



## Virtual Amigos

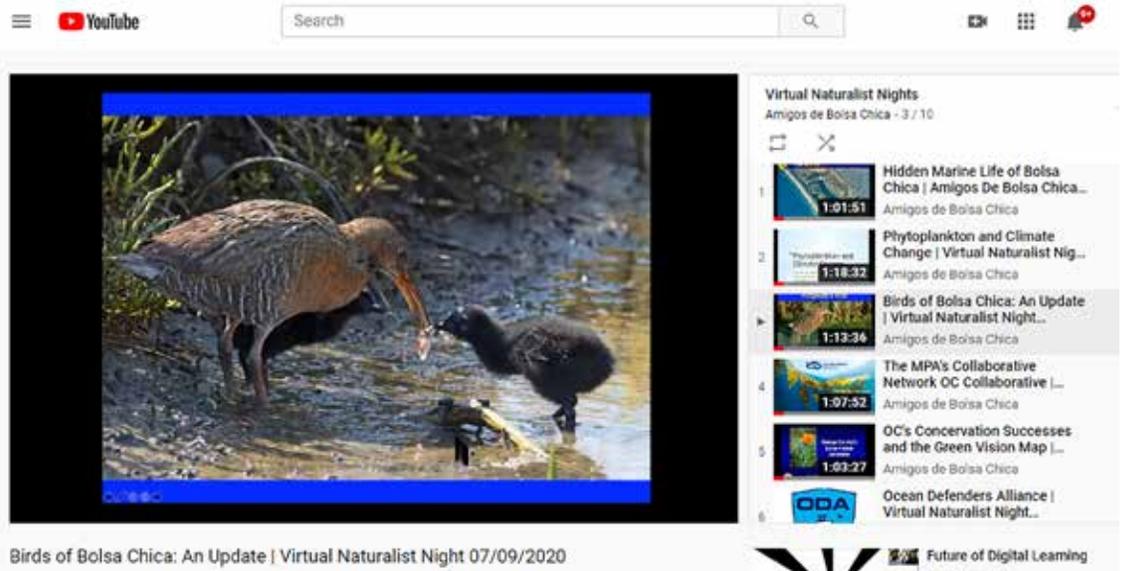
# Naturalist Night Webinars Now on YouTube

By Amber Davis

When the stay-at-home order was first issued in late March of this year, we suspended all in-person activities including our weekly FLOW Program Citizen Science activities and all scheduled field trips. However, what many of us hoped would be a matter of weeks of staying home evolved into a prolonged stay-at-home order with no clear end in sight. With no FLOW or Naturalist activities happening any time soon, we knew we needed to act quickly to keep the Amigos together. We needed our community.

After several virtual meetings and countless emails and text messages, the Virtual Naturalist Night was established. Every Thursday night for the last three and a half months, the Amigos have come together via Zoom to listen to guest speakers from around Orange County – and even across the globe. Our very own marine scientist, Joana Tavares, gave three presentations, first sharing with us her

research into how iron emissions from vessels affect phytoplankton growth at sea followed by a timely presentation on intersectional environmentalism and how equality, diversity, and inclusion are all key factors to a healthy community as well as a well-



rounded and effective organization. While those two were not recorded, her eye-opening presentation on Phytoplankton and Climate Change was.

We also recorded presentations from professors like

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## Volunteer Spotlight - Joana Tavares

By Charles Falzon



The Amigos de Bolsa Chica first encountered Joana Tavares when she was hired to develop curriculum for what would eventually become our FLOW Program. The Amigos hired Joana partly because she is a marine scientist and a marine policy expert who was teaching oceanography at Fullerton College as well as hands-on science lessons in an after school program at the Discovery Science Center in Santa Ana. The other reason she got the job is her endless enthusiasm and energy. She convinces everyone that together we can save the world.

Who else could make phytoplankton so exciting? She taught quite a few Amigos and visiting students that phytoplankton are responsible for half of the photosynthesis on Earth, serve as the basis of virtually all marine food webs, and help regulate Earth's climate by transporting carbon into the deep ocean and into marine sediments. In rare but dramatic cases, phytoplankton are also a part of harmful algal blooms that wreak havoc on marine birds, mammals and occasionally humans. These simple concepts revolutionized the ways the Amigos looked at our coastal ecosystem and gave us a much-needed ability to provide additional education programming beyond wetland tours only.

When Joana's time as an employee ended, she did not abandon us. With Endless Eye Productions she co-produced our 40th anniversary documentary film, *Saving the Bolsa Chica Wetlands*. Shortly after that she was accepted into the PhD program at UCI's Earth System Science Department/Mackey Lab. Her thesis is on the role that ships may be playing as a source of nutrients and/or toxins for phytoplankton in both coastal and open ocean areas. In 2019 she was selected as one of NASA's Future Investigators In NASA Earth and Space Science Technology (FINESST) Program.

With her Master's degree in Marine Science and Policy from the University of Delaware, she co-authored a paper with Prof. Raul Lejano (New York University) and Prof. Friket Berkes, (University of Manitoba), in which they addressed the communication of climate science and identified a

number of things that could advance the conversation of climate change into our everyday narratives. About a year ago Joana presented a distillation of this paper, "The Science of Communicating Climate Science: Strategies I've Tried and New Approaches to Test," to 30+ people at Bolsa Chica State Beach Visitor Center.

She co-organized the Climate Solutions Conference that was held on February 1, 2020, at Orange Coast College. This well-attended conference came into being to fulfill a need to empower more people with the tools that are needed to push the momentum for solutions and change forward.

In April of this year when all of us were first beginning to suffer from the sudden and dramatic weirdness in our lives from the stay-at-home orders and shutdowns, Joana came to the Amigos' rescue and helped us plan a few activities that would sustain us in terms of both volunteer engagement as well as continue our mission. First came the webinars (see page 1), then the Summer Institute for Educators (see page 4). A busy spring became a busy summer. Joana is now back on board the research vessel working on studies for her thesis, but she is still finding time to help with grant writing to ensure that FLOW can continue.

From Joana: "I have worked with marine science and education for more than 20 years, and believe that most people sincerely care about the environment. Although often confused, overwhelmed, or discouraged in the face of current environmental problems and global climate change, most people want to do some something positive in order to reverse this global crisis. I see myself as a science translator, a community organizer and a facilitator, someone who helps people interpret scientific information to understand how they can make a difference. I am a strong believer in the power of informal education, environmental volunteering and citizen science and have witnessed how well-crafted efforts in these areas can democratize knowledge as a process, empower communities and serve as catalysts for change in both individual behavior and public policy."

# Farewell BCER Manager, Kelly O'Reilly

By Kim DiPasquale

The Amigos de Bolsa Chica bid farewell to a dear friend, Kelly O'Reilly, who retired from her position as Reserve Manager for the Bolsa Chica Ecological Reserve on September 11 of this year.

Kelly's education in science began with a Bachelor of Arts degree in Biological Science from Cal-State Fullerton and then continued with a Master of Science degree in Biology from CSUF in 2001. Shortly thereafter she began her career with the California Department of Fish and Wildlife when she was hired to work as a marine fisheries biologist. Her work at that time involved helping to shape the Department's management policies to preserve California's marine life species. As if the demands of this position weren't enough, Kelly taught oceanography at Orange Coast College in the evenings from the Fall of 2001 through the Spring of 2005.

In 2007 Kelly's career shifted from marine fisheries management to coastal wetlands management when she became the reserve manager of the Bolsa Chica Ecological Reserve. Her duties have included protecting wildlife and native wetland habitat at the reserve as well as maintaining its infrastructure. She has also been active in monitoring the breeding activity of endangered bird species and maintaining an inventory of Bolsa Chica's plants and animals. In addition, she has worked with numerous government agencies and non-profit organizations like the Amigos de Bolsa Chica.

The Amigos are very thankful for and appreciative of everything Kelly has done for the reserve and for our organization. She has been very generous with her time having given numerous scientific lectures in support of our educational programs and has always been available to keep us up to date on what's



**Retiring BCER Manager Kelly O'Reilly receives a photo plaque from the Amigos. Plaque and photo by Kim DiPasquale.**

happening at the reserve and to answer any reserve related questions that we might have. She has served with dedication, hard work, and integrity. We will most assuredly miss Kelly but we are very happy for her as she begins a new chapter in her life and we wish her well.

## Virtual Tour Wetland Now Available

By Thomas Anderson

The Amigos de Bolsa Chica's Virtual Wetland Tour video and lesson plans are now available for educators and anyone wanting a distillation of our regular public and private wetland tour, and can be found at: <https://www.amigosdebolsachica.org/virtual.php>. Of course nothing ever can or will replace the 3-dimensional experience of our Naturalist-guided tours, but this video covers all of the most important things to know about the Bolsa Chica Ecological Reserve's ecology, birds, endangered species, plants, and aquatic creatures. The video contains many of the same Next Generation Science Standards talking points as an in-person tour, which allows educators

to use the lesson plans with the video for any classroom needs. As a companion piece to the Virtual Tour, lesson plans are also now available for our *Saving the Bolsa Chica Wetlands* documentary: [https://www.amigosdebolsachica.org/video\\_educators.php](https://www.amigosdebolsachica.org/video_educators.php). This, too, allows educators or anyone who is interested to learn about the decades-long struggle to preserve the Bolsa Chica from waterfront development and restore it to the thriving ecosystem it is today.

# The Amigos de Bolsa Chica-National Geographic Summer Institute for Educators Report

By Jen Mendez

The Amigos de Bolsa Chica Summer Institute was a free program designed to help California Middle and High School Environmental Science/ Ecology/ Sustainability teachers convert their existing in-person class to whatever COVID-19 response plan is to be implemented by their school districts for fall 2020 (e.g. distance learning, in-person, and/or hybrid formats). Held from July 13 – July 24, 2020, classes took place three days a week through Zoom. The 2020 Summer Institute for Educators was facilitated and organized by Joana Tavares-Reager, Gwen Noda, and Kimi Waite.

Originally, the Institute was going to give priority to Title 1 schools in Southern California, but we decided to expand the applications as there was high interest in the program. We ended up hosting 26 educators including fellow Amigos, educators from various states, and educators from around the globe including Portugal, Brazil, Canada, South Africa, and Spain. Although the program included information that was specific to Southern California school districts, we felt there was a lot to gain for educators not in the specified area, as various useful topics and resources would be shared and discussed. It is important to note that this program was designed to help and support the participants and not add additional work and stress, so educators were encouraged to attend when they had the time and energy.

At the start of the program, there was still a lot of uncertainty of what the COVID-19 response plans were going to be for many school districts, so we explored a variety of different strategies and resources to overcome expected challenges in adapting class plans for COVID-19's "new normal."

The 2020 Amigos Summer Institute included Phase 1 training to become a National Geographic Certified Educator, led by Kimi Waite. Teachers who completed phase 1 training of the National Geographic certification gained access to an online community of global educators who share a passion for teaching students about the world and how it works-empowering them to succeed and make it a better place. Participants who signed up with National Geographic after Phase 1 will be notified this fall

about starting Phase 2 training. It will involve utilizing National Geographic lessons, materials, and resources with their students.

In addition to Phase 1 training, the Summer Institute featured various guest speakers for each session including:

- Shannah Hannibal: Educator, Author, Assistant Principal at Sullivan Middle School in Charlotte, SC
- Dr. Kat Usher: Lead Curriculum Designer and Curator; Science and Technology Teacher at Willingdon, Montreal Quebec
- Ivy Castro: First Grade Teacher and the Lower School Equity and Inclusion Co-Coordinator at the Berkeley Carroll School in Park Slope, Brooklyn, New York City.
- Jen Abbate: Lower School Spanish Coordinator and Lower School Equity and Inclusion Co-Coordinator at the Berkeley Carroll School in Park Slope, Brooklyn, New York City
- Segerstrom High School science students (who formed PlanetQuest in an effort to make a difference and stay involved): Student issues with distance learning and suggestions for educators
- Gianna Lum, ClimatePedia: How to connect, engage with, and motivate students online and foster student civic engagement and environmental advocacy during COVID-19

These speakers all provided useful information on how to include diversity, equity, and inclusion into the classroom as well as resources and tips for teaching science online, and maintaining student engagement during COVID-19.

As the Summer Institute came to a close, we created a survey for the attendees to fill out and provide feedback. The participants suggested to offer this program again so we agreed to offer another Institute but with the main direction and facilitation being led by the educators who were part of the 2020 Institute (as a steering committee). It is undetermined when the next Institute will take place, but we are working on getting stipends/honorarium for the presenters, facilitators, and participants.

# ***Bolsa Chica and Politics: The Past Informs the Future***

***By Shirley Dettloff***

When the Amigos de Bolsa Chica's fight began nearly 50 years ago, we were just a group of ordinary people dedicated to saving one of the last remaining wetlands in California. 90% of the state's wetlands had been destroyed. So we started our work by learning everything we could about the importance of wetlands, basing all of our fight on scientific evidence. As our numbers in support of the movement grew, and the fact that the Coastal Act had been passed by the voters in 1972, it put us in a position to take action. This meant that we would have to go before many governmental bodies to make our case so that development would not take place. We soon learned that it would be a group of elected officials who would make the decision whether or not the Bolsa Chica would be saved or developed. Whether it was a Board of Supervisors, a State of California committee or the Legislature, or members of Congress a vote up or down would be made by elected officials.

Our first fight would be with the County of Orange and the Board of Supervisors. This body had jurisdiction over the Bolsa Chica as it had not been incorporated into the City of Huntington Beach. Remember most of us had never been in a fight, nor had we gone before elected boards. We first set up appointments with all of the Supervisors, attended all of the hearings, and slowly made some progress in making minor changes and slowing down the approvals. These approvals would mean that the County supported development of a marina, 5,000 homes, and destruction of the wetland.

At this time Orange County was growing and the Board of Supervisors supported all development. This was also a very conservative county and environmentalism was not a popular concept. Signal Landmark, owners of the wetlands, recognized that there was a growing opposition to their plans for a marina and a residential community. They had their lobbyist persuade our State Senator Paul Carpenter to submit a bill, SB493, which would remove the Coastal Commission's authority to certify Signal's Bolsa Chica plan and give it to the County. This is when the Amigos went into action, lobbying committee members in Sacramento and because of our intense lobbying efforts, the bill was defeated. Hundreds of letters were sent by community members to the committee. This

was the beginning of understanding that we had power and influence and could stand up to the company.

In December of 1981 the County's Land Use Plan for the Bolsa Chica went before the Board of Supervisors. The Board approved a plan which called for 600 acres of wetlands to be saved, 3,200 residential homes on the mesa and 2,500 units on 335 acres of lowland, a 75-acre marina with 1,800 boat slips and a 700-foot navigable ocean inlet. Although this wasn't the plan Signal wanted, we, of course, opposed the plan because our position was that all of the wetlands must be preserved. What we should remember is that every step we took in this long journey resulted in changes being made, but it was never enough. Now it was time to move on to the Coastal Commission.

We knew that the California Coastal Commission's support would be critical if we were to stop development. We met with staff and commissioners. We felt we were making progress with this body, as they, for the most part, understood the importance of saving a wetland, based on scientific evidence and the Coastal Act. It should be noted that all of the members of the Coastal Commission are appointed by State elected officials. The Coastal Act was very clear on wetland preservation, so the Coastal Commission was concerned with the amount of wetlands that Signal was willing to save. Because the County and Commission could not come to any agreements, the County asked that the plan be withdrawn instead of it being defeated. During this entire time, the Amigos continued to meet with the commissioners and State lawmakers.

The standoff between the County and Commission was attracting too much attention in Sacramento, and to resolve this, it was decided that an independent force had to break the logjam. As a result, SB 429 was introduced, giving the Coastal Conservancy and Department of Fish and Wildlife the authority to prepare a Habitat Conservation Plan for Bolsa Chica. This plan revolved around Section 30411 of the Coastal Act which said that if a wetland is so severely degraded and has to be restored, the money for restoration would come through a boating facility. This was the position of Fish and Wildlife and the Conservancy disagreed with this position. In the end, this plan called for 915

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acres of wetlands, and a 60 foot wide navigable inlet, public facilities, a motel and seven restaurants, and was submitted to the Coastal Commission in November of 1984. The Coastal Commission certified it even though they cited numerous inadequacies. The major concern was whether the navigable inlet was the least environmentally damaging alternative. They delayed final action, but the Marina Plan, as it became known, was certified in January of 1986. Amigos continued to work with our State legislators, the Coastal Conservancy, and Fish and Wildlife as both the Amigos and an increasing number of citizens opposed the plan.

The struggle continued. By 1987 it was becoming clear to Signal and to some politicians that the Marina Plan would never be approved. This is when Senator Bergeson, Newport Beach, sponsored a bill requested by Signal which would establish a special district for the Bolsa Chica. This bill would allow the district to issue its own bonds, assess landowners, collect taxes and use the funds to pay for the inlet and the marina's infrastructure. Now the City had a role! In February of 1988 a hearing regarding the bill was held in the Huntington Beach City Council Chamber with 50 speakers opposing the bill! Seeing that the bill had widespread opposition, Senator Bergeson withdrew it.

What would the Coastal Commission approve? Orange County Supervisor Harriett Wieder decided that a new Coalition of State and Federal agencies, City and County representatives, Audubon, Sierra Club, Signal, the Ports of Long Beach and L.A. and the Amigos should come together to try and resolve the issues and come up with a plan. After six months the group came up with a plan called The Coalition Concept Plan. Signal agreed to major concessions. They would eliminate the marina plan, including the navigable inlet, and the extensive lowland residential and commercial development. The Amigos agreed to a strip of low density residential development along the back side of the lowlands adjacent to previously developed land. This was done because of the concessions made by Signal and the fact that this plan would still have to be approved by the Coastal Commission and the Army Corps of Engineers. This was a gamble but Amigos was confident it would pay off in the end. The Commission had made it very clear that the plan was inconsistent with the Coastal Act due primarily to the filling of the 120 acres of degraded wetlands.

Things were far from over. This decision by Amigos would receive much criticism from the community, but stood their ground because they knew that the Commission had to make the right and legal decision. This was a very difficult time for many of us, but we knew that we were the ones who had spent years defeating bad bills, getting changes made to any plan that came forward, spending hundreds of dollars on a lawsuit over many years, and getting the respect of many of our elected officials. Although there were issues with the plan, the fact is that the Marina Plan was eliminated and 90% of the wetlands were saved.

In 1996 Signal, now known as the Koll Company, submitted an amended plan for Bolsa Chica to the Coastal Commission. The proposed plan called for setting aside 1,098 acres of wetlands and buffers, placing 2400 homes on 200 acres of the Bolsa Chica mesa and up to 900 homes on the 185 acres of lowlands. It depended upon the interpretation of Sections 30233 and 30411 of the Coastal Act which allowed development in severely degraded wetlands. This plan would allow Koll to have the money to restore the wetlands because without a boating facility there would be no money for restoration. However, even with these issues, and staff's recommendations to deny, the majority of the Commission voted to certify the document. A lawsuit filed by the Bolsa Chica Land Trust, the Sierra Club, the Surfrider Foundation, Huntington Beach Tomorrow and the Shoshone Gabrieleño Nation claimed the Coastal Commission erred in approving development in 185 acres of lowland considered degraded wetland, allowing Warner Pond to be filled, and approving the moving of the eucalyptus habitat (favored by raptors and herons) to the Huntington Mesa. In 1997, the court agreed: no development even in degraded wetlands!

In 1995, the Ports of Long Beach and Los Angeles and seven other regulatory agencies agreed to acquire the Bolsa Chica Wetlands from the Koll Company. This led to the 1997 decision by the State to acquire 880 acres of Bolsa Chica lowlands using Funds from the Ports of Los Angeles and Long Beach in exchange for mitigation credit. In that same year, the Bolsa Chica Restoration Steering Committee was formed from eight state and federal agencies to oversee the restoration of the Bolsa Chica lowlands, and several public hearing were held

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Claudia Czimczik of UCI, whose current project is to use invasive grasses to study the changes in air pollution during the stay-at-home order, and Martín Hoecker-Martinez, who is looking into how water flows in the outer Bolsa Bay of the Bolsa Chica Ecological Reserve. We also heard from organization leaders like Kurt Leiber, founder and president of Ocean Defenders Alliance, and Melanie Schlotterbeck, consultant for Friends of the Harbors and Parks and member of the Brea Planning Committee, as they shared about their organizations and how they have helped restore, mitigate, and protect the natural spaces in Southern California and beyond. One of the most popular webinars was Diane Alps from the Cabrillo Aquarium who gave a lively talk about the many whales that frequent the Southern California coast.

Over the past several months, the Amigos have gathered together – each of us in our respective homes – to join in our continued learning, in expanding our knowledge of science and of the pressing issues of our lifetimes, and in gathering as a community once more. The response to the Virtual Naturalist Nights has been bracing and encouraging. Seeing the dedication of our members and volunteers has been a light during this difficult season, one that I will cherish for years to come.

While Naturalist Night's began as a way to keep our volunteers connected and informed, the Amigos will be inviting the entire membership to join the webinars in October. Please be sure to open your Current Tide/ News for Amigos Members e-newsletter emails for details. And check out recordings of past webinars on the Naturalist Night Playlist section of the Amigos's de Bolsa Chica's You Tube channel: <https://www.youtube.com/channel/UC85pluHukJ2zsBqrgwW43EA>

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for discussion of restoration plans.

By 2000, Koll was limited to building only on the mesa, but the Commission staff brought forward a very surprising new plan. They proposed that most of the mesa should be protected because it provided foraging habitat for raptors, was immediately adjacent to the wetlands and contained stands of endangered tar plants. On a motion by Commissioner Shirley Dettloff, the commission voted unanimously to support their staff's recommendations. This left Koll with only 65 acres on the upper bench of the mesa with an additional 34 acres set aside for open space. Koll immediately filed a lawsuit against the Coastal Commission. They also filed a suit against the Amigos, saying that their actions were not supporting the original Coalition Plan. Finding that they did not have a strong position, Koll dropped the suit against the Amigos.

Is the fight over? No, it will never be over. First we fought to save and restore the wetlands, and now we must fight to make sure that the wetlands survive for future generations. Now the fight is a financial one to make sure that there is funding for maintenance of the tidal inlet so the flow of ocean water, which is the life of a wetland, are uninterrupted. There are also innumerable uncertainties brought on by climate change and sea level rise. We will need to be activists once again, writing letters, giving testimony and meeting with elected officials with a new purpose. Once again, that is how the future of these wetlands will be decided. How will this community respond now? Will it find a unified voice as it did in the 1970s and 1980s? We must always be vigilant and never for a moment take our achievements for granted.

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**FLOW Fridays, the First Saturday of the Month Tour and the Last Saturday of the Month Bird Walk/Trash Cleanup are suspended until further notice so as to avoid exposing our volunteers and tour participants to COVID-19. Check our website, [www.amigosdebolsachica.org](http://www.amigosdebolsachica.org) for updates.**



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**THE TERN TIDE**

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**AMIGOS DE BOLSA CHICA MEMBERSHIP APPLICATION**

I support the specific and primary purpose of Amigos de Bolsa Chica, which is to advocate the preservation, restoration and maintenance of the Bolsa Chica, to encourage the public acquisition of all the wetlands and sufficient surrounding open space to create a viable ecosystem, and to provide education about the importance of wetlands.

**ANNUAL DUES**

\$ 10 Student

\$ 25 Individual

\$ 40 Family

\$100 Sustaining

\$1000 Life Member

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_ Zip: \_\_\_\_\_

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**Additional Contribution:**

\$ \_\_\_\_\_ Fund operational expenses    \$ \_\_\_\_\_ Fund education projects    \$ \_\_\_\_\_ Total enclosed

**Please check if you are interested in volunteering for:**

FLOW Citizen Science \_\_\_ Naturalist training/wetland tours \_\_\_ Wetlands cleanups \_\_\_ Fundraising \_\_\_ Grantwriting \_\_\_

All contributions to Amigos de Bolsa Chica are tax-deductible as allowed by law under IRS Code Section 501(c)3.

No goods or services were provided in consideration of this gift.

Return application to: Amigos de Bolsa Chica, P.O. Box 1563, Huntington Beach, CA 92647