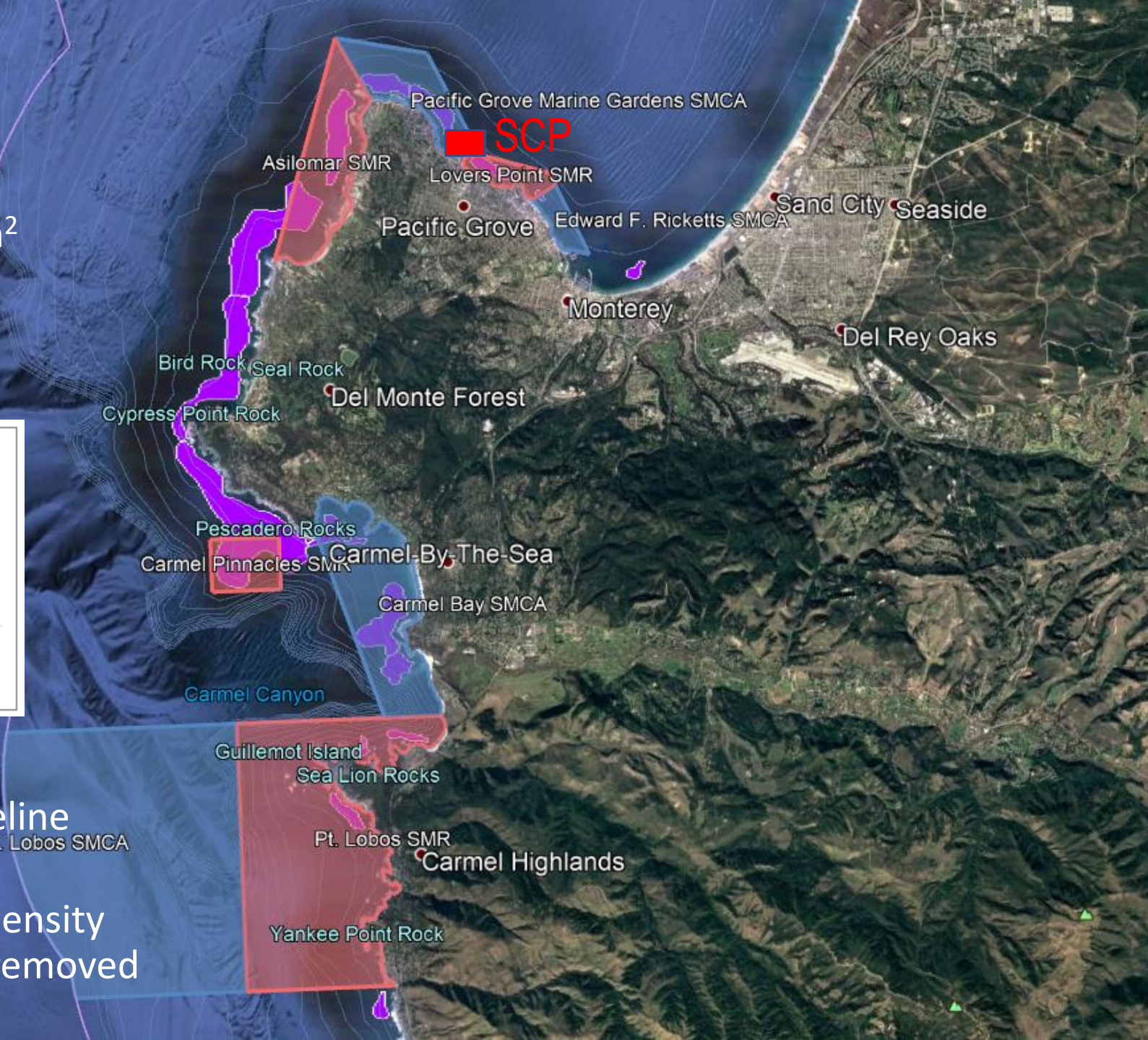
New 2 cm cohort



Red urchins 95x baseline

Pt. Lobos SMCA

Red urchins tripled density
when purples were removed



November 2017

Denied for Monterey

Rule change for North Coast

January 2019

Denied

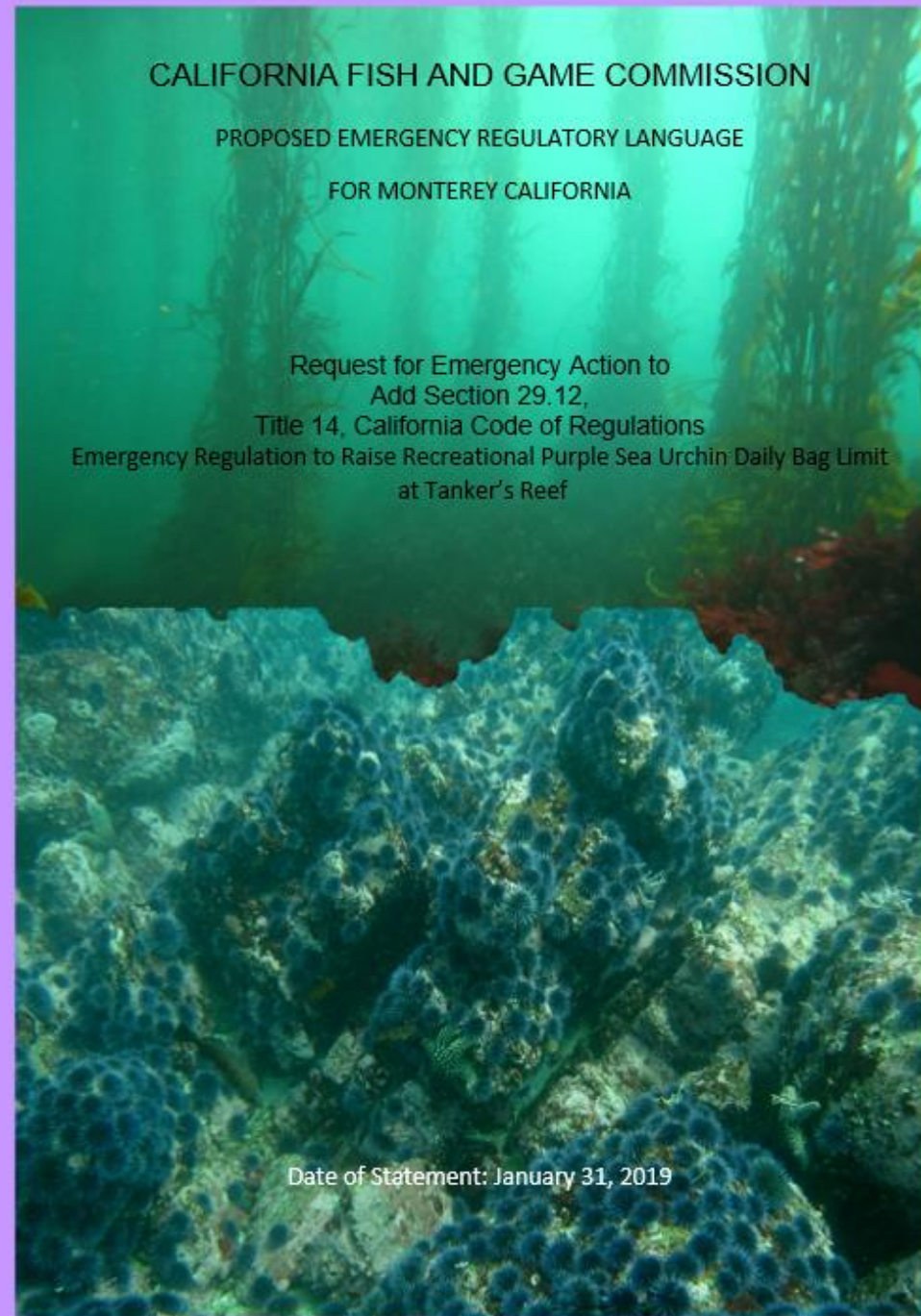
Reasons:

No evidence of emergency

Sea otters present (CEQA)

January 2020

North coast is the priority



North Coast Regulation Changes

FGC - Emergency Regulation Change 20 gallons 5-1-18,
extended 11-1-18

FGC - Rulemaking 40 gallons 3-7-19

FGC - Emergency Regulation Change (CDFW
initiated) Crushing urchins 2-21-20

OPC funding removals and monitoring 2-26-20
Over \$800,000

~~GOAL: Establish kelp oasis along north coast~~

GOAL: Clear urchin barrens

Noyo Harbor

S Main St

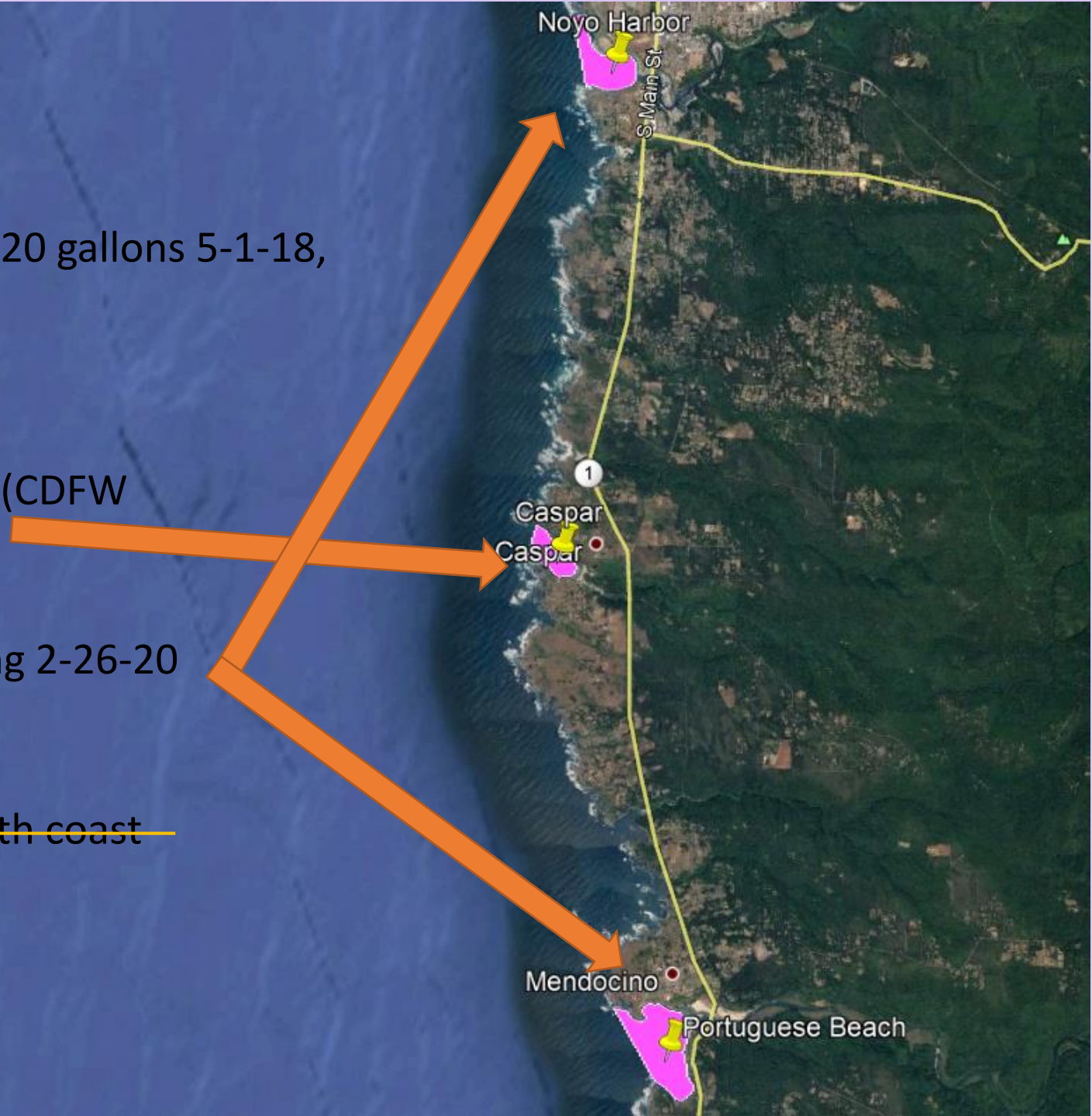
1

Caspar

Caspar

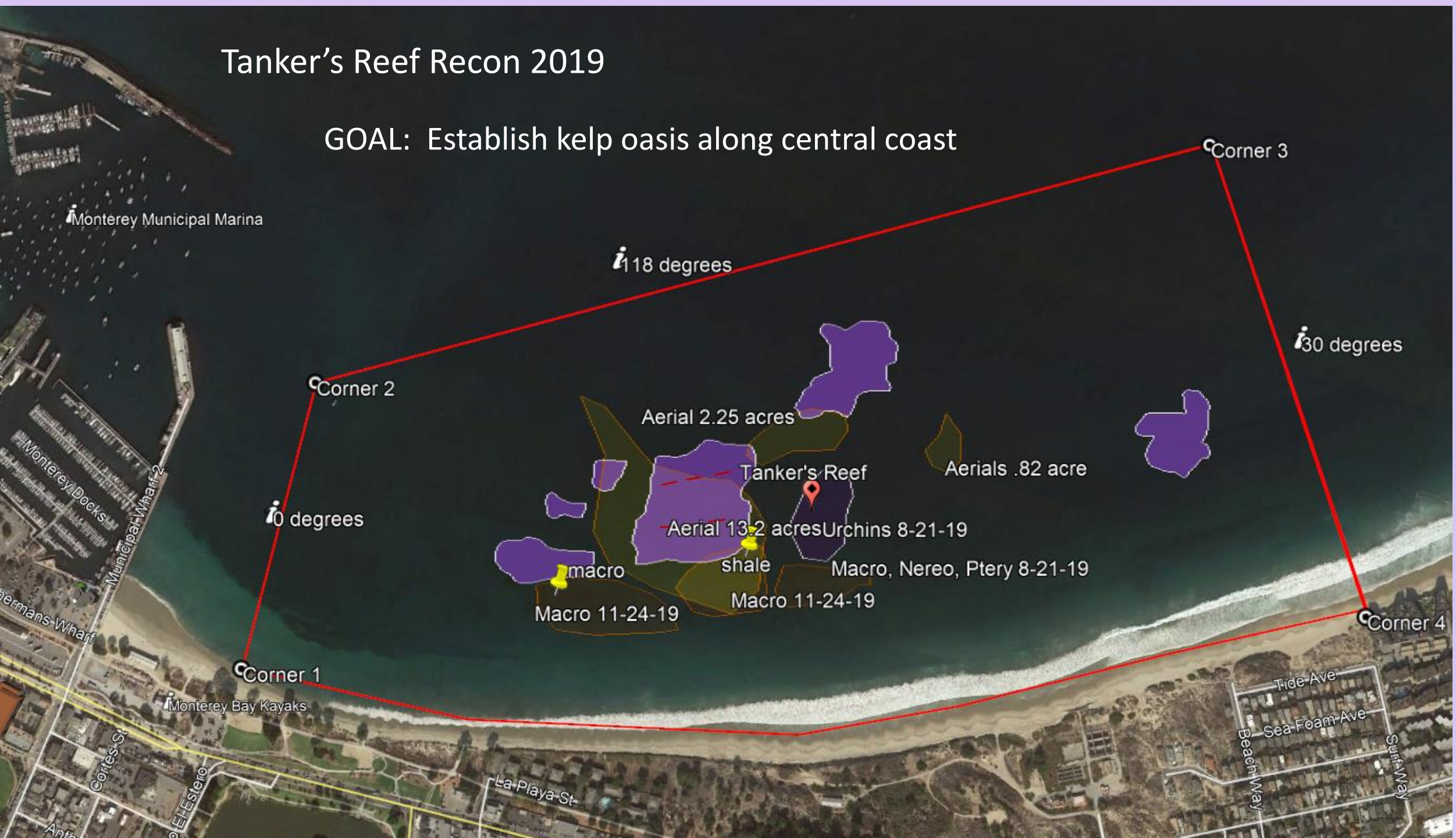
Mendocino

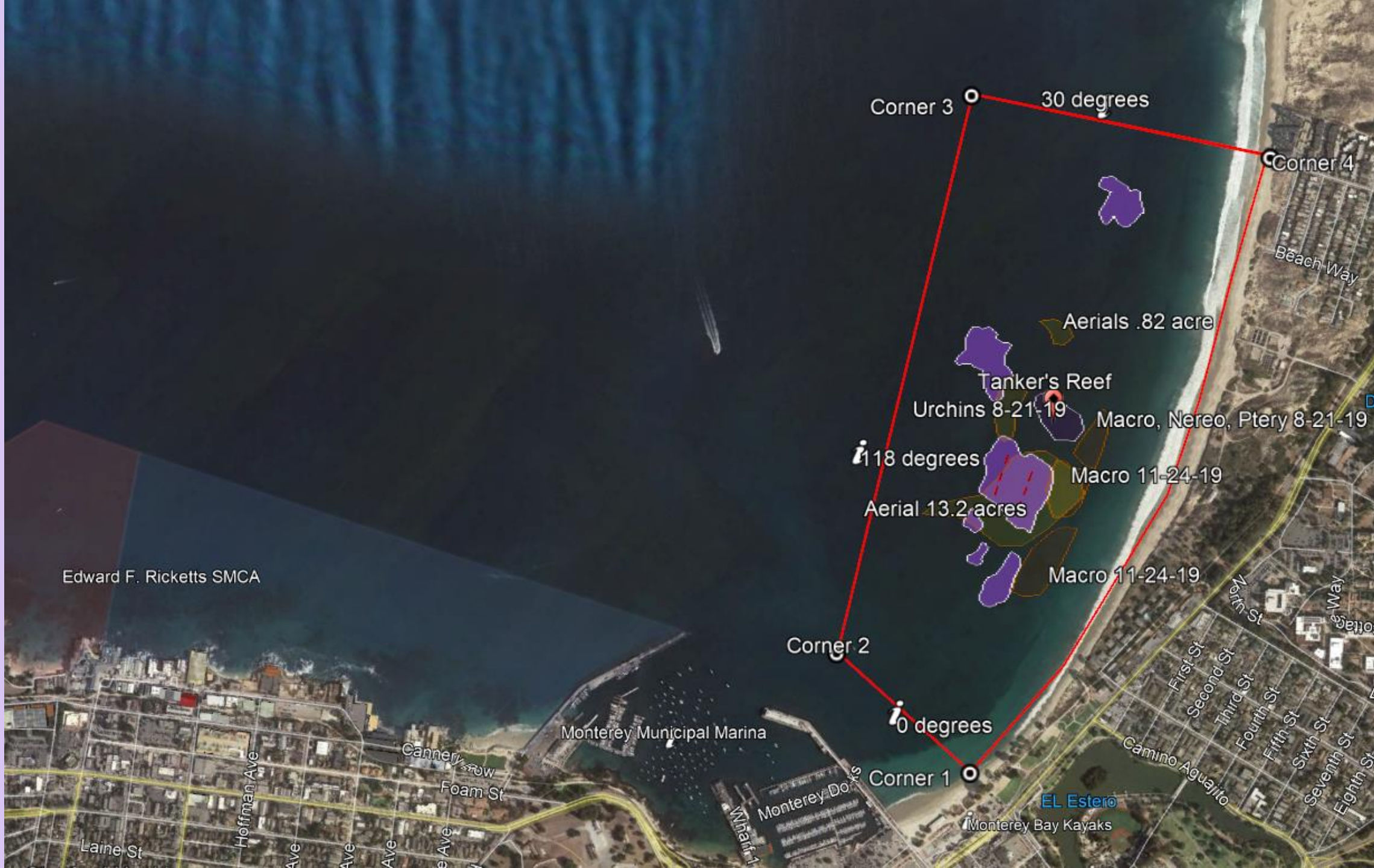
Portuguese Beach



Tanker's Reef Recon 2019

GOAL: Establish kelp oasis along central coast





Corner 3

30 degrees

Corner 4

Aerials .82 acre

Tanker's Reef

Urchins 8-21-19

Macro, Nereo, Ptery 8-21-19

i 18 degrees

Macro 11-24-19

Aerial 13.2 acres

Macro 11-24-19

Corner 2

i 0 degrees

Corner 1

Edward F. Ricketts SMCA

Monterey Municipal Marina

Monterey Dock

EL Estero

Monterey Bay Kayaks

Beach Way

North St

First St

Second St

Third St

Fourth St

Fifth St

Sixth St

Seventh St

Eighth St

Laine St

Hoffman Ave

Ave

Ave

Ave

Ave

Cannery Row

Foam St

Wharf 1

Ed Ricketts June 2007



Edward F. Ricketts SMCA

View Blvd

Irving Ave

Line St

Hawthorne St

Laine St

Prescott Ave

Lantern Ln

Hoffman Ave

McCellan Ave

Cannery Row

Foam St

Bolio Rd

Monterey Municipal Marina

Edward Ricketts July 2019

Edward F. Ricketts SMCA



Edward Ricketts Urchin Barrens 2020





Lovers Point

Pt. Cabrillo (Hopkins Marine Station)

2018 Kelp Density (stipes/m²)



0 0.25 0.5 1 Kilometers



Lovers Point

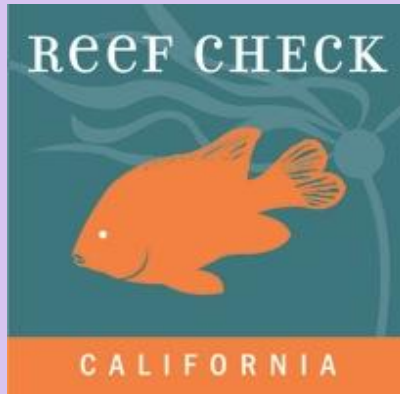
Pt. Cabrillo (Hopkins Marine Station)

2019 kelp density (# stipes / m²)

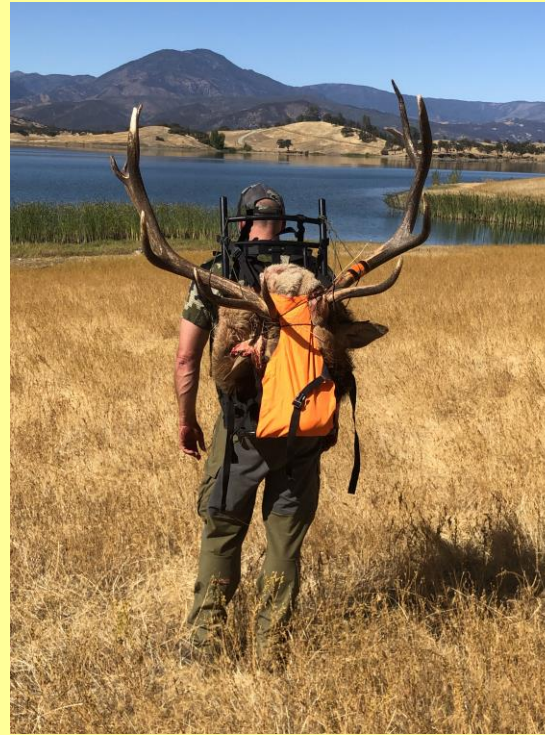


0 0.25 0.5 1 Kilometers

Thank you!



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reefcheck.org



2020 Mammal Hunting Regulations

Recommended Changes to §360(c) and §361(b), Title 14—Deer

Hunt Zone	2019/2020 Tag Allocations	2020/2021 Proposed Tag Allocations
A-33 (Fort Hunter Liggett Late Season Archery Either-Sex Deer Hunt)	25 Military/25 Public	50
G-8 (Fort Hunter Liggett Antlerless Deer Hunt)	10 Military/10 Public	20
J-10 (Fort Hunter Liggett Apprentice Either-Sex Deer Hunt)	15 Military/60 Public	30



Recommended Changes to §362, Title 14—Nelson Bighorn Sheep

HUNT ZONE	2019/2020 TAG ALLOCATIONS	2020/2021 PROPOSED ALLOCATIONS
Zone 1 - Marble and Clipper Mountains	5	5
Zone 2 - Kelso Peak/Old Dad Mountains	0	1
Zone 3 - Clark/Kingston Mountain Ranges	4	4
Zone 4 - Orocopia Mountains	1	1
Zone 5 - San Gorgonio Wilderness	0	0
Zone 6 - Sheephole Mountains	0	0
Zone 7 - White Mountains	6	6
Zone 8 - South Bristol Mountains	2	2
Zone 9 - Cady Mountains	2	2
Zone 10 - Newberry, Rodman, Ord Mountains	6	6
Open Zone Fund-Raising Tag	1	1
Marble/Clipper/South Bristol Mountains Fund-Raising Tag	1	1
Cady Mountains Fund-Raising Tag	1	1
TOTAL	29	30

Recommended changes to §364 & §364.1, Title 14—Elk

Hunt Zone	2019/2020 TAG ALLOCATIONS	2020/2021 PROPOSED ALLOCATIONS
Northwestern*	28 bull, 34 antlerless, 3 either sex	37 bull, 49 antlerless, 3 either sex
Fort Hunter Liggett*	14 bull, 8 antlerless, 6 either sex	9 bull, 15 antlerless, 6 either sex
Grizzly Island*	7 bull, 64 antlerless, 16 spike	7 bull, 16 antlerless, 10 spike
Bear Valley	3 bull, 2 antlerless	4 bull, 2 antlerless
Goodale*	3 antlerless	1 bull, 2 antlerless
Independence*	3 bull, 3 antlerless	2 bull, 2 antlerless
Lone Pine*	2 bull, 3 antlerless	1 bull
West Tinemaha*	0 tags	1 bull
Whitney*	1 antlerless	1 bull, 1 antlerless

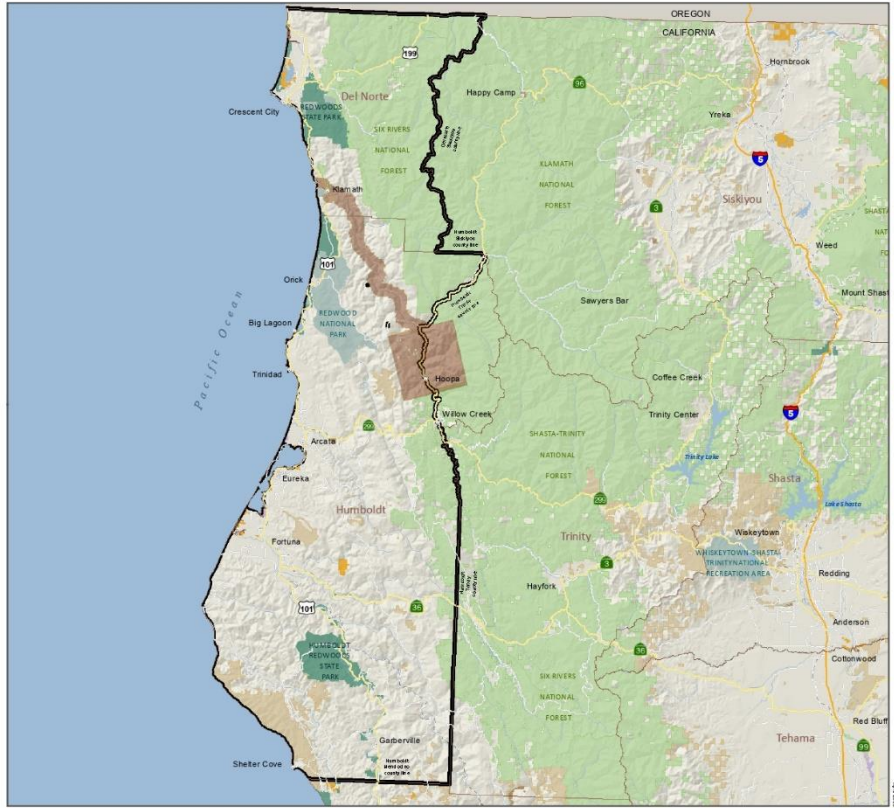
* Tag allocations include all hunts and periods for the zone

Recommended changes to §364 & §364.1, Title 14—Elk

Hunt Zone	Proposed Net Change
Northwestern	Increase by 40 tags (split among PLM, SHARE and landowner)
Fort Hunter Liggett	Increase by 7 antlerless, decrease by 5 bull tags; no military tags
Grizzly Island	Decrease by 54 tags
Bear Valley	Increase by 1 bull tag
Goodale	Increase by 1 bull tag, decrease by 1 antlerless tag
Independence	Decrease by 2 tags (1 antlerless, 1 bull)
Lone Pine	Decrease by 4 tags (3 antlerless, 1 bull)
West Tinemaha	Increase by 1 bull tag
Whitney	Increase by 1 bull tag



CALIFORNIA DEPARTMENT OF FISH & WILDLIFE

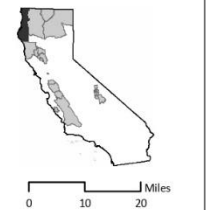


NORTHWESTERN CALIFORNIA ROOSEVELT ELK HUNT



Siskiyou, Humboldt
Trinity, Shasta and Tehama
Counties

- Northwestern Hunt Zone
 - County Boundary
 - CA Dept. of Fish & Wildlife
 - CA Dept. of Parks & Rec.
 - U.S. Fish & Wildlife Service
 - U.S. Forest Service
 - U.S. National Park Service
 - U.S. BLM
 - Tribal Land
- Note: Hunt boundary shown is an approximation. Hunters are responsible for knowing the exact boundary locations as described within Section 364, Title 14, Calif. Code of Regs.



Non-PLM Tags in Alternative 2 2019 SED

Bull	Cow	Either-Sex	Total
44	58	3	105

Proposed 2020 Quota: \$364, \$364.1

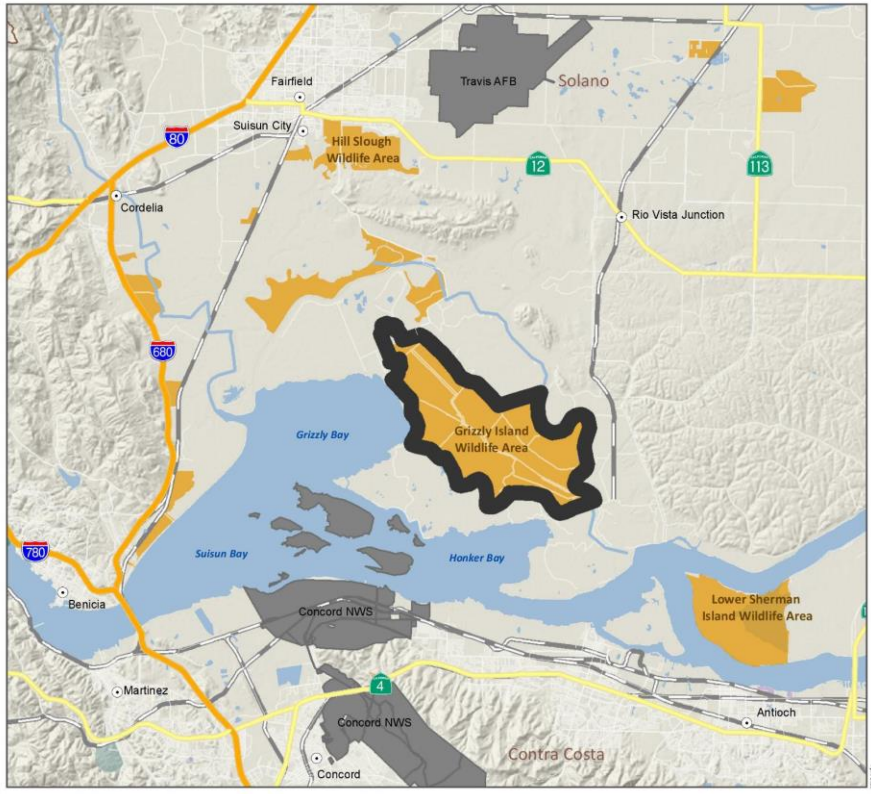
	Bull	Cow	Either-Sex	Total
General	3	15	3	21
SHARE	34	34	--	68
Totals	37	49	3	89

Remaining allocation to \$555

Landowner	7	9	--	16
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Northwestern

CALIFORNIA DEPARTMENT OF FISH & WILDLIFE

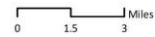


GRIZZLY ISLAND
TULE ELK HUNT



- Solano County
- Grizzly Island Hunt Zone
- County Boundary
- CA Dept. of Fish & Wildlife
- CA Dept. of Parks & Rec.
- U.S. Fish & Wildlife Service
- U.S. Forest Service
- U.S. National Park Service
- U.S. BLM
- DOD Lands

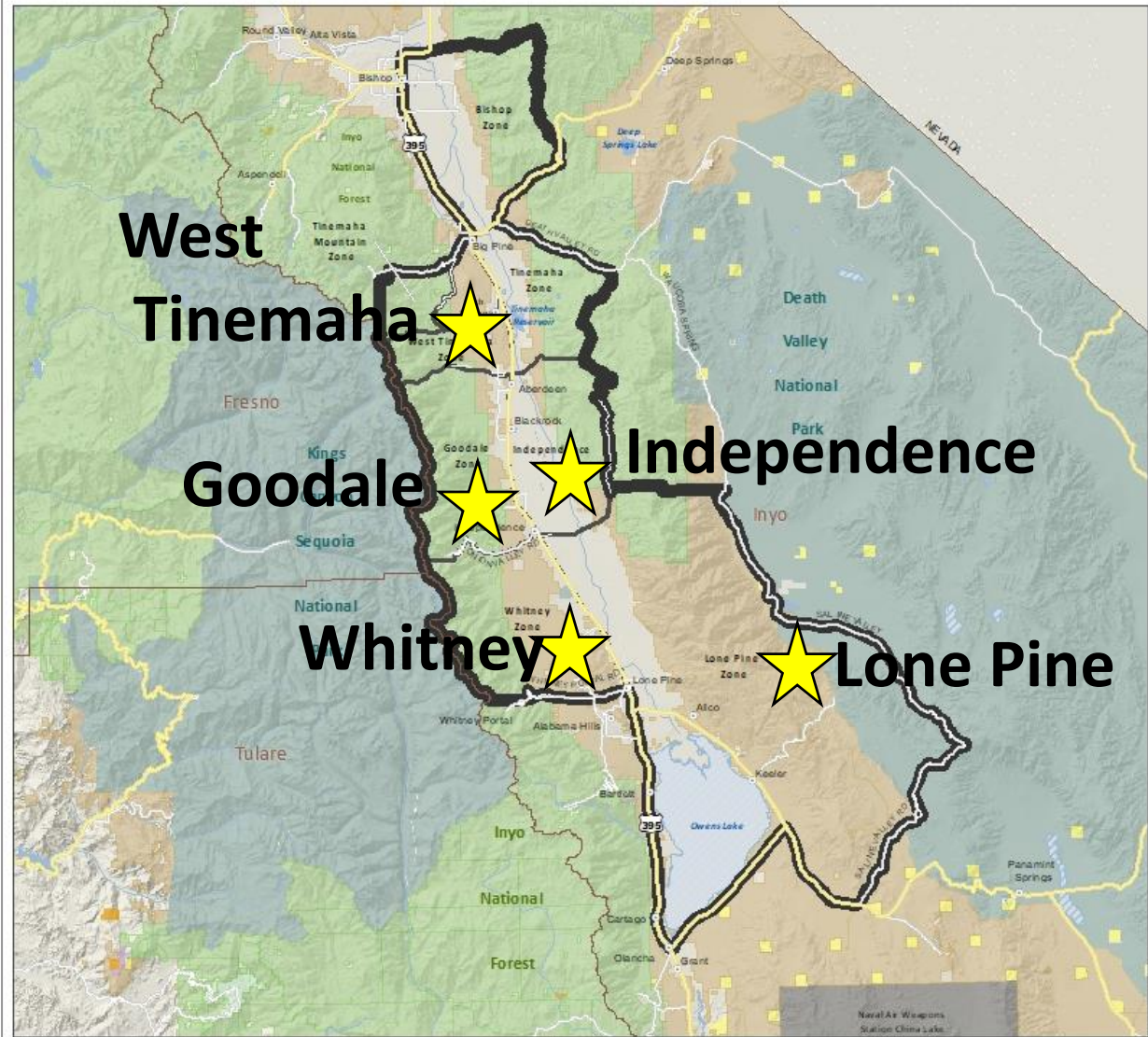
Note: Hunt boundary shown is an approximation. Hunters are responsible for knowing the exact boundary locations as described within Section 364, Title 14, Calif. Code of Regs.



Grizzly Island

Owens Valley

CALIFORNIA DEPARTMENT OF FISH & WILDLIFE



OWENS VALLEY TULE ELK MANAGEMENT UNIT



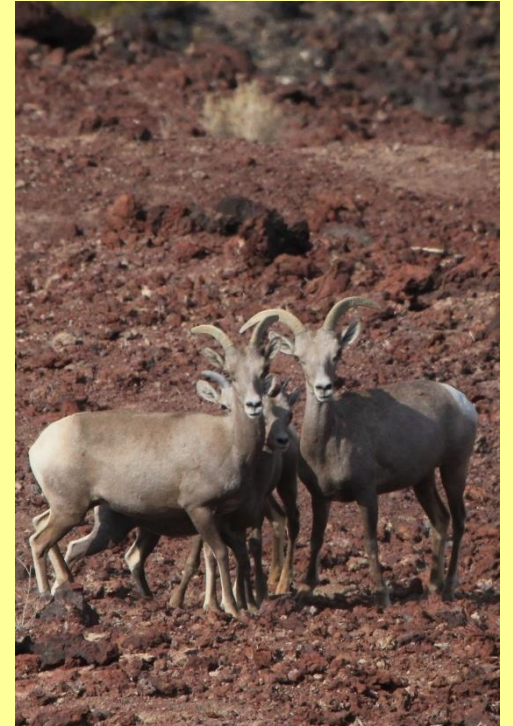
Inyo County

- Owens Valley Management Unit
- Hunt Zone
- County Boundary
- CA Dept. of Fish & Wildlife
- CA Dept. of Parks & Rec.
- U.S. Fish & Wildlife Service
- U.S. Forest Service
- U.S. National Park Service
- U.S. BLM
- CA State Lands Commission
- Department of Defense



0 5 10 Miles

Questions?



2020 Mammal Hunting Regulations



2020-21 Waterfowl Hunting Recommendations Section 502



Fish and Game Commission Meeting

April 16, 2020

Melanie Weaver

Wildlife Branch

Overview

- Federal Frameworks
- Department recommendation



Duck Frameworks

Western Mallard

➤ 107 days from Sat nearest Sept 24 to January 31

7 ducks, 7 mallards, 2 hen mallards

Pintail: 1

Canvasback: 2

Scaup: 86 days/2

Redhead: 2



Goose Frameworks

Between 100-107 day season

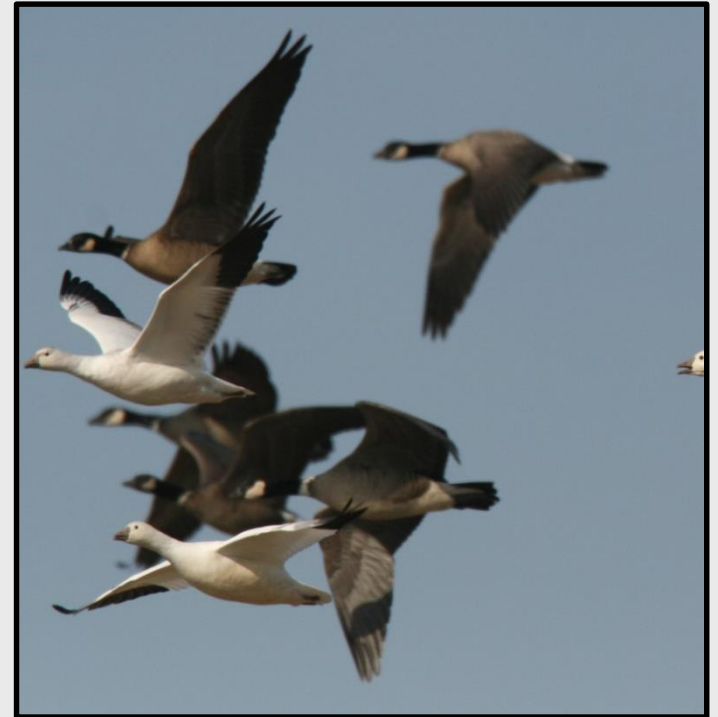
Generally 30/day

➤ 20 white geese

➤ 10 dark geese

Brant

➤ 27 days 2/day



Summary of Department Recommendation

- Reduce season length in NE Zone from 105 to 103 days to accommodate the Vet Days
- All other zones - January 31st falls on last Sunday resulting in 100-day seasons
- 2 days for Veteran Days
- 3 days for falconry-only in Bal of State, So San Joaquin Valley and So California zones



Seasons Based on Closing January 31

Season	Sat Opening	Closing Day	Season Length	Falconry Only
2019-20	Oct 19	Fri, Jan 31	105	0
2020-21	Oct 24	Sun, Jan 31	100	5
2021-22	Oct 23	Mon, Jan 31	101	4



Duck Season Recommendation

Northeast Zone

- Regular Season: Oct 3 – Jan 13 (103 days)
- Scaup: Oct 3 – Nov 29 (58 days) & Dec 17 – Jan 13 (28 days)

Bal of State, So San Joaquin Valley, So California Zones

- Regular Season: Oct 24 – Jan 31 (100 days)
- Scaup: Nov 7 – Jan 31 (86 days)

Colorado River Zone

- Regular Season: Oct 23 – Jan 31 (101 days)
- Scaup: Nov 7 – Jan 31 (86 days)
- Must match AZ regulations



Northeast Zone Goose Season Recommendation

Regular Season

- Canada geese: Oct 3 – Jan 10 (100 days)
- White & white-fronted geese:
Oct 3 – Nov 29 (58 days) & Jan 2 – Jan 15 (14 days)

Late Season

- White & white-fronted geese: Feb 6 – Mar 10 (33 days)
- 30/day: 20 white/10 dark geese, no more than 2 Large Canada geese



Balance of State Zone Goose Season Recommendation

Early Season Canada geese

➤ Oct 3 – Oct 7 (5 days)

Regular Season

➤ Oct 24 – Jan 31 (100 days)



Late Season

➤ White & and white-fronted geese Feb 20 – Feb 24
(5 days)

➤ 30/day: 20 white/10 dark geese

Goose Season Recommendation Continued...

So San Joaquin Valley and So California Zones

- Oct 24 – Jan 31 (100 days)
- 30/day: 20 white/10 dark geese in S.S.J. Valley Zone & 3 dark geese in So California Zone

Colorado River Zone

- Oct 23 – Jan 31 (101 days)
- 20/day: up to 20 white/4 dark geese
- CA must match Arizona adjacent zone



Brant Season Recommendation

Northern Brant

➤ Nov 18 – Dec 14 (27 days)

Balance of State Brant

➤ Nov 19 – Dec 15 (27 days)



Special Management Area Recommendation

North Coast

- Regular Season: Nov 7 – Jan 31 (86 days)
- Late Season: Feb 20 – Mar 10 (19 days)

Klamath Basin

- White & white-fronted Geese: Oct 3 – Jan 15 (105 days)
- Canada Goose: Oct 3 – Jan 10 (100 days)

Sac Valley

- Oct 24 – Dec 21 (59 days)

Imperial Valley

- Regular Season: Nov 7 – Jan 31 (86 days)
- Late Season: Feb 1 – 5, 8 – 12, 15 – 21 (17 days)



Youth and Veteran Hunt Day Recommendation

Youth Hunt Days

- NE Zone: Sept 19 – 20
- All other zones: Feb 6 – 7

Veteran Hunt Days

- NE Zone: Jan 16 – 17
- All other zones: Feb 13 - 14
- Colorado River Zone: none



Falconry Recommendation

Extended Falconry

- Northeastern Zone: None
- Bal of State, So San Joaquin Valley, & So California Zones: Feb 10 – 12 (3 days)
- Colorado River Zone: Feb 1 – 4 (4 days)



Youth Hunt Day Text Clarification

(e) Youth Waterfowl Hunting Days Regulations

(NOTE: To participate in these Youth Waterfowl Hunts, youth must be accompanied by a non-hunting adult 18 years of age or older., ~~federal~~ Federal regulations require that hunters must be 17 years of age or younger, and ~~must be accompanied by a non-hunting adult 18 years of age or older.~~)



Section 507

Text Clarification

(4) ... Shotgun shells may not be used or possessed that contain shot size larger than ~~No. BB in lead or~~ T shot in steel or other nontoxic shot approved...

Questions?



Melanie Weaver
Waterfowl Program Leader
(916)445-3717
Melanie.Weaver@wildlife.ca.gov



CDFW Lands Regulations



Fish and Game Commission, April 16, 2020

Kari Lewis, Lands Program, Wildlife Branch

Department Lands

WILDLIFE AREAS

- 110 wildlife areas
- 712,123 acres
- Conserve wildlife and habitats
- Hunting, fishing, wildlife viewing, photography
- Conservation education and research activities
- Fish & Game Code Sections: 1526, 1528 and 1745

ECOLOGICAL RESERVES

- 135 Ecological Reserves
- 229,953 acres
- Conserve rare species and specialized habitat types
- Conservation education and research
- Other uses may be authorized if compatible
- Fish & Game Code Sections: 1580, 1584, 1585

A Focused Approach

The proposed regulations focus on a limited number of topics:

- Designate new lands as wildlife areas or ecological reserves.
- Remove lands from the list of wildlife areas or ecological reserves for which the department no longer has ownership or management authority.
- Authorize compatible site-specific public uses clearly supported by:
 - a management plan or environmental document
 - operational need
 - public safety concern





A Focused Approach

- Simplifies public understanding and participation
- These proposed regulations have been....
 - introduced to the public via the public notice process;
 - discussed at public meetings;
 - approved by CDFW leadership; and
 - approved by the Wildlife Resources Committee of the FGC.

Sections of Title 14, CA Code of Regulations (regs)

550	Public use regs that apply to all CDFW lands
550.5	Restricted entry (reservations, permits, etc.)
551	List of wildlife areas, site-specific regs
552	Site-specific regs for nine federal refuges under agreement with CDFW
630	List of ecological reserves, site-specific regs

Lands to be Designated

➤ Kern

- Indian Wells ER

➤ Riverside

- Santa Margarita River ER

➤ San Diego

- Cañada de San Vicente ER

➤ San Luis Obispo

- North Carrizo ER

➤ Santa Barbara

- Cienega Springs ER

➤ Inyo

- Deep Springs ER
- Round Valley WA
- Tecopa ER



Lands to be “Un-designated”



➤ **Lake Berryessa WA**

- Napa County
- Owned by the Bureau of Reclamation

➤ **White Slough WA**

- San Joaquin County
- Owned by Department of Water Resources

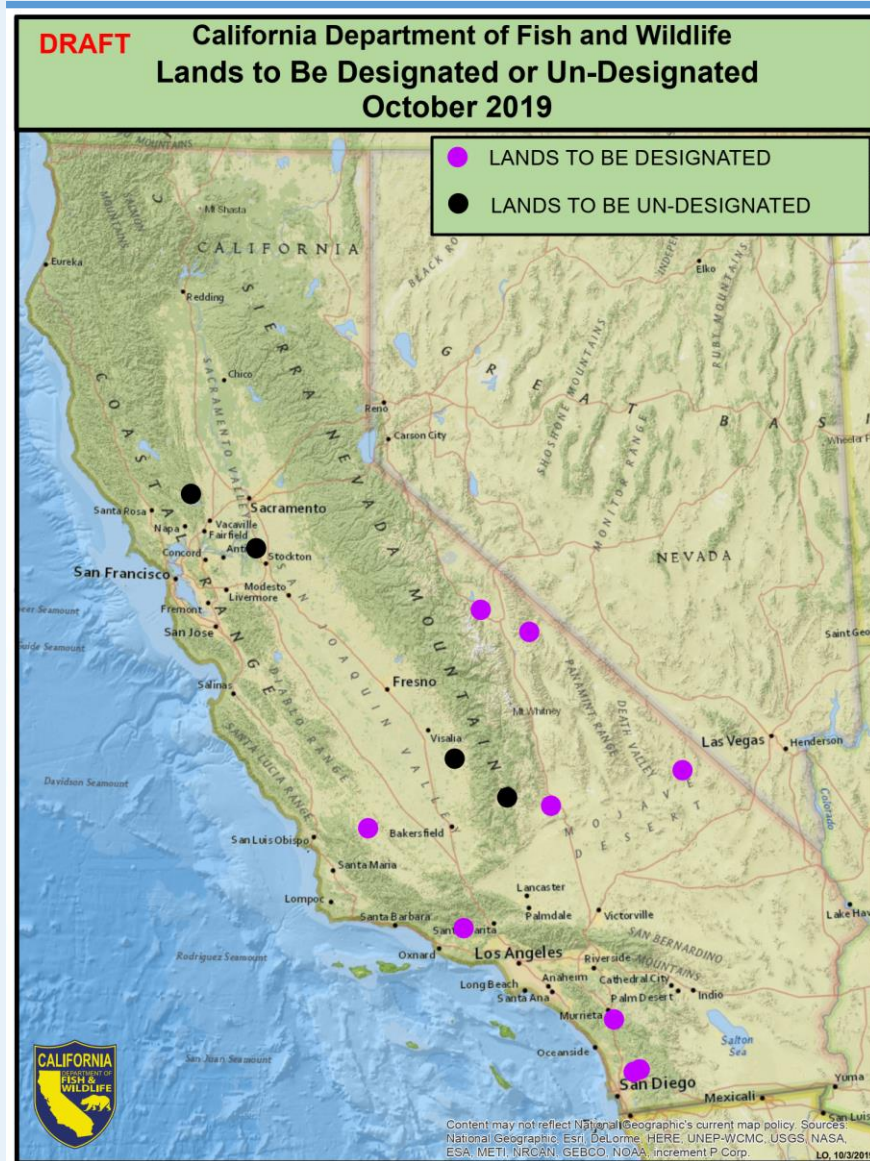
➤ **South Fork WA**

- Kern County
- Owned by U.S. Forest Service

➤ **Yaudanchi ER**

- Tulare County
- Owned by CA Dept of Developmental Services

Lands to be Designated or “Un-designated”



Site-Specific Changes

- **Reduce consecutive early season pheasant hunt days on some Type A WA's.**
- **Opening the Southern Crossing Unit of the Napa-Sonoma Marsh WA (NSMWA)**
- **Biking on two designated trails on the (NSMWA)**
- **Extend crow hunting at Hollenbeck Canyon WA**
- **Prohibit firearms/archery at Truckee River WA**
- **Closure of Del Mar Mesa/Lopez Ridge ER, San Diego**

Minor Clean Up Examples

- **550.5(c)(7):** For CDFW lands that require an entry permit during the waterfowl season: clarify that only hunters who are under 16 years of age must be accompanied by an adult in order to obtain an entry permit.
- **Remove references to specific properties proposed for removal from Title 14.**
- **Lake Sonoma Wildlife Area is listed in Section 551(b) and 551(c). Since it is entirely on federal land, it should only be listed in Section 551(c).**
- **Update language for consistency with federal regulations on federal refuges on which hunting is managed by CDFW under an agreement with the USFWS.**

Public Comment

- **January 17, 2020 – release of public notice on Lands Regulations Proposal.**
- **February 27, 2020 – Initial Study and Negative Declaration posted for public review.**
- **No public comment received to date.**

Thank You



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Shasta Snow-Wreath (*Neviusia cliftonii*)



Photo: Belinda Lo, CC BY-NC-SA 3.0

Fish and Game Commission Meeting

April 16, 2020

Cherilyn Burton

Native Plant Program

Presentation Outline

Purpose: Summarize the Shasta Snow-Wreath Petition Evaluation Report

- Overview of Shasta snow-wreath
- Threats
- Department Recommendation



Photos: Steve Matson, CC BY-NC-SA 3.0





Photo: Belinda Lo, CC BY-NC-SA 3.0

Photo: ©2011 Sierra Pacific Industries, Stephanie Puentes

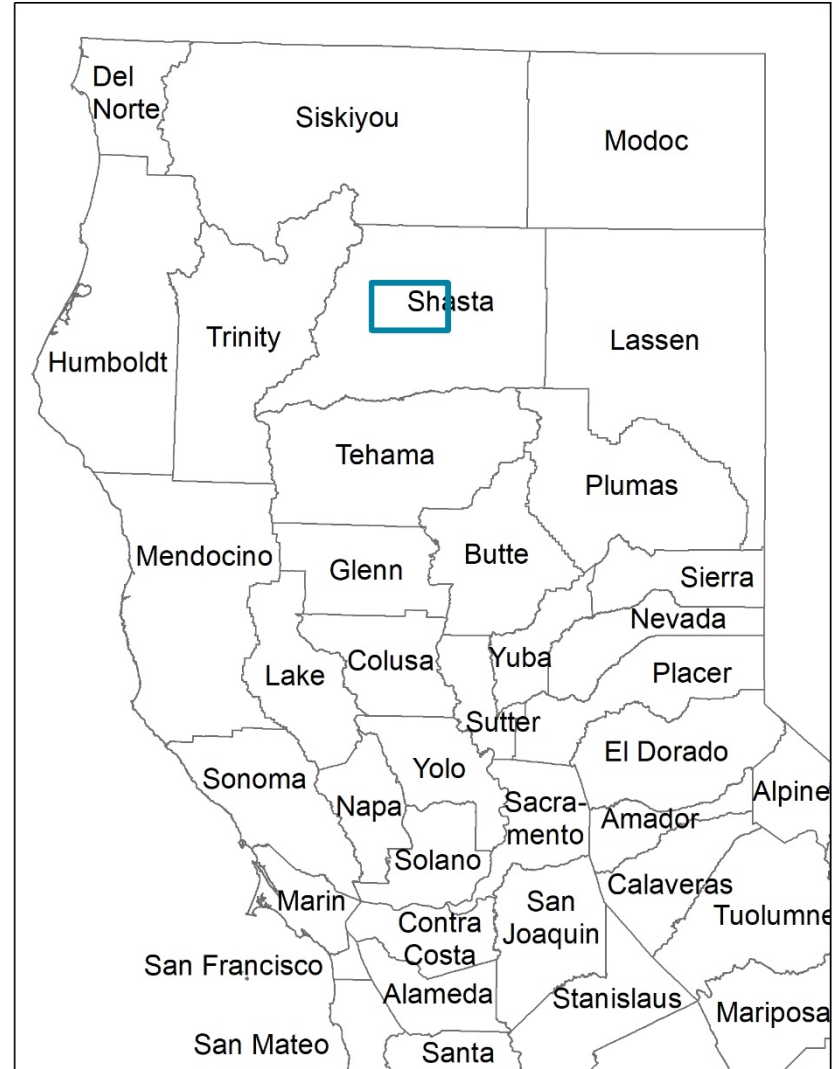


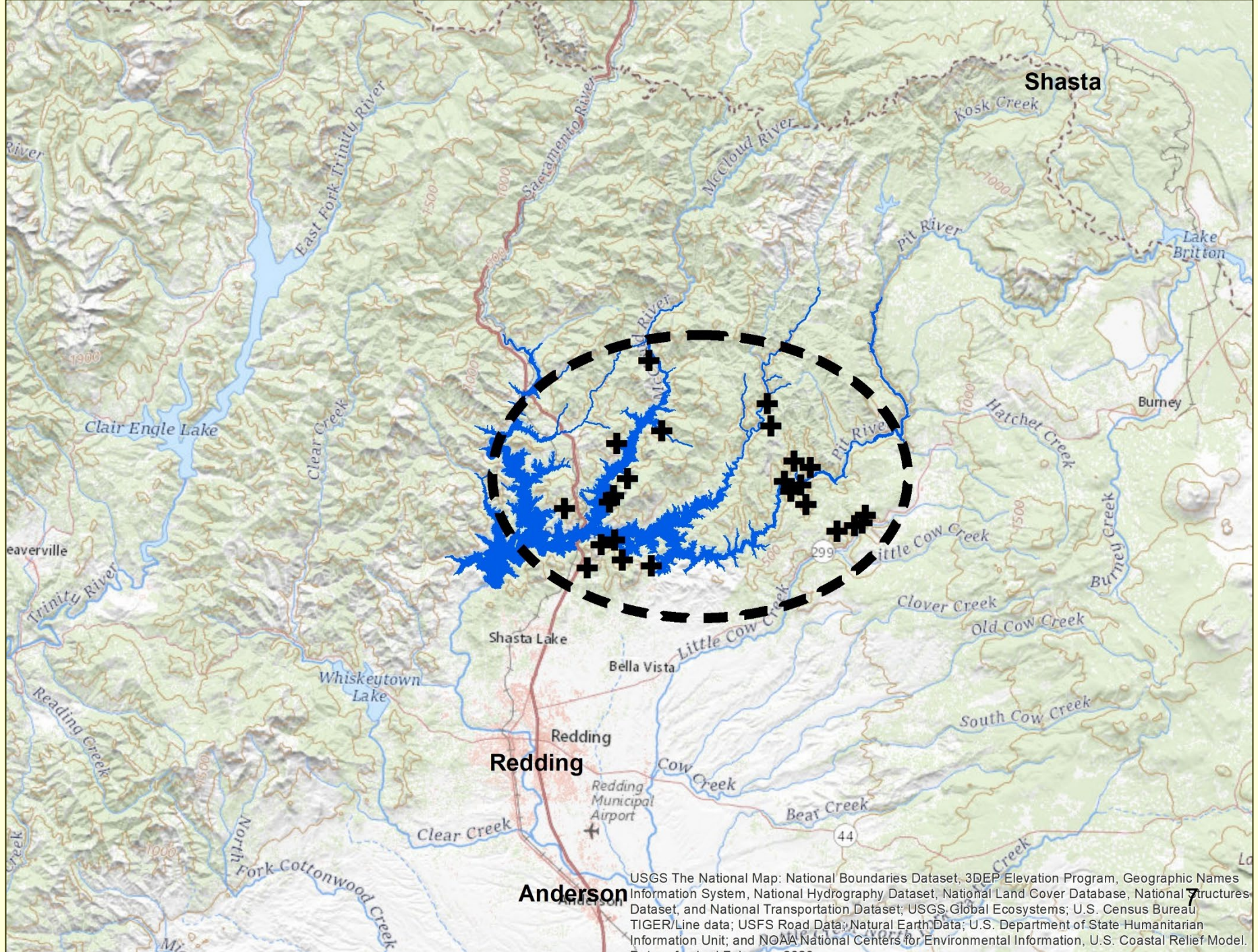


Photo: Gary Monroe, CC BY-NC-SA 3.0

Range and Distribution

- Western Shasta County
- Twenty-four occurrences
 - Eighteen on federal land
 - Six partially or completely on non-federal land
- “Relict” species





USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model.

Habitat



Photo: ©2013 Sierra Pacific Industries, Jessica O'Brien



Photo: Julie Kierstead, CC BY-NC-SA 3.0

Population Trend

- Historically more widespread
 - Shasta Dam 1948
- Monitoring in 2011 - 2013

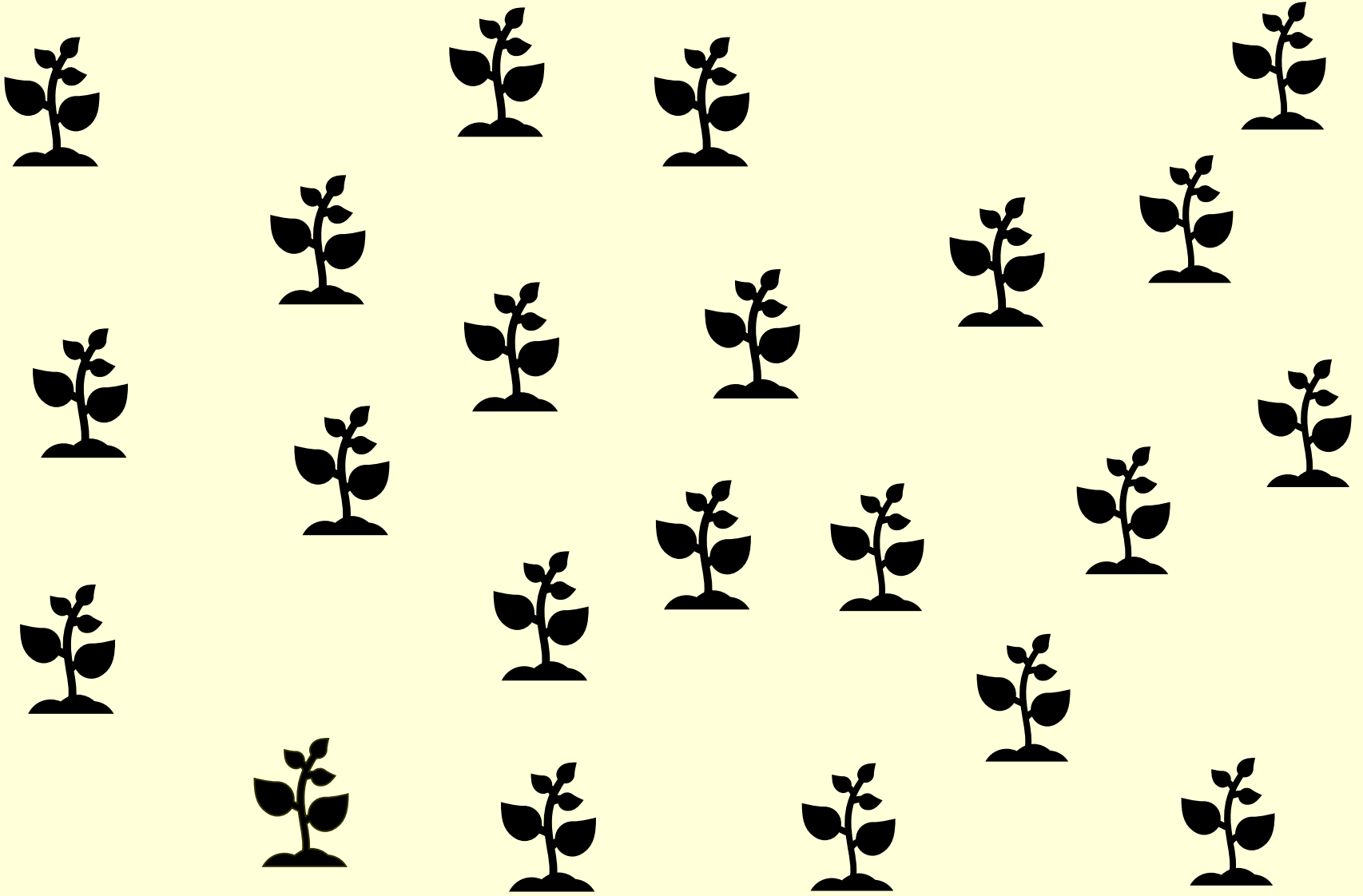


Abundance

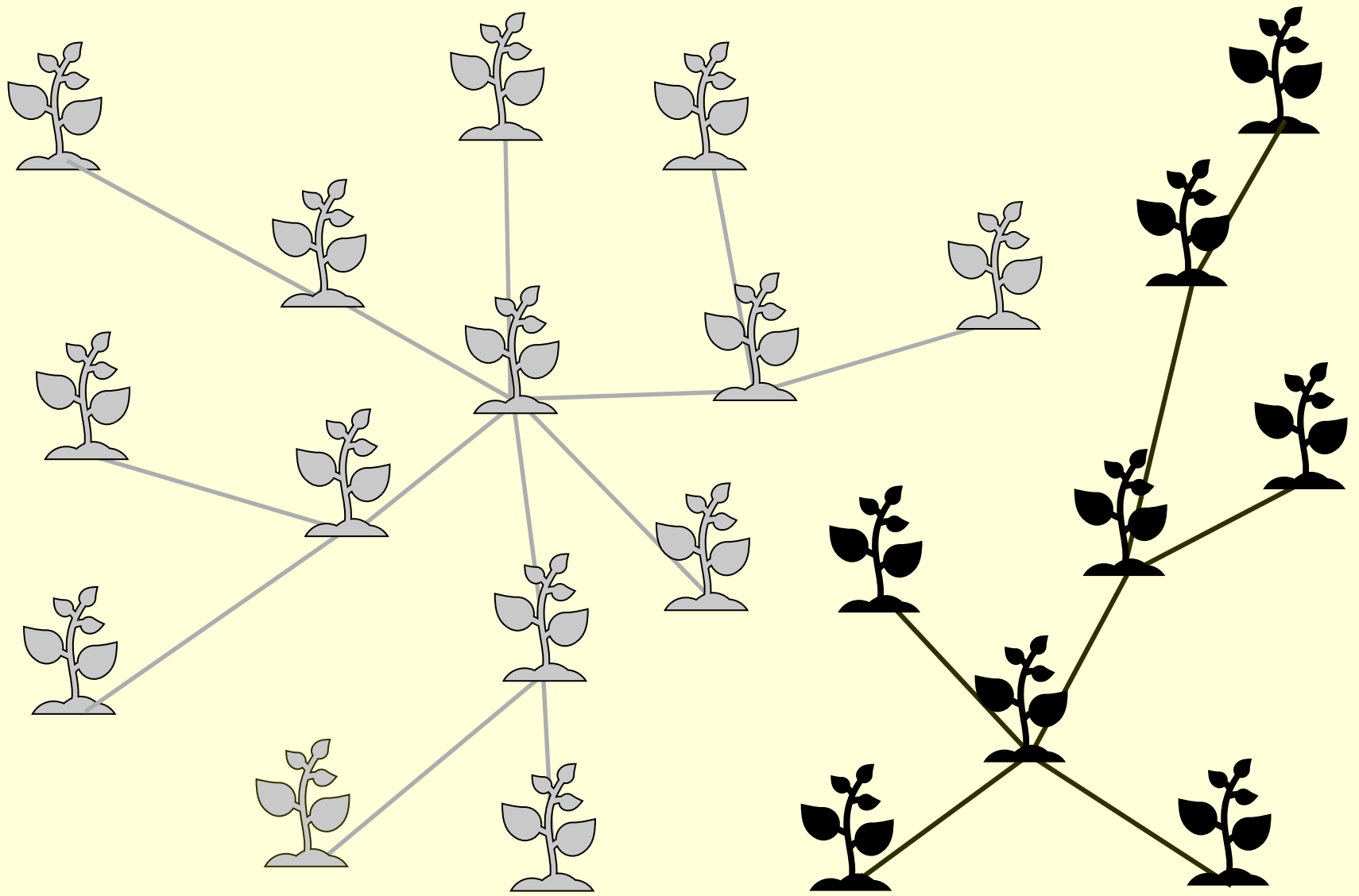
- Population sizes vary
- Vegetative propagation - clones



CDFW Photo by Cherilyn Burton



n = 22

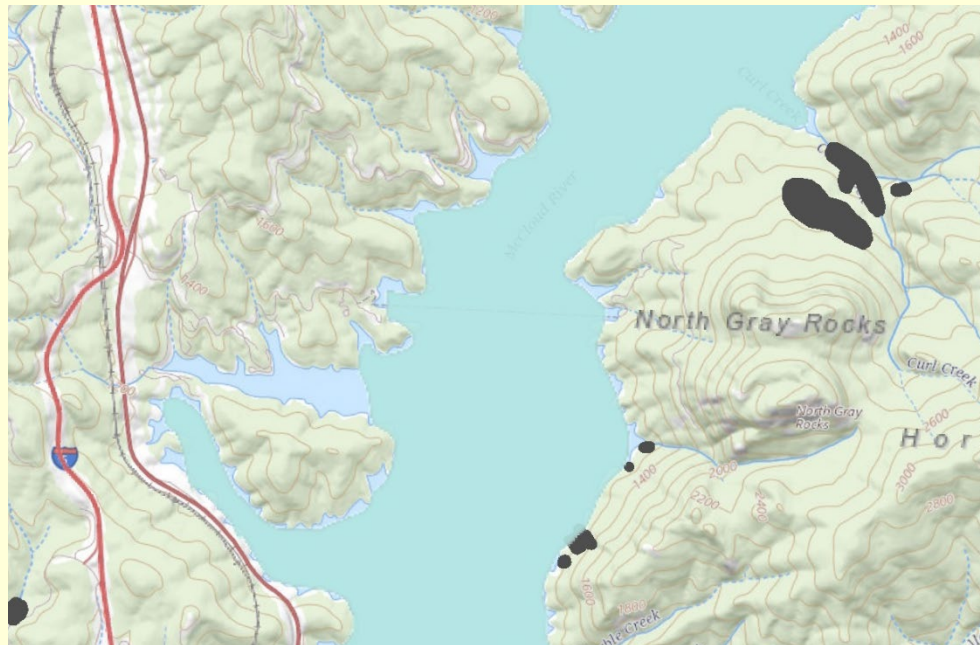


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Threats

Modification of Habitat

- Shasta Dam project: petition states 19 populations affected
 - Eleven by water level rise
 - Eight by associated activities



Modification of Habitat

- Invasive species
- Wildfire
- Landslides
- Climate change



CDFW Photo by Cherylun Burton

Modification of Habitat

- Land management projects
- Road and trail maintenance
- Mining, logging, other development

Reproductive Challenges

- Lack of seed germination
- Limited dispersal ability
- Seed bank viability



Photo: John MacDonald, Rancho Santa Ana Botanic garden

Overutilization



Photos Julie Kierstead, CC BY-NC-SA 3.0

Conclusion

The Department finds there is sufficient scientific information to indicate that the petitioned action may be warranted, and **recommends the Commission accept and consider the Petition.**

Summary

Shasta snow-wreath

- Twenty-four populations
- Primary threats
 - Modification of habitat
 - Reproductive challenges
 - Overutilization



Photo: Steve Matson, CC BY-NC-SA 3.0

The Department recommends accepting and considering the petition.

Questions



Thank You



Photo: Julie Kierstead, CC BY-NC-SA 3.0

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CESA Petition Evaluation: Mountain Lion (*Puma concolor*)



Photo Credit: Donna Krucki

Fish and Game Commission - April 16, 2020

Esther Burkett – Wildlife Branch/Nongame Wildlife Program

Presentation Outline

- **Conservation Status**
- **Species Overview**
- **Petition Evaluation Process**
- **Petition Evaluation**
- **Department Recommendation**

Conservation Status

Former Range of Mountain Lions in North America and Legal Status in California



From Culver et al. 2000, cited in the Petition.

California Status:

Many changes in legal status over time, including a bountied predator, nongame mammal, and a game mammal

“Specially Protected Mammal” in 1990 (FGC Section 4800)

Public Safety, Depredation, Educational, and Scientific Research Take Exceptions

Species Overview: Distribution and Taxonomy in California

- Order: Carnivora
- Family: Felidae
- Formerly *Felis concolor*, with two subspecies in California

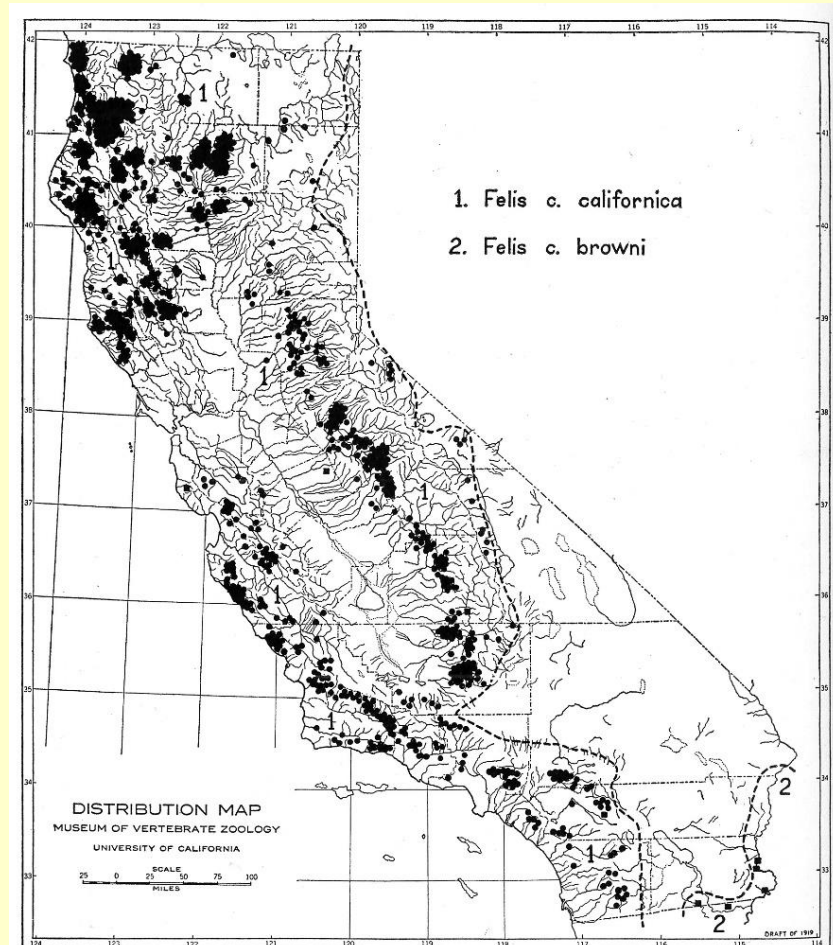
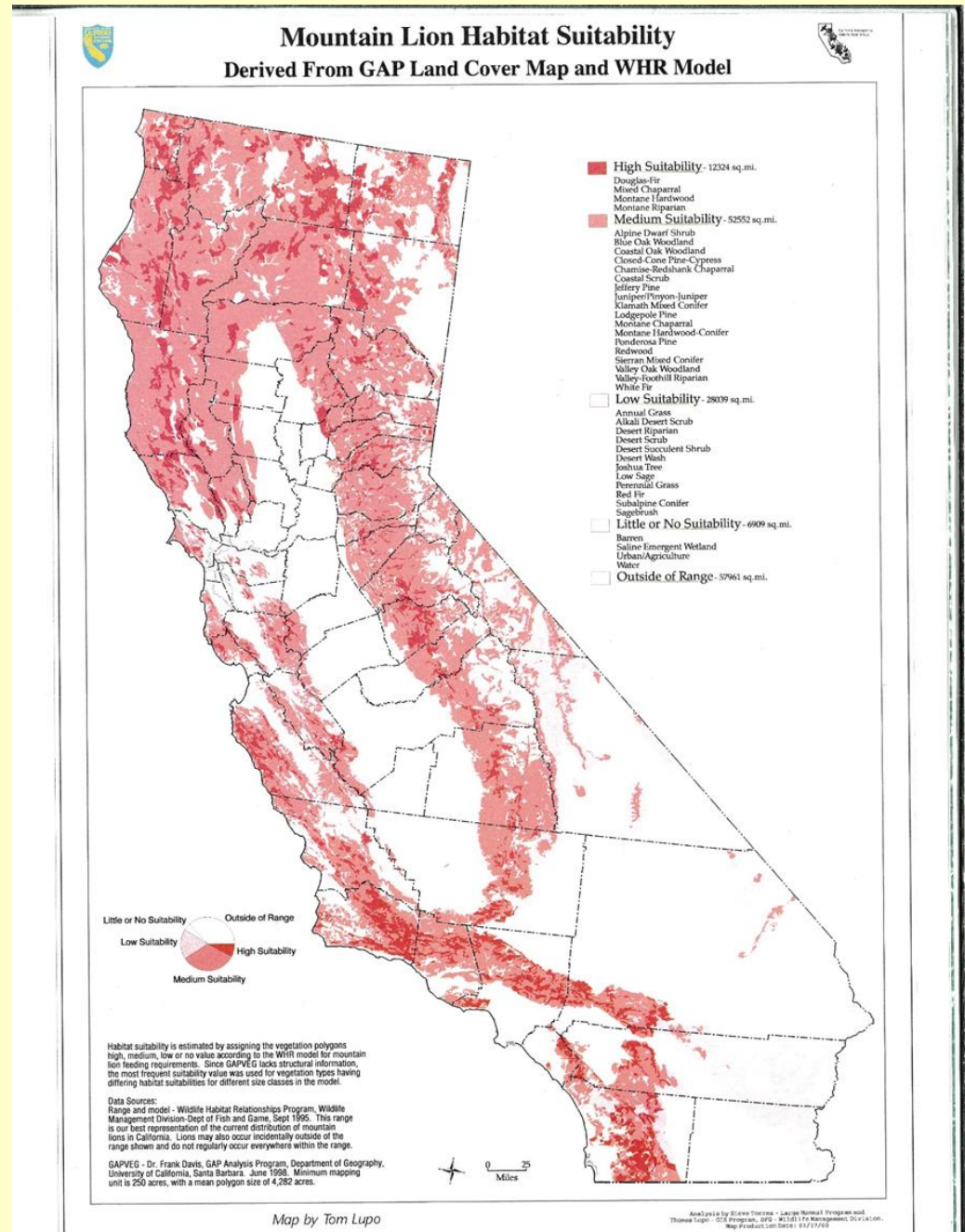


Fig. 221. Distribution of mountain lions in California: Round spots indicate localities of capture as stated in the Fish and Game Commission bounty records for the 7-year period, 1913-1919; square spots indicate some known localities of record otherwise, most of them as represented by specimens preserved. The approximate former limits, in California, of the two races are shown by broken lines; these races are: 1, California mountain lion; 2, Yuma mountain lion.

Species Overview: Overview:

Mountain Lion Range and Habitat Suitability in California



Species Overview: Life History

Apex predator, occurs in low densities

Territorial and mostly solitary

Females care for their young for 1-2 years

Deer are the primary prey species

Juvenile males disperse further than females



Bushnell (M) Camera Name 62°F16°C ● 03-23-2014 17:01:07

Photo Credit: Wildlife Health Center, UC Davis

Petition Evaluation Process

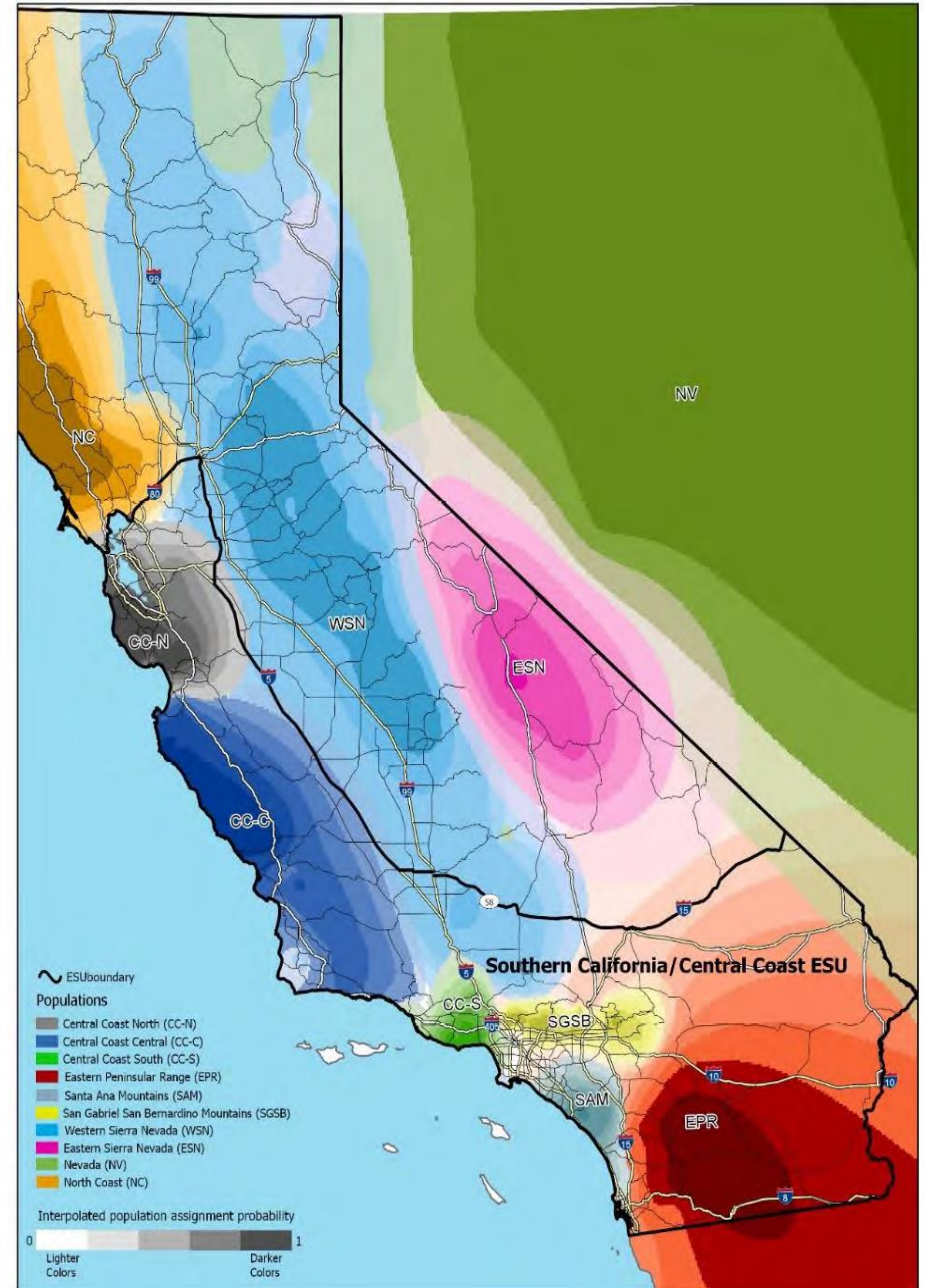
1. Population trend
2. Range
3. Distribution
4. Abundance
5. Life history
6. Habitat
7. Survival and reproduction factors
8. Degree/immediacy of threat
9. Impacts of existing management
10. Suggestions for future management
11. Information sources
12. Detailed distribution map

Petition Evaluation

Proposed Southern California/Central Coast ESU

Six Genetic Subpopulations of Mountain Lions

- Central Coast North (CC-N)
- Central Coast Central (CC-C)
- Central Coast South (CC-S)
- San Gabriel/San Bernardino Mtns (SGSB)
- Santa Ana Mtns (SAM)
- E. Peninsular Range (EPR)



Petition Evaluation: Population Trend and Abundance

Population	Effective Population Size (N_e)	Estimated Total (Adult) Population (N)
Central Coast North (CC-N)	16.6	33-66
Central Coast Central (CC-C)	56.6	113-226
Central Coast South (CC-S)	2.7^2	5-10
Santa Ana Mountains (SAM)	15.6^3	31-62
San Gabriel/ San Bernardino Mountains (SGSB)	5	10-20
Eastern Peninsular Range (EPR)	31.6	63-126
Total		255-510

Petition Evaluation: Factors Affecting the Ability of the Population to Survive and Reproduce

- Lack of habitat connectivity
- More frequent wildfires
- Habitat loss and fragmentation
- Climate change
- Low genetic diversity/inbreeding depression
- Anthropogenic mortality factors
- Intraspecific strife (i.e., aggression between lions)



Photo Credit: Wildlife Health Center, UC Davis

Petition Evaluation: Degree and Immediacy of Threats

- Human population growth
- Continued habitat loss and fragmentation
- Further degradation and destruction of habitat connectivity
- Need for wildlife crossing infrastructure
- Need for preservation of intact linkages, e.g., Tehachapi and Sierra Pelona Mountains



Photo Credit: Wildlife Health Center, UC Davis

Petition Evaluation: Kind of Habitat Needed for Survival

- Large, contiguous blocks of habitat
- Adequate movement corridors
- Sufficient cover
- Wide variety of prey, especially large ungulates



Bushnell

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Photo Credit: Wildlife Health Center, UC Davis

Petition Evaluation: Impact of Existing Management Efforts

- **California Environmental Quality Act**
 - Transportation infrastructure
 - Development projects
- **Southern California Natural Community Conservation Plans**



Photo Credit: Wildlife Health Center, UC Davis

Department Recommendation

- The Department concludes the Petition meets the requirement in Fish and Game Code section 2072.3 that it include sufficient scientific information to indicate the petitioned action may be warranted.
- The Department recommends the Commission accept the Petition for further consideration under CESA.

Questions



Thank You



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CESA: Southern California & Central Coast Mountain Lions

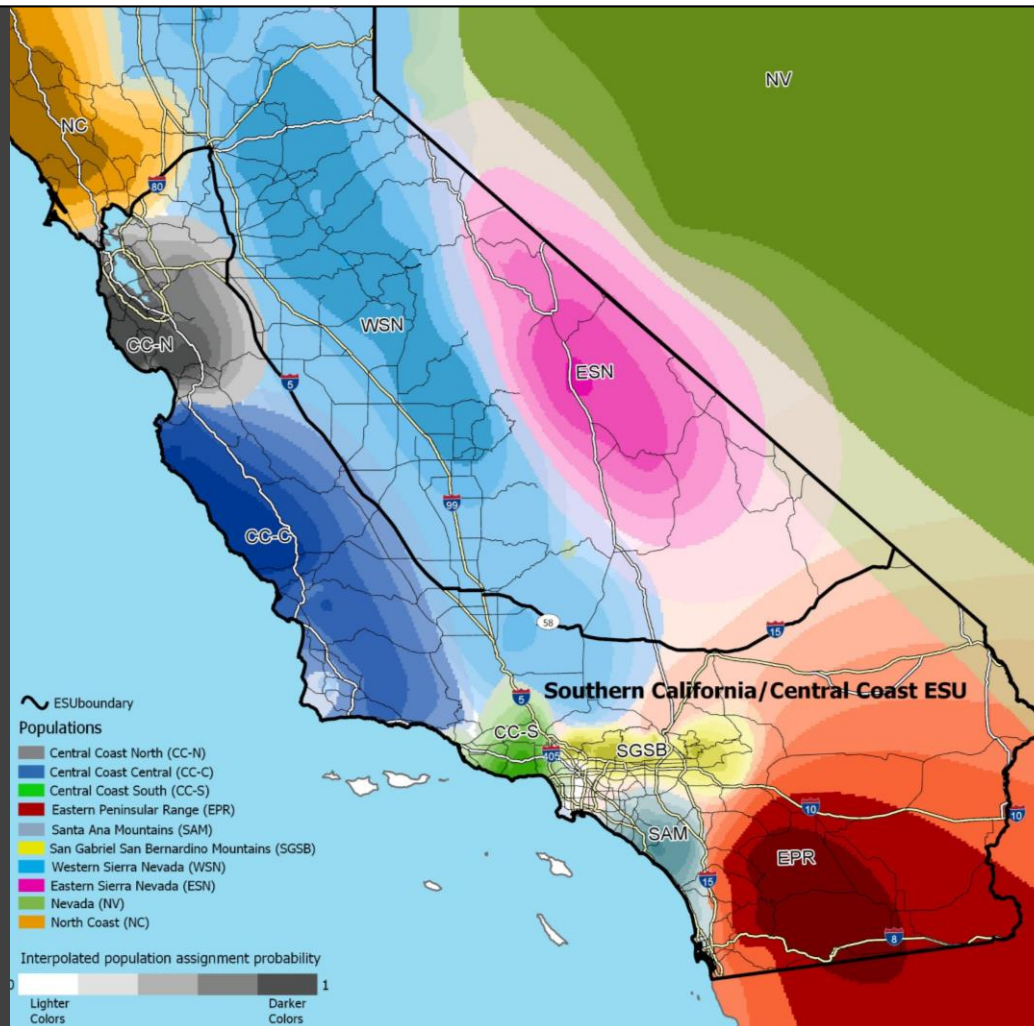


Tiffany Yap, D.Env/Ph.D
Center for Biological Diversity
CA Fish and Game Commission Meeting
April 16, 2020



Proposed Evolutionarily Significant Unit (ESU)

Based on science and management



Derived from Gustafson et al. 2018. Genetics data source: Kyle Gustafson, PhD, Department of Biology and Environmental Health, Missouri Southern State University, and Holly Ernest, DVM, PhD, Department of Veterinary Sciences, Program in Ecology, University of Wyoming, Laramie.



Populations with an $N_e < 50$ might be at high risk of extinction

Population	Effective Population Size (N_e)
Santa Ana Mountains	6
Santa Monica Mountains	4
San Gabriel/San Bernardino	5
Santa Cruz Mountains	16.6
Eastern Peninsular Range	31.6
Central Coast Central	56.6
Western Sierra Nevada	157.5

} Within the proposed ESU

Gustafson et al. 2018, Conservation Genetics
Benson et al. 2019, Ecological Applications

Santa Cruz

Western Sierra Nevada

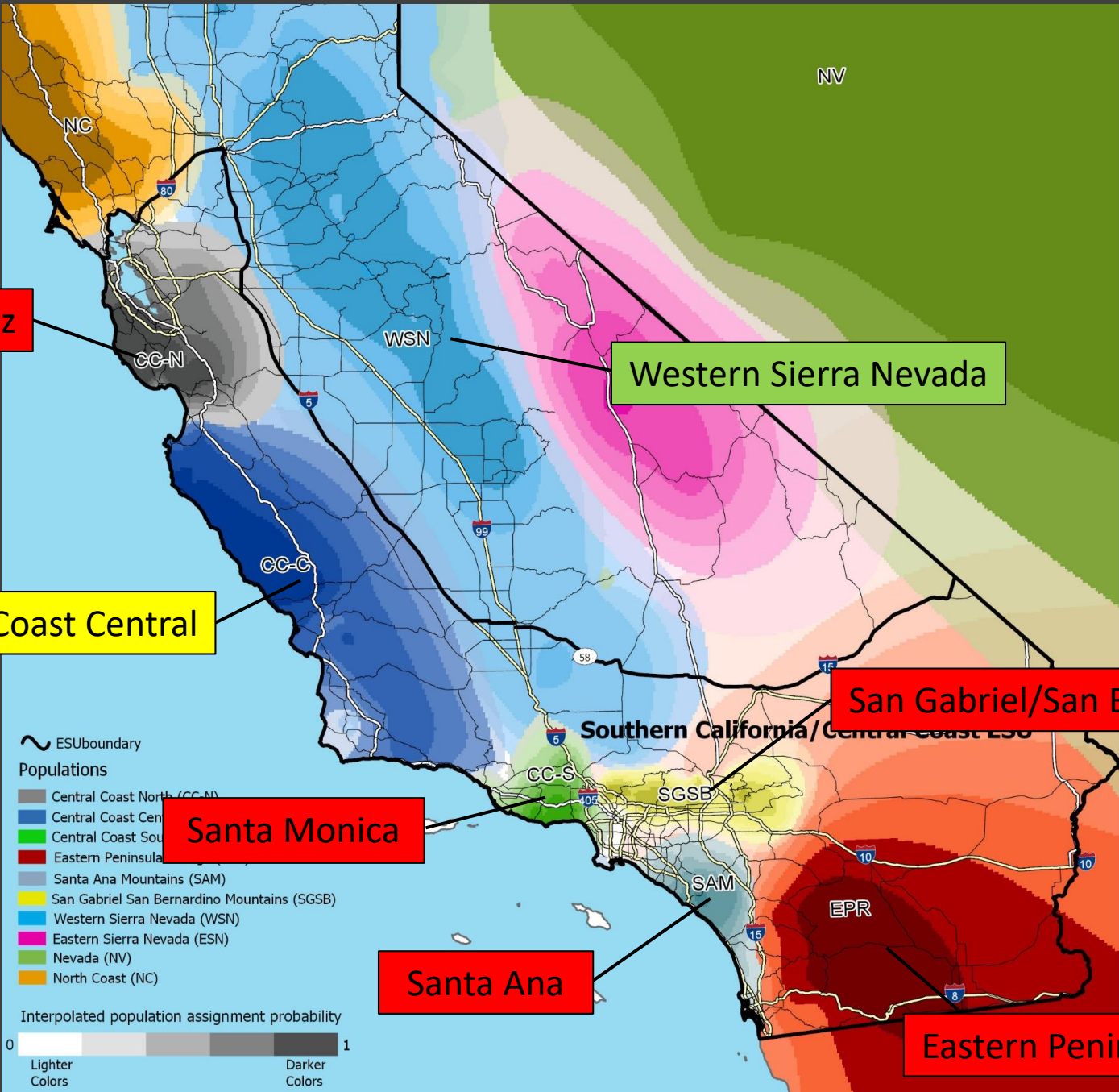
Central Coast Central

San Gabriel/San Bernardino

Santa Monica

Santa Ana

Eastern Peninsular Range



Santa Cruz

Western Sierra Nevada

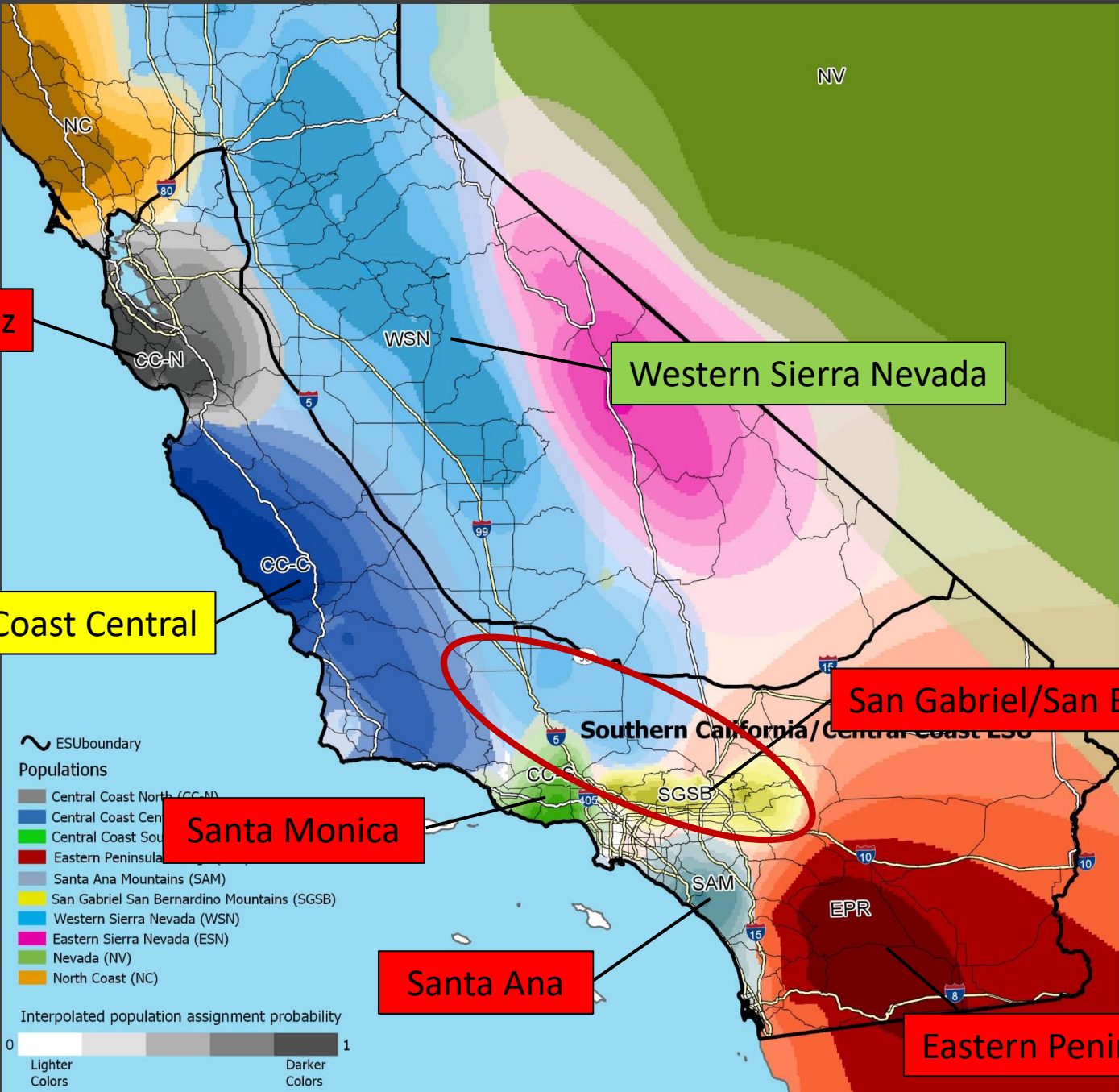
Central Coast Central

San Gabriel/San Bernardino

Santa Monica

Santa Ana

Eastern Peninsular Range



Extinction Vortex

- Genetic Isolation
- Vehicle Strikes
- Depredation Kills
- Rat Poisons
- Poaching
- Disease
- Wildfires
- Climate Change



Extinction Vortex

- Genetic Drift
- Vehicle Collisions
- Dependent on
- Rat
- Poaching
- Disease
- Wildfires
- Climate Change

**Primary Driver:
Lack of Connectivity**

Existing laws are not enough

- Prop 117 bans sport-hunting
- Some populations have lower rates of survival than many hunted populations
- Roads and development continue to fragment mountain lion habitat



What would CESA listing do?

- Land-use planning decisions
 - Preserve existing natural corridors
 - Minimize impacts to lion movement
 - Consult state wildlife experts
- Greener infrastructure
 - Wildlife bridges
 - Culverts, underpasses
 - Protected land on both sides of highways
- Use of rodenticides
- CDFW recovery plan



