



## CALIFORNIA WETFISH PRODUCERS ASSOCIATION

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March 15, 2021

Mr. Marc Gorelnik, Chair  
And Members of the Pacific Fishery Management Council

### REQUEST FOR RENEWAL OF EXEMPTED FISHERY PERMIT (EFP) TO ALLOW FISHING OF PACIFIC SARDINE FOR BIOLOGICAL SAMPLES IN 2021 NEARSHORE RESEARCH PROGRAM

Dear Chair Gorelnik and Council Members,

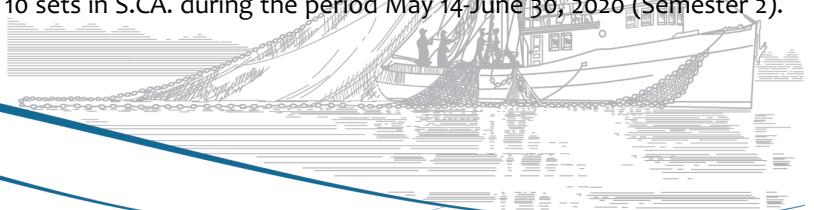
On behalf of CWPA and California's wetfish industry, I am submitting this request for renewal of the EFP authorizing sardine fishing to collect biological samples to indicate our interest in continuing the field work begun in May 2020, with Council and NMFS approval.

We initiated this EFP request following the 2020 sardine STAR Panel review, after learning that the model used to estimate sardine abundance had excluded fishery age data since the closure of the directed sardine fishery in 2015. Although the SSC recommended including biological / age data from recent year incidental catches and the live bait fishery, to date the Stock Assessment Team (STAT) has only considered age data collected from landings directly targeting sardine. This is concerning because the directed fishery has been closed for five years and may remain closed for the foreseeable future. Consequently, the model 'saw' no evidence of recruitment and predicted a continuing decline of the 'northern' sardine stock, contradicting both the abundance data in AT surveys (Tables 6 and 8 of the 2020 stock assessment document), numerous observations of increasing abundance and small sardines reported by fishermen and other independent evidence of abundance (i.e. the Juvenile Rockfish Survey and CalCOFI Rep., Vol. 60, 2019).

Thus, it was necessary to establish a small sardine fishery in order to provide recent biological / age data that the STAT can use to update the model in further stock assessments. This EFP research project was designed in communication with the SWFSC lead sardine stock assessment scientist and the California Department of Fish and Wildlife (CDFW), to develop a systematic framework for carefully controlled sardine fishing to provide landings for the purpose of biological sampling, including age, in both Southern CA and Monterey throughout the fishing year. Without a continuing timeseries of age data, the sardine assessment will suffer the same fate as the anchovy assessment. The absence of biological sampling after the anchovy fishery declined in the early 1980s caused a 25+ year gap in age data, which now presents a big challenge in developing a new model-based anchovy stock assessment. The goal of this EFP is to prevent the same problems from happening with sardine.

The framework suggested by the stock assessment scientist was to provide a minimum of at least six landings per semester in both Monterey and Southern California. CDFW biologists confirmed their ability to sample and age every set. Collecting these age samples in 2020 was particularly important as these samples constitute the only biological / age data available for 2020 semester 2 (January-June), since both the spring NOAA Acoustic Trawl survey and CDFW aerial survey were cancelled. NOAA's summer AT survey also was cancelled, thus the only sardine fishery age data available are from this EFP.

Our 2020 bio sampling sardine fishing EFP allocated 640 mt for the period ended June 30, 2020, and another 740 mt for the period July 1, 2020 through June 30, 2021. We landed a total of 586.84 mt in the period ended June 30, leaving a balance of 53.16 mt. We accomplished 12 sets in Monterey and 10 sets in S.CA. during the period May 14-June 30, 2020 (Semester 2). (Please see attached spreadsheets for details.)



The landings in Monterey were particularly interesting, as nightly sets included a range of sardine sizes schooling together, from Young of the Year to five-year-old sardines. *(Please see photo attached.)*

The updated tables attached to this letter reflect directed catches in both Monterey and S.CA. from July 1, 2020 to date. We will continue this work under the current EFP allowance until June 30, 2021, the ending date of the FY 2020 EFP.

In light of the critical importance of maintaining a continuing time series of age data, we are again requesting an allocation of a portion of the 2021-22 ACL for use after July 1, 2021 and throughout the 2021-22 fishing season. The objective of this request is to continue this essential biological sampling program, collecting age data to improve the sardine stock assessment. This request acknowledges the current listed stock status of the northern subpopulation of Pacific Sardine, and the need for allocation of available tonnage to other fishery sectors.

We are requesting an amount not to exceed 620 mt from the 2021-22 ACL for use after July 1, 2021. This amounts to about one 20 mt landing per month per area as a baseline throughout the season. We've determined that 20 tons is the smallest amount feasible to cover fuel and crew expenses for a day's fishing for vessels that volunteer to participate in this research project. The fishermen listed in this EFP request are receiving no other payment besides their catch.

All landings will be sampled by CDFW to produce biological data, including age, for use in the stock assessment model. The STAR Panel also recommended increased sampling of CPS identified in aerial surveys, and the STAT suggested augmenting both aerial and acoustic samples. To accomplish this, the framework increases the sampling frequency to 3 sets during the months of April in S.CA. and August in Monterey, to be timed in conjunction with the aerial survey and summer AT survey (assuming that it runs in 2021). Further, two landings per month are scheduled for November and December, the peak season for sardine in California. This framework provides for approximately 8 landings in S.CA. and 10 landings in Monterey during semester 1 - 2021 (July-December 2021) and 8 landings in each area in semester 2 - 2022 (January-June 2022).

In light of recent year landings patterns, we suggest that the 2021-22 ACL would cover the three EFP requests proposed in 2021 (2 in CA and 1 in the PNW), as well as all other uses approved in 2020.

This biological sample fishing EFP is distinct from our EFP renewal request for aerial survey research using point sets to validate observer tonnage estimates and species ID. Point sets are difficult to achieve, as they require wrapping 80-100 percent of the school. This entails close coordination between the fisherman and pilot as the pilot sets the boat, flying his own plane to direct the set. Because the pilot we employ in this work also serves as the observer in the Department's plane when they are conducting aerial surveys, point sets cannot occur at the same time as the CDFW aerial surveys. However, this bio sample fishing EFP, in addition to providing new age data for the model, would also allow for fishermen to capture samples identified by the pilot to confirm species identification while he is observing in the Department's plane. Thus, the two EFPs, while coordinated to the extent possible, have different objectives.

Three objectives provide the justification for this EFP renewal request: [1] to address the critical need to provide current and continuing biological / age data for the model for stock assessments, [2] to increase sampling of CPS schools observed in CDFW aerial and acoustic surveys, as recommended by the STAR panel and STAT, and [3] to provide evidence of recruitment that is obvious to fishermen in the field, and is also appearing in our biological samples to date, as well as independent scientific surveys that currently are not approved for use in sardine stock assessments (e.g. the Juvenile Rockfish Survey). As noted above, recruitment has not been observed in AT surveys, thus is not recognized in the sardine stock assessment. But recruitment has obviously occurred, and it is essential to provide that data for the next and future stock assessments.

Thank you very much for your consideration.

  
Executive Director

Attachments:

## Evidence of Recruitment & Abundance *the good news*

From CWPA testimony Agenda Item G.1.b, Supp. Pub. Comm. June 2020

- Thanks to Council support for our "biological sample fishing" EFP, NMFS approved it and we are producing new evidence:



## Biological sample fishing log for the period May 14-June 30, 2020

P - May 14- June 30, 2020 ~ total 640 mt															
Set #	Landing Date	Vessel	Port	Processor	Capture Latitude	Capture Longitude	SST	Total Sardine Lbs	Sardine MT	Total Anchovy Lbs	P&J Mack	Other Species Lbs	Total Landed Wt. Lbs	Total Landed Wt. MT	Fish Ticket
1	22-May	Triton	Term.Is.	Coast Tradin	N33° 36.909' W118° 05.59'		60	26,301	11.93	0	70	0	26,371	11.96	163617E
2	22-May	Provider	Term.Is.	Coast Tradin	N33° 37.23' W118°58.32		64	104,759	47.52	0	262	0	105,021	47.64	163605E
3	26-May	Triton	Term. Is.	Coast Fisher	N 33° 26.506' W 117° 58.08		62	69,056	31.32	0	250	0	69,276	31.42	163980E
4	26-May	Eileen	Term. Is.	Tri Marine	N 33° 44.23' W 118° 16.03		62	110,603	50.17	0	1,250	0	111,853	50.74	163960E
5	27-May	King Philip	Monterey	Monterey Fish	N 36° 37.41' W 121° 53.77		61	27,335	12.40	0	0	0	27,335	12.40	162749E
6	27-May	Trionfo	Monterey	ioCal Seafood	N 36° 37.610' W 121° 51.362		62	15,671	7.11	11,645	0	0	27,317	12.39	141500E
7	28-May	Trionfo	Monterey	ioCal Seafood	N 36° 39.63' W 121° 50.19		62	40,049	18.17	0	0	0	40,049	18.17	141504E
8	2-Jun	King Philip	Monterey	Monterey Fish	N 38° 38.61' W 121° 51.60		57	27,456	12.45	0	0	0	27,456	12.45	148422E
9	3-Jun	Trionfo	Monterey	ioCal Seafood	N 36° 37.45' W 121° 53.89			43,442	19.71	0	51	0	43,493	19.73	141516E
10	3-Jun	Provider	Term. Is.	Coast Fisher	N 33° 42.96' W 118° 09.51		62	29,690	13.47	0	605	0	30,295	13.74	165373E
11	4-Jun	Eileen	Term. Is.	Tri Marine	N 33° 42.9' W118° 11.8'		62	31,620	14.34	0	0	0	31,620	14.34	165569E
12	5-Jun	Trionfo	Monterey	ioCal Seafood	N 36° 37.119' W 121° 53.355		58	(incl. below) 76,682	34.78	0	0	0	76,682	34.78	141517E
13	8-Jun	Trionfo	Monterey	ioCal Seafood	N 36° 38.01' W 121° 54.44		58	(incl. below) 70,610	32.03	0	0	0	76,610	34.75	141518E
14	9-Jun	Trionfo	Monterey	SoCalSeafood	N 36° 39.60' W 121° 51.00		57	4,232	1.92	0	0	0	4,232	1.92	141523E
15	10-Jun	Eileen	Term Is.	Tri Marine	N 33° 38.69' W 118° 00.5'		64	1,417	0.64	0	0	0	1,417	0.64	166285E
16	11-Jun	Trionfo	Monterey	ioCal Seafood	N 33° 39.5' W 118° 03.19		62	112,548	51.05	0	0	0	112,548	51.05	166289E
17	11-Jun	Trionfo	Monterey	ioCal Seafood	N 36° 37.01' W 121° 151.9'		58	52,637	23.88	0	26	0	52,709	23.91	141527E
18	11-Jun	Triton	Term. Is.	Coast Fisher	N 33° 42.820' W 118° 08.88'		63	49,450	22.43	0	0	0	49,450	22.43	166541E
19	12-Jun	Triton	Term. Is.	Coast Fisher	N 33° 37.935' W 118° 09.70'		62	90,096	40.87	0	1	0	90,096	40.87	166711E
20	12-Jun	Trionfo	Monterey	ioCal Seafood	N 36° 37.73' W 121° 51.32		58	28,460	12.91	0	3	0	28,463	12.91	141528E
21	17-Jun	Eileen	Term. Is.	Tri Marine	N 33° 43.9' W 118° 21.9'		65	1,415	0.64	0	0	0	1,415	0.64	167355E
22	17-Jun	Trionfo	Monterey	SoCalSeafood	N 33° 43.7' W 118° 21.8		64	135,216	61.33	0	0	0	135,216	61.33	167353E
23	17-Jun	Trionfo	Monterey	SoCalSeafood	N 36° 37.76' W 121° 51.32		57	49,567	22.48	0	0	0	49,567	22.48	141533E
24	30-Jun	Trionfo	Monterey	SoCalSeafood	N 36° 37.74' W 121° 51.30		"	51,173	23.21	67,498	0	0	118,671	53.83	168256E
25	30-Jun	Trionfo	Monterey	SoCalSeafood	N 36° 38.78' W 121° 51.32		58	44,268	20.08	0	0	0	44,268	20.08	168257E
SubTotal								1,293,753	586.84	mt					
Balance									53.16	mt					

Preliminary biological sample fishing log for the period July 1, 2020 – June 30, 2021  
Monterey

July 1 '20 - June 30 '21 – 740 metric tons

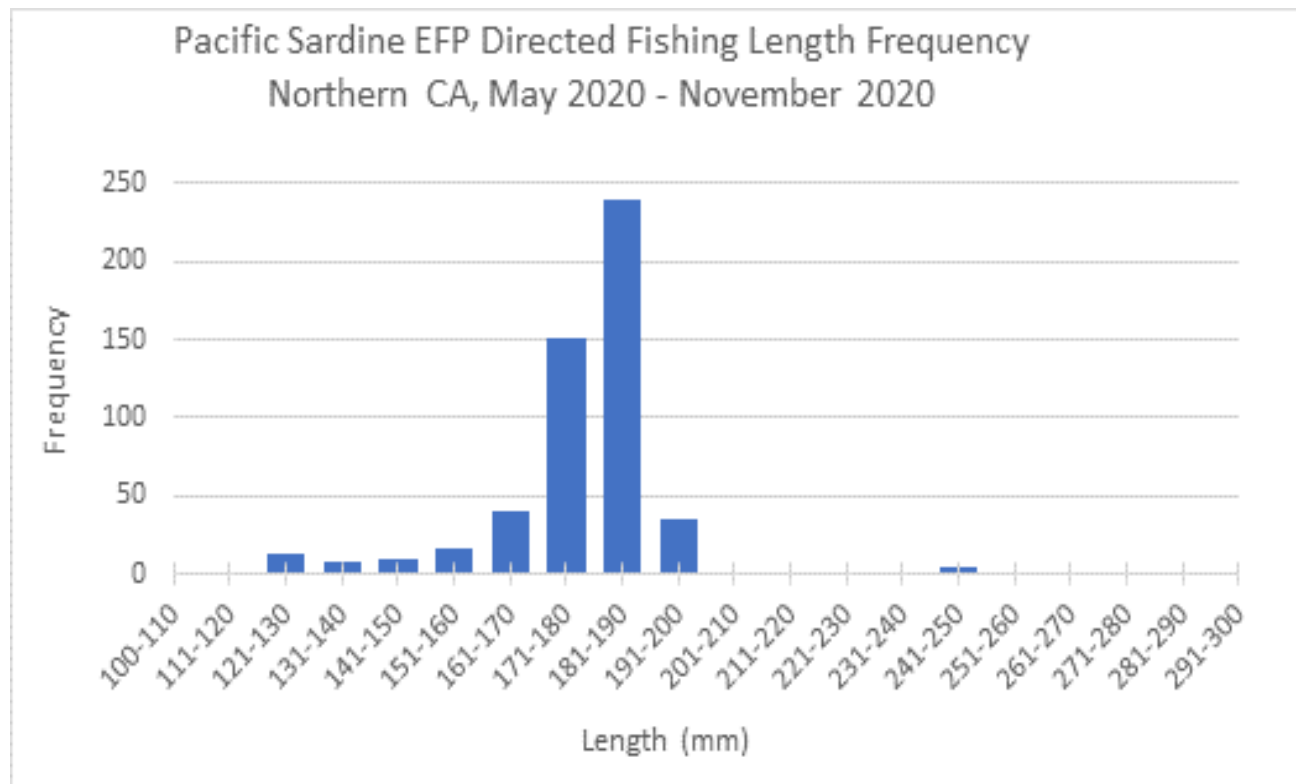
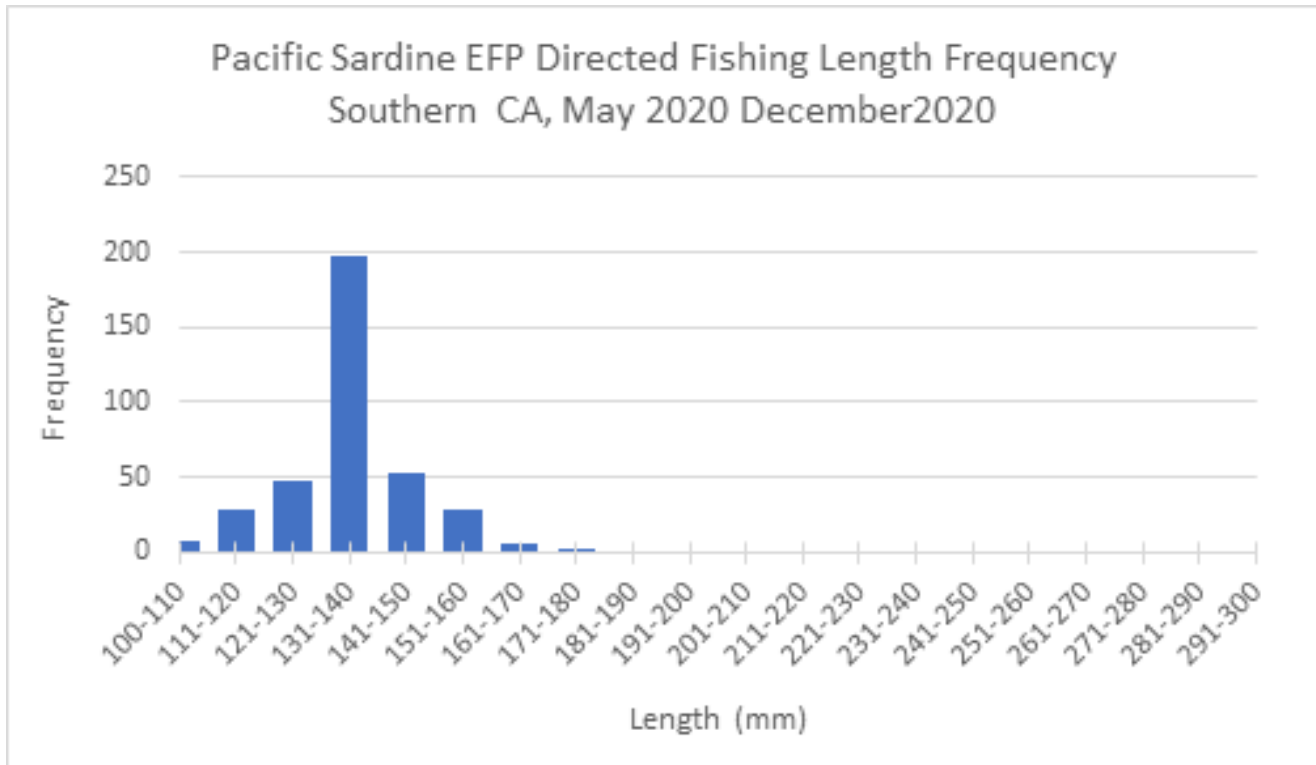
Monterey		370 mt									
Set #		Landing Date	Vessel	Port	Processor	Capture Latitude	Capture Longitude	SST	Total Sardine Lbs	Sardine MT	
SEMESTER 1 Jul-Dec '20	1	9/14/20	Trionfo	HMB	SoCal Sfd	N 37.08.13	W 122.25.50	58	52,852.0	23.97	
	2	9/21/20	Trionfo	Monterey	SoCal Sfd	N 36.38.027	W 121.51.34	58	68,976.0	31.29	
	3	9/21/20	Sea Wave	Moss Landing	Mnty Fish	N 36.54.13	W 121.51.27	58	57,221.0	25.96	
	4	9/23/20	Trionfo	Monterey	SoCal Sfd	N 36.53.79	W 121.50.78	58	81,067.0	36.77	
	5	9/23/20	Sea Wave	Moss Landing	Mnty Fish	N 36.54.65	W 121.51.59	60	88,101.0	39.96	
	6	10/28/20	Sea Wave	Moss Landing	Mnty Fish	N 36.41.35	W 121.49.49	57	68,392.0	31.02	
	7	11/17/20	Sea Wave	Moss Landing	Mnty Fish	N 36.41.57	W 121.49.15	55	69,509.0	31.53	
SEMESTER 2 Jan-Jun '21	8	2/17/21	King Philip	Moss Landing	Mnty Fish	N 36.37.77	W 121.34.38	53	28,585.0	12.97	
	9	2/17/21	Sea Wave	Moss Landing	Mnty Fish	N 36.38.03	W 121.54.84	53	9,670.0	4.39	
	10	2/18/21	King Philip	Moss Landing	Mnty Fish	N 36.38.35	W 121.58.54	53	15,869.0	7.20	
Sub-Total		Monterey							540,242.0	245.05	
Balance - Monterey										124.95	

Southern CA

S.CA		370 mt									
Set #		Landing Date	Vessel	Port	Processor	Capture Latitude	Capture Longitude	SST	Total Sardine Lbs	Sardine MT	
SEMESTER 1 Jul-Dec '20	1	10/22/20	Provider	Term.Is.	Tri-Marine	N 33.38.91	W 118.06.60	68	48,273.0	21.90	
	2	11/3/20	Provider	Term.Is.	Tri-Marine	N 32.42.89	W 118.08.46	64	39,599.0	17.96	
	3	11/17/20	Provider	Term.Is.	Tri-Marine	N 33.43.14	W 118.11.39	59	43,967.0	19.94	
	4	11/19/20	Provider	Term.Is.	Tri-Marine	N 33.43.05	W 118.12.25	59	48,650.0	22.07	
	5	12/4/20	Provider	Term.Is.	Tri-Marine	N 33.42.90	W 118.09.85	58	48,315.0	21.92	
	6	12/10/20	Provider	Term.Is.	Tri-Marine	N 33.43.04	W 118.12.52	58	47,912.0	21.73	
	7	12/17/20	Provider	Term.Is.	Tri-Marine	N 33.43.61	W 118.22.06	58	47,101.0	21.36	
SEMESTER 2 Jan-Jun '21	8	1/15/21	Provider	Term Is.	Tri-Marine	N 33.43.10	W 118.10.57	57	63,570.0	28.84	
	9	2/12/21	Provider	Term Is.	Tri-Marine	N 33.43.80	W 118.21.98	58	25,423.0	11.53	
	10	2/26/21	Provider	Term Is.	Tri-Marine	N 33.45.05	W 118.10.36	58	64,694.0	29.35	
Sub-Total		S.CA							477,504.0	216.59	
Balance -		S.CA.								153.41	
TOTAL REMAINING										278.35	

Preliminary biological data collected in Biological Sample Sardine Fishing EFP from May 14, 2020 to December 2020

*Note: Aging samples is underway.*





*[EFP2 APPLICATION RENEWAL REQUEST SUBMITTED FOR 2020-21 RESEARCH]*

- 4a. Date:** March 15, 2021
- 4b. Applicant:** California Wetfish Producers Association (CWPA)  
Diane Pleschner-Steele, Executive Director  
PO Box 1951, Buellton, CA 93427  
(805) 693-5430

On behalf of CWPA and California's wetfish industry, we would appreciate NMFS consideration of and support for the following EFP renewal request:

This request stems from the outcome of the 2020 sardine STAR Panel review, where we learned that the model used to estimate sardine abundance has not included new fishery age data to predict age 1+ biomass since the closure of the directed sardine fishery in 2015. Although the SSC recommended that the stock assessment team include biological / age data from recent incidental catches and the live bait fishery ( <https://www.pcouncil.org/documents/2019/06/all-committee-agendas-for-june-2019-briefing-book-bookmarked-in-alphabetical-order-for-easy-navigation.pdf/> (p.28)), assessment scientists chose not to comply. Consequently, the model continues to predict a decline in the 'northern' sardine stock, contradicting both the abundance data in the AT surveys (Tables 6 and 8 of the stock assessment document), numerous observations of increasing abundance reported by fishermen and other independent evidence of abundance (i.e. the Juvenile Rockfish Survey and CalCOFI Rep., Vol. 60, 2019). The Juvenile Rockfish Survey currently is not approved for use in the sardine stock assessment.

- 4c.** The proposed survey plan provides the following explanation of purpose and goals

**Overview and Justification**

Three objectives provide the justification for this EFP request: [1] to address the critical need to provide current biological / age data for the model for the update assessment and future stock assessments, [2] to increase sampling of CPS schools observed in CDFW aerial surveys and Acoustic Trawl surveys, as recommended by the STAR panel and stock assessment scientists, and [3] to provide evidence of recruitment that is obvious to fishermen in the field, and is also appearing in independent scientific surveys that currently are not approved for use in sardine stock assessments (e.g. the Juvenile Rockfish Survey). However, despite this evidence, recruitment has not been observed by the AT survey, therefore the sardine stock assessment report stated that recruitment has not occurred.

We are requesting an allocation of the northern 2021-22 sardine Annual Catch Limit (ACL) for use after July 1, 2021 to continue accomplishing essential research to better inform the sardine stock assessment:

it is necessary to establish a small fishery to collect biological samples because, to date, stock assessment scientists have opted to exclude all recent fishery age data unless collected from targeted sardine fishery landings, and the fishery has been closed since 2015. This EFP research project was designed in communication with the SWFSC lead stock assessment scientist and the California Department of Fish and Wildlife (CDFW), to develop a systematic framework for carefully controlled sardine fishing for the purpose of biological sampling that will provide landings and biological data in both Southern CA and Monterey throughout the fishing year.

The framework suggested by the stock assessment scientist and reviewed by CDFW biologists is to provide a minimum of six landings per semester in both Monterey and Southern California. Collecting these biological / age samples at this time is important as these samples constitute the only directed fishery age data available. We are cooperating with CDFW biologists on this research, and they confirmed their ability to sample and age every set.

We are requesting an amount not to exceed 620 mt from the 2021-22 ACL for use after July 1, 2021, and throughout the remainder of the 2021-22 fishing year. This amounts to about one 20 mt landing per month per area as a baseline throughout the season. We've determined that 20 tons is the smallest amount feasible to cover fuel and crew expenses for a day's fishing for vessels that volunteer to participate in this research project. The fishermen listed in this EFP request are receiving no additional payment besides their catch.

All landings will be sampled by CDFW to develop biological data, including age, for the stock assessment model.

The STAR Panel also recommended increased sampling of CPS identified in aerial surveys, and the STAT suggested augmenting both aerial and acoustic samples. To accomplish this, the framework increases the sampling frequency during the months of April in S.CA. and August in Monterey, in conjunction with the aerial survey and summer AT survey. Further, two landings per month are proposed for November and December, the peak season for sardine in California. This framework provides for approximately 8 landings in S.CA. and 10 landings in Monterey during the first semester (July-December 2021) and 8 landings in each area in the second semester (January-June 2022). To ensure enough fish for at least one sample per month per area for throughout the year and increased sampling during survey months, this EFP will apply trip limits when targeting samples. Please see Table 1, provided as a guideline to spread catches over the two areas by semester and year. All landings will be reported to NMFS daily when fishing effort occurs to ensure that the total does not exceed the EFP tonnage limit.

Fishing days will be standardized to occur around the same time each month (e.g. the second or third week, weather permitting), to facilitate scheduling CDFW biologists to sample landings. Each landing will be sampled and aged by CDFW biologists. All activity will be closely coordinated with both CDFW and NMFS.

Three vessels from S.CA. and three from the Monterey area have volunteered to work with us on this project (on rotation except during survey months). All are experienced in fishing for data, and all recognize the critical importance of improving the science underpinning the sardine stock assessment. We are also requesting one “John Doe” EFP permit per area to provide flexibility if other fishermen would like to volunteer to participate in this research.

All sardines captured will be processed and sold by participating processors, and fishermen will be paid for their catches at the usual rates. Aside from the sale of fish captured in this project, fishermen and processors are not compensated for the extra fuel and labor costs they will incur in landing, or cooperating with CDFW in weighing and sorting each school and documenting species composition.

#### **4d. Rationale for issuing the EFP:**

This EFP research is critically important to address the following needs to improve the sardine stock assessment:

- provide current biological / age data for the model for the update assessment,
- increase sampling of CPS schools observed in CDFW aerial surveys as recommended by the STAR panel (<https://www.pcouncil.org/documents/2020/03/agenda-item-d-3-attachment-2-star-panel-report-electronic-only.pdf/>), and augment sampling of acoustic surveys, as suggested by the stock assessment scientist
- provide evidence of recruitment that is obvious to fishermen in the field, and is also appearing in our biological samples to date, as well as independent scientific surveys that currently are not approved for use in sardine stock assessments (e.g. the Juvenile Rockfish Survey).

This EFP is needed to address the following serious problems:

- the stock assessment’s acknowledgement that age data have not been updated since 2015,
- the stock assessment team’s requirement, to date, to use age data only from targeted sardine purse seine fishing (disregarding age data from incidental catch in other fisheries, research point sets and live bait)
- the 2020 stock assessment report declaration of no evidence of recruitment, despite multiple lines of evidence of recruitment, including surveys not approved for use in the assessment model (e.g. the Juvenile Rockfish Survey).

This EFP will allow fishermen to retain the schools they catch without question, including pure sardines or mixed schools exceeding the allowed 20 percent incidental catch rate. This EFP will facilitate fulfilling the goals and objectives of this research and will avoid wasting a valuable resource. Absent an EFP, fishermen would be limited in targeting observed schools, or risk a violation if the captured schools contained sardine above incidental catch limits.

We suggest that, to facilitate and simplify accounting, the Council follow the protocol established for other EFPs and designate the sardines requested in this EFP as a research set aside. Any amount unused would simply roll back into the ACL at the conclusion of the research period.



We are requesting an amount not to exceed 620 mt from the 2021-22 ACL to be used after July 1, 2021 throughout the remainder of the year to accomplish this work.

In light of recent year landings patterns, we suggest that the 2021-22 ACL would sufficiently cover the three EFP requests proposed for 2021, as well as all other uses approved in 2020.

**4e. Significance of this EFP:** This research is essential to update age data in the model and improve the sardine stock assessment. This EFP will also increase sample sizes in the aerial survey and augment sampling in the acoustic survey. In addition, the collaboration between industry, the scientific community, and federal and state agencies mandated to assess and manage fisheries is a win-win for all, facilitating increased understanding of the uncertainties in quantifying highly variable CPS resources, utilizing fishermen's knowledge of the ocean. Without a timeseries of recent and continued age data, ongoing assessments for sardine will suffer the same age data gap as with the anchovy fishery, when sampling stopped in the early 1980s and didn't resume until about 2014, leaving a 25+ year hole in biological information essential to develop a model-based stock assessment.

**4f. Continuation of this EFP:** The longevity of this EFP is contingent on a number of factors, chief among them the ongoing need for current and accurate age data and increased sampling for aerial surveys. Continuation also depends on sufficient funding to continue, and the status of the sardine fishery in the future.

**4g. Participating vessels:**

CWPA has identified 6 vessels that meet the criteria for this research project: 3 in Northern CA and 3 in S.CA – usually only one vessel per month will be assigned to target sardines, except during survey months, when more samples are needed:

VESSEL NAME	SKIPPER	OWNER	USCG /REG	CPS PERMIT
<b>Southern CA</b>				
*Triton	Pete Ciaramitaro	Triton Fishing Inc.	CF7218UH	14
*Provider	Jamie Ashley	Provider LLC	D572344	1
*Eileen	Nick Jurlin / Corbin Hanson	South Sound Fisheries Inc.	D252749	38
<b>Monterey</b>				
*King Philip	Anthony Russo	Sea Wave Corp	D1061827	9
*Trionfo	Aniello Guglielmo	Neil Guglielmo	D625449	45
* Sea Wave	Andy Russo	Sea Wave Corp.	D951443	10

(\*Note: All vessels also are listed on our 2021 EFP renewal application to conduct point sets for the aerial survey.)

In addition, we request one "John Doe" EFP permit per area, to provide flexibility if other fishermen would like to volunteer to participate in this research. The name(s) and contact information for these permits would be provided to NMFS prior to the vessel's participation in the project.

**Participating processors:**

Four wetfish processors have been identified – 2 in S.CA. and 2 in Monterey/Moss Landing

Southern Coast Trading Company, 2148 West 16th Street, Long Beach CA 90813

(offloads FV Provider, FV Triton; Contact: Lillo or Dominic Augello)

Tri-Marine Fish Co., 220 Cannery Street, San Pedro, CA 90731

(offloads FV Eileen, Contact: Vince Torre)

Monterey Fish Company, 960 South Sanborn Road, Salinas, CA 93901, offloading in Moss Landing, CA

(offloads FV King Philip and FV Sea Wave; Contact Anthony Tringali, Ken Towsley or Jenn Towsley)

Southern Cal Seafood, Pillar Point Harbor, Half Moon Bay or Monterey, CA; Contact Pete Guglielmo

(offloads FV Trionfo)

**4h. Description of species harvested:**

Under this project, purse seine vessels will be directed to capture at least one school of sardines per month per area (weather depending) except during survey months, when additional sets per area will be attempted. During fall peak season, this project may attempt to land two schools per area per month. An EFP is necessary because the directed sardine fishery is closed, and will remain closed in 2021-22. No measurable impacts to non-target species are anticipated.

**4i. Justification for EFP request:**

We are requesting 620 mt NSP from the 2021-22 ACL to be used after July 1, 2021 to accomplish this work. As noted above, in light of recent year landings patterns, we suggest that the 2021-22 ACL would sufficiently cover the three EFP requests proposed in 2021, as well as all other uses approved in 2020. Without an EFP, such captures would be in violation. The issuance of an EFP also allows the sale of the fish to help offset additional costs incurred by participating fishermen and processors.

**4j. Accounting for EFP fish:**

Fishermen will maintain a log (similar to the log in the EFP / NCS point set project) to identify the explicit location and time of each set. Upon landing, biologists will take a subset of each set at the dock for processing to obtain biological characteristics and age of individual fish. Processors will maintain bucket sample records of the weight of sardine and other species groups, to validate species composition.

CWPA will notify NMFS and CDFW Enforcement at least 12 hours before vessel(s) go out to inform them of vessel name(s) and location(s) to be targeted for sampling, and processors(s) who will be receiving research fish that day. The survey plan anticipates sending no more than one vessel per month in each area, except during aerial and AT survey months.

CWPA will also maintain a record of the volume / total weight of load of sardines captured and will monitor progress toward attaining the EFP limit. These weights and species composition per set will also be included in a final report.

**4k. Data Collection Methods:** According to the survey plan:**Biological sampling**

The catch taken from each school will be subsampled by CDFW biologists dockside upon landing of the daily catch. CDFW biologists will obtain a 5-gallon subsample of fish at quarterly intervals of pumping each set, using a quantitative bucket sampling method. Up to 50 fish per species (if set consists of mixed fish) per set will be collected by a CDFW biologist/sampler upon landing of the daily catch. The four collected fish subsamples will be stored in plastic bags and preserved on ice. At the CDFW laboratories these samples will be measured for biological characteristics (length, weight, sex, maturity, and age). Modifications to allow cooperative sampling with processors may occur if the need arises due to extenuating circumstances such as CDFW staffing restrictions (e.g. COVID-19 government orders).

Scientific data collection and analysis will be supervised by CDFW and CWPA scientists, who will collaborate on procedures to ensure and evaluate data quality during the survey, and data analysis methodology through completion of the project.

**4l. Vessel selection:**

Criteria were established to qualify vessels for participation in this research project. From those requirements CWPA identified six vessels meeting the criteria for vessel size, equipment and skippers' experience, whose skippers, importantly, committed to participate voluntarily in this research, notwithstanding any other fishing opportunities during the project period. All vessels have participated in prior field research and are experienced in following orders and fishing for data.

**4m. Time and Place of Research Fishing:**

This project will take place in nearshore waters of the central coast (Monterey – Half Moon Bay) and the Southern California Bight. The framework suggested by the lead stock assessment scientist and reviewed by CDFW is to target a minimum of 6 schools of sardines per semester, per area, with additional sampling attempted during survey months, as noted above. This project will also coordinate with spring and summer CDFW aerial surveys and the 2021 NOAA summer survey, if it occurs. Fishing gear used is purse seine net of suitable mesh size and length for capturing CPS schools. During survey months, vessels will attempt to capture schools identified by the CDFW observer to provide samples to corroborate aerial survey observations, and may also augment sampling in the nearshore acoustic survey.

Thank you very much for your consideration.

Best regards,



Diane Pleschner-Steele  
Executive Director

Table 1 Framework for allocating sample sets (provided as a guideline, weather dependent)

SOUTHERN CA			NORTHERN CA		
(Minimum 6 samples per semester per area)					
Jul (SSP)	<u>1</u>	20	Jul	<u>1</u>	20
Aug (SSP)	<u>1</u>	20	Aug (Aerial)	<u>3</u>	60
Sep (SSP)	<u>1</u>	20	Sep	<u>1</u>	20
Oct	<u>1</u>	20	Oct	<u>1</u>	20
Nov	<u>2</u>	40	Nov	<u>2</u>	40
Dec	<u>2</u>	40	Dec	<u>2</u>	40
Semester 1	<u>8</u>	100	(NSP)	<u>10</u>	200
2022					
Jan	<u>1</u>	20	Jan	<u>1</u>	20
Feb	<u>1</u>	20	Feb	<u>1</u>	20
Mar	<u>1</u>	20	Mar	<u>1</u>	20
Apr (Aerial)	<u>3</u>	60	Apr	<u>3</u>	60
May	<u>1</u>	20	May	<u>1</u>	20
Jun	<u>1</u>	20	Jun	<u>1</u>	20
Semester 2	8	160	(NSP)	8	160
2021-22	16	260		18	360
TOTAL 2021-22			620		

**Appendix 1.** Fisherman's log form

## CPS Biological Sample Sardine EFP Fisherman's Log Form

Date: \_\_\_\_\_ Captain: \_\_\_\_\_

Vessel: \_\_\_\_\_ Processor: \_\_\_\_\_

Estimated Catch \_\_\_\_\_ (st) Delivered Weight \_\_\_\_\_ (lbs) Fish Ticket No. \_\_\_\_\_

Species Observed \_\_\_\_\_

**Hydroacoustic Gear**

Type	Make	Model	Frequency
Sounder			
Sonar			

**Net Dimensions**

Net Length (fm)	Net Depth (fm)	Mesh Size (in)

**School and Ocean Data**

Set Start Time	Latitude	Longitude	Top Depth of School (fm)	Bottom Depth of School (fm)	Ocean Depth (fm)	SST (F)	Weather Condition	Picture of Sonar (Y/N)

Weather Codes: 1= calm, clear; 2= light wind, good visibility; 3= moderate wind, fair visibility; 4= poor fishing conditions

Comments and sonar interpretations:

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