SOUTHWICK
ASSOCIATES

November 15, 2021

Ms. Liane Randolph, Chair
California Air Resources Board
1001 I Street
Sacramento, CA 95814

RE: CHC2021 – Economic Feasibility of Vessel Replacement for Passenger Sportfishing and Whale Watching Boats

Dear Ms. Randolph:

Please let me begin by sharing my credentials. Since founding the business in 1990, we have specialized in economic research regarding fishing, hunting and outdoor recreation. We have conducted many hundreds of sportfishing economic studies, including numerous examinations of marine sportfishing issues in California. This background provides us in-depth expertise into the motivations, spending and roadblocks associated with sportfishing participation and their associated jobs, tax revenues and other economic concerns. Based on this experience, the rest of this letter provides my comments and observations regarding CARB's proposed engine emission regulations for commercial passenger harbor crafts, commonly associated with sportfishing, whale watching and scuba diving.

Background:

On September 21, 2001, the California Air Resources Board (CARB) released amendments to the proposed Commercial Harbor Craft Regulations designed to reduce diesel engine emissions. These regulations, if adopted, would require engines and technology that may not fit existing vessels' engine rooms. As a result, and CARB admits, vessel replacement would be likely.

CARB contends that boat replacement is economically feasible, costing approximately $2.1 million for a new, compliant vessel. To finance these vessels, CARB reports passenger ticket prices would have to increase. CARB does not report how their cost estimates were calculated or if they consulted with vessel owners or builders regarding the costs for new, compliant vessels. CARB acknowledges that even at their projected vessel cost, not every boat owner can afford a new vessel or pass on the full cost increase to their passengers and that some business loss is likely.

Given the lack of data behind CARB's statements, several key questions arise:

1. What are the actual costs to business owners to purchase a new, compliant vessel?
2. Will any price increases required to purchase new vessels impact fishing participation?
3. Will there be any impact on fisheries management and state conservation efforts?
4. Will any communities experience greater burdens than others? and,
5. What is the expected impact to the State economy?

To answer these questions, the Sportfishing Association of California retained Southwick Associates. Following is a summary of our findings.

1. What are the actual costs to business owners to purchase a new, compliant vessel?

To establish whether CARB's expected costs to purchase a new, compliant vessel are correct, a Certified Public Accountant (CPA) with marine industry experience evaluated construction bids for two commercial vessels that were designed to comply with CARB's proposed rules (attached). The Class 1 and Class 2 bids (attached) reflect two of the most common passenger sportfishing vessels found off the California coast, with a Class 1 vessel that can be configured for whale watching, eco-tourism and scuba diving excursions.

CARB's *Standard Regulatory Impact Assessment* (SRIA) economic analysis estimated the average replacement cost for a commercially inspected passenger sportfishing vessel to be $2.1 million, financed with passenger ticket price increases of $39.78 (or 27% increase) for a single-day trip and $37.05 (or 19% increase) for a multi-day trip on a per passenger per day basis. Their economic analysis does not reveal how CARB assessed the $2.1 million value, whether they sought bids from reputable boat builders and if they applied the projected construction costs to real boat operating budgets. To ensure reliable, defensible data are used to assess the true impacts of the proposed amendments, H&M Landing of San Diego did exactly that.[1]

Two construction bids were received by H&M Landing (attached). One was for $4.6 million to construct a 65 ft one-day vessel (Class 1, suitable for day fishing trips, whale watching and SCUBA excursions) and $5.7 million for an 80 ft multi-day vessel (Class 2). These costs are magnitudes greater than CARB's estimate of $2.1 million per vessel. According to the CPA report, based on the operating budgets of current H&M landing boats, to break even, businesses replacing a Class 1 boat would have to increase prices for a one-day fishing trip from $180 to $542 (201% increase) and a new Class 2 boat that provides multi-day fishing trips would have to increase its prices from $200 to $394 (97% increase). These price increases are significantly higher than the 19% to 27% increases anticipated by CARB.

The CPA's analysis also underscores the financing challenges facing boat owners. The CPA notes that 20% - 40% is a commonly required down payment within the marine industry. Considering existing non-compliant boats will have no resale value in California and the glut of boats to be sold will depress markets outside of California, businesses will find it difficult to sell their current boats and secure down payments on new vessels, thus raising the risk for banks. Banks would have to demand higher down payments and/or higher rates. Without feasible financing, many vessel operators will shut down.

2. Will any price increases required to purchase new vessels impact participation?

It is noteworthy to mention that CARB assumes CPF vessels would maintain their current passenger loads in the face of price increases. Expecting passenger demand to remain unchanged in face of price increases is wrong. At Southwick Associates, we have examined impacts on fishing license sales resulting from price increases for over 40 states. Price increases can include the price of the actual license, fuel prices (boat and auto), the hassles associated with poor weather, and more. The following are examples from these previous analyses:

Oklahoma:

a. In 2019, a $1 (or 5%) increase in resident annual fishing licenses would result in a loss of 7,924 anglers and a decline in license sales of 1.2%:

[1] H&M Landing in San Diego operates 30 CPF vessels.

- The statistical models custom built for Oklahoma's license sales show that a 100% increase in price would cause resident participation to decrease over 22%, while a 200% increase would result in a 44% decline in participation.

b. A $1 increase in Oklahoma's nonresident annual fishing license would result in a loss of 1,342 visitors, which equates to a 4% decline in sales.
   - Further statistical modeling shows that a 100% increase in price would cause non-resident participation to decrease to nearly zero.

Tennessee:

a. In 2018, a 10% increase in the basic fishing/hunting license[2] would result in a loss of 6,149 anglers which means a 2% decline in license sales:
   - Tennessee's statistical models show that a 100% increase in price would cause resident participation to decrease 20%, while a 200% increase would result in a 40% decline in participation.

b. A 10% increase in Tennessee's nonresident annual fishing license would result in a loss of 1,482 visitors, which equates to a 4% decline in nonresident license sales.
   - Further statistical modeling shows that a 100% increase in price would cause non-resident participation to decrease 37%.

Oregon:

a. In 2013, a $1 (or 3%) increase in the price of the resident annual fishing license would result in a loss of 5,711 anglers which means a 2.3% decline in sales:
   - The statistical models custom built for Oregon license sales show that a 100% increase in price would cause resident participation to decrease to 74%, while a 200% increase would decrease participation to nearly zero.

b. A $1 increase in the $106.25 annual fishing license would cause a 1.1% sales decline.
   - Further statistical modeling shows that a 100% increase in price would cause non-resident annual license sales to decrease to nearly zero.
   - Considering Oregon's annual nonresident fishing license is priced similar to a one-day CPF vessel trip, we tested the effects of CARB's suggested price increases. At these levels, Oregon's annual license sales would fall over 40%.

Results of other states are also available. Across the board, the statistical models show that price has a significant effect on fishing participation. **While small increases might be absorbed, increases of 97% to 201% as required for operators to replace CPF vessels would cause annual passenger volume to decline severely.** Even if CARB's regulatory costs could be passed on with a 19-27% passenger price increase, the proposed regulations could reduce passenger volume by nearly half, per the Oregon data.

Please note that it is possible to measure the effects of price increases on California's license sales. The necessary license data are in possession of the California Department of Fish and Wildlife. CARB's economic analysis *(SRIA*) does not refer to any effort to conduct this basic statistical assessment.

3. Will there be any impact on fisheries management and state conservation efforts?

Fisheries management is largely dependent upon the sale of fishing licenses. Every adult angler aboard a CPF vessel is required to possess a California marine fishing license, generating significant fisheries conservation revenues. The total revenues attributable to CPF vessels are calculated for 2018, which is

[2] Tennessee does not sell a standard fishing-only license to residents. Users must purchase a combination fishing/hunting license.

the same year examined by the professional CPA financial assessment regarding CARB's potential financial burden on CPF vessel operators:

- The California Department of Fish and Wildlife reports 1,776,844 resident and nonresident fishing licenses were sold in 2018 with revenues of $59,876,070.[3] This equates to $58.95 per license sold.
- The professional CPA documented the annual revenue for two California CPF vessels. The average annual revenue for both vessels in 2018 was $457,760.
- The typical fees paid by their customers range from $60 for 1/2 day trip to $800 for a 2.5 day trip.[4] Across all types of trips, the average fee paid per customer is estimated to be $287.75.[5]
- Dividing the average annual revenue by the average fee per customer yields an average of 1,986 passengers per vessel each year. With 75% of passengers expected to be repeat users, each vessel is estimated to generate 497 license sales annually.
- At an average of $58.95 per license sold, each vessel represents $29,298 in annual license revenue to the State of California.
- With 174 CPF vessels operating in California,[6] and considering the assumptions stated above, the California Department of Fish and Game receives $5,097,852 annually from license sales to CPF vessel customers which represents 8.5% of its annual sport fishing license receipts.

Another potential ramification to conservation funding relates to a possible reduction in federal funds received by the State for fisheries conservation. This fund, known as the Federal Aid in Sport Fish Restoration fund, allocated $16.5 million to California in 2018. Funds are received from the wholesale fishing tackle and motorboat fuel sales, then allocated across states based on a formula accounting for each state's number of licensed anglers and water area. The final apportionments vary each year based on the total funds available and the number of licensed anglers across states. In 2018, California received $10.30 for each licensed angler.[7] Considering there are 174 active vessels, each generating on average 497 license sales annually, CPF vessels account for roughly 86,478 license buyers who represented $890,723 in federal fisheries conservation funds in 2018. A reduction in their numbers could directly threaten California's future federal funding allocations.

4. Will any communities experience greater burdens than others?

Basic demographic data are shared first:

- The U.S. Fish and Wildlife Service (USFWS) reports 43 percent of anglers had an average household income under $75,000, identical to the average U.S. household (43%).[8]
- Likewise, according to the USFWS, 48% of anglers were under the age of 45, while 47% of the U.S. population was under 45 years of age.
- While anglers are under-represented among Hispanics, the Recreational Boating and Fishing Foundation (RBFF) reports Hispanic participation is growing rapidly, with 13% having

[3] https://wildlife.ca.gov/Licensing/Statistics#SportFishingLicenses
[4] Personal communications with H&M Landing in San Diego from where 30 CPF vessels operate.
[5] The proportion of trips across these four categories was obtained via personal communications with H&M Landing in San Diego: ½ day = 45%, full-day = 18%, overnight = 15% and multi-day = 22%.
[6] Per SAC estimate of USCG commercially inspected vessels, based on CFW data.
[7] For FY2018, California received $16,513,733. When divided by California's sale of 1,603,626 licenses as certified by the USFWS, this equals $10.30 in federal revenue per license sold.
[8] Angler income obtained from the 2016 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation., U.S. Fish and Wildlife Service, 2018. US median income obtained from https://www.census.gov/library/publications/2017/demo/p60-259.html.

> participated in fishing in 2020, the highest participation rate yet recorded. Nearly one in 10 Hispanics participated in fishing for the first-time last year. In the past ten years, the number of U.S. Hispanics who went fishing grew 55% from 3.1 million to 4.8 million.[9]

A common misperception is anglers are disproportionately wealthy and will accept higher prices to continue to fish. The Federal statistics shared above show anglers are not wealthy compared to the U.S. population and likely comprise just as many young families as found anywhere else. Considering prices for boats that can safely access the ocean generally start at $75,000, the only affordable means for many lower-income segments of California's communities to access the ocean are via CPF vessels. **Expecting lower-income communities of California to bear severe price increases and not decrease their use of CPF vessels is certainly not reasonable.**

Please note that data does exist pinpointing where anglers live. License data held by the California Department of Fish and Wildlife contains purchasers' zip codes. These data can be used to generate plot maps showing where anglers live, including the percentage living in lower income neighborhoods. Such assessments have apparently not been conducted, yet should be to better determine the potential burden placed on lower income communities.

5. What is the expected impact to the State economy?

Per page 110 of CARB's economic analysis (SRIA), July 7th, 2021:

> "…However, staff cannot rule out the possibility of some business elimination if costs cannot be pass on to the customer or if passing through costs would result in a significant decrease in demand."

Earlier, it was shown that many customers will stop using CPF vessels if prices are increased. **Any assumption that costs can be fully or even partially passed along to customers without decreasing participation is simply wrong. If boat operators were in a position to charge higher prices, just like any business, they already would have. Without a doubt, price increases will harm CPF vessel operators and likewise the local communities that depend on them.**

Decreased participation means decreased spending on CPF vessels, which in turns harms the economy:

- As shown earlier, the average fee paid per customer is estimated at $287.75 while the average number of paying customers per vessel is 1,986 annually.[10]
- With 174 vessels in service, 345,564 passenger trips occur annually.
- With an average of $287.75 per trip, annual fees paid to access CPF vessels in California is $99,436,041.
- According to the most recent economic impact data for marine fishing in California[11], for each dollar spent by anglers, the following multipliers take effect:
  - .000015 jobs are supported
  - 38 cents in income is generated for California residents
  - $1.59 in value-added, or contributions to GDP, are provided
  - And according to an additional source, 14 cents in state tax revenues[12]

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[9] 2021 Special Report on Fishing. Recreational Boating and Fishing Foundation (RBFF) and the Outdoor Industries Foundation (OIF).

[10] The proportion of trips across these four categories was obtained via personal communications with H&M Landings of San Diego who operates 30 vessels, plus their website regarding prices.

[11] National Marine Fisheries Service. 2021. Fisheries Economics of the United States, 2017. U.S. Dept. of Commerce, NOAA Tech. Memo. NMFS-F/SPO-219

[12] Southwick Associates. Sportfishing in America: An Economic Force for Conservation. Produced for the American Sportfishing Association (ASA) under a U.S. Fish and Wildlife Service (USFWS) Sport Fish Restoration grant (F12AP00137, VA M-26-R) awarded by the Association of Fish and Wildlife Agencies (AFWA), 2012.

- Therefore, considering anglers annually spend $99,436,041 to access CPF vessels, the following benefits are created for California's economy:
  - 1,492 jobs
  - $37,785,696 in income (salaries, wages and small business profits)
  - $158,103,305 in GDP contributions to California's economy, and
  - $13,921,046 in lost state tax revenues.

The economic impacts are greater than just the fees paid to CPF vessel operators. Passengers also spend money traveling to and from the marinas, often staying in hotels before or after their trip while also purchasing food at local restaurants along with outdoor clothing and more. According to research based on data from the U.S. Census Bureau, for every dollar anglers spend on guides and CPF vessels, another $19.77 are spent on other travel items such as lodging, food and more. How much is spent specifically by CPF customers on travel items is not known, but are certainly significant and would add much more to the CPF sector's economic impacts reported above.

California's tourism sector will also be affected. According to the U.S. Department of Commerce, nearly 10% of California's marine anglers are out-of-state residents.[13] Their exclusion will harm California's tourism industry.

Summary:

CARB clearly does not understand nor did not take time to learn about the affected vessels' operations and business environment, nor understands the demographics, motivations and financial abilities of these vessels' customers. Assuming the customers of the affected vessels, who commonly hail from lower income environments, will simply accept higher prices and not decrease their days of fishing is absurd. If passed as proposed, the amendments will significantly reduce the dollars received by California for oceans and fisheries conservation, impact lower income communities the most, and cost the state economy nearly 1,500 jobs, $37.8 million in income and over $13 million in state tax revenues.

In conclusion, we find serious shortcomings in CARB's statements and claims as presented in its economic analysis (SRIA). We offer our insights based on the best data available and our years of experience. We kindly request that the State of California carefully considers these potential impacts before making decisions that can potentially harm businesses, their employees and California residents who want to access the ocean. Thank you.

Sincerely,

Rob Southwick
President
Rob@SouthwickAssociates.com

[13] [13] National Marine Fisheries Service. 2021. Fisheries Economics of the United States, 2017. U.S. Dept. of Commerce, NOAA Tech. Memo. NMFS-F/SPO-219

CONSIDINE CONSIDINE
CERTIFIED PUBLIC ACCOUNTANTS

November 10, 2021

Frank Ursitti
H&M Landing
2803 Emerson Street
San Diego, CA 92106

Dear Mr. Ursitti,

As a partner in the attestation group of Considine and Considine for 35 years, I have worked with many marine entertainment-based event businesses and significant marine industry activity. Considine and Considine is a San Diego-based public accounting firm in operation since 1947 with approximately 90 staff.

In response to new engine emission rules proposed by the California Air Resources Board (CARB) that will likely require commercially inspected passenger boats to be replaced in the coming years, H & M Landing sought a cash analysis to determine the financial impact of different scenarios that would result from the purchase of a Class 1 (65 ft) vessel or Class 2 (80 ft) vessel.

This analysis is in response to the CARB statements in the *Standard Regulatory Impact Assessment* (SRIA) and associated cost spreadsheet that replacement vessels are projected to cost an average of $2.1 million and can be financed with passenger ticket price increases of $28.03/day (or 19% increase) and $26.09/multi-day (or 14% increase).

Our firm was retained to answer the following questions for each vessel:

1) What would be the impact to cash flow using CARB's suggested ticket price increase percentages?

2) What increase in ticket prices would be required for a vessel owner to achieve break-even cash flow (no profit)?

Methodology:

From a reputable ship builder, the client secured bids for commercial passenger vessels that commonly operate off the coast of California, a Class 1 65 ft local/coastal (day trip) vessel and a Class 2 80 ft multi-day vessel. The ship builder believes that the new vessels would meet the requirements of CARB's proposed rule and be able to accommodate the mandated engines and equipment when approved for marine use.

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The cash flow analyses are based on estimated operating expenses provided by client of in-service vessels and existing daily customer rates. There are two vessels under consideration, one a $4.6 million build cost related to a Class 1 coastal local experience vessel with an expected 15-person capacity; the Class 2 multi-day vessel would be a larger offshore multi day vessel with estimated construction cost of $5.7 million with an expected 25-person capacity. We used the year 2018 as the base year, a period that proceeded the COVID-19 pandemic that required operations to be suspended, and assumed vessels operated at 100% of capacity on all trips.

The cash analyses are based on constant dollars with no inflation factor built in. Increasing costs are based on statutory rates or market forces. Inflation impact on revenue and expenses are expected to net to near zero and have not been included in the cash analyses to provide a more simple straightforward effective way to demonstrate the cost of acquiring major new fixed asset vessels to cash flow.

Each vessel analysis has two cash flow schedules the first based on a 14% price increase in the year of acquisition for the vessel and a 1% increase in real dollars each year thereafter ending at 10 years. The second analysis demonstrates the pricing levels necessary to break even on cash flow for the acquisition. While breakeven is not an acceptable long-term business model it does provide guidance to the expected pricing increases that would be necessary to reset a fleet with new qualified vessels.

The financing terms on the acquisition of new vessels are expected to be at 6% interest over a 20-year repayment life with a down payment of approximately 10% to be sourced from a potential resell value of existing equipment. These terms are likely optimistic for several reasons. First, the resale value of existing vessels may be difficult given that they will not meet new emission standards and have no resale value, requiring the vessels to be transferred overseas or across the U.S. Second, our experience demonstrates that banks are unlikely to finance 90% of the cost of a new vessel given down payments of 20%-40% are common for these types of vessels. Third, the analysis assigns no cost to the pay-off of a capital note on the existing vessel and it is unlikely that the full resale value of the existing vessel would be fully available for a down payment as it would be the security for the existing note. And lastly, the vessel owners will be required to convert the vessels to zero emission well within the useful life of the capital investment at an unknown but potentially significant cost meaning banks will want the loan to mature over a shorter period or will further reduce the percentage of the vessel that can be financed.

Conclusion

H&M Landing (current vs. future prices)

	Passenger Ticket for Existing Vessel	Passenger Ticket for CARB Compliant Vessel
Class One (Day) 15-passengers	$180	$542
Class Two (Multi Day) 25-passengers	$200	$394

Class 1 Coastal Vessel (65 feet): As the cash flow analysis demonstrates the $4.6 million boat acquisition with 10% deposit would produce a **negative** cash position over 10 years of $ 2,826,304. For this boat to breakeven, passenger prices would have to increase threefold or be increased by 200%.

Class 2 Multi-Day Vessel (80 feet): The cash flow results based on the $5.7 million purchase with a 10% deposit would produce a $ 3,047,600 **negative** cash at the end of 10 years and for this boat to breakeven, passenger prices would have to nearly double or be increased by 97%.

The four cash flow analyses attached to this letter demonstrate the trajectory business owners will face given high cost of replacement vessels. Modeling suggests revenue increases to support the cost of new build will be extremely aggressive.
In my experience with marine recreation, the sudden and significant cost increase would both reduce the pool of those that can access the service and the frequency of returning customers. This challenge will be even greater for the most common smaller passenger vessel category (Class 1), notably half to one-day coastal vessels that serve anglers, whale watchers and divers. This would affect the ability to finance a vessel as would the uncertainty regarding future investments necessary to achieve zero emissions. Banks may view any extensions granted by CARB negatively as it would shorten the period of capital recovery and thereby require additional increases in ticket prices to achieve sustainable revenues.

Very truly yours,

Considine & Considine

PHILIP R. SMITH

Certified Public Accountant

PRS/Alli

Charter Boat Analysis
Class 1 (65ft) Vessel (Local/Coastal)
$360,000 Down Payment, 20-Year Payoff, 6.00%
Cost: $4,600,000

	2022 Year 1	2023 Year 2	2024 Year 3	2025 Year 4	2026 Year 5	2027 Year 6	2028 Year 7	2029 Year 8	2030 Year 9	2031 Year 10
Revenues										
Existing Day Rate/Person	$ 180	$ 180	$ 180	$ 180	$ 180	$ 180	$ 180	$ 180	$ 180	$ 180
Rate Increase	**1.00**	**1.14**	**1.15**	**1.16**	**1.17**	**1.18**	**1.19**	**1.20**	**1.21**	**1.22**
Boat Capacity	10	15	15	15	15	15	15	15	15	15
Days of Operation/Year	116	116	116	116	116	116	116	116	116	116
Revenues	$ 208,800	$ 357,048	$ 360,180	$ 363,312	$ 366,444	$ 369,576	$ 372,708	$ 375,840	$ 378,972	$ 382,104
Operating Costs										
Fees	$ 62,640	$ 107,114	$ 108,054	$ 108,994	$ 109,933	$ 110,873	$ 111,812	$ 112,752	$ 113,692	$ 114,631
Utilities	$ 511	$ 511	$ 511	$ 511	$ 511	$ 511	$ 511	$ 511	$ 511	$ 511
Advertising	$ 6,264	$ 10,711	$ 10,805	$ 10,899	$ 10,993	$ 11,087	$ 11,181	$ 11,275	$ 11,369	$ 11,463
Labor	$ 37,979	$ 39,118	$ 40,292	$ 41,501	$ 42,746	$ 44,028	$ 45,349	$ 46,709	$ 48,111	$ 49,554
Maintenance	$ 25,056	$ 42,846	$ 43,222	$ 43,597	$ 43,973	$ 44,349	$ 44,725	$ 45,101	$ 45,477	$ 45,852
Fuel	$ 73,000	$ 73,000	$ 73,000	$ 73,000	$ 73,000	$ 73,000	$ 73,000	$ 73,000	$ 73,000	$ 73,000
Insurance	$ 8,000	$ 8,000	$ 8,000	$ 8,000	$ 8,000	$ 8,000	$ 8,000	$ 8,000	$ 8,000	$ 8,000
Total expense	$ 213,450	$ 281,301	$ 283,884	$ 286,502	$ 289,156	$ 291,848	$ 294,579	$ 297,348	$ 300,159	$ 303,012
Operating Income	$ (4,650)	$ 75,747	$ 76,296	$ 76,810	$ 77,288	$ 77,728	$ 78,129	$ 78,492	$ 78,813	$ 79,092
% of Gross	-2%	21%	21%	21%	21%	21%	21%	21%	21%	21%
Expenses Resulting from Purchase										
New Vessel Interest	$ -	$ 230,638	$ 244,937	$ 237,561	$ 229,730	$ 221,417	$ 212,591	$ 203,220	$ 193,271	$ 182,709
New Vessel Property Tax	$ -	$ 46,000	$ 42,167	$ 38,653	$ 35,432	$ 32,479	$ 29,772	$ 27,291	$ 25,017	$ 22,932
Net Income (Loss)	$ (4,650)	$ (200,891)	$ (210,807)	$ (199,404)	$ (187,875)	$ (176,168)	$ (164,234)	$ (152,020)	$ (139,476)	$ (126,549)
% of Net	-2%	-56%	-59%	-55%	-51%	-48%	-44%	-40%	-37%	-33%
Cash Beginning	30,000	25,350	(279,046)	(609,437)	(935,800)	(1,258,465)	(1,577,736)	(1,893,899)	(2,207,219)	(2,517,944)
Net Income	(4,650)	(200,891)	(210,807)	(199,404)	(187,875)	(176,168)	(164,234)	(152,020)	(139,476)	(126,549)
Loan Payoff	-	(103,505)	(119,584)	(126,959)	(134,790)	(143,103)	(151,930)	(161,300)	(171,249)	(181,811)
Capital Reserves	-	-	-	-	-	-	-	-	-	-
Net Sale Proceeds	-	360,000	-	-	-	-	-	-	-	-
Down Payment	-	(360,000)	-	-	-	-	-	-	-	-
Ending Cash	**25,350**	**(279,046)**	**(609,437)**	**(935,800)**	**(1,258,465)**	**(1,577,736)**	**(1,893,899)**	**(2,207,219)**	**(2,517,944)**	**(2,826,304)**

Charter Boat Analysis
Class 1 (65ft) Vessel (Local/Coastal)
$360,000 Down Payment, 20-Year Payoff, 6.00%
Cost: $4,600,000

	2022 Year 1	2023 Year 2	2024 Year 3	2025 Year 4	2026 Year 5	2027 Year 6	2028 Year 7	2029 Year 8	2030 Year 9	2031 Year 10
Revenues										
Existing Day Rate/Person	$ 180	$ 180	$ 180	$ 180	$ 180	$ 180	$ 180	$ 180	$ 180	$ 180
Rate Increase	**1.00**	**2.93**	**3.07**	**3.05**	**3.04**	**3.03**	**3.03**	**3.02**	**3.01**	**3.01**
Boat Capacity	10	15	15	15	15	15	15	15	15	15
Days of Operation/Year	116	116	116	116	116	116	116	116	116	116
Revenues	$ 208,800	$ 918,951	$ 960,890	$ 956,699	$ 953,106	$ 950,070	$ 947,550	$ 945,513	$ 943,925	$ 942,759
Operating Costs										
Fees	$ 62,640	$ 275,685	$ 288,267	$ 287,010	$ 285,932	$ 285,021	$ 284,265	$ 283,654	$ 283,178	$ 282,828
Utilities	$ 511	$ 511	$ 511	$ 511	$ 511	$ 511	$ 511	$ 511	$ 511	$ 511
Advertising	$ 6,264	$ 27,569	$ 28,827	$ 28,701	$ 28,593	$ 28,502	$ 28,427	$ 28,365	$ 28,318	$ 28,283
Labor	$ 37,979	$ 39,118	$ 40,292	$ 41,501	$ 42,746	$ 44,028	$ 45,349	$ 46,709	$ 48,111	$ 49,554
Maintenance	$ 25,056	$ 110,274	$ 115,307	$ 114,804	$ 114,373	$ 114,008	$ 113,706	$ 113,462	$ 113,271	$ 113,131
Fuel	$ 73,000	$ 73,000	$ 73,000	$ 73,000	$ 73,000	$ 73,000	$ 73,000	$ 73,000	$ 73,000	$ 73,000
Insurance	$ 8,000	$ 8,000	$ 8,000	$ 8,000	$ 8,000	$ 8,000	$ 8,000	$ 8,000	$ 8,000	$ 8,000
Total expense	$ 213,450	$ 534,157	$ 554,204	$ 553,526	$ 553,155	$ 553,070	$ 553,257	$ 553,701	$ 554,388	$ 555,307
Operating Income	$ (4,650)	$ 384,793	$ 406,687	$ 403,173	$ 399,952	$ 396,999	$ 394,293	$ 391,812	$ 389,537	$ 387,453
% of Gross	-2%	42%	42%	42%	42%	42%	42%	41%	41%	41%
Expenses Resulting from Purchase										
New Vessel Interest	$ -	$ 230,638	$ 244,937	$ 237,561	$ 229,730	$ 221,417	$ 212,591	$ 203,220	$ 193,271	$ 182,709
New Vessel Property Tax	$ -	$ 46,000	$ 42,167	$ 38,653	$ 35,432	$ 32,479	$ 29,772	$ 27,291	$ 25,017	$ 22,932
Net Income (Loss)	$ (4,650)	$ 108,155	$ 119,584	$ 126,959	$ 134,790	$ 143,103	$ 151,930	$ 161,300	$ 171,249	$ 181,811
% of Net	-2%	12%	12%	13%	14%	15%	16%	17%	18%	19%
Cash Beginning	30,000	25,350	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000
Net Income	(4,650)	108,155	119,584	126,959	134,790	143,103	151,930	161,300	171,249	181,811
Loan Payoff	-	(103,505)	(119,584)	(126,959)	(134,790)	(143,103)	(151,930)	(161,300)	(171,249)	(181,811)
Capital Reserves	-	-	-	-	-	-	-	-	-	-
Net Sale Proceeds	-	360,000	-	-	-	-	-	-	-	-
Down Payment	-	(360,000)	-	-	-	-	-	-	-	-
Ending Cash	**25,350**	**30,000**	**30,000**	**30,000**	**30,000**	**30,000**	**30,000**	**30,000**	**30,000**	**30,000**

Charter Boat Analysis
Class 2 (80ft) Vessel (Full Day Islands/Offshore)
$500,000 Down Payment, 20 Year Payoff, 6.00%
Cost: $5,700,000

	2022 Year 1	2023 Year 2	2024 Year 3	2025 Year 4	2026 Year 5	2027 Year 6	2028 Year 7	2029 Year 8	2030 Year 9	2031 Year 10
Revenues										
Existing Day Rate/Person	$ 200	$ 200	$ 200	$ 200	$ 200	$ 200	$ 200	$ 200	$ 200	$ 200
Rate Increase	**1.00**	**1.14**	**1.15**	**1.16**	**1.17**	**1.18**	**1.19**	**1.20**	**1.21**	**1.22**
Boat Capacity	25	25	25	25	25	25	25	25	25	25
Days of Operation/Year	162	162	162	162	162	162	162	162	162	162
Revenues	$ 810,000	$ 923,400	$ 931,500	$ 939,600	$ 947,700	$ 955,800	$ 963,900	$ 972,000	$ 980,100	$ 988,200
Operating Costs										
Fees	$ 243,000	$ 277,020	$ 279,450	$ 281,880	$ 284,310	$ 286,740	$ 289,170	$ 291,600	$ 294,030	$ 296,460
Utilities	$ 2,500	$ 2,500	$ 2,500	$ 2,500	$ 2,500	$ 2,500	$ 2,500	$ 2,500	$ 2,500	$ 2,500
Advertising	$ 24,300	$ 27,702	$ 27,945	$ 28,188	$ 28,431	$ 28,674	$ 28,917	$ 29,160	$ 29,403	$ 29,646
Labor	$ 117,938	$ 121,476	$ 125,120	$ 128,874	$ 132,740	$ 136,722	$ 140,824	$ 145,049	$ 149,400	$ 153,882
Maintenance	$ 97,200	$ 110,808	$ 111,780	$ 112,752	$ 113,724	$ 114,696	$ 115,668	$ 116,640	$ 117,612	$ 118,584
Fuel	$ 228,906	$ 228,906	$ 228,906	$ 228,906	$ 228,906	$ 228,906	$ 228,906	$ 228,906	$ 228,906	$ 228,906
Insurance	$ 26,000	$ 26,000	$ 26,000	$ 26,000	$ 26,000	$ 26,000	$ 26,000	$ 26,000	$ 26,000	$ 26,000
Total expense	$ 739,844	$ 794,412	$ 801,701	$ 809,100	$ 816,611	$ 824,238	$ 831,985	$ 839,855	$ 847,851	$ 855,978
Operating Income	$ 70,156	$ 128,988	$ 129,799	$ 130,500	$ 131,089	$ 131,562	$ 131,915	$ 132,145	$ 132,249	$ 132,222
% of Gross	9%	14%	14%	14%	14%	14%	14%	14%	13%	13%
Expenses Resulting from Purchase										
New Vessel Interest	-	282,858	300,394	291,348	281,745	271,549	260,724	249,232	237,031	224,077
New Vessel Property Tax	-	57,000	52,250	47,500	42,750	38,000	33,250	28,500	23,750	19,000
Net Income (Loss)	70,156	(210,870)	(222,845)	(208,348)	(193,406)	(177,988)	(162,060)	(145,587)	(128,532)	(110,855)
% of Net	9%	-23%	-24%	-22%	-20%	-19%	-17%	-15%	-13%	-11%
Cash Beginning	30,000	100,156	(237,655)	(607,159)	(971,212)	(1,329,927)	(1,683,418)	(2,031,806)	(2,375,214)	(2,713,769)
Net Income	70,156	(210,870)	(222,845)	(208,348)	(193,406)	(177,988)	(162,060)	(145,587)	(128,532)	(110,855)
Loan Payoff	-	(126,940)	(146,659)	(155,705)	(165,308)	(175,504)	(186,329)	(197,821)	(210,022)	(222,976)
Capital Reserves	-	-	-	-	-	-	-	-	-	-
Net Sale Proceeds	-	500,000.00	-	-	-	-	-	-	-	-
Down Payment	-	(500,000.00)	-	-	-	-	-	-	-	-
Ending Cash	**$ 100,156**	**$ (237,655)**	**$ (607,159)**	**$ (971,212)**	**$ (1,329,927)**	**$ (1,683,418)**	**$ (2,031,806)**	**$ (2,375,214)**	**$ (2,713,769)**	**$ (3,047,600)**

Charter Boat Analysis
Class 2 (80ft) Vessel (Full Day Islands/Offshore)
$500,000 Down Payment, 20 Year Payoff, 6.00%
Cost: $5,700,000

	2022 Year 1	2023 Year 2	2024 Year 3	2025 Year 4	2026 Year 5	2027 Year 6	2028 Year 7	2029 Year 8	2030 Year 9	2031 Year 10
Revenues										
Existing Day Rate/Person	$ 200	$ 200	$ 200	$ 200	$ 200	$ 200	$ 200	$ 200	$ 200	$ 200
Rate Increase	**1.00**	**1.74**	**1.98**	**1.98**	**1.98**	**1.97**	**1.97**	**1.97**	**1.97**	**1.97**
Boat Capacity	25	25	25	25	25	25	25	25	25	25
Days of Operation/Year	162	162	162	162	162	162	162	162	162	162
Revenues	$ 810,000	$ 1,410,045	$ 1,603,326	$ 1,601,515	$ 1,599,908	$ 1,598,512	$ 1,597,333	$ 1,596,378	$ 1,595,653	$ 1,595,166
Operating Costs										
Fees	$ 243,000	$ 423,014	$ 480,998	$ 480,454	$ 479,972	$ 479,554	$ 479,200	$ 478,913	$ 478,696	$ 478,550
Utilities	$ 2,500	$ 2,500	$ 2,500	$ 2,500	$ 2,500	$ 2,500	$ 2,500	$ 2,500	$ 2,500	$ 2,500
Advertising	$ 24,300	$ 42,301	$ 48,100	$ 48,045	$ 47,997	$ 47,955	$ 47,920	$ 47,891	$ 47,870	$ 47,855
Labor	$ 117,938	$ 121,476	$ 125,120	$ 128,874	$ 132,740	$ 136,722	$ 140,824	$ 145,049	$ 149,400	$ 153,882
Maintenance	$ 97,200	$ 169,205	$ 192,399	$ 192,182	$ 191,989	$ 191,821	$ 191,680	$ 191,565	$ 191,478	$ 191,420
Fuel	$ 228,906	$ 228,906	$ 228,906	$ 228,906	$ 228,906	$ 228,906	$ 228,906	$ 228,906	$ 228,906	$ 228,906
Insurance	$ 26,000	$ 26,000	$ 26,000	$ 26,000	$ 26,000	$ 26,000	$ 26,000	$ 26,000	$ 26,000	$ 26,000
Total expense	$ 739,844	$ 1,013,402	$ 1,104,023	$ 1,106,962	$ 1,110,105	$ 1,113,459	$ 1,117,030	$ 1,120,825	$ 1,124,850	$ 1,129,113
Operating Income	$ 70,156	$ 396,643	$ 499,303	$ 494,553	$ 489,803	$ 485,053	$ 480,303	$ 475,553	$ 470,803	$ 466,053
% of Gross	9%	28%	31%	31%	31%	30%	30%	30%	30%	29%
Expenses Resulting from Purchase										
New Vessel Interest	-	282,858	300,394	291,348	281,745	271,549	260,724	249,232	237,031	224,077
New Vessel Property Tax	-	57,000	52,250	47,500	42,750	38,000	33,250	28,500	23,750	19,000
Net Income (Loss)	70,156	56,784	146,659	155,705	165,308	175,504	186,329	197,821	210,022	222,976
% of Net	9%	4%	9%	10%	10%	11%	12%	12%	13%	14%
Cash Beginning	30,000	100,156	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000
Net Income	70,156	56,784	146,659	155,705	165,308	175,504	186,329	197,821	210,022	222,976
Loan Payoff	-	(126,940)	(146,659)	(155,705)	(165,308)	(175,504)	(186,329)	(197,821)	(210,022)	(222,976)
Capital Reserves	-	-	-	-	-	-	-	-	-	-
Net Sale Proceeds	-	500,000.00	-	-	-	-	-	-	-	-
Down Payment	-	(500,000.00)	-	-	-	-	-	-	-	-
Ending Cash	**$ 100,156**	**$ 30,000**	**$ 30,000**	**$ 30,000**	**$ 30,000**	**$ 30,000**	**$ 30,000**	**$ 30,000**	**$ 30,000**	**$ 30,000**

SOCAL Charter Vessel Specification

Proposed concept is to provide a diesel electric drive charter fishing/sightseeing vessel. The diesel electric design was chosen to "futureproof" the vessel to allow for upgrades to power system as new and more reliable technology becomes available. Electrical power is generated via multiple diesel generators, the decision was made to not use battery storage system due to the current inefficiency in energy storage.

Vessel to be designed and built to all class requirement (Sub-Chapter T, ABS etc)

100 Design & Structure

General

Length overall,	65'
Beam overall	22'
Crew	3 person
Passengers maximum	40 person
Fuel capacity, useable	2500 US gal.
Fresh water capacity	750 US gal.

Hull materials

- Option #1 Steel
- Option #2 Fiberglass
- Option #3 Aluminum

House design

- Material same as hull
- Interior dinning/seating area
- Galley for food preparation and concessions sales
- ADA compliant
    - Head
    - Doorway
    - Seating area
- Crew member berth and head w/ shower

SOCAL Charter Vessel Specification

200 Propulsion Systems

Propulsion to be provide by twin electrically powered azimuth pod type motors. This propulsion system combines steering along with propulsion making the vessel highly maneuverable and controllable. Electrical power is provide by multiple generators, operating together as power is required and shutting down during low power consumption operations(in/out port, trolling or “idling”)

Azimuth Thruster

- SCHOTTEL SRE
- EcoPeller 150 L-Drive
- 1200 mm Fixed Pitch Propeller
- Offshore duty rating
    - 3000 to 5500 annual thruster operating hours
- Freshwater cooled motor

Azimuth steering

- Electrical
- Steering time 10 seconds for 180°

Generators

- Three Northern Lights 300kw w/ SCR, DPF & wet exhaust
- Multiple generators to be started & paralleled as electrical demands increase
    - Utilize generator power efficiently to reduce, fuel consumption, noise and engine wear

300 Electrical Systems

Vessel is equipped with multiple electrical systems of AC & DC power. Electrical control cabinets are used to properly protect components and personnel. All systems to be grounded at one single point as required.

- Schneider frequency converts for control of propulsion motors
- Generator control systems
- Led lighting throughout vessel
- Generators individual start battery bank
- House emergency power battery bank
- Shore power connection 50 amp minimum

SOCAL Charter Vessel Specification

400 Command & Control Systems

Full suite of Furuno Navnet electronics system along with communication radios and satellite phone. Schottel drive controls

Electronics

- Furuno radar radome
- Furuno radar open array
- Furuno Navnet system
- Dual GPS chart plotters
- Satellite phone
- Dual VHF
- Sideband radio
- Wesmar HD860 Color side-scanning sonar
- Fathometer
- Loud hailer
- PA system

Alarm system

- Bilge high water
- Fire
- Propulsion motors
- Generator monitoring

SOCAL Charter Vessel Specification

500 Auxiliary Systems

Auxiliary system components are selected for longevity and where possible duplicated between system to reduce spare requirements

- HVAC
  - TECHNICOLD CHILLED WATER MARINE AIR CONDITIONING
  - 90,000 btu
  - Multi zone system
    - Bridge
    - Galley
    - Mess deck
- RSW
  - Integrated Marine Systems 5 ton system
  - Electric drive
- Bait tanks
  - FWD
    - 300 gallon / 20 Scoop
  - AFT
    - 750 gallon / 50 scoop
  - Fish hold/rsw supplied
    - 1000 gallon/66 scoop
- Fish Hold
  - Multiple storage tanks
    - Size and configurations TBD
- Washdown pumps FWD & AFT
- Potable water
  - 750 gallon tank
  - Pressure pump
  - Hot water heater
- Waste system
  - 400 gal black water
  - 400 gal grey water
  - Deck pump out connection
- Bilge System
  - Individual bilge pumps located in all water tight compartments

SOCAL Charter Vessel Specification

600 Interior/Exterior Outfitting

All decking, paneling, cabinetry, and seating for passengers made of materials selected for ease of cleaning and durability

Galley & Concessions equipment

- Under counter top load Beverage cooler
    - 25 cases of bottles
- Refrigerator
- Flat top grill
- Vent hood
- Warming pan
- Coffee maker

Seating area

- ADA compliant doorway
- Easy clean booth type seating
    - ADA compliant section
- USB charging ports
- (2) 42 " flat screen TV's w/ dvd player
    - Optional satellite TV

Passenger heads

- Two individual heads
- ADA compliant
    - Doorway
    - Grab bar
    - Toilet height
- Easy clean with deck drain
- Raw water toilet

Insulation

- Passenger and pilot house areas to be thermally insulated
- Engine room to be acoustically insulated

SOCAL Charter Vessel Specification

600 Interior/Exterior Outfitting (CONT)

Crew Stateroom & head

- Separate from the guest areas
- Sleeping bunk
- Full head w/shower

Railing

- Continuous railing with movable sections as required for boarding
- Height TBD

Paint/gelcoat

- Paint
    - If vessel is steel or aluminum
- Gelcoat
    - If vessel is fiberglass

Decks

- All walkways and decks shall be covered in Nonskid

Windows

- All windows to be direct bonded frameless windows

Budgetary estimate

The budgetary Estimates for this vessel

- Diesel electric propulsion is $4,600,000
- Conventional power package (diesel w/ shafts & props) $4,200,000

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Proposed concept is to provide a diesel electric drive charter fishing/sightseeing vessel. The diesel electric design was chosen to "futureproof" the vessel to allow for upgrades to power system as new and more reliable technology becomes available. Electrical power is generated via multiple diesel generators, the decision was made to not use battery storage system due to the current inefficiency in energy storage.

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Beam overall	25
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Fresh water capacity	1000 US gal.

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- Option #1 Steel
- Option #2 Fiberglass
- Option #3 Aluminum

House design

- Material same as hull
- Interior dinning/seating area
- Galley for food preparation and concessions sales
- ADA compliant
    - Head
    - Doorway
    - Seating area
- Crew member berth and head w/ shower
- 21 persons berthing spaces

SOCAL Charter Vessel Specification

200 Propulsion Systems

Propulsion to be provide by twin electrically powered azimuth pod type motors. This propulsion system combines steering along with propulsion making the vessel highly maneuverable and controllable. Electrical power is provide by multiple generators, operating together as power is required and shutting down during low power consumption operations(in/out port, trolling or “idling”)

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- SCHOTTEL SRE
- EcoPeller 150 L-Drive
- 1200 mm Fixed Pitch Propeller
- Offshore duty rating
    - 3000 to 5500 annual thruster operating hours
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- Steering time 10 seconds for 180°

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    - Utilize generator power efficiently to reduce, fuel consumption, noise and engine wear

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- Furuno radar open array
- Furuno Navnet system
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- Satellite phone
- Dual VHF
- Sideband radio
- Wesmar HD860 Color side-scanning sonar
- Fathometer
- Loud hailer
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- Bilge high water
- Fire
- Propulsion motors
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  - 90,000 btu
  - Multi zone system
    - Bridge
    - Galley
    - Mess deck
- RSW
  - Integrated Marine Systems 10 ton system
  - Electric drive
- Bait tanks
  - FWD
    - 500 gallon / 33 Scoop
  - AFT
    - 1500 gallon / 100 scoop
  - Fish hold/rsw supplied
    - 2,500 gallon/167 scoop
- Fish Hold
  - Multiple storage tanks
    - Size and configurations TBD
- Washdown pumps FWD & AFT
- Potable water
  - 1000 gallon tank
  - Pressure pump
  - Hot water heater
- Waste system
  - 500 gal black water
  - 500 gal grey water
  - Deck pump out connection
  - Macerator pump and overboard connection
- Bilge System
  - Individual bilge pumps located in all water tight compartments

SOCAL Charter Vessel Specification

600 Interior/Exterior Outfitting

All decking, paneling, cabinetry, and seating for passengers made of materials selected for ease of cleaning and durability

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    - 25 cases of bottles
- Refrigerator
- Flat top grill
- Vent hood
- Warming pan
- Coffee maker

Seating area

- ADA compliant doorway
- Easy clean booth type seating
    - ADA compliant section
- USB charging ports
- (2) 42 " flat screen TV's w/ dvd player
    - Optional satellite TV

Passenger heads

- Two individual heads
- ADA compliant
    - Dooway
    - Grab bar
    - Toilet height
- Easy clean with deck drain
- Raw water toilet

Insulation

- Passenger and pilot house areas to be thermally insulated
- Engine room to be acoustically insulated

SOCAL Charter Vessel Specification

600 Interior/Exterior Outfitting (CONT)

Crew Stateroom & head

- Separate from the guest areas
- Sleeping bunk
- Full head w/shower

Passenger Berthing spaces

- Bunks for 21 passengers
- Emergency egress hatches & fire barriers as required

Railing

- Continuous railing with movable sections as required for boarding
- Height TBD

Paint/gelcoat

- Paint
    - If vessel is steel or aluminum
- Gelcoat
    - If vessel is fiberglass

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