



October 2, 2018

Pacifica Planning Director Tina Wehrmeister  
Pacifica City Manager Kevin Woodhouse  
170 Santa Maria Ave.  
Pacifica, CA. 94044

**San Francisco Public Golf Alliance Comment  
On Pacifica Sea-Level Rise Policy Options for LCP Update**

Dear Ms. Wehrmeister and Mr. Woodhouse,

1 The San Francisco Public Golf Alliance represents 6,500-plus public course golfers, mostly residents of San Francisco and Northern San Mateo County, a substantial number of which are Pacifica residents. We have the following comments, objections, and suggestions in response to the August 24, 2018 memorandum from the city’s consultant ESA, captioned “Sea-Level Rise Policy Options for Pacifica LCP Update” (the “Policy Options”).<sup>1</sup>

**i. EXECUTIVE SUMMARY**

2 **WE OBJECT TO THE POLICY OPTIONS AS MISLEADING AND DEFETIVE BECAUSE THEY ARE BASED ON AND INCORPORATE THE DEFECTIVE AND ARBITRARY FINAL ADAPTATION PLAN, WHICH (1) UNDER-COUNTS AND UNDER-VALUES THE PROPERTIES, BUSINESSES, AND SENSITIVE COASTAL RESOURCES NOW PROTECTED BY PACIFICA’S SHORE DEFENSES, WHILE (2) ARBITRARILY OVER-VALUING “BEACH RECREATION” WITHOUT SUPPORTING DATA, THEREBY (a) SKEWING THE COST-BENEFIT ANALYSIS TO FAVOR “MANAGED RETREAT”, AND (b) LOCKING-IN EXHORBITANT “MITIGATION COSTS” FOR MAINTAINING CURRENT SHORE DEFENSES OR BUILDING NEW ONES – IN EFFECT MAKING FUTURE OPTIONS OTHER THAN MANAGED RETREAT ECONOMICALLY INFEASIBLE.**

<sup>1</sup> ESA, Inc, August 24, 2018, Memorandum, “Sea-Level Rise Policy Options for Pacifica LCP Update” : <http://www.cityofpacific.org/civicax/filebank/blobdload.aspx?t=49723.49&BlobID=14599> (The Policy Options memo is attached to a 2-page introductory letter, dated September 10, 2018 from Pacifica Planning Director Tina Wehrmeister.)

## II. BACKGROUND: THE FINAL ADAPTATION PLAN AND ITS COST-BENEFIT WILL BE THE “MAIN LIMITING FACTOR” ON COASTAL PROTECTION – INCREASING THE COST AND LIMITING PACIFICA’S ABILITY TO OBTAIN GRANTS OR OTHER FINANCING FOR NEEDED COASTAL DEFENSES.

Pacifica’s City Council on March 28, 2018 unanimously declared that the city’s key Goals for the Draft Sea Level Rise Adaptation Planning include “Preserve Existing Neighborhoods and Promote Environmental Justice and Local Economic Vitality. . . The Adaptation Plan will allow the city to create policies that will protect these areas from the impacts of sea level rise, erosion, and coastal flooding.”<sup>2</sup> And both the draft Sea-Level Rise Policy Options and the underlying Final Adaptation Plan claim to follow these laudable goals. The Policy Options expressly states: “. . . consistent with the City Council’s goals, particularly to preserve existing neighborhoods and promote environmental justice and local economic vitality, the policies focus on protection and armoring of the shoreline and reassessment of the adaptation plan in the future. [ Page 1] . . . Managed retreat is not included in any of the near-term [sub-area] policies” [Page 6].”<sup>3</sup>

3 But the Policy Options also clearly states that it is based upon and incorporates the Final Draft Sea-Level Rise Adaptation Plan.<sup>4,5</sup>, which its introductory and concluding sections, explicitly cautions that the “feasibility” of maintaining, expanding, or constructing new armoring or other coastal defenses will be determined by the Adaptation Plan’s Cost-Benefit Analysis.

“The alternative adaptation strategies must be explicitly defined through time to yield cost-benefit outputs that can indicate what is feasible and can be referred to for future funding pursuits.”<sup>6</sup>

“In a number of sub-areas, Alternative 3 [Managed Retreat] yielded the highest net-benefits (or lowest costs) because the cost of Alternative 1, which involves armoring, were higher than the benefits of protecting the property. Alternative 1 (armoring) may also reduce the width of beaches, which can lower recreational value. However, Alternative 3 is less aligned with the Council adopted goal to Preserve Existing Neighborhoods and Promote Environmental Justice and Local Economic Vitality. When considering policies to incorporate into the LCP Update, the City will need to consider costs/benefits on balance with community goals.”<sup>7</sup>

<sup>2</sup> Pacifica City Council, Resolution, March 28, 2018, “Goals for the Draft Local Coastal Land Use Plan Update and Adaptation Planning: <http://www.cityofpacifica.org/civicax/filebank/blobdload.aspx?BlobID=14019>

<sup>3</sup> Policy Options, *supra*, pp. 1, 6:

<http://www.cityofpacifica.org/civicax/filebank/blobdload.aspx?t=49723.49&BlobID=14599>

<sup>4</sup> Sea-Level Rise Policy Options, etc., *Id.*, at page 1, paragraph 1, and page 4, Hazard Policy 4 (“The City shall implement its Sea-level Rise Adaptation Plan. . .”

<http://www.cityofpacifica.org/civicax/filebank/blobdload.aspx?t=49723.49&BlobID=14599>

<sup>5</sup> Final Draft Sea-Level Rise Adaptation Plan, dated September 2018, found at:

<http://www.cityofpacifica.org/civicax/filebank/blobdload.aspx?t=58348.79&BlobID=14632>

<sup>6</sup> Final Draft Sea-Level Rise Adaptation Plan, *Id.*, at page 6, second paragraph:

<http://www.cityofpacifica.org/civicax/filebank/blobdload.aspx?t=58348.79&BlobID=14632>

<sup>7</sup> Final Draft Sea-Level Rise Adaptation Plan, *Id.*, at page 6, penultimate paragraph:

<http://www.cityofpacifica.org/civicax/filebank/blobdload.aspx?t=58348.79&BlobID=14632>

Pacifica Planning Director Tina Wehrmeister emphasized this point in remarks to an April 28, 2018 public meeting, saying she expects the cost-benefit analysis to be “the main limiting factor. . . in what kind of adaptation strategies actually get implemented ... and whether or not we can get funding”:

“ . . . the plan is to prepare . . . an adaption strategy that includes physical improvements such as sea walls or maintenance of sea walls that makes sense for our community. And I think part of that is trying to figure out how to fund that. And so there may be a series of strategies involved, depending on how much money that we can secure. And I think that this [the economic analysis] is a really important part of the plan, . . . , and that is going to be the limit, right? That’s going to be the main limiting factor I think in what kind of adaptation strategies actually get implemented in our city and whether or not we can get funding through our community -- that means an assessment district or a bond of some sort -- or funding from grants from other agencies.”<sup>8</sup>

The Draft Policy Options memo also makes clear, at Hazard Policies 4, 7, 20, and 22<sup>9</sup>, that “mitigation” expenses to for claimed “negative impacts” that maintenance or expansion or new construction of shoreline protection may have on “beach recreation” can be expected to significantly increase the expense of any such adaptation measures. This “recreation impacts” issue – and the amount of money to be paid as “beach recreation mitigation fee” in addition to construction and other costs, was at issue in the Coastal Commission’s May 2017 decision in the Solana Beach case.<sup>10</sup>

**lii. The Final Draft Sea Level Rise Adaptation Plan’s Cost-Benefit Analysis Is based upon an arbitrary \$40 “day-at-the-beach” value, multiplied by beach attendance “estimates” that are also arbitrary, because (except for Pacifica State Beach) they are not factually-based, but are rather taken from “estimates” in a draft 2015 CRSMP study which the City has previously said would not be used in the Adaptation Planning process. In the Adaptation Plan’s Response to Comments, the Consultant ignores and does not respond to detailed legal analysis and factual critique on these issues.**

The Final Adaptation Plan explains beach recreation valuation as follows:

“Even though beaches other recreational amenities are free to use, they still have value to the public. Economists measure the value of these non-market resources by estimating what consumers would be willing to pay (WTP for the services. . . For beach recreation, this study applies a day use value of \$40—that is a day at the beach is worth

<sup>8</sup> Pacifica Public Meeting with Community Workgroup, re Introduction to Adaptation Strategies, April 26, 2018, at 1:45:52-1:47:02: <https://www.youtube.com/watch?v=hh4iFYrVun4&t=2s>

<sup>9</sup> Sea-Level Rise Policy Options, etc., *supra*, at page 4, Hazard Policies 4 and 7, Page 5, Hazard Policy 11, Page 14, Hazard Policy 20, and Page 15, Hazard Policy 22 <http://www.cityofpacifica.org/civicax/filebank/blobdload.aspx?t=49723.49&BlobID=14599>

<sup>10</sup> CalSpan video of the Commissioners’ public hearing, May 11, 2017, Agenda Item 17d, **City of Solana Beach Major Amendment LCP-6-SOL-16-0020-1, and related documents** <http://cal-span.org/unipage/?site=cal-span&owner=CCC&date=2017-05-11>

\$40 per person. To estimate the total value of beach recreation, one multiplies the day use value (\$40) by the number of people attending the beach. . . .For . . . beaches in Pacifica [other than Pacifica State Beach], this study used estimates from the Coastal and Regional Sediment Master Plan (ESA 2015)...”<sup>11</sup>

5 (Cont.)

We have previously critiqued the Final Adaptation Plan and its beach recreation valuations in our letters to Pacifica Planning letters dated June 8, 2018 (“The Economic Methodology Memo is Unreliable,”<sup>12</sup> etc.), and August 28, 2018 (“Draft Sea-Level Rise Adaptation Plan is Unclear,”<sup>13</sup> etc.), copies of which are attached hereto respectively as Exhibits A and B. These letters, and the Consultant’s responses to them, are found in the Final Draft Plan’s Appendix K, Response to Comments.<sup>14</sup>

**A. The \$40 “day-at-the-beach” – the multiplicand in ESA’s beach recreation Valuation equation -- is arbitrary because it is both factually and legally groundless, and the Consultant’s Responses to Public Comments are evasive, and do not address the factual and legal problems.**

The Final Adaptability Plan cites no Pacifica-specific “willingness to pay” study to support \$40 or any “day-at-the-beach value” for any Pacifica beaches. Instead, ESA and its economist have insisted that their proposed \$40 “day-at-the-beach” value is somehow mandated by a 2015 California Coastal Commission “advisement” or alternately that the \$40 is “consistent with” a 2017 Coastal Commission in a Solana Beach case. Both claims are untrue. Rather, our June 8 and August 28 letters (Exhibits A and B) establish that: (1) Coastal Commission Staff in the 2015 Coastal Commission study referenced by ESA rejected the concept of a flat statewide “day-at-the-beach” valuation number -- of \$40 or any other amount, and noted that the flat amount advocated by Dr. King (the amount was \$39.49 in 2015) would produce recreational value in-lieu fees (for use in calculating mitigation costs for future shoreline armoring projects) “3.5 to over 10 times more than the in-lieu fees that have been applied by the Commission for similar projects”, noted further that the beach studies relied upon for Dr. King’s \$40 figure were principally Southern California beaches, with different personalities and use characteristics from Northern California beaches, and recommended development of peer-reviewed regional and local beach studies “to ensure an objective process”<sup>15</sup>; (2) the Coastal Commission decision in the 2017 Solana Beach (San Diego

<sup>11</sup> Final Draft Sea-Level Rise Adaptation Plan, *supra*, at page 68:  
<http://www.cityofpacific.org/civicax/filebank/blobdload.aspx?t=58348.79&BlobID=14632>

<sup>12</sup> Letter, June 8, 2018, SF Public Golf Alliance to Pacifica Planner, etc., “The Economic Methodology Memo is Unreliable,” etc.: <https://drive.google.com/open?id=1xtAbR562iciLq7NGqfjcyd1C4tZII5s>

<sup>13</sup> Letter, Aug. 28, 2018, SF Public Golf Alliance to Pacifica Planner, etc., “The Draft Final Sea-Level Rise Adaptation Plan is Unclear,” etc.: [https://drive.google.com/open?id=1mCeRV3t3mbqJGMkZYyhDVUZAAbFWQ\\_GU](https://drive.google.com/open?id=1mCeRV3t3mbqJGMkZYyhDVUZAAbFWQ_GU)

<sup>14</sup> Pacifica Final Sea-Level Rise Adaptation Plan, Appendix K, Response to Public Comments:  
<http://www.cityofpacific.org/civicax/filebank/blobdload.aspx?t=58348.8&BlobID=14635>

<sup>15</sup> California Coastal Commission, Improved Valuation for Impacts to Recreation, Public Access, and Beach Ecology from Shoreline Armoring, Administrative Draft – Not Approved by the Coastal Commission, dated September 28, 2015: <https://drive.google.com/file/d/1TpFmEXLdHr9EnzgcHQgA3CELX7zg-MT-/view>  
And See detailed analysis at Letter, June 8, 2018, SF Public Golf Alliance to Pacifica Planner, *supra*, at page 4, footnotes 15-17: <https://drive.google.com/open?id=1xtAbR562iciLq7NGqfjcyd1C4tZII5s>

County) case, City of Solana Beach Major Amendment LCP-6-SOL-16-0020-1, May 11, 2017, is not in fact “consistent with” ESA’s flat statewide \$40-per-day value, because the Commission did not adopt a statewide “day-at-the-beach” valuation number, but rather adopted a Solana Beach-specific number, based on that city’s own local study, and did not adopt a flat \$40-per-day, but rather adopted different Solana Beach-specific figures for summer days (\$35.56) and non-summer days (\$21.00), averaging about \$25-per-day over the year<sup>16</sup>; (3) a prior 2004 beach valuation study, co-authored by ESA’s economics consultant Dr. King noted that at Northern California beaches “... the water is generally too cold to swim, and many ... beaches are subject to dangerous currents that make swimming impossible... [so] “we cannot conclude with confidence that visitor behavior at [Northern California] beaches will be similar to Southern and Central California beaches.”<sup>17</sup> (3) On May 16, 2018, Coastal Commission Staff environmental scientist Mary Matella cautioned Dr. King that Commission Staff have not reached agreement “on recommended methods for all beaches. . . . The north/south divide has been a concern for some staff who anticipate that northern beaches will be undervalued”; to this, Dr. King responded he will nevertheless use \$40-per-day in his Pacifica beach valuation, because he wants to use Pacifica as “a good test case” and because “there are few substitutes.”<sup>18</sup> (In other words, no local Pacifica “willingness-to-pay” studies have been conducted.)

In effect, Dr. King’s and ESA’s attempt to impose a flat \$40 “day-at-the-beach” value on all Pacifica beaches -- without any kind of local Pacifica-based WTP analysis for those beaches (e.g., visitors’ travel time to the beach, length of beach stay, income, vacation and leisure-time options, weather, water and surf quality, suitability-for-swimming, etc.) -- is a backdoor attempt to impose a standardized statewide beach recreation value that the Coastal Commission declined to adopt in in the May, 2017 Solana Beach case, and that Coastal Commission Staff in September, 2015 rejected and criticized in the matter of the 2015 Administrative Draft Improved Valuation for Impacts to Recreation, etc study.

**B. Neither does the Final Adaptation Plan have a factually-supported multiplier – actual beach use data -- for any Pacifica beaches other than Pacifica State Beach. Instead of data, the Final Adaptation Plan relies on what Dr. King himself acknowledges to be “high error-band” (i.e., flimsy) “estimates” taken from the ESA-authored 2015 draft CRSMP plan that was never finalized or adopted, and which Pacifica has promised would not be used in the Sea Level Rise Adaptation Planning process.**

<sup>16</sup> See detailed analysis of the Coastal Commission’s decision in City of Solana Beach Major Amendment LCP-6-SOL-16-0020-1 (May 11, 2017), at Letter, June 8, 2018, SF Public Golf Alliance to Pacifica Planner, supra, at page 4, footnotes 15-17: <https://drive.google.com/open?id=1xtAbR562iciLq7NGqfjcqyd1C4tZII5s>

<sup>17</sup> King, Philip, and Symes, D., “Potential Loss in GNP and GSP from a failure to Maintain California’s Beaches,” Shore and Beach, Fall, 2004, at p. 21:[https://drive.google.com/open?id=1MIC2QvIA7if\\_2XsDjGZQF5TLjnvxRhUy](https://drive.google.com/open?id=1MIC2QvIA7if_2XsDjGZQF5TLjnvxRhUy;); And see detailed analysis at Letter, June 8, 2018, SF Public Golf Alliance to Pacifica Planner, supra, at pages 6-7, footnotes 28-30: <https://drive.google.com/open?id=1xtAbR562iciLq7NGqfjcqyd1C4tZII5s>

<sup>18</sup> E-mail exchange, May 16, 2018, between Mary Matella and Philip King: <https://drive.google.com/open?id=1eATEMEUJQPpE64NK0tPSfDErIKkfbJp3> . This correspondence was produced by the City of Pacifica in response to a California Public Records Act request.

The Final Adaptation Plan concludes with an admission that “one area where data was very limited was beach recreation,”<sup>19</sup> and instead of identifying actual data for attendance at beaches other than Pacifica State Beach, the Final Adaptation Plan relies only on “estimates” for which no foundational data or explanation is offered.<sup>20</sup> In effect, these are numbers pulled from a hat – non-objective and arbitrary.

There are major problems with this, which make the “estimates” unreliable and unsuitable for an objective cost-benefit analysis, as described in detail in our June 8 and August 28 letters (Exhibits A and B), including: (1) the 2015 Draft Coastal Regional Sediment Management Plan<sup>21</sup>, which the Final Draft Adaptation Plan cites as the source of its beach attendance “estimates,” itself acknowledges that the “estimates” are not reliable (“have a high error band”) because they were based on only four days of student counts in February, 2014<sup>22</sup>; (2) although ESA represented to Pacifica when ESA was hired as consultant for the Sea Level Rise Adaptation study that it “already has data on beach attendance and valuation,” it has never been able to produce that “data”<sup>23</sup>; (3) the beach off the Sharp Park Golf Course levee is a posted dangerous beach, and has been the recurring scene over the years of numerous drownings – three in 2016 alone<sup>24</sup>; (4) at Sharp Park Beach, both the CRSMP and its supporting Economics Analysis (authored by Dr. King), note that the beach is dangerous, so although the California Coastal trail atop the golf course levee is popular, “**few people set foot on the beach** and the waves are posted as dangerous”<sup>25</sup>; and (5) in its Responses to Comments on the Draft Vulnerability Assessment, the City of Pacifica states that “the draft Coastal Regional sediment Management Plan (CRSMP) and its results [which would have to include its beach use “data”] are not being directly relied upon for the City’s study.”<sup>26</sup>

<sup>19</sup> Final Draft Sea-Level Rise Adaptation Plan, *supra*, at page 96:

<http://www.cityofpacific.org/civicax/filebank/blobdload.aspx?t=58348.79&BlobID=14632>

<sup>20</sup> Final Draft Sea-Level Rise Adaptation Plan, *id.*, at page 68:

<http://www.cityofpacific.org/civicax/filebank/blobdload.aspx?t=58348.79&BlobID=14632>

<sup>21</sup> Environmental Science Associates (ESA), 2016, San Francisco Littoral Cell Coastal Regional Sediment Management Plan, for US Army Corps of Engineers and Coastal Sediment Management Workgroup, [http://www.sfestuary.org/wp-content/uploads/2015/11/Draft\\_SFLC\\_CRSMP\\_20160104.pdf](http://www.sfestuary.org/wp-content/uploads/2015/11/Draft_SFLC_CRSMP_20160104.pdf)

<sup>22</sup> See details at letter, June 8, 2018, SF Public Golf Alliance to Pacifica Planner, *supra*, at pages 5-6, at footnotes 21-29: <https://drive.google.com/open?id=1xtAbR562iciLq7NGqfjcyd1C4tZII5s>

<sup>23</sup> See Letter, Aug. 28, 2018, SF Public Golf Alliance to Pacifica Planner, *supra*, at page 7, footnotes 25-28: [https://drive.google.com/open?id=1mCeRV3t3mbqJGMKzYjyhDVUZAbFWQ\\_GU](https://drive.google.com/open?id=1mCeRV3t3mbqJGMKzYjyhDVUZAbFWQ_GU)

<sup>24</sup> See details at Letter, June 8, 2018, SF Public Golf Alliance to Pacifica Planner, *supra*, at page 7, footnotes 21-24: <https://drive.google.com/open?id=1xtAbR562iciLq7NGqfjcyd1C4tZII5s>

<sup>25</sup> See details at Letter, June 8, 2018, SF Public Golf Alliance to Pacifica Planner, *id.*, at page 8, footnotes 37-38: <https://drive.google.com/open?id=1xtAbR562iciLq7NGqfjcyd1C4tZII5s>

<sup>26</sup> Final Draft Pacifica Sea Level Rise Vulnerability Assessment, June 2018, Appendix E, Responses to Comments, Response to Recurring Question 7, at Appendix E, page 12

<http://www.cityofpacific.org/civicax/filebank/blobdload.aspx?t=67369.96&BlobID=14459>

Note: the Final Draft Vulnerability Assessment is itself attached as Appendix A to the Final Draft Adaptation Plan (July, 2018)

### C. The Response to Public Comments ignores and does not respond to these defects in the Final Adaptation Plan's cost-benefit analysis.

Appendix K – the Response to Public Comments<sup>27</sup> segment of the Final Adaptation Plan, responds to none of the foregoing individual problems with the Plan's beach recreation valuation and attendance analysis, as listed in Sections II A and B of this letter and discussed and substantiated in detail in the SF Public Golf Alliance's June 8 and August 28, 2018 letters (Exhibits A and B to this letter).<sup>28</sup> Rather, Appendix K restricts its response to "Master Response E"<sup>29</sup>, which ducks the problems of arbitrariness, lack-of-data, lack of objectivity, lack-of-support from the Coastal Commission, and complete absence of real beach attendance data for any beaches other than Pacifica State Beach. Master Response E says, in effect, "no harm / no foul," claiming that whatever the "beach recreation" valuations, the relative ranking of the response alternatives would not change. But this isn't true – certainly not if the assets which the cost-benefit analysis ignores were accounted for as well (like the golf course and golf and trails recreation discussed below in Section IV, not to mention the endangered

<sup>27</sup> Final Sea-Level Rise Adaptation Plan (Sept. 2018), Appendix K, Response to Public Comments: <http://www.cityofpacific.org/civicax/filebank/blobdload.aspx?t=58348.8&BlobID=14635>

<sup>28</sup> The Golf Alliance's June 8, 2018 letter is found at Appendix K, *Id.*, unnumbered page 77 ff, and ESA's response is found at Appendix K, *Id.*, page 13; the Golf Alliance's Aug. 28, 2018 letter is found at Appendix K, *Id.*, unnumbered page 230 ff, and ESA's response is found at Appendix K, *Id.*, page 27. <http://www.cityofpacific.org/civicax/filebank/blobdload.aspx?t=58348.8&BlobID=14635>

<sup>29</sup> Master Response E is found at Appendix K, *Id.*, at pages 6-7:

<http://www.cityofpacific.org/civicax/filebank/blobdload.aspx?t=58348.8&BlobID=14635> It reads in full:

"Master Response E: Sensitivity of Beach Recreation Value and Beach Attendance Estimates  
Several comments on the Final Draft Adaptation Plan questioned whether the valuation of beach visitation, \$40/day per person-visit, was too high and whether a lower value might result in a different assessment of alternative net costs. In particular, commenters opined that a lower value should be used because the beach in front of Sharp Park has dangerous waves and other negative conditions, adding that a lower beach valuation would facilitate funding for coastal armoring. These commenters also emphasized that the number of people using the beach was very small, lower than the estimates used in the adaptation study. In response to these concerns, a review of the economic estimates/projections was conducted using the Sharp Park subarea, and a sensitivity analysis was applied using a lower day use value (\$10/day per person-visit). The adaptation analysis did not separately assess pedestrian uses of the berm walkway because we assumed that a shoreline walking trail would be maintained for all alternatives.

A review of the prior analysis (with \$40/day per person-visit) indicates that the recreational value of the beach was estimated/projected to be the same for all alternatives in 2018 and 2050 (in Table 26 of the report). In this case increasing or reducing the value of a beach day (e.g., from \$40 to \$10) would make no difference in the relative ranking of alternatives. By 2100 under Alternative 1, the beach erodes to the point where recreational value declines relative to other alternatives (Alternative 2 consists of armoring and beach nourishment and Alternative 3 consists of managed retreat). Using the lower beach valuation (\$10/day per person-visit) does not change the rankings, even for year 2100 where the beach is estimated/projected to be significantly reduced for Alternative 1- Shoreline Armoring (Table 27).

Using the \$10/day per person-visit, the total recreational benefits are now \$13.4 million for Alternative 1, and \$19.1 million for Alternatives 2 and 3. The net benefits for Alternative 1 is now -\$99.4 million, Alternative 2 is now -\$203.8 million; and Alternative 3 is now -\$57.1 million. Consequently, even for a much lower (or even zero) valuation for beach recreation, Alternative 3 has the highest net benefits.

In summary, lowering the value of a beach day, or lowering attendance, would not change the rank ordering of the alternatives economics results as shown by comparison of Table 26 and Table 27 in the report. Note that the effect of lowering the beach value by a 75% yields the same result as lowering attendance by 75% or reducing both attendance and unit value by 50%. Further, the US Army Corps of Engineers can consider the beach recreation as a factor in assessing a Federal interest in cost-sharing beach nourishment projects. Therefore, estimating recreational value a beach using a lower day-use figure would potentially lower the benefits for a nourishment project since the recreational value would be 75% lower. Finally, it is the economist's professional opinion that the \$10/day per person visit is too low and we do not recommend using this value."

7 (Cont.)

species in Sharp Park’s wetlands). And of course the high “beach recreation value” sought by the consultant can be expected to very substantially – according to Coastal Commission staff – increase the mitigation expense costs for shore protection structures.

**IV. The Final Adaptation Plan’s Cost-benefit analysis systematically undercounts and undervalues backshore coastal assets and public recreation. At Sharp Park, the cost-benefit analysis does not include economic valuations of public golf recreation or public use of the California Coastal Trail. The golf course itself is obviously grossly undervalued by the Cost-benefit analysis.**

Both the golf course and the segment of the California Coastal Trail atop the Sharp Park Golf Course levee provide coastal recreational opportunities for low-and moderate-income persons, so both come within the Coastal Act’s definition of “sensitive coastal resource areas”.<sup>30</sup> And the Consultant’s Methodology for Economic Analysis Memorandum states that its analysis will include “the recreational value of Pacifica’s beaches and coastal trails and golf course. . .”<sup>31</sup> But in the Final Adaptation Plan, only beach recreation is valued in the Sharp Park-Fairway Park-Mori Point subarea – the failure to value golf recreation or trail recreation appears plainly on the face of the “Detailed Breakdown of Benefits and Costs,” Table 26 and accompanying text.<sup>32</sup>

**A. Golf recreation value is missing from the cost-benefit analysis**

The omission of a golf recreation value in the cost-benefit analysis is a huge hole in the analysis. And the omission was noticed not only by the Public Golf Alliance, but also by Coastal Commission Staff, which in its August 28, 2018 letter asked: “How does the recreational value of Sharp Park Golf Course actually get factored into the analysis?” To this question, ESA responded: “The recreational value of Sharp Park Golf Course is discussed in Appendix G. Currently, the costs of providing the services (fees and subsidy from San Francisco department of Recreation and Parks) are approximately equal to the recreational value.”<sup>33</sup> Appendix G to the Final Adaptation Plan, captioned “Sharp Park Golf

<sup>30</sup> California Public Resources Code Section 30116 “Sensitive coastal resource areas” means those identifiable and geographically bounded land and water areas within the coastal zone of vital interest and sensitivity. “Sensitive coastal resource areas” include the following: . . .(b) Areas possessing significant recreational value; (c)Highly scenic areas. . . . (f)Areas that provide existing coastal housing or recreational opportunities for low-and moderate-income persons.

<sup>31</sup> ESA, Memorandum, “Methodology for Economic Analysis of sea Level Rise Hazards for Pacifica Sea Level Rise, etc.” May 4, 2018, at page 4: <http://www.cityofpacific.org/civicax/filebank/blobdload.aspx?BlobID=14133>

<sup>32</sup> This failure to assign any recreational values to either golf or trails is seen plainly in the Final Draft Sea-Level Rise Adaptation Plan, *supra*, at pages 83-84 and Table 26: <http://www.cityofpacific.org/civicax/filebank/blobdload.aspx?t=58348.79&BlobID=14632> At page 83, Table 26, the “Recreation Value” lines show figures of \$2,100,00 for the year 2018, \$48,100,000 for 2050, and \$53,600,000 for 2100; in the accompanying text at pages 83-84, ESA says that if it were to reduce day-at-the-beach use value by 75% -- from \$40 to \$10 per day—each of these “Recreation Values” would in turn be reduced by 75%. In other words, there is nothing but “beach recreation” in the “Recreation Value”.

<sup>33</sup> The Coastal Commission’s, August 29, 2018 letter is found at Appendix K, Response to Public Comments, unnumbered page 125: <http://www.cityofpacific.org/civicax/filebank/blobdload.aspx?t=58348.8&BlobID=14635> The question itself comes at unnumbered page 128. ESA’s response is found at Appendix K, *Id.*, pp. 19-20.

Course,” sets the recreation value-per-round at Sharp Park at \$47.50, and gives the 2017-18 number of rounds as 30,293.<sup>34</sup> Multiplication of those numbers yields a total of \$1,438,918. Following ESA’s recreation valuation method of calculating present value for the periods 2018-2050 and 2018-2100, using a 3% discount factor, the golf recreation values from ESA’s numbers in Appendix G would be \$30,776,669 (through 2050) and \$45,154,074 (through 2100). But these numbers, or nothing remotely like them appear in the Final Adaptation Plan’s cost-benefit analysis for the Sharp Park-Fairway Park-Mori Point sub-area. (Golf appraisal expert Gene Krekorian, in an opinion letter suited by San Francisco Public Golf Alliance, would place the recreation value significantly higher – at \$36.7 Million for the 2018-2050 period, and \$54.7 Million for the 2018-2100 period.<sup>35</sup>)

## **B. Trail recreation is also unvalued for the California Coastal Trail**

ESA admits in the Response to Public Comments, Appendix K to the Final Adaptation Plan, that “beach use is lower in northern Pacifica and that people mostly use the trails there.”<sup>36</sup> This is consistent with the economist Dr. King’s own 2014 observation that at Sharp Park beach, the walkers stick to the California Coastal Trail along the top of the sea wall and the levee, and “few people set foot on the beach and the waves are posted as dangerous”. The irony here is that on the one hand, ESA claims to have no data by which to value the trail—which Dr. King acknowledges is used more than the beach, yet he insists on placing substantial value on beach recreation based on no data at all. Something is very wrong here.

## **C. The cost-benefit analysis obviously fails to place a value on the golf course itself that is anywhere near the course’s reasonable value.**

The golf course – an historic seaside Alister MacKenzie-designed course in the heart of the strongest economic area in the country, ranked among the Top 50 Municipal Courses in the U.S. by Golfweek Magazine – is valued by golf appraiser Gene Krekorian at \$31.5 Million, based upon San Francisco’s demonstrated “willingness to pay” substantial annual operations and maintenance expense (\$1,546,494 in 2017-18, as reported at the Final Adaptation Plan’s Appendix G<sup>37</sup>), and recently invest in a \$10 Million recycled water system to provide future irrigation for the course.<sup>38</sup> Interestingly, Mr. Krekorian’s golf course valuation number is within

<sup>34</sup> Appendix G to Final Adaptation Plan is found at the following link on the Pacifica Planning website: [Appendices B through J](#).

<sup>35</sup> Letter, Gene Krekorian, Pro Forma, Inc, Aug. 27, 2018 <https://drive.google.com/open?id=1z9UzMvNyENpN9yMzGxOFurWdgJNFWfAJ>  
This letter was submitted as part of San Francisco Public Golf Alliance’s August 28, 2018 comment letter, *Supra*, page 2, fn. 4: [https://drive.google.com/open?id=1mCeRV3t3mbqJGMKzYjyhDVUZAAbFWQ\\_GU](https://drive.google.com/open?id=1mCeRV3t3mbqJGMKzYjyhDVUZAAbFWQ_GU)  
Mr. Krekorian critiqued ESA’s “Sharp Park Golf Course” golf recreation valuation for relying on greens fees from hot-summer-weather inland golf courses far from the coast and from Sharp Park’s prime upper-San Francisco Peninsula location, and for ignoring the value of Sharp Park’s Alister MacKenzie architectural heritage, and also criticized ESA for relying on only one year play figures, rather than the most recent 5-year average.

<sup>36</sup> Appendix K, Response to Public Comments, *supra*, page 18:  
<http://www.cityofpacific.org/civicax/filebank/blobdload.aspx?t=58348.8&BlobID=14635>  
(Letter No. 46 at page 18, in response to a comment by Robine Runneals, at unnumbered page 120 .

<sup>37</sup> Final Adaptation Plan, Appendix G, page 2: [Appendices B through J](#)

<sup>38</sup> Letter, Gene Krekorian, Aug. 27, 2018, *supra*:  
<https://drive.google.com/open?id=1z9UzMvNyENpN9yMzGxOFurWdgJNFWfAJ>

\$0.5 Million of the approximately \$31 Million “golf recreation value” derived from ESA’s own figures (that also appear in in the Final Adaptation Plan’s Appendix G) of a \$47.50 value of a round of golf multiplied by the slightly over 30,000 rounds played at Sharp Park in 2017-2018, over the 2018-2050 time frame and reduced to present value.<sup>39</sup> Though Appendix G does not give a bottom-line figure of its golf course appraisal, it does say: “The economic value of the Sharp Park golf course as currently operated and given recent attendance data, appears to be in line with the costs of the service”<sup>40</sup>. That would be San Francisco’s combined approximately \$1.5 Million maintenance and operations expense in 2017-2018. So it appears we have something of a consensus here around the \$31 Million figure.

The golf course is a constructed and maintained landscape – an historical landscape by one of history’s greatest golf architects, at that -- and is a structure, under California Coastal Act Section 30235.<sup>41</sup> Under the Final Adaptation Plan’s Methodology for Cost-Benefit Analysis, “once erosion hits a structure, this study assumed that the structure is lost along with its associated value”.<sup>42</sup>

11 (Cont.)

Though the Final Adaptation Plan’s cost-benefit analysis does not give individual values for individual properties, it does show, at Table 26, “Detailed Breakdown of Benefits and Costs, etc.”,<sup>43</sup> a total value of about \$44 Million in the 2050 time-frame on flooding and erosion damage to all properties and structures (including the golf course) in the Sharp Park-West Fairway Park-Mori Point sub-area in the 2050 “Managed Retreat” (Alternative 3) scenario.<sup>44</sup>

This \$44 Million figure cannot possibly include anything close to a \$31 Million valuation of the golf course. So either the cost-benefit analysis is substantially undervaluing the golf course property, or it is substantially undervaluing everything else in the surrounding neighborhoods. Or maybe both things are true. We take this as strong evidence that the cost-benefit analysis is systematically undervaluing not only the golf course, but everything else behind Pacifica’s shoreline defenses.

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<sup>39</sup> See the discussion, above, in this letter, at Section IV.A

<sup>40</sup> Final Adaptation Plan, Appendix G, at pages 2-3: [Appendices B through J](#)

<sup>41</sup> California Coastal Commission, Nov. 8, 2017, Agenda Item 9, Application 2-17-0702, San Francisco Recreation and Park Department, Pacifica, Staff Report, Oct. 27, 2018, at page 18: <https://www.coastal.ca.gov/meetings/agenda/#/2017/11>

<sup>42</sup> Final Adaption Plan, *supra*, at page 64: <http://www.cityofpacificacounty.gov/civicax/filebank/blobdload.aspx?t=58348.79&BlobID=14632>

<sup>43</sup> Final Draft Sea-Level Rise Adaptation Plan, *supra*, at pages 83, Table 26: <http://www.cityofpacificacounty.gov/civicax/filebank/blobdload.aspx?t=58348.79&BlobID=14632>

<sup>44</sup> See the analysis in the SF Public Golf Alliance’s August 28, 2018 comment letter, *supra*, at page 8, final paragraph: [https://drive.google.com/open?id=1mCeRV3t3mbqJGMKzYjyhDVUZAbFWQ\\_GU](https://drive.google.com/open?id=1mCeRV3t3mbqJGMKzYjyhDVUZAbFWQ_GU)

- V. **One more thing: Hazard Policy 28 should be amended to include improvements to the City of Pacifica’s defective storm sewer system, which currently dumps stormwater from Pacifica city streets directly onto the golf course and ultimately into Laguna Salada, thus creating a fluvial storm flood hazard to the surrounding Clarendon and West Fairway Park neighborhoods.**

12 The City of Pacifica’s infrastructure map for the Sharp Park, West Fairway Park, Mori Point sub-area<sup>45</sup> shows that the City of Pacifica’s municipal storm drains dump storm water runoff from Sharp Park Road and from every Pacifica street that touches the golf course – Fairway Dr., Ridgeway, and Lundy on the south, Francisco Boulevard on the east and Lakeside and Clarendon on the north, directly onto the golf course and ultimately into Laguna Salada, thereby creating fluvial flood risk to the West Fairway Park and Clarendon neighborhoods. For example, at a point about halfway between the golf course entryway and the intersection of Sharp Park Road / Francisco Boulevard, the Pacifica infrastructure map shows a 30” storm sewer line from Sharp Park Road and three Francisco Boulevard storm drains entering the golf course property at a junction box at the southeast corner of the clubhouse parking lot, with a 10” pipe exiting the junction box heading west. In times of heavy runoff, the 10” exit pipe is overwhelmed and the junction box overflows and the stormwater simply flows out of the box, across the parking lot and then sheet-flows across the golf fairways towards Laguna Salada. The exit 10” pipe, between the junction box and Laguna Salada is unflanged buried pipe laid end-to-end, so stormwater that does manage to get into the 10” pipe escapes at the seams and flows out onto the golf fairways, and eventually to Laguna Salada. In its Response to Comments on the Draft Vulnerability Assessment, the City of Pacifica acknowledges its awareness of the problem:

“11. The City of Pacifica understands that the system was designed such that the 10-inch pipe would handle the low flow and that during big rain events the drainage would bubble up and sheet flow across the fairway. The Sharp Park Golf Course is the property of and maintained by City and County of San Francisco.”<sup>46</sup>

So we suggest that Hazard Policy 28 be amended, to add the phrase “improvements to the Pacifica storm sewer system,” immediately following the phrase “which may include”.

San Francisco Public Golf Alliance believes that the City of San Francisco’s pumps at Horse Stable Pond at the southwest corner of the golf course have sufficient capacity to handle large volumes of flood water. The problem is not that the pumps “are not designed to mitigate flooding. . . during significant rainfall events,” as the Policy Options memo states,<sup>47</sup> but rather that Laguna Salada and Horse Stable Pond have not adequately been dredged in recent years to keep channels open to move the water through Laguna Salada and its

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<sup>45</sup> Pacifica Draft Vulnerability Assessment, Appendix A-4, Existing Conditions Map, Sharp Park, West Fairway Park, Mori Point (blue lines designate the stormwater drain lines): [https://drive.google.com/open?id=13iMuo-kz\\_DKa12ZWbz7jvksRS-WbrTI8](https://drive.google.com/open?id=13iMuo-kz_DKa12ZWbz7jvksRS-WbrTI8)

<sup>46</sup> **Final Draft Pacifica Sea Level Rise Vulnerability Assessment, June 2018, Appendix E, Responses to Comments on Draft Vulnerability Assessment (response to question from Richard Harris), at page 23 (page 130 of Appendix A):** [www.cityofpacific.org/civicax/filebank/blobdload.aspx?t=67369.96&BlobID=14459](http://www.cityofpacific.org/civicax/filebank/blobdload.aspx?t=67369.96&BlobID=14459)

<sup>47</sup> Policy Options, *supra*, at page 8, bottom paragraph: <http://www.cityofpacific.org/civicax/filebank/blobdload.aspx?t=49723.49&BlobID=14599>

12 (Cont.) wetlands to the pumps. We believe that a combination of improved Pacifica storm drains and dredging offers a solution to the fluvial flooding problem, and further believe that this is something that should be made a point of discussion and cooperation between the City of San Francisco and the City of Pacifica and its Public Works Department. (We believe that Hazard Policy 24, which calls for San Francisco to “support adaption planning for the course,” already calls for this kind of inter-governmental cooperation, but of course cooperation must be reciprocal.

Respectfully submitted,  
San Francisco Public Golf Alliance

*Richard Harris*

Richard Harris, President

**EXHIBITS**

EX. A Letter, June 8, 2018, SF Public Golf Alliance to Pacifica Planner, “The Economic Methodology Memo is Unreliable,” etc.: <https://drive.google.com/open?id=1xtAbR562iciLq7NGqfjcqyd1C4tZII5s>

EX. B. Letter, Aug. 28, 2018, SF Public Golf Alliance to Pacifica Planner, etc., “The Draft Final Sea-Level Rise Adaptation Plan is Unclear,” etc.: [https://drive.google.com/open?id=1mCeRV3t3mbqJGMKzYyhDVUZAAbFWQ\\_GU](https://drive.google.com/open?id=1mCeRV3t3mbqJGMKzYyhDVUZAAbFWQ_GU)

cc:

Pacifica City Council  
Pacifica Public Works Department  
Bonny O’Connor, Assistant Pacifica Planner  
San Francisco Recreation and Park Department  
Congresswoman Jackie Speier  
State Senator Jerry Hill  
Assemblyman Kevin Mullin  
San Mateo County Board of Supervisors  
California Coastal Commission, North-Central Coast District  
San Mateo County Office of Sustainability  
U.S. Army Corps of Engineers, Susan M. Ming, PE  
Bo Links

Richard Harris Letter Dated October 2, 2018

1. Your comment is in the record.
2. Your comment is in the record.
3. The Final Draft Adaptation Plan with Response to Comments is a support document that provides background analysis of a range of possible adaptation measure, their potential cost, potential benefits, and environmental triggers. Using this background information, along with public input and Council adopted project goals, the Draft LCP Policies were developed. The adopted LCP Policies will be the official direction that staff will implement. References to the Adaptation Plan in the Policies are included in Hazard Policies Nos. 4, 5, 6 and 15. Hazard Policy No. 5 references the Adaptation Plan to state that thresholds need to be established to reassess the City's Adaptation Plan. Hazard Policies Nos. 4 and 6 reference the "Adaptation Plan as expressed in the LCP general and sub-area coastal hazard adaptation policies". The general and subarea coastal hazard adaptation policies do not include managed retreat adaptation strategies, therefore even though managed retreat is analyzed in the Adaptation Plan it is not expressed in the LCP general and sub-area coastal hazard adaptation policies and would not be consistent with the current policies.

Hazard Policy No. 15 discusses leveraging FEMA funding opportunities to implement the Adaptation Plan. The term "as expressed in the LCP general and sub-area coastal hazard adaptation policies" was added to provide consistency of what adaptation strategies would be appropriate.

4. Mitigation to address impacts from shoreline protection structures is an existing requirement of Pacifica's current LCP. The policies referenced in the comment do not address the proportionality of mitigation that will be determined for future projects.
5. The use of \$40 a day for the non-market value of beach recreation is based on a very long literature in the economics of non-market recreation (see references listed for Table R-1 and full citations at the end of this response). The \$40 a day value was based on numerous studies in California. Dr. King updated these studies to 2018 dollars (using the consumer price index). Please note in Table R1 that given the update for inflation, the average of these studies is actually just over \$50 a day, so the \$40 a day estimate is conservatively low and based on the midpoint formula from Pendleton and Kildow (2006).

The SF Golf Alliance has stated that Pacifica State Beach and other beaches in Pacifica are different from beaches in southern California and therefore deserves a different number. In Dr. King's professional opinion, the relative scarcity of beach opportunities in the Bay area more than offset the fact that the water is colder and the waves may be dangerous. It should be noted that surfing is very popular at Pacifica State Beach and surfing is often considered a higher value activity.

Table R1: Estimates of Day---Use Value (Consumer Surplus) at Various California Beaches				
Region	Counties	Usage Level*	Consumer Surplus Studies	CS Values (\$2015)
Southern	San Diego Orange Los Angeles Ventura Santa Barbara	High	12	\$15.66 <sup>1</sup>
				\$22.63 <sup>2</sup>
				\$25.39 <sup>3</sup>
				\$29.06 <sup>2</sup>
				\$31.81 <sup>2</sup>
				\$35.24 <sup>1</sup>
				\$36.42 <sup>4</sup>
				\$39.88 <sup>2</sup>
				\$47.31 <sup>5</sup>
				\$99.67 <sup>1</sup>
				\$109.98 <sup>6</sup>
		\$116.67 <sup>6</sup>		
		Low	0	
Central	San Luis Obispo Monterey Santa Cruz San Mateo San Francisco	High	1	\$50.29 <sup>6</sup>
		Low	0	
Northern	Marin Sonoma Mendocino Humbolt Del Norte	High	0	
		Low	0	
CA Average		N/A		\$50.13
Midpoint Kildow & Pendleton (2006)		N/A		\$41.87 <sup>7</sup>
<sup>1</sup> Leeworthy & Wiley (1993) <sup>2</sup> King (2001) - midpoint between two methods <sup>3</sup> Chapman and Hanemann (2001) - corrected for inflation using CPI <sup>4</sup> Lew and Larson (2005) <sup>5</sup> Lew (2002) <sup>6</sup> Leeworthy (1995) <sup>7</sup> Midpoint of Kildow & Pendleton (2006) adjusted for inflation (\$2018)				

As fully discussed in Master Response E prepared for the Final Draft Adaptation Plan, the City did address concerns that the \$40/day per person-visit value was too high for Pacifica's beaches and that the number of people using the beach was very small, lower than the estimates used in the adaptation study. In response, a sensitivity analysis was applied using a lower day-use value (\$10/day per person-visit). Note that the effect of lowering the beach value by a 75% (e.g. 1 – 10/40) yields the same result as lowering attendance by 75% or reducing both attendance and unit value by 50%. In summary, the lowering the value of a beach day, or lowering attendance, will not change the rank ordering of the alternatives economics results.

The cost-benefit analysis in the Adaptation Plan was prepared to support and inform the comparison of various adaptation strategies. The cost-benefit analysis is not intended to establish a standardized statewide beach recreation value. Lastly, the creation of a Pacifica specific “willingness to pay” study to identify an exact value for Pacifica’s beaches is beyond the Council-approved scope and budget for this effort.

6. Given the differences of opinion on the value of a beach recreation day as well as the uncertainty about attendance, Dr. King conducted a sensitivity analysis and found that even using 25 percent of the value for a day at the beach or for beach attendance, the relative of the benefit/cost analysis did not change, except at Rockaway Beach, where a higher attendance estimate would justify nourishment, which would also help protect the hotels, restaurants and other businesses there. Using a lower value for beach recreation could undermine the potential Federal interest (i.e., participation by the US Army Corps of Engineers) in beach nourishment at Rockaway.
7. See response to Comment 6.
8. The cost-benefit analysis in the Adaptation Plan was prepared to support and inform the comparison of various adaptation strategies. The cost-benefit analysis is not intended to establish a standardized statewide beach recreation value. The assumption made under the adaptation plan was that the coastal trail would retreat naturally or be reconstructed / renovated as needed, so that there would be no loss in recreational value. Consequently there was no need to value this as a benefit or a cost (loss). Indeed, armoring the golf course could lead to a loss in recreational value, if viewing a beach is considered an amenity, as opposed to viewing a seawall.
9. Dr. King valued the golfing at Sharp Park. A higher value for the golf course was employed than the golf course actually charges. Dr. King examined other courses in the area and employed a value for golfing that is significantly higher than that used by the Sharp Park golf course. The Sharp Park golf course, like many municipal golf courses, is heavily subsidized by the City of San Francisco. Dr. King concluded that this subsidy can currently be justified and the golf course just “breaks even” in terms of providing benefits to the community. However, the significant costs of armoring cannot be economically justified by a course that is already heavily subsidized.
10. The assumption made under the adaptation plan was that the coastal trail would retreat naturally so that there would be no loss in recreational value. Consequently there was no need to value this as a benefit or a cost (loss). Indeed, armoring the golf course could lead to a loss in recreational value, if viewing a beach is considered an amenity, as opposed to viewing a seawall.
11. Although the golf course is valuable and worthy of a significant subsidy, in the future the Sharp Park golf course probably cannot justify by economics analysis an expensive armoring project. If the City deems that the course has historical significance, this may be an argument for preserving the course, though there are options other than armoring that should be considered.
12. Your comment is in the record.

## References:

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