

# CYPRESS ISLAND WETLANDS

## Alternative Proposal by Alan Clarey (September 2023)

### STRAWBERRY BAY FRESHWATER WETLANDS

Reviewing the Herrera Group draft document carefully for the proposed conversion to the Strawberry Bay wetlands multiple times and find it to be produced in an extremely professional manner and it fulfills all the “**WANTS**” for the purposes of the DNR...but not the stakeholders of Madrona Estates...which have a significant contiguous property line... the Madrona Estates Lot 36 and beach front. This proposal does not justify the issue of the “**NEED**” to trench a permanent channel through an existing natural berm consequently **converting** an existing freshwater wetland into an estuarine wetland...there are alternate options available to remove the existing structures and mitigating the swimming pool without a full-on **conversion of the freshwater wetlands**. Unfortunately, the proposal doesn't delve into the negative consequences which a partial list is shown below for the purpose of opening a real discussion at a further anticipated meeting with the DNR and the Herrera Group as to how they will mitigate and resolve these issues.

#### The negatives that are not addressed fully or not all in the draft document....

- Brackish water infiltrating Madrona Estates Lot 36.
- The continuous foul odors from decaying plants from the DNR property and potentially Madrona Estates Lot 36.
- The flooding issue **cannot** be resolved regardless of what the Herrera Group/DNR proposes...King tides and massive amounts of freshwater introduced into the wetlands from the streams will create a never-ending sequence of varying degrees of flooding.
  - The flooding will only subside when the tide recedes.
- The current draft plan proposes to change the direction of the stream directly behind the Cook house and trench a new course through a Blue Heron rookery...these are a Federally protected bird species.
- The draft plan doesn't clarify or even mention how the DNR plans to mitigate the potential damage to the Madrona Estates beach front properties and potential access issues.
  - The need for a **Geomorphic** study should not be questioned but should be executed before any of the proposed work is initiated.
- There is real potential to damage or even destruction to the existing eel grass field located seaward of the proposed opening due to the constant year-round flow of freshwater and sediment from the existing streams. Secret Harbor didn't have the same issues as they had a small spring not a constant flow of surface water throughout the year.
- The continuous discharge of sediment and the potential changes to the tidal flow could directly affect or destroy a known Candle Fish spawning area also known as the mud flats on the eastern end of the bay.
- There is the possibility of damaging the traditional tribal crabbing area located in Strawberry Bay.
- The DNR and the Herrera Group have no real time experience in Strawberry Bay regarding the tidal surges and winter storms.
  - I personally have witnessed multiple storms out of the SW annually with winds up to 90+ MPH and the consequences they bring to the beach.
- There is no mention of a “short- or long-term monitoring plan” they do propose that they complete the proposed work and walk away forever...**I find that to be extremely naive, short sighted and misinformed.**
- There is no mention of any plan for the DNR to take financial and or physical responsibility for any damage created to the Madrona Estates properties by moving forward with their plan and making the property owners in Madrona Estates whole for any damages incurred.
- Hopefully at some point in time that Madrona Community and its members will be contacted by the DNR and the Herrera Group (no members that I am aware of at this time have been contacted) and the valuable information that these members have who have lived decades in the bay and have actual experience what can happen throughout all the seasons will be used to help implement a fair and equitable plan for the removal of the buildings and the swimming pool not just a cursory attempt to check off the stakeholder box **without having the intent of actually using the information** and implementing it into the final plan as has been done in the past. There is a substantial group of community members that are **not** in favor of opening the berm and wish to modify that part of the proposal.

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- Several variations of the plan have been discussed within the community which advocate the removal the buildings, mitigating the swimming pool through removal as proposed and rebuilding the berm or through the destruction and or burial of the swimming pool without penetrating the berm this type of alternative will save a massive amount of money and preserve the current freshwater wetlands and its current ecological system...there have been no discussions of alternative plans to date but we are hopeful that the DNR will look at alternatives before moving forward to convert the freshwater wetlands.
- I have already mentioned in a previous post to our website that the proposed redirection (excavation) of the stream appears to go through a Blue Heron rookery, although they are not endangered, they are Federally protected under the Federal Migratory Bird Treaty Act and are a Priority Species under the WDFW Priority Habitat and Species Program (PHS). The WAC refers to PHS in sections dealing with Critical Area Ordinances, Shorelines Master Programs and the Essential Facilities Siting Evaluation Council. The State Supreme Court has held that PHS is a valid source of best available science for the Growth Management Act. Priority species require protective measures due to population status, sensitivity to habitat alteration and commercial, or tribal importance.

#### WHAT NEEDS TO BE ACCOMPLISHED

- Of great importance to our members is the potential change that a 60-foot opening in the berm will have on our beaches. The DNR to our knowledge has not conducted a year-round Geomorphic study regarding the effects of wind, waves, ocean currents (to include current versus modified status), and the change to the groundwater sediment on the beaches, the eel grass, and tribal crabbing grounds for the proposed conversion. When completed, the findings should show both the short- and long-term effects to the DNR property and the adjacent shoreline properties of Madrona Estates and the results need to be published and included in the final plan.
- The physical and geographical characteristics of Strawberry Bay are totally different than those of Secret Harbor.
  - Secret Harbor is protected from high winds and storm surges by geography...Strawberry Bay is not...it faces directly to the SW and opens to miles of unobstructed wind and tidal surge from the open sea.
  - The Secret Harbor berm was man made as noted in the Herrera Group report. The Strawberry Bay berm is not man made and it repairs and rebuilds itself through these winter storms through the centuries...**it is a natural process.**
- Given the heavy storm surges and winds that are typical to the bay during the winter months the DNR should provide the following:
  - DNR should have a plan in place should they move forward with the conversion for both short- and long-term monitoring of both the DNR and Madrona Estates beaches for any changes and be financially responsible for any damages or detrimental changes to the Madrona Community properties and mitigate the damages or detrimental changes at their sole expense and that plan should be codified prior to the finalization of the plan and commencement of any work.
- The draft proposal notes the removal of all man-made structures.
  - Regarding the buildings and swimming pool they should be removed so not to create a nuisance or hazardous situation, particularly since the DNR will not maintain them.
- Should the DNR proceed with the proposed plan... the proposed 60'-0" bridge in the Herrera Group proposal needs to be changed from a proposed to being constructed so as not to isolate Madrona Estates members and guests from the DNR designated entrance to the NRCA.

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### WHAT IS IT

Currently the freshwater wetland is designated as a “**Closed Lagoon**” the Herrera Group is advocating for a saltwater wetland. The Herrera Report has not proven that the marsh is estuarine. The conversion to a saltwater wetland as described in the draft document could run into millions of dollars. The Herrera Group/DNR plan has shown a purpose which is the removal of certain man-made items but **has not shown a “NEED” to convert the wetlands...**there are less expensive ways and alternative solutions to accomplish the purpose of the project which is the removal of the buildings and the desired removal of the swimming pool and or making the pool disappear in some other fashion rather than a full-on conversion of the wetland...so let's do something “**NOVEL**” let's let the current wetlands decide.



\*The pictures shown above illustrate a freshwater wetlands. The trees and grasses in the pictures will not grow and thrive in a saltwater environment, the trees on the perimeter are at least 100+ years old if not more, this is a freshwater wetlands and has been for centuries.

- The draft report lacks the documentation of the percentage of the types of flora and fauna found within the total area of the freshwater wetlands so...let's take an inventory of all plants found within the fresh water wetland by the % of freshwater plants versus % of saltwater plants in the total area of the wetlands...this inventory needs to be taken anyway and should prove a freshwater marsh present.
- **Side note** – the 3 Spine Stickleback observed in the wetlands and noted in the Herrera report can also be found in Cypress Lake (aka. Phoebe Lake) they were planted as food source for the brook trout planted in 1926 and their presence could be a wash down from the lake when the stream known as Strawberry Creek runs fully on the surface to the wetlands during the winter months and they can survive in freshwater as well as saltwater.

### RELEVANCE

How relevant is the Herrera Group/DNR argument to convert an existing freshwater wetland into a saltwater wetland-based wetland is based on apparently 3 criteria.

**Number 1:** The interpretation of the 1886 hand drawn map made by the personnel that originally denoted that this wetland was a “**Closed Lagoon**”.

- Which explanation of the classification of this wetland is more plausible? The hand drawn map made by the onsite personnel that designated this wetland as a “**Closed Lagoon**” in 1886 or the supposition 117 years later by the Herrera Group in 2023 who would like us to believe that the original the designation in

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1886 was in error. The Herrera Group supposition of a saltwater wetland should be ignored because it is not founded in fact only supposition and a **misinterpretation of the 1886 map was only to meet a need.**

- **Just because the Herrera Group speculates that the wetlands in 1886 was an estuarine wetland doesn't make it so...**

**Number 2:** The fill dirt found around Madrona Estates Lot 1 and existing Sea Gate.



- The sea gate was designed and installed to evacuate the fresh water and exclude the saltwater from the freshwater wetland
- It would be naive to assume that there was never a breach of the berm throughout the centuries, the original sea gate installed in 1903 failed and the current gate was reinstalled with native fill to reconstitute Madrona Estates Lot 1 at that time.
- It would also be naive to assume that the berm would not have naturally repair itself as it has done for centuries due to the extreme tidal surges that deposit massive amounts of fill and logs as evidence by the current berm rebuilt in the sea gate area by the multiple winter storms every year.

The picture shown below is an excellent example of a naturally formed berm...by high winds and tidal surges...there is nothing man made about any of it including the area in front of the Sea Gate...the berm self-repairs itself continuously...the logs in the swimming pool were not placed there by man...nature did it.



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### Number 3: The Sea Gate itself...

- The Sea Gate was re-installed in the late 1950's and is still marginally operational...measured on July 31, 2023, approximately 25 – 30 gpm of fresh water was flowing from the outfall on a minus 3.1 tide.



So how relevant are these 3 items...**not very**...it doesn't change the fact that this has been a freshwater wetland for centuries. Salt water has intruded into the wetlands from time to time...it comes over the top of the berm during high winds and tidal surges also on flooding situations with a King tide and massive amounts of fresh water coming from the streams which immediately dilutes the salt water to insignificance. The flooding issues resolve themselves when the tide goes out.

- Consequently, the ground samples that were taken and used to characterize the wetlands as from time to time as being estuarine in nature more than likely were the occasional winter wash overs that have happened consistently in the winter months throughout the centuries not an open berm as proposed by the Herrera Group.
- In all cases it has remained a freshwater wetland throughout the centuries and the predominant ecosystems are fresh water.
- The Herrera Group/DNR appear to be trying hard to establish an unnecessary “**NEED**” for the full-on conversion process by highlighting these 3 issues which leads to...

### EXISTING

There is an existing Sea Gate that was installed in the late 50's to replace the one that was installed in 1903 to manage the freshwater in the wetlands. Approximately 20 years ago a new wooden cover was installed with a padlock for safety reasons.

- Someone has removed the padlock and did not replace it...leaving the potential to be opened creating the potentially hazardous situation should someone enter the vault.
- Approximately 20 years ago the actual gate in the Sea Gate rusted in the open position and was manually opened fully and secured in that open position allowing seawater to flow into the wetlands **only** when the tides are high enough to reach the 20" gate opening.
  - This makes the Sea Gate function the same as the proposed 60'-0" opening...they both are open to the sea, but the difference lies in the magnitude of the openings 20" vs 60'-0" and their impact on the wetlands and tidal area.
  - The influx of seawater into the wetlands only happens when there are King tides...the seawater from a 20" opening is immediately diluted with massive amounts of freshwater from the hillside streams and springs...not affecting the freshwater ecosystems in the wetlands...not sure how a 60'-0" opening would impact the current freshwater wetlands with 2 high tides a day...probably in a negative way.

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- The highly diluted brackish water is immediately removed from the wetlands when the tide recedes enough to reverse the process and the wetlands are immediately returned to a freshwater environment causing no harm to the existing ecosystems.
- The conversion planned excavation of the berm will be a continuous year-round intrusion of seawater into the wetlands.

This Sea Gate system has worked well throughout the years emptying the wetlands efficiently when the tide receded. Unfortunately, the outfall has deteriorated in efficiency because of a design flaw...the horizontal portion of the 20" outfall pipe has filled with rock and gravel restricting the flow of fresh water from the wetlands at low tide.



- The photograph above shows that freshwater is still flowing...and the system is still viable...while this photograph shows the compromised 20" outfall pipe.

The Herrera Group has dismissed this vital existing piece of infrastructure in favor of a massive conversion of a freshwater wetland...spending an extraordinary amount of money when the **need doesn't exist for the proposed conversion.**

#### 60'-0" CONVERSION OPENING VERSUS AN EXISTING 20" OPENING

Neither version plan will stop the flooding when King tides are present...there are positives and negatives to both versions, but the important fact is one system is a known...and the other is fraught with unknown consequences and a sure potential for the expenditure of a lot of money...maybe millions...and potential damages to the neighboring stakeholders, the surrounding ecological systems and tribal interests...the current existing opening requires very little effort and work to maximize the outflow and has proven very successful in the decades but needs a some help.

- The 60'-0" opening will evacuate water but at what cost, and only as the receding tide allows and as long as it stays open...the same for the current 20" Sea Gate opening.
- The existing 20" outfall would evacuate as much 4.3 million gallon of freshwater water plus an estimated 100,000 to 150,000 gallons or almost 1,000,000 gallons of water in a 6-hour tide operating at capacity each 6-hour tide change...the total estimate includes the percolation gallons through the length of the whole berm.

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This picture was taken on July 31, 2023, and illustrates the percolation of hundreds of gallons of water through the berm even in the heat of the summer...the full length of the berm is like this and is 100's of yards in length and when there is flooding in the wetlands you can't dismiss its positive effect on flooding relief.

The Herrera Group has stated that we couldn't get a permit to replace the current Sea Gate...that may be true but if they meaning the DNR can get a permit to trench through a natural berm and change the wetland ecology they most assuredly could get a permit to repair or modify the **existing Sea Gate, outfall and pond** at pennies on the thousands of dollars they propose to expend on the conversion...**and preserve an existing freshwater wetlands.**

#### PERSONAL EXPERIENCE AND OBSERVATIONS

I am Alan Clarey....In 1974 I first visited Cypress Island and realized what a special place this is. I purchased Lot 5 from Jack Kidder and constructed my vacation home with the help of my father, Edward Howard, and George Howard and have never regretted doing so until the DNR purchase.

In my almost 50 years on the island, I have experienced many things, good and bad...I have raised my children, grandchildren and now my great children here knowing that it is a special place and one of a kind. I have spent countless days, weeks, months, and years here spring, summer, fall, and winter experiencing many of the things that the island has to offer.

I would like to address several of the issues that the Herrera Group proffered in their first meeting presentation and in their draft document for the conversion of the Strawberry Bay freshwater wetlands.

#### Flooding

The Herrera Groups presentation of the 100-year and 50-year floods were accurate as I was present for the events...the presentation and the actual flooding events.

- In 1990 there was the 100-year flood the water was up to the back of my house...we were rowing in the road behind the house and the only access to the beachfront cabins was from the front of the berm.
- That storm sank the I-90 bridge.
  - The flooding was caused by an inordinate amount of rain, stream run off and King tides.
  - I can personally testify that the flooding was controlled in one (1) minus tide and had receded to the point that the road was exposed and drive-able and at no point thereafter were any of the

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properties in danger...the water fluctuated throughout the weekend until the rains stopped and the flow of fresh water from the springs and streams diminished.

- The Sea Gate was about 75% - 80% operational...the percolation of the water through the berm was exceptional.
- The water exiting the Sea Gate outfall was shooting 10 – 12 feet in the air and was consistent throughout the flooding issue.
- The flooding could not have been prevented and was a natural event...the ultimate control of the flooding can be attributed to the Sea Gate and the natural percolation of water through the berm... **the system worked.**

The 50-year storm 4-5 years ago flooded the wetlands and took 2-3 days for the water to recede.

- The same issues were present, heavy rains and run off and King tides.
- Through the years from 1990 until this 50-year event the Sea Gate outfall had diminished in efficiency and was running at probably no more than 10 % efficiency, a very significant difference from 1990.
  - The percolation of the freshwater through the berm again was again exceptional and was the main source of drainage rather than the Sea Gate consequently it took longer to resolve the flooding issue.
  - The natural percolation of the freshwater through the berm remained as it has been throughout the centuries.
- **The system didn't work as well this time...**but it was and is still working.

#### Wind

There are multiple wind storms every winter, the storms out of the SSW or SW are particularly damaging. They move mountains of rock, gravel, sand and logs up on to the beach building the berm naturally.

- The typical storm waves are 4 – 8 feet in height depending on the storm...nothing is sacred on the beach.
- In all my years on the island I have yet to see any DNR and now Herrera Group personnel on the beach in the winter to witness in person the power of these storms and how they work the beach.

About 18 years ago there was a particular windstorm with 90+ mph winds that blew in from the SW. There wasn't any rain, just wind and it was a King tide. I had photographs of the beach and the remnants of the beach but when I moved, they were lost somewhere but I am willing to testify to the following.

- My neighbor's boat broke loose and was deposited high up on the rocks of the west side of the bay and was totaled.
- All the logs in front of the beach front homes were either moved **over** the berm onto the road, into the wetlands, stacked under the decks or the larger percentage down to the eastern portion of the beach right where the conversion opening is planned...there were no logs left in front of our beachfront properties.
- The sand, gravel, and rock deposited on the berm was from 6" to 24" in depth along with logs and woody debris.
  - The tidal surge was massive.
  - If anyone ever wanted to witness how a berm is constructed by nature that would have been the opportune time...although this was a particularly violent storm the lesser storms still build the berm every year just not as aggressively.
- There are multiple windstorms every winter from the SSW or SW that continuously build the berm naturally...even storms from the S and SE help build the berm.

I do find it rather **naive that the draft plan calls for a build it and leave it scenario...**the reality is that the opening will be lucky to survive 5 years without being plugged up or destroyed.

#### POSSIBLE SOLUTION

In conversations with community stakeholders the portion of the HERRERA plan calling for the removal of the buildings and the removal or burial of the swimming pool is meeting with approval because...



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- The DNR has predetermined that they will not maintain any of these structures planned for removal, therefore the consensus is that they should be removed for safety and liability reasons both for the DNR and Madrona Estates.
- The removal of the structures will limit the desire for the public to journey to Strawberry Bay which has created an additional nuisance problem for Madrona Estates.
- The 60'-0" opening of the berm without the proposed bridge will potentially deny access to the NRCA to the residents and guests of Madrona Estates.
- There are multiple reasons as illustrated in this document to abandon the trenching of the existing berm which is fraught with unknown problems and is not needed
- The DNR letter to the tribes in Oregon, Washington, and British Columbia possibly looking for approval which they will need does not adequately illustrate the total project and is very sketchy on the details of the draft plan...informing the tribes of the details of the plan and possible consequences should be done immediately.

Madrona Estates is an integral participant in this proposed conversion and should be included for transparency of the process in any meetings, correspondence, emails, presentations etc.

- This will include Madrona Estates being an actual participant of any meetings with governmental agencies or tribal councils or their representative regarding the draft plan and or final plan of any conversion process.
- This would also include being copied (included) on any written or electronic correspondence regarding this draft plan with any governmental agency or tribal council or their representative regarding this conversion process for the sake of complete transparency.

There are alternatives that are available to the DNR/Herrera Group that will accomplish the removal of the buildings and the removal or burial of the swimming pool without having an unnecessary million-dollar conversion of an existing freshwater wetlands.

- Excluding the expense of the removal of the buildings and structures there are several variations to modify the draft plan.
  - These variations are both feasible and financially responsible solutions that will manage flooding that the DNR/Herrera Group proposes in there 100- and 50-year scenarios for pennies on the thousands of dollars for the proposed expenditure for the conversion process.
  - These alternatives are proven and work.

**There is a better solution than converting the existing freshwater wetlands and we are looking forward to having that conversation with the DNR/Herrera Group...as the consensus of Madrona Estates stake holders is that they are not in favor of trenching the berm and changing the freshwater ecology.**

#### ALTERNATE PLAN OPEN FOR DISCUSSION

- Remove all man-made structures as proposed over the wetlands and through the swimming pool area.
  - Remove all debris from the swimming pool either crush the sides of the swimming pool in and bury it or remove it in total through the lowered berm opening to the planned barges.
- Abandon the re-direction of **Stream 2** behind the Phillip Cook house as proposed by the Herrera Group which would mean trenching through an established Great Blue Heron rookery a Federally protected bird.

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- Instead maintain the current path of **Stream 2** excavate the stream bed wider and deeper to the existing Sea Gate pond.
- Currently all other streams identified run to the Sea Gate pond area already.
- Widen and deepen the existing pond area.
- **Important: Use all overburden created by excavations to fill the swimming pool area and rebuild the berm to its previous condition after the removal of all the buildings.**

#### This where the plans differ...

There is a proven piece of existing (grandfathered) infrastructure called the Sea Gate or weir that has worked for decades that can move approximately 4.3 million gallons of water in a 6-hour tidal sequence and the **“KEY WORD HERE IS -MAINTENANCE”** it is not a new installation.



- The existing flap has rusted off and is laying on the bottom of the vault.
- Examining the existing installation, it is a collar type fitting which allows the old installation to be removed and a replacement gate by the same manufacturer “Waterman” can be easily accomplished.
- These gates are available for sale and 24” diameter gate costs approximately \$3,500.00 to \$5,000.00 F.O.B. Waterman Manufacturing in Exeter, California.

**This portion of the maintenance of the system is like changing the oil filter on your car every 5,000 miles. If the goal is to reduce flooding, repairing the SeaGate is the cheapest and most environmentally friendly solution.**

#### The second and final portion of the maintenance is the modification of the outfall pipe.

- The outfall pipe in the Sea Gate vault is clear and functioning as designed per the photograph above.
- The portion of the outfall pipe that has slowly failed is the 20’-0” horizontal run as shown below. There is more than enough good pipe on the uphill side of the outfall



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- There are good sections of pipe further up the beach and it is proposed to find a good section of pipe on Madrona Estates property cut and remove the damaged sections that lie on state property approximately 20'-0" and design and install a rockery style outfall to mitigate silting and a runoff channel as this revitalized installation will run 24-7 -365 days.
  - Building a new long term rockery outfall on Madrona Estates property may require a permit and some design help and some time and materials costs TBD from the DNR but again it is maintenance and should a permit be required it would be easier for the DNR to acquire it and again Madrona Estates most likely would pay for the permit (negotiable).
- The damaged sections of the outfall piping should be removed from the site at the same time as the buildings utilizing the mobilized Track- Hoe on the DNR barge.

Completing this second portion of the maintenance needs... working in conjunction with the DNR will give the Strawberry Bay wetlands a fully functional system to maintain the freshwater ecosystems again for pennies on the multi-thousands of dollars for decades to come and it is proven system that works.

### **CONCLUSION**

Finally, there will be no need to convert the wetlands... but to let the DNR walk away as they want to do Madrona Estates will need to have the standing authority to maintain the whole system to include access to the stream, pond, Sea Gate, and outfall maintenance and have in hand as well as any long term permits or permission as needed to accomplishing this simple variation will enable the DNR to walk away as the they propose.

Should the DNR move forward with the conversion of the wetlands and choose not to work with Madrona Estates with an acceptable alternative solution then the DNR should be willing to be held completely responsible both physically and financially for any and all damages created by their action and do so in an enforceable document to Madrona Estates and to include separately all individual Madrona Estates stakeholders.

### **DISCLAIMER**

**This alternative proposal is being presented to Madrona Estates and DNR for an equitable solution to the conversion of the Strawberry Bay wetlands.**