Monterey Bay Regional Chilipepper Rockfish Final EFP Report

Applicant: Real Good Fish, a Community Supported Fishery
7532 Sandholdt Rd., Suite 5B
Moss Landing, CA 95039
Point of Contact: M. Alan Lovewell, M.A.
alovewell@realgoodfish.com
(831) 345-5153

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EFP Participant Caulder Deyerle with a big catch of Chilipepper Rockfish.

Summary of EFP Activity

During this project (2019-2020), we worked with small-scale fishermen in the Monterey Bay Area to test troll gear to maximize catch of targeted rockfish while reducing bycatch of overfished species of concern such as the cowcod and yelloweye. We conducted outreach to dozens of fishermen which resulted in the participation of five fishermen and five vessels: the F/V Sea Harvest 3, the F/V Grinder, the F/V Salt n Season, the F/V Juliet, and the F/V Lady LeBlanc. These fishermen were almost all new users of the gear, and helped refine its design as they tested it, resulting in a revision of the EFP terms and conditions to allow for safer and more flexible gear configurations. Collectively, the participating vessels made 22 trips and caught 3950 pounds of chilipepper rockfish, 2221 pounds of bocaccio rockfish, less than 2% of the project's quota for non-target species (widow, vermillion, and canary rockfish), and no cowcod (Table 1, Table 2). We generated interest in use of this troll gear in the fishing community more broadly, and witnessed increased landings of chilipepper rockfish caught with the same gear design in the open access fishery during the project period, highlighting the feasibility of this fishery outside of the exempted fishing permit (EFP). Some EFP participants sold their catch to Local Bounty (DBA Real Good Fish) between $1 and $3/lb, and others held off-the-boat sales for $6/lb, which allowed us to test two unique markets for this local, sustainable product (Table 3).

Table 1: EFP fishing activity between May 2019 and July 2021.

Trip #	F/V	Vessel ID	State Reg. #	Date of Trip	P.O.L.
1	Sea Harvest 3	07062	CF8760TR	5/8/2019	Moss Landing
2	Grinder	70963	CF3909CJ	9/26/2019	Santa Cruz
3	Grinder	70963	CF3909CJ	10/7/2019	Santa Cruz
4	Grinder	70963	CF3909CJ	3/20/2020	Santa Cruz
5	Grinder	70963	CF3909CJ	3/28/2020	Santa Cruz
6	Juliet	13780	288513	8/17/2020	Half Moon Bay
7	Juliet	13780	288513	9/4/2020	Half Moon Bay
8	Juliet	13780	288513	9/14/2020	Half Moon Bay
9	Juliet	13780	288513	9/16/2020	Half Moon Bay
10	Juliet	13780	288513	10/7/2020	Half Moon Bay
11	Juliet	13780	288513	10/14/2020	Half Moon Bay
12	Salt n Season	73334	CF0911HT	11/12/2020	Half Moon Bay
13	Salt n Season	73334	CF0911HT	11/19/2020	Half Moon Bay
14	Salt n Season	73334	CF0911HT	12/4/2020	Half Moon Bay
15	Salt n Season	73334	CF0911HT	4/15/2021	Moss Landing
16	Salt n Season	73334	CF0911HT	4/23/2021	Moss Landing
17	Salt n Season	73334	CF0911HT	4/24/2021	Moss Landing
18	Lady LeBlanc	49548	CF8978SM	4/24/2021	Half Moon Bay
19	Salt n Season	73334	CF0911HT	4/29/2021	Moss Landing
20	Salt n Season	73334	CF0911HT	5/17/2021	Moss Landing
21	Salt n Season	73334	CF0911HT	6/3/2021	Moss Landing
22	Salt n Season	73334	CF0911HT	6/11/2021	Moss Landing

Table 2: Pounds (lbs) landed and discards on each trip.

Trip #	Chilipepper	Bocaccio	Widow	Vermillion	Canary	Shelf	Discard Species	Total Landings
1	1170.0	390.0	371.0	4.0				1935.0
2	269.0	5.0	4.0					278.0
3	6.4	84.6		5.6				96.6
4					18.6	99.6		118.2
5		131.5	5.5	9.5	2.5	34.0		183.0
6								0.0
7		74.5	91.2			35.5		201.2
8		76.0	16.0			148.0		240.0
9	198.0							198.0
10	451.0	14.1						465.1
11	108.0	7.2						115.2
12	129.6	3.5						133.1
13	40.8							40.8
14	274.0	18.0						292.0
15		125.0		52.0	4.0	60.0	10.0	251.0
16	523.0	543.0	2.0	31.0	14.0		9.0	1122.0
17	751.0	416.0	2.0	9.0			11.0	1189.0
18		52.1				94.8		52.1
19	15.0	39.0			5.0			59.0
20								0.0
21	12.0	113.0	4.0			263.0		392.0
22	2.7	129.1	1.8	8.6	6.7	35.4		184.3
Total	**3950.5**	**2221.6**	**497.5**	**119.7**	**50.8**	**770.3**	**30.0**	**7545.6**

EFP Market Activity

All of the fish landed went to local markets, split between the local wholesaler, retailer and restaurant, Sea Harvest, and Real Good Fish.

We built market awareness of fresh, local, sustainable rockfish during this project through two market channels. One was Real Good Fish and Sea Harvest, which collaborated on processing and sales of one of our primary target species, chilipepper rockfish caught with troll gear through the Real Good Fish member network. Our membership has enjoyed receiving EFP rockfish with this story knowing they are part of the solution -- differentiation would be difficult if we weren't able to share the unique fishermen and conditions for getting that fish. We shared this story with our members via a blog post. One unexpected market channel that emerged during this project was off-the-boat-sales at Half Moon Bay harbor, where fishermen commonly sell dungeness crab, salmon, and other species directly to consumers. The chilipepper rockfish in particular was a big success in this market, as consumers loved the bright red color and high quality of the whole fish due to the type of gear used.

Table 3. Average price/lb for each species from wholesale, RGF, and off-the-boat sales.

Chilipepper	Bocaccio	Widow	Vermillion	Canary	Shelf
$3.00	$2.21	$1.91	$1.89	$1.95	$2.43

EFP Project Outcomes

Prove that fly gear trolled inside the Rockfish Conservation Area (RCA) can be selective to catch only target species with very little bycatch or discards

Early on in meetings with fishermen, there were mixed levels of concern about whether this gear was susceptible to catching deeper-water bycatch species. Some fishermen with more experience were confident that by keeping the gear at a certain distance away from the seafloor, it would be impossible to catch cowcod and other species of concern. The fishermen who were less experienced with this gear type were less confident, but quickly understood the mechanics of how to deploy the gear in a way that would target feeding schools of chilipepper rockfish and boccaccio at shallow depths. Because of this exchange of information, and skill of the participants, we met this objective. The fishermen using less than 2% of the project's quota for non-target species (widow, vermillion, and canary rockfish) and did not catch any cowcod, which was the species of biggest concern, as we had extremely limited quota (around 33lbs) in the first year. Test drops were very important for assessing species compositions of schools of

fish detected with on-board fish finders, and proved an effective tool for ensuring the catch was selective. While we had on-vessel observer coverage, there was very limited discarding, which was recorded by the observers. With the onset of COVID-19, we transitioned to fishermen logbooks with 100% retention, so over half of the EFP trips had no discards at all.

Improve the local supply (and demand) for rockfish species coming directly from Monterey Bay

We met this objective even with limited catch from the EFP. All of the EFP-caught fish was easily sold via Real Good Fish and off-the-boat markets, indicating demand for these species. Real Good Fish could have sold 3x the amount of fish that were landed by the EFP, and even bought and sold over 17,000 lbs of rockfish landed by Sea Harvest vessels fishing this gear-type outside of the RCA in the open access fishery in 2020.

Foster a new fishery with low barriers to entry that can support the commercial fishing community and Monterey Bay area ports

We generated interest in using this gear among small-scale fishermen, and those that built the gear proved that it was relatively simple and low cost. Barriers to entering our EFP ended up being higher than using this gear in the open access fishery, which doesn't require VMS or observer coverage. Initially, the quota and fishing depths we had access to via the EFP were the primary benefit to fishermen, but during the project period, NMFS announced plans to decrease the size of the RCA, opening up deeper fishing depths, and drastically increase individual limits for the open access fishery. This limited the appeal of the EFP somewhat, but is great news for the future of this fishery, as more commercial fishermen in the open access fishery can use this gear type without any barriers. Fishermen who participated in our EFP said that this fishery helped support them between other important fisheries like dungeness crab and salmon, and generally were interested in continuing to fish this gear in the future.

Lessons Learned & Recommendations

Market Concerns

We heard early on in meetings with fishermen that there was a lot of concern about the ability of the market to support increased landings of the target species. We worked to overcome this concern by offering a higher than average market price for fishermen who wanted to sell through Real Good Fish, even guaranteeing this market for their catch, while still encouraging them to find additional buyers if they wished. Several fishermen participating in the EFP also

had good experiences selling these fish off the boat for double the price per pound. Despite demonstrating these two market avenues, most of the fishermen who participated in those early meetings that were vocal about the market concerns being their only barrier still didn't join the EFP. This made it clear to us that the market wasn't the primary issue, and that there were many other barriers to EFP participation that needed to be weighted more heavily.

Participation Variables

During this project, we learned that there were more variables influencing fishermen's participation in the EFP than initially expected. We had a few fishermen involved in the EFP application from the outset, with the expectation that fishermen are more willing to act on their own ideas than ideas pushed forward by a third party. These fishermen were involved in the early meetings and helped attract additional interest to the project, but ultimately did not take EFP trips. This left us in the position of having to recruit new fishermen to participate in a project that they had not planned for and were not necessarily invested in. We quickly learned about the multitude of variables that influenced their ability and willingness to participate. These small-scale fishermen all participate in multiple fisheries that necessitates a finely tuned seasonal dance of rigging their boats with different gear, tracking good weather windows, and optimizing their routines to be able to pursue the highest-value fishery available to them at any given time. Our EFP fishery was risky for these fishermen, due to the uncertainties associated with learning a new gear, new fishing spots, and the chance of coming back empty handed. This was especially true with the fishermen that were less experienced with this gear type, despite how eager they were to break into new fisheries. We attempted to ameliorate these risks with a stipend for the first few trips, which did entice some fishermen to participate, but not at the scale we expected, and not for these less-experienced fishermen. The fishermen who were confident and experienced with this gear were less concerned about the risks, and seemed willing to participate, but we found that the EFP became their fishery of last resort. Because they had many other fisheries open to them, the only time they would be able to take an EFP trip was when the weather was nice and there were no other fisheries open. That window turned out to be very narrow. Overall, we found that there is not much energy for pursuing these species, which could be due to the slow decline of the industry at large, the high risks and unknowns, regulatory factors (e.g., observer requirements), or some combination. Based on these learnings, we recommend that future projects concentrate on working with a few highly motivated fishermen from the outset, and anticipate a longer time horizon for fishermen to fully integrate a new fishery into their seasonal profiles.

Electronic Monitoring

Recognizing that observer coverage would not be financially feasible for this fishery in the long run, we decided to test electronic monitoring technology for small-scale vessels during this project. The goal was to test a technology system with a provider to see if we could adequately capture enough information about the catch, at a reasonable cost, to replace the need for an observer when fishermen are using this fly gear in the RCA. We worked with the Environmental Defense Fund and ShellCatch to pilot a camera system. We were surprised to see that initial fishermen interest was high, even amongst fishermen who were not committed to participating in the EFP. Several fishermen attended a meeting with the ShellCatch CEO, gave tours of their boats, and requested that camera mounting brackets be installed on their vessels. This wave of interest from the fishermen seemed to stem from wanting to have experience using EMR technology in order to (a) be able to give input as regulators consider how to implement it, and (b) be able to prove their accountability to the rules to hopefully afford them more fishing flexibility in the future. Once the fishermen started taking trips, we quickly realized that the design of the specific technology system provided by ShellCatch did not meet the needs of our fishery. For example, fishermen needed to return the camera box to the Real Good Fish office in Moss Landing after each trip so that the footage could upload, which was logistically difficult when fishermen were landing their catch in Monterey, Santa Cruz, and Half Moon Bay. We were able to overcome that challenge on a few occasions, only to have major malfunctions with the ShellCatch hardware that made it clear this was not the right technological solution for this fishery. Through this experience, we learned the importance of having precise contextual fishery information and data output requirements before selecting an EMR vendor.

Conclusions

During this EFP, we learned that this gear can be selective to catch only target species with little bycatch or discards, making it an attractive option for use inside the RCA. We demonstrated that there is adequate demand for these species, and the price per pound for fishermen is highest with off-the-boat sales. There is a diverse market that has room to be enhanced further, for example by developing local high-end restaurant markets. The EFP gear is relatively simple and low-cost to build, and can be used on different types of small-scale vessels as part of a seasonal fishing portfolio. However, we saw that this tends to be a fishery of last resort that is heavily influenced by weather and unpredictability of the Chilipepper rockfish distribution. The complex of species that were allowed alongside this main target was critical for buffering against what would otherwise be an extremely high-risk fishery. We also learned that many small-scale fishermen in Monterey Bay are open to electronic monitoring, but the

systems need to be well-designed to fit within the logistics of the fishing operations while providing appropriate information and data to the correct users.

Our current EFP permit expires at the end of 2021, with an extension into 2022. We will continue to support the few participating fishermen with the EFP logistics and market access through that time period. After the EFP ends, we will continue to provide a market for the EFP target species that are being landed in the open access fishery or through other fisheries. Real Good Fish played an important role as an intermediary to manage the administrative logistics of applying for, managing, and reporting on the EFP that would have otherwise limited the ability of multiple fishermen to try out this fishery. Based on the current level of interest and participation from fishermen, as well as changing market and regulatory conditions, we will evaluate continuing this EFP beyond the next authorization period. In addition, we would be open to helping develop other exploratory fisheries in the future by applying for and managing EFPs with a fisher-led approach that would increase supply of sustainable West Coast species available for local markets.

We would like to thank the Pacific Fisheries Management Council for the opportunity to explore the use of this fly-line gear in the RCA, and look forward to future opportunities to work together for the betterment of our fisheries.