

# The Broadmoor Breeze



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*A Publication for the homeowners/residents of The Broadmoor Huntington Harbour Community Association*

**LAGOON UPDATE:** The lagoon has looked better recently. To learn more about this issue, read below:

**Q:** The lagoon is looking the best it has in months. What was done to improve its looks?

**A:** Long story! The biggest problem with the lagoon is the sediment, dirt and debris on the bottom of the lagoon. The dirt is where algae likes to form and the dark green patches are where algae is present. The sunlight reflecting off those dark green/brown areas cause the water to look murky and ugly. To eliminate algae requires high concentrations of chlorine. To avoid creating further calcium deposits, the board had the pool service try other chemicals such as tri-chloride and even pure liquid chlorine. The tri-chlor caused the calcium to dissolve, which resulted in uncovering all the debris and sediment on the lagoon bottom. Liquid chlorine is expensive and evaporates quickly from the sun's rays. The chlorine levels couldn't be kept high enough to keep the algae at bay. Until we can find a practical and affordable solution to removing the sediment and debris, for now we figure it won't make things any worse to go back to using cal-hypo in order to keep the chlorine levels high enough to deter the formation of algae. Of course, this means are adding more calcium deposits to the already existing situation.

**Q:** How did the test vacuuming work?

**A:** On Tuesday, October 1, the company that contracts to maintain the "Finding Nemo" ride at Disneyland came out to conduct a test run of their equipment on the lagoon. Their stand alone vacuum pumps started at the shallow end (near the entrance gate) around the edges of the lagoon. For the first hour the test went incredibly well! All sediment was removed by their vacuums leaving a clean lagoon bottom, which appeared to be in good condition. No calcium, dead algae or organic material remained where they vacuumed. But then they moved toward the deeper areas in the center of the lagoon. Immediately their pump rotors clogged and their filters filled. The amount of sediment and debris was too much for their vacuums to handle. So the company ceased its test run and left. They will submit a formal report to the board.

**Q:** What will the board do now?

**A:** That is the big question. The association now knows that there is a lot of sediment in the lagoon. One option is to drain the lagoon, clean it and refill it with one million gallons of water, which is an expensive option (\$50,000 plus). The problem with this is that once the lagoon is clean, it will merely begin to gather leaves, debris, dirt, bird droppings, etc., and there is no easy way of removing such deposits. The association would need to contract to have the lagoon bottom vacuumed periodically, probably at a cost of \$1,000 per month. Another option is to do nothing, go back to using cal-hypo and start creating more calcium deposits.

We have had several companies come in and look at the lagoon. No one has been able to suggest a practical and cost-effective solution for removing the sediment and debris. The absolute best solution is to drain the lagoon, clean it and then refill it. However, one fear of draining the lagoon is that the high water table under the lagoon might put pressure on the emptied concrete structure, causing cracks and leaks or even forcing it to "pop" up in areas. And even if the lagoon bottom could be cleaned, what do we do with the dirt and sediment that will invariably begin to build up again.

**Q:** Why is the lagoon any different than a swimming pool?

**A:** Chemically, the lagoon is treated similarly to a swimming pool -- chemicals levels are constantly maintained to prevent algae growth and the PH level neutral. That is where the similarity ends. A swimming pool is designed with circulating pumps and drains at the bottom of the pool. Water and sediment are sucked up by the bottom drain and circulated through a diatomaceous filter which traps all impurities before returning the water to the pool. In addition, a vacuum can be hooked up to an intake valve and the pool bottom vacuumed through that filter when needed. The lagoon is basically a huge cement pond. Eight pumps keep the water circulating from the end of Admiralty to the end near the swimming pool. This is necessary to prevent stagnant water, which would result in mosquitos breeding and algae forming. But the lagoon was not built with ANY bottom drains or filtering system, so we have no convenient way to remove any debris that settles on the bottom of the lagoon. Over decades, we now have tons of calcium deposit and organic sediment.

**Q:** What is algae?

**A:** Algae is a multicellular organism that is present in all water. Kelp is a form of algae. If the lagoon was not treated with chemicals and the water circulated, algae would form along the cement surfaces and would become a breeding ground for insects. What is being uncovered is a layers of organic sediment that has built up over the years and was previously covered by calcium deposits. Walk out to the lagoon and you will see patches of what appears to be brownish, greenish dirt. That is both dead and living algae deposits mixed with dirt on the lagoon bottom.

**Q:** Why did the lagoon look so good before May?

**A:** For years the old pool service company dumped calcium hypochlorite in the lagoon, a granular form of chlorine. Cal-hypo is 33% calcium which falls out in the form of sediment. Over the years, the calcium covered the entire lagoon bottom (including all organic debris) with a soft, fine, white layer of calcium. Light reflecting on the calcium sediment produced a very pleasing blue water color. When the board discovered the fact that tons of calcium deposits were being introduced into the lagoon, it directed the new pool company not to use cal-hypo. The chlorine product currently used slowly dissolves some of the calcium, which has revealed layers of dead algae and organic compost on the lagoon bottom.

**Q:** How did the board settle on Blue Balance?

**A:** Blue Balance is a small family run business. The owners seemed knowledgeable about their business, committed to spending at least three days a week on both the pool and lagoon and proposed a monthly fee \$1,000 less than our existing vendor. In person Blue Balance proposed the similar level of service that all of the other proposals presented.

**Q:** Why has the lagoon's appearance changed so drastically?

**A:** The board talked to four new companies. The one the board liked the most declined to submit a proposal, saying that the existing sediment in the lagoon would be too difficult a problem to handle. All four of those companies stated that they would not recommend use of calcium hypochlorite, which the old company used. They said cal-hypo is cheap and convenient but long term you pay a price because 1/3 of cal-hypo is calcium which will settle out as deposits, clouding the water and causing scaling. The new company has been using trichlor, a granular form of chlorine which has dissolved some of the calcium, raising the TDS (total dissolved solids) in the water, causing more clouding.

In May the pool company tried a blue-colored algaecide dye specifically designed for fish ponds and lagoons such as ours. The advantages are that it cuts down light transmission, which helps decrease the sunlight's penetrating effects and retards degradation of the chlorine in the water, and adds a pleasing blue tint to the water. However, an unexpected side effect of this additive was that it reacted with the decaying compost under the calcium sediment. That reaction caused the compost to float to the surface of the lagoon, which had to be skimmed and removed. The pool company estimates it removed 800 pounds of debris in May/June and there is more on the bottom covered by the calcium.

**Q:** What has the board been doing?

**A:** The blue algaecide revealed that there are tons of organic compost at the bottom of the lagoon, built up over decades from leaves, dirt, bird droppings, etc. All of that is covered by a layer of calcium deposits. In early June the board began obtaining various proposals ranging from vacuuming the bottom of the lagoon to completely draining the lagoon, removing all waste and then refilling the lagoon with over 1 million gallons of water. Draining the lagoon is very expensive, requires special permits from city sewage treatment plants, and hazardous waste disposal fees. Vacuuming the bottom of the lagoon is less expensive. A proposal by a company that cleans the "Finding Nemo" ride at Disneyland was received in late June.

**Q:** Why is the board moving so slowly?

**A:** Once the proposal for vacuuming the lagoon bottom came in at the end of June, it was immediately placed on the July board meeting agenda for consideration. Unfortunately, due to lack of a quorum that meeting was cancelled and the matter had to wait until the August meeting. At the August meeting the board immediately approved a test trial of the vacuuming system but the company had scheduling conflicts with its equipment in September. The test is currently scheduled for October 1, 2013. Once the test results are in, the board must wait until the October meeting to discuss the test results and determine the next step to take.

**Q:** Why can't the board act more quickly?

**A:** The California civil code prohibits board members from meeting to discuss any association matter other than at its regularly scheduled monthly meetings or at a special meeting after proper notice to all homeowners. If it were practical, the board would be meeting weekly over this matter to investigate all alternatives, obtain advice from experts, explore options, etc., and then present its findings at an open board meeting for

consideration. Unfortunately, each step must wait until the next board meeting for consideration and approval.

**Q:** When will this problem be resolved?

**A:** Don't know. At the October meeting the board will review the results of the vacuuming test. It may decide to proceed with vacuuming the entire lagoon or it may consider obtaining other proposals for the complete draining and cleaning of the lagoon. Once those proposals are received, they will be presented at a monthly board meeting.

**Q:** Did the current pool service company cause this problem?

**A:** Absolutely not. They did not cause the years of calcium deposits nor the organic debris that has accumulated on the lagoon bottom. Instead its efforts to clean up the lagoon is revealing the consequences of years of neglect, which unfortunately is causing an unpleasant appearance. That company is dealing with a situation we suspect few if any companies have ever faced.