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Page 1

1. Contact Information (optional)

Name (optional) Andrew

E-Mail Address (optional) Not answered

Zip Code (optional) 92672

Please add my e-mail address to the "Local Coastal Program" interested parties list

2. Comment Regarding Nature Based Coastal Resiliency Project Feasibility Study

I am a resident of San Clemente. My feedback is that we need sand. It is essential to everything we love about San Clemente and we should ensure we provide sand up and down the coast. What is San Clemente without a beach. An increase in Sales Tax or some type of regular tax is justified. Everyone I've spoken with would support a tax in order to receive annual sand placement.

Page 1

1. Contact Information (optional)

Name (optional) Not answered

E-Mail Address (optional)

Zip Code (optional) Not answered

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Not answered

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2. Comment Regarding Nature Based Coastal Resiliency Project Feasibility Study

Thanks

Page 1

1. Contact Information (optional)

Name (optional) Not answered

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Zip Code (optional) 92672

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2. Comment Regarding Nature Based Coastal Resiliency Project Feasibility Study

Thanks for anything you can do to help replenish the sand and clean up poche beach

Page 1

1. Contact Information (optional)

Name (optional) Cord Bauer

E-Mail Address (optional)

Zip Code (optional) 92673

Please add my e-mail address to the "Local Coastal Program" interested parties list

2. Comment Regarding Nature Based Coastal Resiliency Project Feasibility Study

As the coastal plan continues to coalesce, I hope to see more detailed concepts of the breakwaters, and especially hope that they can include sand on the inland side so that they can be visited by swimmers, paddlers, etc.

All Southern California cities are required to mitigate runoff flowing to the ocean, which may include pesticides, sewage, etc. All SoCal cities have sewer culverts, and most have rivers that have converted the sides and even bases to concrete. Interestingly Los Angeles is experimenting with removing concrete, which would cause more sediment to flow to the sea.

The bottom line is that all SoCal coastal cities have rules requiring how they handle and use all forms of water, and nearly all these rules negatively impact sand to naturally flow from land to the beaches. We have no recourse regarding these rules--most are smart and proper--and yet when sand is needed only the residents of these cities are required to pay for replenishment.

When the state had an epidemic of bark beetles and millions of trees died, the State and the Federal government mainly took care of removing the trees so they wouldn't be a fire hazard. I'm sure there are several other examples where the State and Feds bore the major expense for natural emergencies, especially on State lands. Why are all the coastal communities required to pay for these replenishment efforts when we are following the mandates of State and Federal agencies, which end up starving our beaches of sand?

Thank you,

Cord Bauer

Page 1

1. Contact Information (optional)

Name (optional) John Conover

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Zip Code (optional) 92024

Please add my e-mail address to the "Local Coastal Program" interested parties list

2. Comment Regarding Nature Based Coastal Resiliency Project Feasibility Study

Strongly prefer series of small groins to hold sand as Newport has successfully done. You can't have a "nature based" solution to a man made problem.

Page 1

1. Contact Information (optional)

Name (optional) Ken Poczekaj

E-Mail Address (optional)

Zip Code (optional) Not answered

2. Comment Regarding Nature Based Coastal Resiliency Project Feasibility Study

Looking forward to seeing proven plans based on concepts that have worked at other beaches around the world. This should be available. Also wondering if you have modeling software that can show how the proposal would work by using actual water and current flows. Seems like in this day and age that type of tool would be available.

Page 1

1. Contact Information (optional)

Name (optional) Scott Skinner

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2. Comment Regarding Nature Based Coastal Resiliency Project Feasibility Study

Thank you for publishing the beach sand replenishment and maintenance plan. One thing that has made San Clemente a unique beach town is the surf breaks. What would be desirable to most visitors and residents is to have more surf breaks. The existing surf breaks have become very crowded with commuters and electric bikes. Down at San Onofre, access to the break has been impacted by beach erosion at Old Mans and wash out of the road in addition to their being uncertainty over the land lease with Pendleton to continue public access. These challenges will invariably bring more commuting and local surfers to the local San Clemente breaks.

Currently, many of the commuters and local long boarders prefer to drive into Sano. With the advent of ebikes the beaches are parking lots for bikes basically limiting other forms of beach recreation due to access. Lower is not an ebike parking lot on the beach. This is noteworthy to consider how the evolution and popularity of Ebikes will impact the beach use.

San Clemente would be even more unique for locals and visitors if the sand replenishment would create additional better quality surf breaks. Right now the quality is found at T street, Pier, lost winds, and riviera and occasionally state park. There are long sections of beach where there are no surf breaks and if the sand plan took into account some reef concepts to create new or better surf breaks, that would be desirable for the entire community and be revolutionary to land use planning.

More surf breaks could be paired with a permitted parking plan for locals so they do not lose their street parking capacity. Also, there could be a separate lane for bikes to traverse the beach and park in designated areas. Creation of commuter friendly locations could be beneficial also in concert with the Shuttle service similar to the pier train stop. For commuters we could try to steer them to North Beach and Poche to revitalize those areas and keep congestion down within city proper.

Lastly, the Shorecliffs beach club is in jeopardy of erosion up to the beach entrance. This landmark should be protected with the sand plan. Just because it is on the border of Dana Point has no bearing since that surrounding area is public access and we are concerned with the beach and not city borders. That area needs to maintain a viable surf break.

Thank you for allowing public comments and great work so far.

Page 1

1. Contact Information (optional)

Name (optional) Marcus Vanneman

E-Mail Address (optional)

Zip Code (optional) 92672

2. Comment Regarding Nature Based Coastal Resiliency Project Feasibility Study

Love it!!..definitely willing to pitch in and support this initiative. So much progress from last year!..

Thank you City Council and citizens for fighting for our beaches, the lifeblood of San Clemente!

Page 1

1. Contact Information (optional)

Name (optional) GEORGE thomas GREGORY

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Zip Code (optional) 92672

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2. Comment Regarding Nature Based Coastal Resiliency Project Feasibility Study

fast track a harbor

no new taxes

time to improve maritime endeavors of recreation and commerce

please

Page 1

1. Contact Information (optional)

Name (optional) Glen Griffith

E-Mail Address (optional)

Zip Code (optional) 92672

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2. Comment Regarding Nature Based Coastal Resiliency Project Feasibility Study

I am ecstatic that something is finally being done in a meaningful and hopefully productive manner. That being said, I noticed some degree of public investment in areas that are generally not accessible to the public between Capo Beach and North Beach with the one exception being Poche. If the public is going to spend dollars to protect the private homes in those areas that the public has great difficulty in accessing, then some form of increased access to those areas need to be addressed in the plans.

Page 1

1. Contact Information (optional)

Name (optional) Not answered

E-Mail Address (optional) Not answered

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2. Comment Regarding Nature Based Coastal Resiliency Project Feasibility Study

Thank you so much for your work on this! It's very exciting to see a comprehensive plan after years of concern and impact from the sand loss. Many of the locals in the Cyprus Shore and surrounding communities refer to the area that you called "South Gate" on slide 14 as "Gordie's Point" instead. For any future materials that you share can you please be sure to refer to that area as Gordie's Point to avoid any more confusion, or at least "Gordie's Point/South Gate"? Thank you for what you are doing to help secure our beaches and, by extension, many of our homes

Page 1

1. Contact Information (optional)

Name (optional) Martin Eichmann

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Zip Code (optional) 92673

2. Comment Regarding Nature Based Coastal Resiliency Project Feasibility Study

Jetties can create surf spots as in Newport Beach. People don't have any idea what happened there 30 yrs ago. Tides were over boardwalk between pier and jetty,s. Two short jetty's and metal groin brought back 100yds of sand and created two new breaks.

WE CAN DO IT TOO. And we should

Page 1

1. Contact Information (optional)

Name (optional) Nate

E-Mail Address (optional)

Zip Code (optional) 92673

Please add my e-mail address to the "Local Coastal Program" interested parties list

2. Comment Regarding Nature Based Coastal Resiliency Project Feasibility Study

Thank you for finally addressing sand retention with jetties and structures that will preserve the replenishment and benefit surfers and beachgoers. Our city is world-renowned for the amount of pro surfers born or living here. We're also a surf tourist destination for Trestles and other beautiful beaches. This is an important part of our heritage and an opportunity to bolster tourism dollars that benefit our residents.

Page 1

1. Contact Information (optional)

Name (optional) Colby Tibbets

E-Mail Address (optional)

Zip Code (optional) 92627

Please add my e-mail address to the "Local Coastal Program" interested parties list

2. Comment Regarding Nature Based Coastal Resiliency Project Feasibility Study

Hello,

I would like to offer services for the parties responsible for testing the feasibility of the proposed breakwaters and mini-headlands. Thank you.

Page 1

1. Contact Information (optional)

Name (optional) Bob Wilson

E-Mail Address (optional)

Zip Code (optional) 92629

Please add my e-mail address to the "Local Coastal Program" interested parties list

2. Comment Regarding Nature Based Coastal Resiliency Project Feasibility Study

It looks like my comments have been incorporated into your reasons for the disappearance of the sand on the beaches and for the solution in the future. That is to import sand, and to create offshore breakwaters which intercept the waves that do the damage.

Page 1

1. Contact Information (optional)

Name (optional) Tess Nelson

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Please add my e-mail address to the "Local Coastal Program" interested parties list

2. Comment Regarding Nature Based Coastal Resiliency Project Feasibility Study

The highest priority for San Clemente is to not let our beaches wash away and the slides caused from that loss. I like the idea of a Nature-Based Coastal Project to help restore and preserve our beaches. I prefer the proposal that would build two breakwaters, one at North Gate and one at South Gate in Cyprus Shores.

I know the city is trying to put a tax up for vote that would go toward replenishing the beaches. My struggle with just adding sand without any breakwater/groin to keep it there, is the sand will just wash away again. In adding breakwaters to where this tax would go, it would be a lot easier to pass this tax.

Page 1

1. Contact Information (optional)

Name (optional) Robert Christie

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Please add my e-mail address to the "Local Coastal Program" interested parties list

2. Comment Regarding Nature Based Coastal Resiliency Project Feasibility Study

Not answered

Page 1

1. Contact Information (optional)

Name (optional) Gary Ross

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Please add my e-mail address to the "Local Coastal Program" interested parties list

2. Comment Regarding Nature Based Coastal Resiliency Project Feasibility Study

THE Y REEF SOLUTION

Ocean energy is born from wind just up the coast or from storms thousands of miles away. This energy has proven difficult to capture but is freely released as waves breaking on every shore. This energy is unpredictable with waves formed by these ever-changing inshore sand bars. Sandy beaches are the most vulnerable for shore erosion.

Coral reefs perfectly manage wave energy with their elevated, multi-dimensional structure, and trap and hold sand with their natural porosity. Coral reefs slow the wave energy so that waves break more offshore and in predictable ways. Coral reefs can absorb up to 97% of the waves energy proving their efficiency to protect beaches.

Surfers travel the globe for the managed energy found on coral reefs for perfect waves. Tavarua in Fiji is one such well-known reef that naturally manages the small to the very largest wave energy. Coral reefs have great value to shelter for nearly one-quarter of all marine life. This is made possible with the porosity that is also the key for survival by slowing energy and also allowing it to pass through these reefs.

Natural sandy beaches absorb erosive wave energy to protect shorelines but structures made by man, such as break walls, reflect, not absorb, the energy and take the sand with it. High energy events move the sand more offshore and then return it with periods of low energy. The sand will not return if revetments are on the shore. Nature's dynamic sand accretion and reduction cycle smooth pebbles, perfects sea glass, and naturally manages dynamic sandy shores.

PHYSICS OF WAVES AND OCEAN ENERGY

The physics of waves and ocean energy are unique and are known but some aspects are ignored or maybe not fully understood. Swells are born from wind energy making circular energy oscillations on the surface that grow oscillations below them to become stacks of them, deeper and deeper while also moving away from the origin. The energy trains become the swells that cross oceans with very little energy loss. Swells can also go thousands of feet deep creating more room to move when needed with larger energy events. Swells from any direction can easily pass through each other without energy loss, making this offshore energy difficult to capture.

Oscillations become less structural when they are forced to become more elliptical when compressed as they arrive near a shore with less room to move. This energy can also be seen as swells that defy gravity and mature to become visible waves.

Refraction is a process that redirects all arriving swells directly to the local beach. Independent swells feel the resistance of the ocean bottom on arrival and are slowed and forced to pivot perpendicular to the shore. Swells from all directions and strengths go through this same process, then move with the dominant swell to the shore in one direction. Some of the energy is used for nature's transformation process but it's a good value as it lowers shore erosion energy and creates surfing waves to ride.

Most now agree that artificial reefs can be a solution for shore erosion with proof in years of observing nature's reefs. Natural materials using sand and cobblestones are ideal, but use of these materials can work but typically become a short-term solution. Reefs made of boulders are difficult to maintain with reapplication of boulders common, require a long installation, and will create a longer term environmental disruption.

Potentials exist to mimic coral reefs and also to harvest the unidirectional energy just before the ripe energy is released as waves. It's known to be easier to catch most anything including Salmon in Alaska when they are slowed while coming to the river mouth to breed from one direction. Natural coral reefs should not be disrupted for energy capture.

THE Y REEF SOLUTION

The Y Reef is made of high density polyethylene (HDPE) pipe. This pipe material is inert, infinitely scalable, durable with high strength-to-density ratio, highly flexible, and economical. This material has proven long-term applications in the ocean but it has not yet been used for artificial reefs.

This extruded pipe material has long been used in housing cables crossing oceans and for energy conduits for floating wind farms in Norway. The Ocean Cleanup uses this scalable pipe in a unique way. The PacWave offshore energy testing hub in Oregon just installed a 7-mile long HDPE pipe onshore to transfer wave energy when it is harvested offshore. Pipes can be sandblasted to accelerate local marine habitats or locate 3D printed coral-like forms. HDPE pipe has a 100-year life when UVs are present, and unlimited life when UVs are not a factor when located underwater.

Any engineered reef design must consider the local wave history, tidal range, beach slope, bathymetry, and currents. HDPE pipe used in the Y Reef will barely float and with pipe-to-pipe connectors designed and made to formalize critical porosity to mimic the positive aspects of a coral reef.

The Y Reef can be assembled in a harbor and then towed with end caps for flotation to the location. The Y Reef shape is then fully formalized just offshore of the chosen site, then submerged to park and anchored with GPS precision estimated in a fortnight.

The “Y” shape reef was discovered from a “V” shape at Scripps Institute of Oceanography (SIO). Wave energy engages first on the offshore shoaling leg of the Y to slow and focus the local spectrum of energy. A full scale reef will consider the largest historic waves and is gauged for the managed resistance of the multi pipe deep end leg. Also designed for the largest waves to break at the beginning of the V of the Y-shaped reef. Smaller waves to break on the reef or inshore of the reef and always more offshore.

TYPES OF ARTIFICIAL REEFS

Materials currently used for artificial reefs that have porosity include concrete reef balls and oyster shells in metal basket cages. A rock reef known as the “Corals” reef in Western Australia was made to generate surfing waves and was very economical at about \$2M, having the advantage of being built on an existing rocky foundation. The T Street Reef in San Clemente, CA was made on a sandy inshore for \$30M in 1975 as a mitigation for the installation of the San Onofre Nuclear Energy Power Plant and has some proven benefits for surfing.

Rock reefs for shore protection for perfect surfing waves are difficult and expensive if made on a sandy shore. Submerged breakwaters are very similar in ways and are typically made with boulders that sink into the sand until the stability of the foundation is confirmed. More boulders are then added for ideal surf wave shoaling. Any reef design may require periodic maintenance and is typical with submerged breakwaters with minimal porosity. The cost can be \$75M to consider barges with cranes to move in and out of shallow water and to navigate tides and dodge periods of larger waves for the process of installing a rock reef inshore that is not removable.

Geotubes filled with sand were popular and used for inshore reefs at the turn of the century as it was considered a “soft” solution. Geotubes become hard when filled with sand, and stacked sand-filled geotubes are heavy to sink into the ocean floor as they have no porosity. Geotube reefs advertised at \$4-6M are also known to be easily punctured with boat anchors to destroy the ideal function and to degrade the reefs 25-30 year life span.

The ocean delivers food to the invertebrates that build nature’s coral reefs with algae assist. Warmer oceans are now stressing them to end the very long term relationship with algae. Hope exists for rejuvenating coral reefs using farmed high temperature corals installed on reefs in decline. This includes the good work in progress from Mars. Their Reef Stars are designed to hold high temperature farmed coral installed with divers on reefs in decline to secure a new colony on a dying reef. This was developed from the company famous for chocolate bars – not visitors from the red planet.

secure a new colony on a dying reef. This was developed from the company famous for chocolate bars, not visitors from the red planet.

HISTORY OF THE Y REEF

The Y Reef is not widely known and has not been promoted as a private development since the 1980's starting with numerical and 3D modeling and with flume and wave basin testing. Established and respected private sector entities assisted in the engineering and environmental aspects of the design. The US Navy supplied anchoring expertise. The Y Reef design project began when Furgo provided a full scan of a natural surfing rock reef called Rights and Lefts on the Hollister Ranch in Santa Barbara, CA. for the blueprint of one nature's perfect surfing reef designs.

A popular wide sandy beach with surfing waves at Oil Piers Beach in Ventura County, CA disappeared when two piers were removed that once were used for oil wells. One-half mile to the north from the beach is the man-made Little Rincon Island, now without oil wells on it and is now a marine habitat. Just to the south of the Oil Piers beach was a natural surfing reef called Stanley's that was eliminated in the 1970's when a freeway offramp was built on top of the perfect and natural surfing reef.

Stanley's Reef Foundation was formed as a federal nonprofit at the turn of the century to lead efforts supported by BEACON and others to restore the popular Oil Piers Beach and the lost surf break. An Act of Congress funded \$6M to be spent on the restoration. Stanley's Reef Foundation helped bring this project to Ventura County. The Y Reef design was not chosen despite support from most agencies at the time. It placed second, as one of the two projects considered to be fully funded and permitted by the USACE.

The company selected to build the artificial reef at Oil Piers Beach featured the new geotube reef design. The company went bankrupt ending the restoration efforts. The Oil Piers Beach shoreline restoration project was referenced as a positive in the permitting for a bike path (from Rincon Point to Oil Piers Beach) with an ocean view. The bike path eliminated 4 miles of public parking and access to beaches for swimming and surfing. The restoration project was abandoned, except for a concrete parking lot, always empty, behind the freeway. Today waves break on boulders on the shore. The long sandy beach and waves for surfing are now a memory.

State Lands was a supporter of the Y Reef design and is now in Phase 2 to consider full removal of Little Rincon Island and / or just the causeway to the island. Options are in play for full removal of the island with estimates of \$800M. The Oil Piers Beach is just 1/2 mile away and is not being considered in this second phase for Rincon Island. It is not known how much of the \$6M of the federal funds for the Oil Piers Beach restoration was spent before the bankruptcy.

The Y Reef installation at Oil Piers Beach could now satisfy the federal mandate to restore Oil Piers Beach and help mitigate the lost parking for beach and surf access because of the bike path. The destruction of the Stanley's surf break is one more reason to bring back the promised restoration to the local community that also serves Santa Barbara County. The permitting and funding from the federal government had been fully approved and assumed to be archived. There is little chance of any negative impacts on the boulders on the shoreline or with sections of a narrow sandy beach with the installation of two Y Reefs.

Highwave is a company born from the coffee revolution in the 1980's with innovations over many years and a founder of Stanley's Reef Foundation with the historic www.stanleysreef.org. The information on Page 1 of the site was presented at a conference in New Zealand describing the physics of a wave energy converter (WEC) and is still valid, and includes the bio's of many of the partners selected for the original development. Highwave Ocean Energy is now a California Corporation with progress with a now classic web site at www.highwaveoceanenergy.com, showing the original design idea for a WEC and historic reef and pipe connectors now both upgraded. <https://beacon.ca.gov/wp-content/uploads/2021/03/CRSMP.pdf> Page 32 gives more information on the Oil Piers site.

Efforts continued over two decades for the reef design evolution with the efforts for a Wave Energy Converter (WEC) designed for the reef to focus and manage the now unidirectional inshore wave energy. American Wave Machines was the first to assist the efforts for Stanley's Reef Foundation with its engineered drawings for a Y reef. Two papers reviewed by the IEEE were presented at Oceans 11 in Kona, HI, and in 2013 at Oceans 13 in San Diego, CA

A full 3D modeling study tested a half-dozen reef designs from Sea Engineering in Hawaii which was key for the evolution of the most current Y Reef design. Sea Engineering later helped to assist Kelly Slater's wave ranch for their known success with perfect inland surfing waves.

PROOF OF Y REEF DESIGN CONCEPT

On Veterans Day, 2021, Highwave Ocean Energy tested its Y Reef capabilities at Hinsdale National Lab at Oregon State University (OSU). Two Y reefs were tested in the massive wave basin for two different scaled diameter pipe designs with scaled sand. The Y reefs yielded good surfing waves, 2 to 14 foot scaled irregular waves, at 6-second intervals, with video evidence. Testing also confirmed the sand-holding capability of the 1/22 scaled Y reefs, documented with photos and scans.

The current 7th generation Y Reef WEC evolved with tests at Scripps in its larger flume tank and small, one-meter flume tank. The Y reef, with its upgraded design, was then tested in OSU's huge flume tank as the very first modern full-scale WEC device ever tested at the Hinsdale National Lab. The patented, articulating double parallelogram Y Reef easily moved with its six hydraulic actuators with good yields with 1 to 4.5 foot scaled waves at 6-second intervals.

Devices made to catch inshore energy only on the ocean surface are estimated to engage with just 30% of the available energy. The submerged Y Reef WECs engage fully with the energy on the deep end of the reef and as well with the energy on surface for maximum swell exposure for capture. The WECs have now proven to have a smooth motion, similar to giant kelp when riding the waves as observed and recorded. Small colorful buoys were used in testing to see some of the unique and unexpected motion of the invisible movement of the compressed elliptical oscillations.

The Y Reef is made to easily engage with the energetic surface and also the deeper energy of the ocean swells with its double parallelogram design. The WEC's are located on the deep end of the offshore leg on a reef that can be 2-4 feet deep at the lowest tide. Made to harvest the focused ripe energy from small to the largest waves first managed on the reef. Designed to maximize yields and to survive the very largest breaking waves on the offshore leg of the shoaling zone of the Y Reef.

Good results were recorded in the full scale Y Reef/WEC testing despite overwhelming the pressure sensors on the first one-foot wave tested. The economical WEC considers easy, periodic removal, maintenance, and upgrades on small surf days. The current 9-foot high scalable WEC lays flat on the reef surface at the end of a large compression for its survival. This is similar in ways to a surfer's "duck dive" to escape to the lower energy in deeper water. A dozen or more WECs can also adjust to the highest or lowest energy with simple dynamic flotation elements paired on each parallelogram, easily adjusted for any size inshore energy.

SUMMARY

Moving with the compressed unidirectional oscillations, the Y Reef's WECs send pressurized water through reef pipes with 8-12 inch plus OD selected a mains to a shack built on the shore for energy conversion. Sea water can be returned to the ocean or used for estuary flushing, desalination, or for on-shore high temp coral farming, and or delivered to a higher elevation pond for pumped storage for managed energy conversion. Unlike most other current inshore wave energy capture designs, nothing is seen on the ocean's horizon except for improved waves for surfing.

The Y Reef structure is formalized while floating just offshore of the selected site. Potentials exist to attach corals, seagrass or kelp while floating on the surface. The reef then installed precisely with multiple GPS located anchors to hold up to 40,000 lbs. each, and with full completion of the Y Reef informally estimated in a fortnight.

The Y Reef, parked on a sandy inshore, secures itself with sand accretion on the base of the reef as validated in testing and is also removable and adjustable to consider the bathymetry at another site. This unique aspect of easy removal eliminates risk to simplify the permitting process for the very first full scale reef ideally located in the USA.

The Y Reef was made for sand capture with capabilities of wave shoaling more offshore by design to generate surfing waves, shore protection, and energy capture. The scalable Y Reef will become a living reef to support diverse local marine life with its porosity to encourage marine life also with habitats for smaller fish to hide from larger predators. The reef can host seagrass, giant kelp, mussels, oysters, and abalone, as tested and shown on the Stanley's Reef link. A reef the length of a football field or larger can host high temperature corals or seagrass, installed while the Y Reef is floating on the ocean surface. Y Reef... Why not?

RESUME

Gary Ross is the CEO of Highwave Ocean Energy with a degree in Marine Zoology focused on the study of fish, invertebrates, and marine algae. He was also once a sponsored surfer and also on the San Diego State University Surf Team competing with other coastal universities in California. Gary joined a small team of four after graduation that later won a National Award for the design, construction and the creation of the Hall of Shore Ecology at the San Diego Natural History Museum. Gary also led sub-tidal field trips for the museum and also for Scripps Institute. Gary then traveled as crew on a sailboat and returned to design nature-inspired innovations with function. Gary is the founder of Highwave Inc. with over 50 patents in over 40 years in diverse areas, including the Y Reef and WEC. Gary started with the creation of a very simple visor for sunglasses and partnered with Adidas for the LA 82' Olympics and then in every department store. Highwave then became a pioneer in the coffee industry for the very first travel mug with a drink through top first discovered by Neiman Marcus called the Hotjo and later in most every coffee store. The first double wall stainless and then with a vacuum for coffee and the very first for hydration. Hydration for travel dogs went viral with and now international for Springer Pets and with Gary's daughter Shannon as CEO and as seen on Shark Tank. Griffin Ross is Gary's son and a mechanical engineer and sponsor that competed on the Long Beach State University Surf Team. He developed and completed critical designs on the latest 7th generation WEC including all 3D printed components with scalable water-jetted inert HDPE panels. Griffin also formalized the scalable pipe-to-pipe connectors critical for the reef design. Griffin is now working for an elite deep ocean team with NAVFAC with the US Navy. Gary's father, John F. Ross, was a WW2 pilot and a hero, earning the Distinguished Flying Cross and six Air Medals, in missions over France and Italy. After the war, he worked at North American Aviation and was the lead in the development of the propulsion system (the rocket) that returned the Apollo spacecraft to earth from the moon. Until then, only meteorites made of stone traveled in space as far as we know. Gary comes from a long line of inventors, including a grandfather who developed the mechanics to put sound on film, and a great uncle who designed the synchromesh transmission.

FUTURE

The Y Reef when made in the USA can be towed to any location to provide a marine habitat and for shore expansion and protection with the energy capture option. Good surfing waves for the known blue economy value mitigate cost and for with excellent surfing waves on remote islands on any shore

The Y Reef, with wave energy capture for EV charging with good surfing waves capability is feasible off the PCH just north of Malibu. The Point Mugu Navy Base is just to the north that has a huge submerged canyon just offshore. It's known that 90% of the valued sand transported locally and from Northern California disappear into this canyon. Sand capture and transfer is possible to secure the Navy Base for sea level rise. Potentials using blue

energy can pump sand via HDPE pipe over this underwater canyon for this sand to be naturally transported by currents to the South Bay in LA County. It's also a very good time to begin to plan for perfect ocean surfing waves for the Summer Olympic Games in Los Angeles in 2028.

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Page 1

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Please add my e-mail address to the "Local Coastal Program" interested parties list

2. Comment Regarding Nature Based Coastal Resiliency Project Feasibility Study

THANK YOU! THANK YOU! THANK YOU!

My husband, Chris and I live in Capistrano Shores. We chose living in San Clemente over Dana Point, Laguna Beach, Corona Del Mar for several reasons, one of the main reasons being we love the casual lifestyle and community vibe. We couldn't be more appreciative to the City of San Clemente for the ongoing work regarding our beaches and improving our shoreline for all to enjoy. How can we help?

Sincerely,

Helene St Pierre

Page 1

1. Contact Information (optional)

Name (optional) Mel Wygal

E-Mail Address (optional)

Zip Code (optional) 92672

2. Comment Regarding Nature Based Coastal Resiliency Project Feasibility Study

Please consider one or two shore-perpendicular features (i.e. jetty or groin), like those found in Newport, to be placed at Poche Beach. One just North of the Shorecliffs Beach Club and another by the Capistrano Shores Mobile Home Park would do wonders to reduce the alongshore sand movement so chronic to the area. Thank you for your consideration.

Page 1

1. Contact Information (optional)

Name (optional) Casper Zublin

E-Mail Address (optional)

Zip Code (optional) Not answered

2. Comment Regarding Nature Based Coastal Resiliency Project Feasibility Study

I am pleased with what the City has done to protect and enhance our shoreline. Many thanks to those involved in the effort. My family and I are in support of all the concepts in the draft document.

Page 1

1. Contact Information (optional)

Name (optional) Wendy Morris

E-Mail Address (optional)

Zip Code (optional) 92672

Please add my e-mail address to the "Local Coastal Program" interested parties list

2. Comment Regarding Nature Based Coastal Resiliency Project Feasibility Study

Thank you for giving the public the opportunity to comment.

Following are a few of my thoughts that I hope will be included in the study. These questions should be answered in the final study.

1. Since Concept 3 (State Beach Multi-Benefit Emergent Breakwater) will greatly benefit the railway as stated in this study (2.2.3.2) The railway should pay for much of it's cost. (As with all of the whole project.)

2. Will the proposed construction sites create problems for the areas in between these sites? Could the other areas lose or gain sand? What are the expected results? Will they be monitored, how, how often and by who? What will be done if there are negative consequences at other locations? How soon will consequences be corrected? How will they be addressed and by who?

3. Section 3, Next Steps. "Feasibility will consider the function and performance of the concepts, as well as for potential effects upcoast and downcoast." The areas in between the concepts should be included here.

Page 1

1. Contact Information (optional)

Name (optional) Karl Reitz

E-Mail Address (optional)

Zip Code (optional) 92672

Please add my e-mail address to the "Local Coastal Program" interested parties list

2. Comment Regarding Nature Based Coastal Resiliency Project Feasibility Study

The proposal to enhance the beach in front of the Capistrano Shores only benefits the homeowners along that stretch of the beach. The proposal suggest there is public access from North Beach and Poche Beach. Access from North Beach would be a long walk and access from Poche Beach would be along a stretch with little or no beach left. The result is that the only people who would benefit are the residents of Capistrano Shores many of whom are living in unpermitted houses.

It is Poche Beach that should be protected and enhanced given that that is where there is public access.

Page 1

1. Contact Information (optional)

Name (optional) Ryan Gunn

E-Mail Address (optional)

Zip Code (optional) 92672

Please add my e-mail address to the "Local Coastal Program" interested parties list

2. Comment Regarding Nature Based Coastal Resiliency Project Feasibility Study

First, I want to express my appreciation for all the thorough work regarding sand replenishment for San Clemente. As we all know this is such important work for the community. I'm a resident of North Beach and I covered the ideas with my brother who owns the upcoming surf park in AZ and he has extensive experience in this area. We are both very leery of the breakwater concept. Please look into what has happened in Tele Aviv Israel. They went with the breakwater solutions and it has caused very awkward beaches and surfing for the area. Its my opinion that a breakwater solution would receive extensive backlash from the community, its permanent, unfamiliar and has potential to disrupt surfing in the area. I would highly reconsider trying to manipulate the shore line with any concepts that involve going off shore and are permanent but rather focus on solutions & efforts that can be controlled with time including heavy & consistent sand replenishment on a regular basis. As far as permanent structures go within the water, although studies may fine jetties/groins perpendicular to the shoreline less effective than breakwaters this is an idea that the community is very familiar with and proven successful in the beaches of Newport and Ventura. Not only is the community at large in So. California familiar with jetties but it has proven to provide beach protection we need while at the same time improving surfing conditions for a surf based community like San Clemente.

Page 1

1. Contact Information (optional)

Name (optional) Not answered

E-Mail Address (optional) Not answered

Zip Code (optional) Not answered

2. Comment Regarding Nature Based Coastal Resiliency Project Feasibility Study

It is now a sorry state of affairs when this process becomes political and not science based. Your original assessment identified the critical locations and now those locations are not primary. Only the money and personal beliefs have taken over and the rest of San Clemente is totally left out of consideration.

Good Luck trying to what is best for all of this political city.



September 5, 2024

To: Leslea Meyerhoff, Coastal Administrator
Cecilia Gallardo-Daly, Community Development Director
Andy Hall, City Manager

Re: Surfrider Foundation Comments on the City of San Clemente Revised Draft Nature-Based Coastal Resiliency Feasibility Study

Dear Ms. Meyerhoff, Ms. Gallardo-Daly and Mr. Hall,

On behalf of Surfrider Foundation's South Orange County Chapter, our 18 other local chapters in the state, and over 250,000 supporters and members nationwide, we submit these comments on the City of San Clemente's Nature-Based Coastal Resiliency Feasibility Study (Feasibility Study). The Surfrider Foundation is a grassroots environmental nonprofit organization dedicated to the protection and enjoyment of the world's ocean, waves and beaches for all people.

Surfrider submitted detailed comments on October 28, 2023 in response to an earlier round of design concepts. In those comments, we emphasized the need to define the term "nature-based" in order to understand how a project may execute the goals of enhancing coastal resiliency and adapting to the effects of climate change. In the California Natural Resources Agency's "Natural and Working Lands Climate Smart Strategy," nature-based solutions are defined as having an ability to restore nature and increase equity and biodiversity. Nature-based solutions rely on natural ecological systems or processes to reduce vulnerability to climate change related hazards, or other related climate change effects, while increasing the long-term adaptive capacity of coastal and inland areas by perpetuating or restoring ecosystem services. After reviewing the latest round of design concepts in the Feasibility Study, Surfrider is concerned that these concepts do not meet the definition of "nature-based" and do not adequately consider the complexity of coastal processes in the Oceanside littoral cell.

The City's 2021 Climate Resiliency Plan recommended that the City "prepare a feasibility study to identify critical erosion hot spots in the City and develop one or more pilot projects that provide multiple benefits (e.g., sand retention and ecosystem benefits) such as a living shoreline, coastal dune system or cobble berm structure." All of these suggested projects involve "soft" solutions and are variations on the "Design with Nature" philosophy. As noted in our October 2023 comments, Surfrider specifically supports nature-based solutions in contrast to solutions such as hard engineered structures like seawalls, groins, breakwaters and revetments because of the well-known negative impacts that such structures have on coastal processes.

Surfrider does not support the breakwater proposals in the Revised Draft Concepts Feasibility Study released in August 2024 because they are not “nature-based” — they do not restore natural shoreline dynamics, instead promising to permanently or semi-permanently interrupt them. Breakwaters are known for interrupting surf breaks and the movement of sand, such as in Dana Point and Long Beach. A breakwater is a large pile of rocks built parallel to the shore, designed to block the waves and the surf. As with groins and jetties, when the longshore current is interrupted, a breakwater will dramatically change the profile of the beach. Over time, downdrift sand will erode. A breakwater can cause millions of dollars in beach erosion in the decades after it is built and cause substantial losses in the local tourism economy. Indeed, the Dana Point breakwater is a known contributor to erosion in San Clemente, and initial efforts are underway to evaluate removal of the outer segment.¹

In sum, breakwaters do not restore the natural environment and present unacceptable risks to public resources including waves and nearby beaches. Due to the inconsistency of the well-known impacts of breakwaters with the goal of the Feasibility Study to explore “nature-based resiliency options,” we request that these options be removed.

Surfrider requests that the initial project(s) focus on dune restoration, including native plants to restore ecosystem function and provide enhanced resiliency to storm surge and future sea level rise. Concurrently, Surfrider advocates for the preservation of all existing natural dune habitat and is extremely concerned about the ongoing removal of coastal dune habitat and armoring of the LOSSAN rail corridor in San Clemente. The proposal by Orange County Transportation Authority (OCTA) to remove an additional 2/3 of a mile of existing mature dune habitat at San Clemente State Beach would eliminate the City’s existing natural barriers to storm surge and other coastal hazards. The City must strongly oppose any further hard armoring of the San Clemente coastline that diminishes existing coastal resiliency and directly contradicts the City’s 2021 Climate Resiliency Plan. It is well understood that coastal armoring drives shoreline erosion, as evidenced by the ongoing pattern of riprap placement and flanking erosion occurring in south San Clemente. For these reasons, Surfrider has requested that a full environmental review be required before any additional hard armoring is allowed in south San Clemente.²

Surfrider advocates for a holistic and science-based approach that incorporates the precautionary principle regarding coastal resiliency projects. Before any coastal adaptation project is approved, there must be a clear understanding of the coastal processes that drive the movement of littoral sediment and how any project would influence these processes. As noted in the City’s Climate Resiliency Plan: “Good adaptation planning should enhance community resilience to hazards and natural disasters and should stem from full disclosure and a solid understanding of the City’s specific risks, the projected timing of impacts, and the physical processes responsible for causing the risk, now and in the future.” Surfrider therefore recommends partnering with local universities and other experts to better understand these risks and coastal dynamics, as well as expected outcomes.

Because these processes extend beyond City limits, Surfrider encourages participating in regional hazard mitigation planning and working collaboratively to increase the efficiency and cost-effectiveness of coastal resilience measures. As mentioned previously, the partial removal of

¹ Based on phone conversation with Supervisor Katrina Foley, August 28, 2024.

² See Letter from Surfrider Foundation to California Coastal Commission, dated July 24, 2024.

the Dana Point breakwater is one such collaborative project that could enhance San Clemente sand supply. In addition, the City is currently working with the USACE and State Parks to implement a 50-year “Coastal Storm Damage Reduction Project” beach sand replenishment program to address shoreline erosion, one of the primary adaptation tools utilized by the City to maintain its beaches. However, this project is undermined by the ongoing placement of riprap along San Clemente beaches by OCTA, further exacerbating erosion and wasting valuable sand and taxpayer dollars. Therefore, the City should require a benefit-cost analysis be conducted to evaluate the impact this riprap is having on City assets, including ongoing impacts to beach access and Cotton’s surf break. The City should work with federal, state and regional partners to relocate the railway off the San Clemente coastline and allow coastal processes to be restored to a more natural state. As stated in the City’s Climate Resiliency Plan, San Clemente’s sandy beaches are a key asset and are valuable in terms of public enjoyment, community well-being, and ecosystem services such as storm damage protection and intertidal habitat for species including shorebirds and grunion. Loss of beaches also means loss of the coastal economy and recreational opportunities. The removal of the railway infrastructure will provide a valuable opportunity to establish a living shoreline that would rebuild the beach and coastal access and ensure recreational opportunities for future generations.

Surfrider appreciates the City’s exploration into resiliency solutions and looks forward to working with the City to enhance and restore our beaches.

Sincerely,

Mandy Sackett
Senior California Policy Coordinator
Surfrider Foundation

Page 1

1. Contact Information (optional)

Name (optional) Marc Campopiano

E-Mail Address (optional)

Zip Code (optional) 92673

Please add my e-mail address to the "Local Coastal Program" interested parties list

2. Comment Regarding Nature Based Coastal Resiliency Project Feasibility Study

Thank you very much for the opportunity to comment on the Coastal Resiliency Project Feasibility Study. I submit my comments as a private resident of San Clemente. First and foremost, I am thrilled that the City is taking a leadership role on coastal resiliency and planning for the long-term health and viability of our beaches. Sadly, San Clemente's beaches have been under steady loss over past decades for a variety of reasons. Many of the beaches are substantially narrower or gone altogether. It is absolutely critical that we take steps to revitalize and protect our beaches over time. Thank you for being proactive.

On the study, I have three primary comments:

- First, obtaining and placing sand on our beaches is the highest priority. Although this report focuses on resiliency, it should not defer analysis of how the sand will be obtained and financed. Without regular acquisition and placement of sand based on established funding mechanisms and current environmental permits, there will be no beaches left to protect. Given the expense of sand nourishment projects and the difficulty in obtaining environmental approvals, both require a long-term plan and commitment that must begin now and be maintained into the future.
- Second, I believe the City should start by trying to mimic natural features that have historically retained sand in San Clemente or slowed the rate of erosion. For example, T Street sand generally resists erosion because of the underwater rocky reef. I recommend prioritizing resiliency strategies that mimic natural features at T Street, Trestles or other SoCal beaches that have worked over time.
- Third, relatedly, I do not support the non-submerged breakwater except as a last resort. Submerged breakwaters are more acceptable but should be secondary to nature-based solutions that mimic existing submerged features. Non-submerged breakwaters will create aesthetic impacts that may reduce support from visitors and be more difficult to permit.
- Lastly, I support incorporating living shoreline strategies right away and not waiting to "Phase 3." Living shoreline strategies to protect the beach and back dunes can be cost-effective and implemented in a variety of manners. Living shorelines should be integrated where feasible into projects right away.

Thank you again for the opportunity to comment.

Best,

Marc

Page 1

1. Contact Information (optional)

Name (optional) Kathy Esfahani

E-Mail Address (optional)

Zip Code (optional) 92672

Please add my e-mail address to the "Local Coastal Program" interested parties list

2. Comment Regarding Nature Based Coastal Resiliency Project Feasibility Study

We have owned our North Beach home since 1986. The loss of sand, over time, has been tragic. We are delighted at the City's recent efforts at sand replenishment and we strongly support concept 1 for a resiliency project to keep sand on North Beach. We see the benefits of concept 1 outweighing the negatives.

The biggest negative is having the emergent breakwater extremely prominent (10-12 feet high) at low tide. Despite that drawback, we really like the idea of creating a thriving reef 900 ft offshore (we are both scuba divers!) and we would also appreciate the "safe/calm" swimming area in front of the structure. I, for one, would love to swim "laps" in that area. When we want to body surf, we can walk down the beach a bit. The biggest benefit is sand retention, which is the top issue for us.

In conclusion, we vote "yes" for concept 1 for North Beach. Thank you!

Page 1

1. Contact Information (optional)

Name (optional) Mandy Sackett

E-Mail Address (optional)

Zip Code (optional) 92673

Please add my e-mail address to the "Local Coastal Program" interested parties list

2. Comment Regarding Nature Based Coastal Resiliency Project Feasibility Study

September 5, 2024

To: Leslea Meyerhoff, Coastal Administrator
Cecilia Gallardo-Daly, Community Development Director
Andy Hall, City Manager

Re: Surfrider Foundation Comments on the City of San Clemente Revised Draft Nature-Based Coastal Resiliency Feasibility Study

Dear Ms. Meyerhoff, Ms. Gallardo-Daly and Mr. Hall,

On behalf of Surfrider Foundation's South Orange County Chapter, our 18 other local chapters in the state, and over 250,000 supporters and members nationwide, we submit these comments on the City of San Clemente's Nature-Based Coastal Resilience Feasibility Study (Feasibility Study). The Surfrider Foundation is a grassroots environmental nonprofit organization dedicated to the protection and enjoyment of the world's ocean, waves and beaches for all people.

Surfrider submitted detailed comments on October 28, 2023 in response to an earlier round of design concepts. In those comments, we emphasized the need to define the term "nature-based" in order to understand how a project may execute the goals of enhancing coastal resiliency and adapting to the effects of climate change. In the California Natural Resources Agency's "Natural and Working Lands Climate Smart Strategy," nature-based solutions are defined as having an ability to restore nature and increase equity and biodiversity. Nature-based solutions rely on natural ecological systems or processes to reduce vulnerability to climate change related hazards, or other related climate change effects, while increasing the long-term adaptive capacity of coastal and inland areas by perpetuating or restoring ecosystem services. After reviewing the latest round of design concepts in the Feasibility Study, Surfrider is concerned that these concepts do not meet the definition of "nature-based" and do not adequately consider the complexity of coastal processes in the Oceanside littoral cell.

The City's 2021 Climate Resiliency Plan recommended that the City "prepare a feasibility study to identify critical erosion hot spots in the City and develop one or more pilot projects that provide multiple benefits (e.g., sand retention and ecosystem benefits) such as a living shoreline, coastal dune system or cobble berm structure." All of these suggested projects involve "soft" solutions and are variations on the "Design with Nature" philosophy. As noted in our October 2023 comments, Surfrider specifically supports nature-based solutions in contrast to solutions such as hard engineered structures like seawalls, groins, breakwaters and revetments because of the well-known negative impacts that such structures have on coastal processes.

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sand will erode. A breakwater can cause millions of dollars in beach erosion in the decades after it is built and cause substantial losses in the local tourism economy. Indeed, the Dana Point breakwater is a known contributor to erosion in San Clemente, and initial efforts are underway to evaluate removal of the outer segment.⁽¹⁾

In sum, breakwaters do not restore the natural environment and present unacceptable risks to public resources including waves and nearby beaches. Due to the inconsistency of the well-known impacts of breakwaters with the goal of the Feasibility Study to explore "nature-based resiliency options," we request that these options be removed.

Surfrider requests that the initial project(s) focus on dune restoration, including native plants to restore ecosystem function and provide enhanced resiliency to storm surge and future sea level rise. Concurrently, Surfrider advocates for the preservation of all existing natural dune habitat and is extremely concerned about the ongoing removal of coastal dune habitat and armoring of the LOSSAN rail corridor in San Clemente. The proposal by Orange County Transportation Authority (OCTA) to remove an additional 2/3 of a mile of existing mature dune habitat at San Clemente State Beach would eliminate the City's existing natural barriers to storm surge and other coastal hazards. The City must strongly oppose any further hard armoring of the San Clemente coastline that diminishes existing coastal resiliency and directly contradicts the City's 2021 Climate Resiliency Plan. It is well understood that coastal armoring drives shoreline erosion, as evidenced by the ongoing pattern of riprap placement and flanking erosion occurring in south San Clemente. For these reasons, Surfrider has requested that a full environmental review be required before any additional hard armoring is allowed in south San Clemente.(2)

Surfrider advocates for a holistic and science-based approach that incorporates the precautionary principle regarding coastal resiliency projects. Before any coastal adaptation project is approved, there must be a clear understanding of the coastal processes that drive the movement of littoral sediment and how any project would influence these processes. As noted in the City's Climate Resiliency Plan: "Good adaptation planning should enhance community resilience to hazards and natural disasters and should stem from full disclosure and a solid understanding of the City's specific risks, the projected timing of impacts, and the physical processes responsible for causing the risk, now and in the future." Surfrider therefore recommends partnering with local universities and other experts to better understand these risks and coastal dynamics, as well as expected outcomes.

Because these processes extend beyond City limits, Surfrider encourages participating in regional hazard mitigation planning and working collaboratively to increase the efficiency and cost-effectiveness of coastal resilience measures. As mentioned previously, the partial removal of the Dana Point breakwater is one such collaborative project that could enhance San Clemente sand supply. In addition, the City is currently working with the USACE and State Parks to implement a 50-year "Coastal Storm Damage Reduction Project" beach sand replenishment program to address shoreline erosion, one of the primary adaptation tools utilized by the City to maintain its beaches. However, this project is undermined by the ongoing placement of riprap along San Clemente beaches by OCTA, further exacerbating erosion and wasting valuable sand and taxpayer dollars. Therefore, the City should require a benefit-cost analysis be conducted to evaluate the impact this riprap is having on City assets, including ongoing impacts to beach access and Cotton's surf break. The City should work with federal, state and regional partners to relocate the railway off the San Clemente coastline and allow coastal processes to be restored to a more natural state. As stated in the City's Climate Resiliency Plan, San Clemente's sandy beaches are a key asset and are valuable in terms of public enjoyment, community well-being, and ecosystem services such as storm damage protection and intertidal habitat for species including shorebirds and grunion. Loss of beaches also means loss of the coastal economy and recreational opportunities. The removal of the railway infrastructure will provide a valuable opportunity to establish a living shoreline that would rebuild the beach and coastal access and ensure recreational opportunities for future generations.

Surfrider appreciates the City's exploration into resiliency solutions and looks forward to working with the City to enhance and restore our beaches.

Citations:

(1) Based on phone conversation with Supervisor Katrina Foley, August 28, 2024.

(2) See Letter from Surfrider Foundation to California Coastal Commission, dated July 24, 2024.

Sincerely,

Mandy Seabatt

Mandy Sackett

Senior California Policy Coordinator

Surfrider Foundation

Page 1

1. Contact Information (optional)

Name (optional) Elizabeth Taylor

E-Mail Address (optional) Not answered

Zip Code (optional) 92672

2. Comment Regarding Nature Based Coastal Resiliency Project Feasibility Study

Thank you for the opportunity to comment on the revised design concepts. As an environmental attorney with extensive experience in coastal law, I do not agree that the proposed breakwaters qualify as "nature-based." These hard structures will interfere with natural bi-directional sand flow- potentially degrading nearby surf spots and contributing to erosion. True "nature-based" solutions restore dynamic coastal processes. I strongly urge the City to focus on "soft" solutions, specifically dune restoration with native vegetation, while also working to remove the railway and associated hard armoring that is driving the erosion along our coast. The amount of unpermitted riprap in south San Clemente is appalling. I encourage the City to take legal action against OCTA for trespass and violation of the Coastal Act and taking of our public trust lands and waters. The placement of sand is a waste of taxpayer dollars while that riprap remains in place.

Page 1

1. Contact Information (optional)

Name (optional) Suzie Whitelaw

E-Mail Address (optional)

Zip Code (optional) 92673

2. Comment Regarding Nature Based Coastal Resiliency Project Feasibility Study

Thank you for the opportunity to provide comments on the San Clemente Nature-Based Coastal Resiliency Project Feasibility Study. Save Our Beaches continues to appreciate the City's efforts to partner with local stakeholders to finalize concepts for the draft feasibility study.

The City has made tremendous strides these past two years to address coastal erosion and disappearing sandy beaches. We are encouraged by the successful U.S. Army Corps sand project for our central beaches, the City joining forces for the SANDAG RBSP III, opportunistic sand for North Beach from the Santa Ana River, and the hiring of the Coastal Administrator to oversee all these efforts. We continue to encourage the City to prioritize sand projects that will protect and enhance our sandy beaches.

From the presentation, we understand that the City will need 7 million CY of sand over a 50 year period to maintain a 250 foot beach. We encourage the the City to work closely with all stakeholders to develop a long-term 50 year sustainability plan for our coastline so that our sandy beaches will be protected in the long-term. This plan should include our entire coastline, sources of sand for each location, funding structure and commitments from stakeholders to deliver the sand to our coastline.

Phase 1 of the feasibility plan includes sand retention structures including breakwater systems proposed in North Beach, State Beach, and Capistrano Shores. Save Our Beaches supports sand retention, but advocates for structures that are submerged and do not present a visual impact or significant effects to water circulation/wave environment. Scientific research on submerged breakwaters support that these structures are appropriate for all coastlines , offering reduced environmental and visual impact. We encourage the City to move forward and model a concept that does not emerge from the ocean surface. We also suggest the following order of priority for sand retention structures: State Beach, North Beach and lastly Capistrano Shores. Given the proximity of the North Beach structure to surfing resources at 204's , we encourage that the concepts are modeled and monitoring is proposed to ensure there are no significant impacts.

Phase 2 of the feasibility plan includes living shorelines and additional beach sand nourishment. Living shorelines should be considered in areas with existing rock riprap that could be transition to dune habitat. We support living shorelines as habitat restoration concepts via a hybrid dune concept to protect the railline (buried riprap with dune habitat on top in areas such as the Pier Bowl). We support dunes that do not interfere with recreational beach use. Living shorelines should be built in combination with beach nourishment and sand retention. We also believe that living shorelines can be incorporated in beach restoration concepts in all phases and shouldn't necessarily be a Phase 2 long-term concept.

Save Our Beaches remains committed to supporting the City's efforts to restore and maintain the sandy beaches of San Clemente.

Page 1

1. Contact Information (optional)

Name (optional) Peter Stauffer

E-Mail Address (optional)

Zip Code (optional) 92672

Please add my e-mail address to the "Local Coastal Program" interested parties list

2. Comment Regarding Nature Based Coastal Resiliency Project Feasibility Study

Hello,

As a San Clemente resident, beachgoer and surfer, I appreciate the city's efforts to explore nature-based solutions to the serious coastal erosion issues in our town. Our beaches are an invaluable public resource that must be protected for current and future generations.

I support living shoreline projects that can protect public resources, coastal access and public amenities in San Clemente. Living shoreline projects should meet a stringent definition of restoring natural shoreline dynamics, instead of permanently or semi-permanently interrupting them.

I do not support coastal armoring, groins, rip rap or other hard solutions that are designed to protect private property over public resources (beach, surf etc.). Such hard structures reflect wave energy and result in the loss of sediment seaward of the structure.

Specifically, I am strongly opposed to the breakwater proposals in the Revised Draft Concepts Feasibility Study released in August 2024. Breakwaters are known for interrupting surf breaks and the movement of sand, such as in Dana Point and Long Beach. A breakwater can cause millions of dollars in beach erosion in the decades after it is built and cause substantial losses in the local tourism economy.

Finally, I am very concerned about the current armoring of the LOSSAN rail corridor near Cyprus Shores. The only long term solution is the relocation of the train off the south San Clemente coastline to facilitate its removal and to avoid future and further hardening of San Clemente's beaches.

Thank you,

Pete Stauffer

San Clemente, CA 92672

Stivers, Maile

From: Amanda Quintanilla
Sent: Friday, September 13, 2024 11:25 AM
To: Leslea Meyerhoff
Cc: Stivers, Maile
Subject: Nature-Based Coastal Project Feasibility public comment #3
Attachments: SC Nature Based Concept public comment #3.docx

Follow Up Flag: Follow up
Flag Status: Completed

Dear Leslea,

Due to unfortunate circumstances, I was not able to include my public comment until now for the Nature-Based Coastal Project Feasibility Study Public Comment #3.

Please see the attachment.

Thank you for your time and understanding.

Sincerely,

Amanda Quintanilla

As a San Clemente resident of over 50 years, please accept my public comment for the Nature-Based Coastal Project Feasibility Study for the third public comment.

San Clemente is a beach community with a strong heritage and culture in Surfing. As a longtime resident of San Clemente and having spent half my life at North Beach, I understand the importance of the history of San Clemente. North Beach has been a destination beach since the 1920's. Ole Hanson Beach Club had its "Grand Opening and Dedication of the Pool in the Spring of 1928. It was the only Olympic sized pool south of Los Angeles and became the focal-point for athletes to practice for the 1932 LA Olympics."

I am in strong opposition to any type of sand retention measures such as reefs and emergent breakwaters. I specifically oppose offshore and emergent breakwaters that run parallel to the shore such as the North Beach Multi-Benefit Breakwater and the State Beach Multi-Benefit Breakwater. The description of these breakwaters is a Multi-benefit emergent surfable breakwater, but the only place where a person can surf is **only** at its edges. At the other places of the breakwaters is that there is no surf because the purpose of the breakwater is to flatten the surf.

Another major problem to address is the size of the emergent breakwaters. Both the North Beach Reach and the State Beach Reach Multi-Benefit Breakwaters are emergent and are massive. The Multi-benefit surfable breakwater(s) at North Beach and State Beach are massive and in comparison, to the size of the Ole Hanson Beach Club, in the diagram, these breakwaters are substantially larger than the size of Ole Hanson Beach Club and the adjacent green space, which is about 1.52 acres in size. Then the size of the Multi-benefit surfable breakwaters off the coast of State Beach is also massive in comparison to the size of several streets and neighborhoods put together.

According to the experts of Moffat & Nichol, the size of this breakwater varies from 1- 1 ½ lengths of the entire beach. In the case of North Beach, it seems to run the whole length of North Beach and the width is about 50 ft or wider. On page 17 of the Nature-Based Coastal Feasibility Concepts, the emergent breakwater is at least 50 times larger than Ole Hanson Beach Club. The size of Ole Hanson is approximately 1.52 acres. This massive breakwater is extremely large and due to its size will have a negative impact on the surf, whale migration, dolphins, porpoises, potentially harm all marine life, and hurt the fishing industry.

These breakwaters will negatively impact the surf by flattening the surf since that is its main purpose. According to the consultant, Mr. Chris Webb, he stated at the February 29th Nature-Based Coastal Resiliency Concept second public meeting, he stated the following:

"A Breakwater sits off the beach and is oriented parallel to shore so what the break water does is it breaks the water completely. It breaks the waves it knocks down the energy and it creates this nice quiet spot on the beach behind it or in its lee and as sand is moving along the coast being pushed and pulled and carried by waves and it gets into that shadow it stops and it builds a beach. And beaches can form behind these break waters that are really nice the thing about it is **there's no surf behind** it either so you know you got to pick your poison on that one."

The design of these breakwaters is to flatten the surf behind it and the only place to surf is on the edge and this can have a negative on the surf at 204 and the Pier.

The experts from Moffatt & Nichol described it as the "Real-world concept example" of using Palm Beach Reef in Australia. However, this example does not accurately depict the emergent breakwaters at North Beach Reach and at State Beach, where it will have severe impacts on the surf. I addressed this at a San Clemente City Council meeting.

I indicated that it is not a correct example to provide the residents of San Clemente because this real world concept is not the same. This is not an apple to apple type of example. One of the main concerns of these emergent Breakwaters being proposed by Moffatt & Nichol for North Beach and the State Park is that it flattens the surf. The breakwaters are described as Multi-benefit emergent surfable breakwater, but the only place where a person can surf is at the edges.

The main issue is that the proposed solution by Moffatt & Nichol actually flattens the surf and a person is able to surf only at the ends. This will impact the surf at those beaches and neighboring beaches such as North Beach and 204, Cotton's or Upper Trestles. This is of great importance for the Surfing Community to understand, especially since we are Beach Community and depend on our surf and our beaches for tourism and our local economy. This is very important to the community. Recently, I spoke to a group of surfers who grew up at North Beach and they all stated that it is going to change the surf. Those plans should be eliminated.

Moffatt & Nichol gave Real-world solutions that are not the same and the residents of San Clemente has agreed, based upon public opinion, that we do not want experimental solutions that were not even tested in a laboratory setting. That is something that people like me, who brought up at the first Nature Based Coastal Resilience Study meeting and those concepts were eliminated. The breakwaters at North Beach and State Beach kills our surf and these plans should be eliminated.

I am in strong opposition to the Capistrano Shores Reach described as a Submerged Vegetated Habitat Breakwater since this may negatively impact marine life, the fishing industry and whale migration. The size is not indicated on page 16 and that could be problematic and without any indication to the dimensions, I am in opposition to this plan. This could be problematic to swimmers and surfers as well.

The estimated costs for these potential projects were discussed at the third public meeting and the costs of each concept was approximately up to \$40 to \$50 million and that is extremely expensive. At the first public meeting, as the result of a San Clemente resident asking about the cost of these proposals, Chris Webb, Principal Coastal Scientist with Moffatt & Nichol responded to a resident's question about the cost of the proposals and he said that it would cost about \$150 Million dollars in total. However, in both the first and third public meeting there was no indication about the cost of removing these breakwaters and the environmental impact that these breakwaters would have for the placement and removal.

All of these plans are dependent on approval of the California Coastal Commission and without their approval, none of these plans are feasible. Also, the City of San Clemente does not have the funds to pay for these emergent breakwater proposals.

I am in strong opposition to the North Beach, State Beach Reach, and the Capistrano Shores Reach.