National City
Marina District

Fall 2013 • Geography 572 – Land Use Analysis
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About the Sage Project

The Sage Project is a partnership between San Diego State University (SDSU) and a city or government entity in the San Diego region. The mission of the program is to engage students from across the University in assisting a local government with projects that address their smart growth, quality of life, and sustainability goals. In the Sage Project, students have the opportunity to engage in meaningful real-world projects and make positive contributions to a community in SDSU’s service area. The program’s vision is to connect SDSU students and faculty with high-priority, high-need community projects, thereby generating interest and fresh ideas that create momentum and provide real service to the community. The Sage Project embodies the University’s commitment to serving local students, engaging alumni, and contributing to the public good by focusing thousands of hours of course-based student involvement with high-impact activities. The program is based on the highly successful and award-winning Sustainable City Year Program (SCYP) at the University of Oregon and is a part of the SCYP network.

National City, California, is the Sage Project’s 2013-2014 partner city. Participating courses come from the following disciplines: Anthropology; Audiology; City Planning; Civil Engineering; Communication; Geography; Graphic Design; Homeland Security; International Security And Conflict Resolution; Marketing; Political Science; Public Administration; Public Health; Speech, Language, and Hearing Sciences.

About National City

National City is a highly urban community of about 60,000 residents in south San Diego County. It is the second oldest city in the county and boasts a rich history, a diverse community, and is known as one of the most walkable cities in San Diego County. Located just south of downtown San Diego and just north of the US-Mexico border, the city is flanked by freeways and is home to large-scale industries. National City is a mid-size city that faces big city challenges, and, like many municipalities, the city is challenged to meet community needs and new demands of sustainability. By providing new ideas and human capacity, this partnership with the Sage Project will help National City implement sustainability concepts and practices into projects that will improve livability.

Executive Summary

The land use plans outlined in this report were created through the partnership between National City and the SDSU Sage Project during the fall of 2013. Upper-level undergraduate and graduate students in the Geography 572 course titled “Land Use Analysis,” taught by professor Diana Richardson, were given a project site in the National City Marina District for which they were to formulate a land use plan that they believed would be a sustainable, productive, and sensitive use for the site that is consistent and complementary to its surroundings.

The National City Marina District falls under the jurisdiction of several different entities; thus, students were required to identify the relevant federal, state, and local land use policies when considering different ways to best utilize the project site. Students had to comply with the National City General Plan, the Unified Port of San Diego’s Port Master Plan, the Harbor District Specific Area Plan, the California Coastal Commission guidelines, and the federal Endangered Species Act.

The projects were directly tied to goals set forth by the National City 2013 Strategic Plan and with substantial input by National City Staff. The Principal Planner, Martin Reeder, identified the three key needs of National City as job growth, tax generating commerce, and affordable housing. The students, organized into five groups, generated unique proposals to meet these needs while also applying concepts of sustainable design and smart growth in order to enhance connectivity between community, economic, and environmental goals.
Each of the five proposals addressed the nine elements that are laid out in the National City General Plan, which are a foundation for future development within the city. With land use as the umbrella element taken into consideration for all projects, students integrated course concepts to create a sustainable community with a complementary mix of uses. Additionally, the elements of community character, circulation, open space and agriculture, education and public participation, and sustainability were incorporated into site design considerations.

To meet goals of the community character element, many designs highlighted the maritime theme of the Marina District, which is one of the foremost industries in National City. Several paid homage to the history of San Diego, with one dedicating space to a museum filled with regional historic artifacts and information.

Similarly, changes to the site under the circulation element (i.e. transportation) were identified in the proposals. The groups formulated plans to create a more pedestrian-friendly area, with new commercial developments supplemented by trees and other green space. These proposals encourage bicycling and the use of other alternative forms of transportation, with most suggesting extensions to existing bus routes or a revitalized streetcar system to create a more accessible location.

National City and its residents are severely lacking in open space compared to the rest of San Diego County; thus, expansions of the existing Pepper Park and new green spaces were high on the agenda for these proposals. Community gardens were also included in a number of the projects to promote consumption of locally produced goods. One aspect of the site’s open space element is the adjacent Sweetwater Marsh National Wildlife Refuge. Because it is in close proximity to the project site, proposals took advantage of it as an educational opportunity for National City residents as well as to advocate stewardship of endangered wildlife.

The conclusion of this report highlights the most compelling designs and solutions to meet the needs of National City and work sustainable practices specifically into the National City Marina District. Proposals need not be adopted as comprehensive plans, but rather individual aspects from the varying plans can be implemented to ensure a bright future for the city and its residents.

**Project Site Background**

The National City Marina District is bordered by the Paradise Marsh on its east side and the National City Marina, with the connected Sweetwater Channel, to the south. The other surrounding areas are designated as industrial under the Port Master Plan. According to the Existing Land Use Map, Figure LU-1 in the National City General Plan, current onsite uses are industrial, recreation, and some vacant land. The primary use within the project site is industrial and contains some important assets to National City and the Port of San Diego. One such asset is the National Distribution Center that is the main storage and distribution hub for a number of companies including Dole Fresh Fruit, Dixeline Lumber, and Pasha Freight. A second major influence is Pasha Automotive and Distribution. This private company has the most advanced vehicle import and export facility on the West Coast, operating on slightly more than half of the Port’s National City land area and providing nearly $9 million in revenue to the Port in 2013. The commercial zone, which is largely under the Harbor Specific Area Plan jurisdiction, contains a vacant triangular lot and some of the parking lot utilized by the existing industries. A small area located adjacent to the marina and to the north of the Pepper Park parking lot is also designated as commercial.

The nearest major freeway is I-5, which lies on the eastern border of the wildlife refuge and allows access to the site taking Bay Marina Drive westward and going south on Marina Way. The nearest trolley stop is outside the site boundaries approximately 1000ft to the northeast of the I-5-Bay Marina junction.

Due to the location’s predominantly industrial use, the site currently does not receive much visitation aside from recreation use in Pepper Park, the nearby Waterfront Grill, and by those who use the marina and boat launching dock. Therefore, a major opportunity would be to create a more public-friendly and productive commercial area that is a boon to the site and the city at large. A key resource in the area is the wildlife refuge and Sweetwater Channel; therefore any project that would enhance their characteristics and improve community involvement and visitation based on those natural resources would be desirable.
Three vacant lots fall within the project site, and development plans for these areas were included in all five of the proposals. For the sake of clarity they have been renamed in the following report. The two lots just north of Bay Marina Drive and the Marina Gateway Development are renamed Lot A and Lot B, Lot A being the western vacancy. The southern triangular lot in between W 32nd St and the Paradise Marsh is designated as Lot C.

**Introduction**

The City of National City, in partnership with the SDSU Sage Project is striving to be a leader in San Diego County in its application of progressive sustainable concepts. One important concept that can have a large impact on sustainability is land use. The decisions on how best to develop land while promoting synergy across social, environmental, and economic concerns must be at the forefront of the planning process. Keeping this in mind gives National City a great opportunity to create a plan for smart growth over the coming decades. Summarized in this report are different proposals from SDSU students for land use plans in the National City Marina District that are in line with sustainable practices and the needs of the city. The City of National City collaborated with students enrolled in Diana Richardson’s Geography 572 Land Use Analysis course to gain insight into how that site’s potential can be fully realized.

The coursework for the class reviewed specific policies and regulations that are required in land use decisions at the local, state, and federal levels of government that were adhered to within the proposals. Taking these policies into account, the primary objective of the course was to examine how to plan land uses that are healthy for communities, are environmentally sound and that provide positive benefits to the economy and society. Course information was supplemented by outside readings that gave examples of effective sustainable land use practices around the world and accentuated the importance of reincorporating nature into urban landscapes.

A National City Redevelopment Project was set to take place from 2009 to 2014, and contained a plan between the Community Development Commission and the Marina Gateway Association to begin a commercial development in the vacant lots near the main access point to the area. A new land use concept was approved to increase citizen access to the lands west of I-5 while also improving efficiency of port operations at the National City Marine Terminal. This project was intended not only to revitalize the Marina District but other areas of National City as well; unfortunately, it eventually lost steam during the 2008 economic crisis. With implementation of these projects coming to a halt, students in the course were given the opportunity to envision their own ideal and most effective uses for that space.

The City of National City has the potential to benefit greatly from employing some of the ideas brought forth in these proposals. Mixed-use commercial and residential developments, public transportation and alternative transportation modes, cultural and historical consideration, sustainable energy and design technologies, and a focus on increasing green open spaces were all goals that could be feasibly attained for the betterment of the community. The ideas that embody these principles are outlined in greater detail in the following report.

**Thinkin’ About Thinkin’ Green (TATG)**

Vahe Michaelian, Jessica Gelliatly, Aaron Weber, Chad McGrath, Clayton Schminke

This proposal is intended to provide citizens of National City and the greater San Diego region access to a sustainable multi-use corridor while adding tax-generating businesses, and to serve as an example of smart growth in the region.

The proposal offers ideas for the three distinct vacant lots located within the project site, with Lots A and B dedicated to commercial space to boost visitation and economic viability of the area. Lot C is proposed as an open recreational area that provides educational signage and new benches for vistas of the Paradise Marsh Refuge, along with refurbishing the existing bike trail.

On Lot A will be a multi-level parking structure for visitors and a separate mixed-use building with the first floor dedicated to a historical restaurant and museum and the second floor to office or commercial space. The parking structure would complement...
Land Use Analysis

For Lot A, the project team proposes to designate this area for commercial use and construct a brewery and restaurant that is serviced by an organic garden and additional ground-level parking lot. This would enable more visitation and tax revenues, and it opens up another option for funding to initiate this development while supporting local businesses. The attached organic garden would grow barley, hops, fruits and vegetables that could help with self-sufficiency, and additional revenues could be made from guided tours of the brewing process. Buildings on both of these lots are intended to meet requirements for Leadership in Energy & Environmental Design (LEED) certification by utilizing rooftop solar paneling, pervious pavers, recycled building materials, and water conservation technologies.

Lastly, Lot C is designated as a recreation area, with several playgrounds and renewed trails for walking and biking along the wildlife refuge. This community park that integrates the Americans with Disabilities Act regulations is aimed at servicing disabled military veterans and other people with disabilities that make up a large portion of the San Diego region. It is known that recreational therapy and access to green space are beneficial to health in a variety of ways; through this method the project intends to improve the lives of these individuals as well as the entire community. The team also proposes a Paradise Creek Refuge Trail for cyclists and pedestrians that will provide the community with a viewpoint of the marsh that also contains educational signage highlighting some of the various protected flora and fauna that inhabit the refuge. To promote connectivity, they suggest adding a marked access point and linkage for the Sweetwater Loop and River Trail that currently stops before reaching the project site.

National City Gateway Association (NCGA)

Isabel Patten, Andrew Funk, Timothy Fraher, Dott Leibel, Christian Zaragoza

The NCGA designed a plan for the National City Marina that will maintain industrial, commercial uses within the zoning district, while also enhancing the community’s use of the region and establishing the district as a tourist destination. They also seek to preserve the historical aspects of the National City Bayfront, building a stronger connection with the community. They incorporate methods of sustainability in construction of buildings and landscape layout, achieving minimal to zero impact on the wildlife refuge through creative, minimalistic, and mindful uses of the land. This is all in a balanced effort to generate revenue for National City.

The proposal is divided into four separate phases. Phase I rezones Lots A and B for commercial use and constructs a boat dry storage facility for the marina. Phase II establishes a plaza just north of the Pier 32 Marina. Phase III addresses a parks and open space aspect of the proposal, with Phase IV suggesting alterations to transportation to and within the area.
Phase I designs a commercial area playing off of the maritime character of the location. Old shipping containers are repurposed into a café and small retail buildings, with picnic tables and new trees and decorative vegetation to create a visually appealing and pedestrian-oriented commercial space. Lot A includes a new parking area that provides easier access to this space. The most ambitious goal of this phase is to construct the National City Boat Dry Storage Facility. It allocates ample boat storage space on top of the existing space in the marina, resulting in a new source of revenue. It requires dredging of materials running along the western edge of Pepper Park to create a canal between the facility and Sweetwater Channel, but this material is repurposed later on in the development process. This facility also provides a fueling station and boat rental opportunities, creating more of a draw for the nautically inclined. It is to be located in the southwest corner of the project site just north of the Pepper Park parking lot.

A new dry dock boat storage facility takes the form of state-of-the-art multi-tiered buildings that mechanically store and suspend boats above the water in a compact area. They use space efficiently to supply marinas with extra room for boat storage, allowing for maximization of available space. The building is proposed to have 80 by 100 foot dimensions; thus, the facility at a maximum capacity of 300 boats with a space rental price of $9 per foot could earn yearly revenue of $324,000.

The Boat Storage Facility may also be used in conjunction with the newly remodeled YMCA Aquatic Center intended for completion in coming years.

Phase II establishes a community gathering center titled the Bayfront Village Plaza, containing different small commercial retail buildings and a raised amphitheater. The site does not currently attract many residents or tourists; thus, building a community gathering area would drastically improve the district’s community character through additional public space. This new area is partially elevated using the dredged materials harvested during construction of the canal with the amphitheater sitting on top, where they propose movie screenings and other social events. Building this vibrant communal space would draw in newcomers and National City residents alike to support the new commercial businesses, boosting the site’s stream of revenue. The plaza is also constructed with pervious pavement and storm drains to minimize impact on the hydrologic system within the project site.

Phase III develops Lot C into a natural buffer zone between the main development and the wildlife refuge. It is designed as a park with outdoor fitness equipment, some additional parking along its west side, and a gazebo/viewing platform for the wildlife refuge. It also adds more green space to the road and bike route with a bicycle service shop. This phase adds greatly to recreational opportunities and the open space element that is laid out in the General Plan, and works in conjunction with the commercial space to draw in more potential customers who decide to stay after their park visit.

Lastly, Phase IV addresses issues of transportation and accessibility to the area. It is currently difficult to walk to, and also lacks any form of public transportation stops. The NCGA proposes an extension to the Coronado Ferry so that it services this section of the bay. Furthermore, they have proposed a scenic streetcar that would travel along the bayfront from Downtown through National City, ending in Chula Vista. The new streetcar would utilize the old tracks that fell into disuse in the past but still remain in place today. This creates two new options for the currently limited transportation to the area, both of which could also act as tourist attractions while being functional means of travel. Additionally, re-establishing the streetcar conforms to smart growth principles and could fuel future commercial and residential developments. These are both compelling solutions that would greatly improve transportation through and around San Diego Bay, but they require cooperation from a number of different jurisdictions.
National City Marina Community (NCMC)
Shannon Mulderig, John Moran, Jessica Madamba, Gina Davis, Michael Port

This proposal looks to address National City’s priorities of affordable housing, jobs, and tax-generating commerce while being sensitive to and playing off of the industrial surroundings, stressing concepts of smart growth that are goals for all municipalities of San Diego County.

The main goal of the proposal is to create a new independent living community that follows the mixed use, pedestrian-oriented development principles of smart growth and provides a valuable use for the rest of National City. This would require the joint cooperation of the Port of San Diego and National City under the Port Master Plan and the Harbor District Specific Area Plan. While the Unified Port District would prefer that it maintains its prime waterfront industrial sites under the industrial use section in the Master Plan, these students proposed a modification to a part of the project area in order to better meet Port goals in conjunction with city goals. They envision this area as a self-sustaining community with affordable housing, booming local businesses, and recreational areas.

The mixed-use development encompasses the present Pasha Group parking lot and Lot C, and will be two stories with the first floor dedicated to commercial space and the second floor as multi-family residential units. This design is a more efficient use of land area, as housing and economic opportunities can be maximized within the same vertical space. The commercial use ideally should be a diverse mix of predominantly local small businesses and restaurants that employ second floor residents and other National City citizens to enhance community character; however, occupation of this space by shopping centers such as Westfield opens up the possibility of added funding for the project.

This proposal also features a two-story parking structure to allow parking for residents and visitors on one floor while still meeting the Pasha Group’s need for industrial automotive parking spaces on the other. The structure is intended to have a green roof that will serve as a recreational area, maximizing the available space for public benefit. The proposal includes terraced hydroponic farming along the exterior of the structure that draws water from a man-made pond central to the development. This produces a cyclical aquaponic system.

A key objective of the proposal is to create more open space and reinforce the importance of nearby natural resources, while retaining important Port land uses. A significant portion of the site is devoted to recreational areas and the aquaponic pond that serves as a focal point for the project. Improvements in green space are achieved in a number of ways. First, the green roof on top of the parking structure mixes industrial use space with green space in the same vertical area. Second, the expansion of Pepper Park nearly doubles its size and gives the community another gathering place for events. Lastly, within the mixed use development on Lot C, there is a central courtyard available for local residents and their children to use.

The terraced hydroponic gardens connected to the eastern wall of the parking structure are intended to help build a more sustainable community with better access to healthy food options. Community residents are able to grow their own foods in individual plots, which ideally would serve the nearby restaurants and a weekly farmer’s market. It could also provide an educational opportunity if partnerships are made with nearby schools to bring in students who can learn to grow their own fruits and vegetables.
Aquaponics: Aquaponics is a food production system that combines conventional aquaculture (raising aquatic animals in tanks), with hydroponics (cultivating plants in water) in a symbiotic environment. Water containing the accumulated excretions from the animals is fed through a hydroponic system where these by-products are broken down by nitrogen fixing bacteria into nitrates and nitrites, which are utilized by the plants as nutrients. The water is then recirculated back to the aquaculture system.

Designing Urban Recreational Paradise (DURP)
Nicholas Cantelmi, Edmundo Hernandez, Jessica Aloisio, Kevin Biddle, Nadifa Mohamed

The DURP team identified their main project goals as providing community access to a variety of commercial and recreational areas, creating a walkable and social environment, adding a diverse set of transportation options, develop revenue for National City and the Port of San Diego, providing healthy and affordable food for the community, job creation, and improvements in environmental education. To achieve these goals, they developed a five-phase plan.

Phase I includes changes to transportation in order to improve site access. They place strong emphasis on bicycling, suggesting implementation of a new Class I bike path with full connection to the Bayshore Bikeway and California Coast Trail. In addition, they have proposed an extension to the MTS 955 route with two bus stops near the southern end of the project site.

Phase II boosts public access to the shoreline and Paradise Marsh, revamping the dirt walkway with a similar scheme and fencing as the northern edge of the refuge that is just outside the project area. Educational signage is also to be included with a picnic and general recreation area on the eastern side of Lot C, serving as a buffer between the refuge and Phase III plan.

Phase III develops the southern portion as commercial space, with Lot C accommodating small retail stores or local markets. This ideally would be transformed into a permanent farmer’s market that creates a sustainable and green venue with various food stalls and other small shops to supply healthy local food options and revenue for the city and its small businesses.
This farmer’s market could become a productive community gathering space that further promotes walking and public health. The lot sitting adjacent to the farmer’s market is envisioned as open parking for citizens who still choose to rely on driving to the area rather than biking or using public transportation.

Phase IV begins once the previous three have gone into effect and adequate use has been established. They propose an expansion to Pepper Park, utilizing part of the existing overflow parking lot in order to add to the existing minimal open space aspect of National City’s port lands. This gives more recreation opportunities and it permits for room to hold public events, such as cultural festivals and street fairs that build community character.

Phase V redevelops the parking lots that are currently on temporary permit with the Pasha Group into a three story parking garage. This would alleviate pressures put on available parking space for industrial use that is impacted in the other phases, while using the space more efficiently in a fully automated LEED Gold eco-garage. This garage possesses similar technology to the boat dry storage mentioned earlier and could be using the space more efficiently in a fully automated LEED Gold eco-garage. This garage possesses similar technology to the boat dry storage mentioned earlier and could be another opportunity to generate revenue.

**National City Redevelopment Proposal (NCRP)**

**Kristin Otto, Melissa Kemsley, Robert Aiken, Charlayne Lopez**

This group has set goals that are similar to some of the other projects: improving street infrastructure to strengthen accessibility and walkability, building more open space and recreational areas, and fueling the economy with new employment opportunities are all primary objectives. What sets it apart from other projects is the emphasis on the aesthetically pleasing, with public works of art that cultivate creativity and give the site a strong and unique sense of character.

Their suggested alterations to transportation infrastructure include improvements of existing sidewalks that are wider with more landscaping and additional pathways through new park space, a bicycle route that runs throughout the site, and a bus stop near the Pier 32 Marina. Conjoined pathways will rely on clear signage that designates one side for cyclists and the other for pedestrian use to promote safety. They also propose a parking structure within the existing industrial use parking area that has an open roof available for solar paneling, parking, and public gatherings.

The development for Lot B is primarily geared towards local agriculture. There will be a large greenhouse surrounded by plots for public use farming, and through partnerships with local environmental groups such as the Trash Talkers Coalition and Operation Sama-han, they propose holding a farmer’s market associated with every major harvest.

The main feature of the adjacent Lot A is an air quality detection station that would constantly monitor the ambient air. This could open up the possibility for high school and university students to conduct research, thereby encouraging innovation to improve local air quality that is impacted by industrial output. In the center of the lot is a juice stand and café, with artwork related to the cultural history of National City scattered around it.

To meet the goal of increased recreation and open space, they propose an expansion of Pepper Park that extends into a current parking area. Contained in the expansion is a skate park that would not only give youths a new opportunity for recreational activities, but could also serve as a public art piece if it is painted with designs that complement the surrounding aesthetics. Another addition that could inspire more public use is an improvement of the fishing pier at the south end of Pepper Park. They propose construction of a combined small brew pub and bait and tackle shop, such as that found at Fathom Bistro on Shelter Island.

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The group proposes retail shops and restaurants of varying sizes with new decorative foliage and circular pathways that create an aesthetically pleasing and productive commercial area. Some suggestions proposed for these small businesses were novelty stores, tourist souvenir shops, and a Mexican restaurant. Lastly, they propose a ground fountain in between Paradise Park and the commercial area with a nearby gazebo where local bands could play to provide entertainment for the shoppers and diners. These last two additions would solidly support the family-oriented communal atmosphere they hope to attain through this project.
Conclusion

This proposal compiles the five group projects that were generated within one of the first Sage Project-partnered SDSU courses on land use analysis. These projects provide progressive and unique ideas to address National City’s needs for job growth, tax generating commerce, and affordable housing while keeping in mind principles of smart growth and sustainable development. All projects kept National City’s General Plan ideals in mind for the final submission, with a strong focus on the elements of community character, circulation, open space and agriculture, health and environmental justice, and conservation and sustainability. Many aspects of the proposals provide synergistic solutions to meet goals across these different elements.

The individual projects are not intended as comprehensive implementation plans, but preferably the most desirable, creative and future-oriented aspects within each proposal can be considered for application in the Marina District. The following are highlights of the most compelling ideas gleaned from the proposals.

Land Use:

In applying the General Plan element of Land Use, each of the five projects proposed innovative ideas for future development and redevelopment within the Marina District. Through creating a complementary mix of industrial, commercial, recreational, service, food-producing uses and other designations, the proposals worked in different ways to support a sustainable community. By balancing growth and change and maintaining and enhancing well-established characteristics of the area, this raises the possibility of creating an overall quality of life deserving of National City’s residents. Two of the proposals brought forth outstanding ideas that provided the most drastic changes to land use within the project site.

The NCGA’s National City Boat Dry Storage Facility adds to the site’s maritime character and recreational capacity as well as supplying a new commercial land use. Additionally, their Bayfront Village Plaza creates a new commercial area that goes along with the maritime industrial theme and gives the community a forum for social gatherings. The utilization of sustainable technologies such as pervious pavements and storm drains will also minimize impacts on surrounding land uses moving into the future.

The NCMC proposal looks to make a significant change in the Marina District by including mixed-use residential and commercial space in the primarily industrially geared land within the project site. Creating a new living community with multi-family units could potentially meet some of National City’s demand for affordable housing and by implementing smart growth principles lead to a highly productive area for future generations. The combination of residential and commercial in the same space would allow each use to bring benefit to the other, with citizens supporting and running small businesses that fuel the local economy. The proposal does not discount the industrial value of the site, and with a parking structure that would serve Pasha’s needs as well as those of the public’s, it actually uses the limited space more efficiently.

Circulation:

All of the proposals included changes to existing street infrastructure, with wider pedestrian-oriented sidewalks and improvements to the existing bike paths to promote more sustainable alternative forms of transportation.

Four of five proposals advocate the construction of parking structures to alleviate the projected influx of new visitors and to minimize impact on Pasha Automotive’s need for industrial car parking. TATG recommends placement of the structure on Lot A, while the others located theirs closer to the southern end of the project site in the existing parking lots.

The NCGA suggested two inventive thoughts on general public transportation and one for a more efficient use of space within the Pier 32 Marina, albeit with limited accessibility for non-boat owners:

1. A southbound extension to the Coronado Ferry that would allow it to service Downtown San Diego, National City, and Chula Vista,
2. A revival of a scenic streetcar system that visits locations all along the San Diego bayfront, creating a new form of transportation as well as a tourist attraction that would bring revenue to all of the Port lands, and
3. A National City Dry Dock Boat Storage Facility that greatly increases docking capacity for the Marina.

Community Character:

All of the proposals attempt to highlight the strong sense of community character for the Marina District, greater National City, and the Port of San Diego. Two proposals advocate the use of recycled shipping containers in new construction to play off of the marine industrial theme of the area, with others embracing history and paying homage to the past railroad and Spanish influences through museums and public art displays.

Community gathering spaces are highly endorsed, with the NCGA proposing a Bayfront Village with an amphitheater for movie screenings and the DURP group proposing a year-round farmer’s market that both would give the site opportunities for forming a distinctive community.

The NCRP project brings together multiple elements of the General Plan in order to create a vibrant community. Their development includes public works of art and is geared towards family fun and giving the marina a unique sense of identity:
1. A skate park that brings in younger crowds that can also be decorated over with murals and artwork related to National City and the marina,
2. A community shopping center with a ground fountain for kids’ enjoyment and a nearby gazebo with picnic area for community gatherings, and
3. Statues and other art pieces that also serve as playground equipment.

Conservation and Sustainability:
With the nearby Paradise Marsh National Wildlife Refuge, the proposals had to consider the effects their developments might have on the sensitive ecosystem and its inhabitants. Under strict guidelines, all of the proposals recommended a buffer zone in between their new buildings and the marsh. Educational signage is placed along enhanced walkways near the refuge that encourage conservation and stewardship.

All proposals integrated sustainable practices that attempt to boost the use of renewable energy, as well as minimizing driving while increasing the use of bikes and alternative forms of transportation.

The TATG group took conservation and sustainable development practices into high consideration in their proposal. They desire to meet LEED standards in all of their new buildings with an emphasis on the mixed-use aspect of smart growth:
1. LEED certified goals with solar rooftop paneling, pervious pavements, utilization of natural lighting, and rain collection technologies to work towards net-zero water input and output, and
2. Mixed-use restaurant, museum, and commercial space on Lot A and a brewery and restaurant assisted by its own organic garden.

Health and Environmental Justice:
A dedication to health and environmental justice can be seen across all of the proposals, with a focus on increasing space available for recreation for National City residents of all ages. Most proposals include outdoor fitness equipment within these areas and all of them stress riding bicycles for transportation to and around the project site.

Additionally, in its current state, with the exception of the Waterfront Grill the Marina District is a food desert, with little to no access to healthy food on its side of the I-5 Freeway. Because of this, most of the projects implement some form of local agriculture to help raise awareness for and alleviate public health issues.

Open Space and Agriculture:
All proposals provide varied designs on how to maximize the limited amount of green open space within the area. Several call for utilization of Lot C as a new park with outdoor fitness equipment that also serves as a buffer between main development and the Paradise Marsh Wildlife Refuge. Expanding Pepper Park was likewise a heavily supported idea.

In addition to open space, four out of five of the proposals intend to equip the community with opportunities to support local agriculture to make healthier food options more available. TATG proposed an organic garden that grows ingredients for their brewery and restaurant, and NCRP suggests construction of a large greenhouse with small plots surrounding that are open to the public. DURP envisioned a permanent farmer’s market on Lot C that is open for local vendors to sell their produce and other goods.

The NCMC presented components for a plan that allows for an effective combination of open space use and agriculture:
1. Construction of a parking structure with a green roof that can be used for recreation and that would provide a 360 degree view of the bay and wildlife refuge
2. Shopping area with an aquaculture pond in the middle that is surrounded by green space as a gathering area, and
3. Hydroponic terraced farming along the eastern wall of the parking structure that is connected to the pond, creating a self-sustaining aquaponic system.

Ideas presented within these proposals were generated based on cutting-edge research learned from class lecture, course documents and guest speaker presentations. By implementing a mix of the approaches to best practice presented above, the City of National City has the opportunity to reap great benefits in the short-term. Applying these sustainable development principles would also ensure a bright future for the people of National City.