



South Padre Island Shoreline Master Plan

Environmental Education, Tourism,
Conservation and Public Access

The City of South Padre, Texas
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Executive Summary

Introduction

South Padre Island (SPI) is home to a pristine beach and a robust dune system that is rich in ecological diversity and hosts an array of wildlife species, highlighted by a major migratory bird flyway. The Island also separates the Laguna Madre Bay (“the bay”) and the Gulf of Mexico (“the Gulf”); each support world-class commercial and recreational fishing. Located at the southern tip of the Island, the City of SPI (“the City”) is home to more than 5,000 residents and attracts approximately 4.5 million visitors per year (*Seatrade Cruise News 2018*). Public beach and bayside access offer unique activities, including motorized and non-motorized boating, fishing, surfing, sand castle building and wildlife observation. Throughout the year, the City hosts many local events that provide unique opportunities for outdoor recreation and relaxation. Popular events include Sandcastle Days, the Lighted Boat Parade and the Winter Outdoor Wildlife Expo. As shown in the table below, 39 events were directly funded by the City through the Convention and Visitors Advisory Board in 2017. Between 2018 and 2020, over 180 City-sponsored events are scheduled (*M. Flores, pers. communication, 2018*). Additionally, environmental education focused on conservation can be found within the City, including formal and non-formal programs for all ages and abilities.

Year	Number of Events
2017	39
2018	56
2019	63
2020	68

In 2008, the City developed a Comprehensive Plan that provides goals, objectives, policies and strategies for improving the overall functionality of the City’s natural systems and ensuring visitors and residents benefit from the Island’s resources. Currently, the City is revising the Comprehensive Plan that will include a Shoreline Master Plan (“Plan”) with the intention of using information provided herein to supplement and build upon the City’s existing efforts in:

- Education;
- Tourism;
- Conservation; and
- Public access.

In its simplest form, this Plan provides a list of broad, interrelated goals that enhance or support existing education, tourism, conservation and public access projects within the City. Each goal is accompanied by recommendations that build upon commitments from the City’s previous planning documents and the

knowledge gained from the results of a public planning meeting in December 2017 (Appendix A), the SPI Master Plan Survey that was distributed by the City in April 2018 (Appendix B), as well as direct conversation with citizens in one-on-one interviews (Appendix C) and at a Comprehensive Plan Open House held in June 2018 (Appendix D).

Summary

This master plan sets an ambitious path toward improving the community and visitor experience as it relates to the shoreline, creating a more resilient coastline and preserving and protecting the Island's natural resources. Plan development used the best available information to identify key action items and made engagement of current stakeholders and the community a priority in the planning process, as they will have the most direct impact on the success of each goal. Key actions that will directly enhance environmental education, shoreline tourism, conservation and public access within the City are summarized below. It is important to note that the amount of effort required per strategy will vary; some are already being accomplished while others will require innovation and greater resources.

Education

The City seeks to embrace, support and integrate environmental education into everyday experiences. Educational programs and facilities should provide individuals with the knowledge and skills to be effective stewards, allowing them to take actions that will effectively improve and preserve the quality and abundance of the Island's natural resources for future generations. The City's vision includes providing environmental experiences at home, school and in recreational settings by utilizing existing local, regional and statewide resources and recognizing areas for enhancement. It also includes promoting and supporting robust educational facilities and programs that are adaptable to change. Overall, these efforts should increase resident and visitor stewardship, resulting in a greater, personal connection to SPI and an island that is stable and resistant to decline from human and environmental pressures.

Key actions that will directly enhance environmental education associated with the shoreline and its natural resources are:

- **Education Liaison:** The City should have one staff member that is responsible for acting as an active education liaison, ensuring events are posted to the City's calendar and facilitating cross-collaboration of ideas and activities between educational providers. This liaison would also be responsible for coordinating research activities within the City limits, archiving research completed on the Island and within the larger eco-region on the City's website and connecting researchers with potential volunteers to support data collection activities.
- **Create a Forum:** Expand the education activities landing page on www.sopadre.com to promote local environmental education providers and programs not listed currently.
- **Provide Facilities:** Currently, only two beach access points have restroom facilities and there are no similar public facilities at bayside access points. More advanced programs may require classroom space, storage space for field equipment and laboratory equipment. Programs for younger and older groups, especially, may require bathroom facilities. Such facilities should be co-located together.

Tourism

Tourism is SPI's primary economic driver and will continue to be for years to come. The City wants SPI to be seen as a key destination; an integral part of living in and visiting southern Texas and the greater Gulf Coast. To achieve this goal, the City must engage target visitor audiences with a variety of attractions unique to SPI and continue to support projects that market SPI as a world-class destination. Strengthening the City's economic vitality through the preservation and enhancement of SPI's existing

natural and cultural conditions will help the community continue to build a solid foundation for tourism that can be expanded in the future.

Key actions that will directly enhance tourism associated with the shoreline are:

- **Enhance Beach Access Facilities:** The City has done an excellent job of improving beach access points; however, restrooms and shower/foot washing stations are limited and need to be expanded to facilitate a positive experience for all users.
- **Enhance Bayside Access and Facilities:** Bayside activities, particularly fishing and wind sports, are a large secondary draw to the Island; however, public access, parking, restrooms and facilities are significantly lacking. Opportunities for land acquisition should be explored, particularly clustering around the entertainment district for motorized vessel ramps and north of the Convention Centre for non-motorized access.
- **Establish Guidelines to Preserve the City's Brand:** SPI's brand is inherently linked with the shoreline, particularly the beach and spring break. The City, the Economic Development Corporation (EDC) and the Convention & Visitors Bureau (CVB) all work to strengthen the SPI brand and diversify tourism; however, this work should be directed by a set of guidelines and priorities that is clear to the public and helps prioritize investments with the greatest potential benefit. By establishing clear guidelines, including a decision matrix, proposed projects could be evaluated against each other and the projects that rank the highest in supporting the City's brand would move forward ahead of other lower-ranking projects. Such guidelines would complement the Six Sigma tools already being utilized by the City.

Conservation

SPI has an abundance of natural features and scenic areas. Such unique opportunities are the primary reason SPI is revered as a premier location for vacationing and living, and also the reason why SPI's resources must be enhanced and protected. Beach nourishment and protection of natural habitats and ecosystems receive wide public support based on recent polls and public interviews. The beaches and dunes not only provide recreational areas and habitat but also serve as storm protection features. Dunes, in particular, are a storage system of sand that breaks up storm wave energy and assists in beach recovery after the storm passes. In addition, bayside conservation activities, including flood protection and mangrove and wetland preservation were ranked high on the April 2018 public survey.

Key actions that will directly enhance conservation associated with the shoreline are:

- **Storm Resiliency:** In the coming decades, rising sea levels will pose a serious threat to the integrity and vitality of SPI's businesses and neighborhoods. The National Oceanic and Atmospheric Administration (NOAA) projects sea level to rise at the Port Isabel gage between 2 inches to over 2 feet between now and 2050 (NOAA 2017). To protect infrastructure, it will be necessary to improve flood and storm resiliency. SPI is currently completing a Drainage Master Plan to help reduce the potential for flooding. This study should include storm surge and wave modeling for the Island.
- **Updates to Building Code:** SPI has experienced multiple storm events, including hurricanes in 1933, 1936, 1967 (Beulah), 1980 (Allen), and 2008 (Dolly). Flood risk reduction is recommended for the City based on wave height, past storms and the projected sea level rise in 2020 (U-Surge). The City should strengthen the form base code for increased resiliency from flooding. Currently, the FEMA Flood Zone VE ends at the City Historic Building Line. Though not required by the National Flood Insurance Program, it is recommended that local building codes, especially along the beachfront side of Padre Boulevard, be strengthened to exceed the building requirements of FEMA Flood Zones in an effort to plan for the future and increase resiliency. Bayside is

experiencing increased nuisance flooding and the City's building codes should provide stronger guidance regarding constructing new buildings. The City should coordinate with the Development Standards Review Task Force to discuss guidance, which could include occupiable first floor elevations located above a projected base flood elevation, location of electrical panels and HVAC equipment above base flood elevation and flood vents. The City should also encourage builders to implement the Insurance Institute for Business and Home Safety FORTIFIED Home Program voluntary building standards to help strengthen homes against storm impacts.

- **Revision of Chapter 22 of the Code of Ordinances for the City:** Dunes are the primary protection from wave energy and are a key component to storm protection. Chapter 22 references a report by Robert Morton from the Texas Bureau of Economic Geology that was developed in 1993 and describes proposed dune features that should survive most large storms. This guideline, prior to the establishment of a significant dune system on SPI, has since resulted in the successful establishment of a dune system for much of the beach. However, the ordinance was developed under conditions that no longer exist and prior to the majority of current research on climate change and sea-level rise. The sea level projections did not account for the accelerating rate of sea level rise currently being utilized in estimates, as the method for measuring sea level from space using laser altimeters only began in the early 1990s. Now that a dune system is present, the City should review the ordinance based on the current conditions and research. In addition, the City should develop a level of protection goal that can guide dune dimensions. The U.S. Army Corps of Engineers provides methodologies for designing storm damage reduction features such as beaches and dunes. The ordinance should update dune maintenance and access construction guidelines, including dune topping and the distance between walkovers and dune crest (or maximum/minimum walkover deck elevation) and should be comprehensive to include bayside access and protections.

Public Access

While there are multiple unique opportunities for access to the extensive shorelines of the Gulf and the bay, the City must prioritize improvements to existing and new public access points that combine storm protection, habitat restoration and resident and visitor experience. Key actions that will directly enhance public access associated with the shoreline are:

- **Enhance Existing Beach Access Points With Restrooms, Wash Stations and Additional Parking:** The results of a public survey conducted in April 2018 and direct conversation with citizens at a Comprehensive Plan Open House held in June 2018 reveal strong community support for the addition of permanent restroom facilities over temporary restroom facilities at beach access points. By enhancing existing beach access points with amenities such as restrooms, wash stations and parking facilities, the City can help alleviate over-use at current beach access points and improve the overall beach user experience.
- **Increase Boat Access on the Bayside:** Public boat access is currently limited within the City, with only two free public boat access ramps on the bayside at East Palm Street and East Polaris Drive. These two sites also have limited vehicle/trailer parking. There are also several fee based boat ramps at Amberjack, Jim's Pier, Parrot Eyes, and the KOA campground. An additional fee based boat ramp is located within Cameron County's Isla Blanca Park. The City needs to create additional boat access and associated parking, primarily in the entertainment district to draw more tourists to the area and reduce use at the residentially located boat access point.
- **Separate Motorized and Non-Motorized Boat Access Points:** The City should separate motorized boat access points from non-motorized boat access to improve the bayside user experience, public safety and avoid over-use and/or habitat degradation at one particular boat access point.

- **Protect the Continuous Dune System:** The results of a public survey conducted in April 2018 and direct conversation with citizens at a Comprehensive Plan Open House held in June 2018 reveal strong community support for dune walk-overs versus at-grade access mats. Dune walkovers help protect and promote the vital dune system that is important for coastal resiliency. The City should also encourage residents to tie their beach access in to existing walkovers as described in the City's Erosion Response Plan. Providing additional protection to a continuous dune system will provide shoreline protection to upland properties.

The actions described in this Plan offer many opportunities to enhance the community and visitor experience relative to the shoreline; however, when viewed collectively, the quantity and complexity of these actions may seem overwhelming. The key to successful implementation is to understand that there are a number of overlapping recommendations across the four primary goals. Specific efficiencies include enhancing public access facilities, which will serve educational and tourism goals; enhancing bayside access, which will support tourism, public access and conservation goals; and increasing the City's flood and storm resiliency, which will support education, conservation and public access goals. These enhancements will take several years of incremental and continuous change and fortunately, many of them can be achieved concurrently through strong City leadership and community involvement.

Chapter 1. Education

1.1 Introduction

According to Texas Association for Environmental Education, Texans have fewer direct experiences in the natural world today; therefore, safe and enjoyable indoor and outdoor experiences focused on our environmental resources are increasingly important for all citizens. An excellent setting for environmental education is the natural environment. Learning experiences within the natural environment can cater to all ages and backgrounds, be focused on culture and recreation and range from general awareness to action (TAE 2013).

Two international documents, the *Belgrade Charter* and the *Tbilisi Declaration*, provide environmental education definitions and practices that remain the foundation for today's environmental education programs. The *Belgrade Charter* provided an initial goal statement for environmental education that was adopted during a 1976 United Nations conference (TAE 2013):

The goal of environmental education is to develop a world population that is aware of and concerned about the environment and its associated problems, as well as the knowledge, skills, attitudes, motivations and commitment to work individually and collectively toward solutions of current problems and the prevention of new ones (UNESCO 1978).

Two years later, at the world's first intergovernmental conference on environmental education, the *Tbilisi Declaration* articulated the goals for environmental education (TAE 2013):

- *Foster clear awareness of, and concern about, economic, social, political, and ecological interdependence in urban and rural areas;*
- *Provide every person with opportunities to acquire the knowledge, values, attitudes, commitment and skills needed to protect and improve the environment; and*
- *Create new patterns of behavior of individuals, groups, and society as a whole towards the environment.*

Environmental education helps individuals obtain the knowledge and skills necessary to make responsible environmental decisions and take responsible actions to protect natural resources (TAE 2013). Ultimately, the goal of environmental education is to aid individuals in understanding how people and societies are broadly related to one another and to natural systems. This increased awareness then guides people to take collective action toward addressing environmental challenges, as well as individual stewardship actions.

The City and the neighboring community offer a range of environmental education providers that create opportunities for citizens to connect with the natural world in a variety of different settings and experiences. This chapter is intended to provide guidance for the collective environmental educational programs that exist on and near SPI and to identify ways to celebrate, support and sustain these existing environmental education programs. The City and other educational groups are working to provide residents, visitors and future generations multiple opportunities to interact and engage with SPI's natural resources. These efforts include supporting resilient education facilities that are stable and can withstand environmental pressures, as well as promoting programs that are adaptable to change. Currently, there are no formal collaboration or communication channels between all of the entities offering educational opportunities. These programs would be stronger and able to adapt to community needs if there was a

forum for promoting, celebrating and a cross-pollination of programs. The key to a resilient environmental education program on SPI is the ability to connect people and providers so that information, resources and expertise can be easily shared.

A general overview of the existing SPI environmental education opportunities is provided in Section 1.2. This section introduces environmental education on and near SPI and demonstrates how the environmental education community provides learning opportunities for diverse audiences.

Section 1.3 includes a summary of the City's broad environmental education goals to challenge and unite the environmental education community to realize a greater vision and cross-pollination to enrich the environmental education opportunities. These goals include, but are not limited to, the following:

- **Increasing public participation in environmental education opportunities;**
- **Increasing the diversity of environmental education audiences, providers and programs;**
- **Encouraging collaboration and communication among interested parties;**
- **Supporting opportunities for educators to participate in professional development; and**
- **Establishing funding for environmental education within the City and evaluating the success of the environmental education programs.**

Following the summary, each goal is described individually; the goals are mutually supportive and not listed in any specific order. Each goal is accompanied by several strategies and suggested actions to support their obtainment. The amount of effort required per strategy will vary; some are already being accomplished while others will require innovation and greater resources. The list of strategies is not exhaustive, but rather represents suggestions for accomplishing each goal.

1.2 Existing Environmental Education Opportunities

The City offers environmental education opportunities at multiple venues, serving millions of visitors and residents alike. These include formal and non-formal education venues, such as the SPI Birding and Nature Center, Sea Turtle, Inc., the Native Plant Center and The University of Texas Rio Grande Valley Coastal Studies Laboratory. The overall goal of environmental education is to provide inclusive opportunities for all ages and abilities. The following indicates the existing learning opportunities available through environmental education and highlights the broad scope of the environmental education resources on SPI. This listing does not detail all of the existing local, regional, or statewide environmental education efforts, but rather is meant to convey the diversity of environmental education opportunities that are already available. This information can be used to identify potential partnerships and opportunities for collaboration, highlight underutilized resources and suggest funding strategies, with the ultimate goal of supporting and sustaining existing opportunities.

1.2.1 Types of Environmental Education

Generally, environmental education opportunities are referred to as formal or non-formal; however, there may be overlap between these categories. The following sections provide information about each of these education designations.

1.2.1.1 Formal Education

Formal education refers to educational opportunities that occur in formal settings, such as an ongoing classroom or program and are generally guided by a curriculum framework. These opportunities are sometimes based on education standards and often participation is mandatory. Examples of formal settings include:

- Early Childhood Education (pre-Kindergarten [pre-K]);
- Kindergarten through Grade 12 Public and Private Schools;
- Homeschooling;
- Post-Secondary Education (i.e. colleges, universities, public and private technical schools, certification programs);
- Courses/Seminars for Credit, Certification, or Licensure.

Within formal settings, environmental education can be experienced in a variety of ways that can include innovative and experiential education outside the classroom; however, these opportunities generally use more traditional approaches that include lectures and classroom activities.

Formal Education Opportunities

Formal education opportunities on SPI can be found at The University of Texas Rio Grande Valley SPI campus (**Figure 1-1**). The University of Texas Rio Grande Valley operates the Coastal Studies Laboratory, a facility of the School of Earth, Environmental and Marine Sciences. The School of Earth, Environment and Marine Sciences offers degree programs in environmental science, marine biology, ocean, coastal and earth sciences and agricultural, environmental and sustainability sciences, in addition to a curriculum geared toward a teaching certification (*UTRGV n.d.*). At the Coastal Studies Laboratory, students can participate in continuing education programs, which include leading marine science educational programs for visiting school groups (i.e. Ridley Floating Classroom) and in seminar series (*UTRGV n.d.*). Additionally, the Coastal Studies Laboratory offers a two-day professional development workshop for teachers focused on environmental education in the pre-K through Grade 12 environment (*UTRGV n.d.*).



Figure 1-1. Existing Formal Education Resources within the City of South Padre Island
(Source: Texas Orthoimagery Program (TOP) 2015 50cm NC\CIR Orthoimagery)

While there are no public or private pre-K or pre-K through Grade 12 institutions located on the Island, the City provides several homeschool offerings. In the fall of 2018, the SPI marketing team attended a three day National Homeschooling Conference as part of a larger effort to bring non-seasonal educators to the Island. The City exhibited alongside 250 other destinations and third-party homeschool vendors, collaborating with parents and educators and introducing them to SPI's robust natural environment. The City's exhibit highlighted SPI's nature trails, Birding Center, Sea Turtle, Inc. and numerous, year-round sea life tours. The City has since established a permanent landing page on www.sopadre.com dedicated to the familiarization and homeschool offerings which South Padre Island boasts (*M. Flores, pers. communication, 2018*).

Within the neighboring City of Port Isabel, Texas, there are several institutions that offer formal education settings. These include primarily public and private pre-K and pre-K through Grade 12 schools (**Figure 1-2**):

- Port Isabel Junior High and High School
- Garriga Elementary School
- Derry Elementary School
- Little Learners Academy
- Bay Area Christian Academy

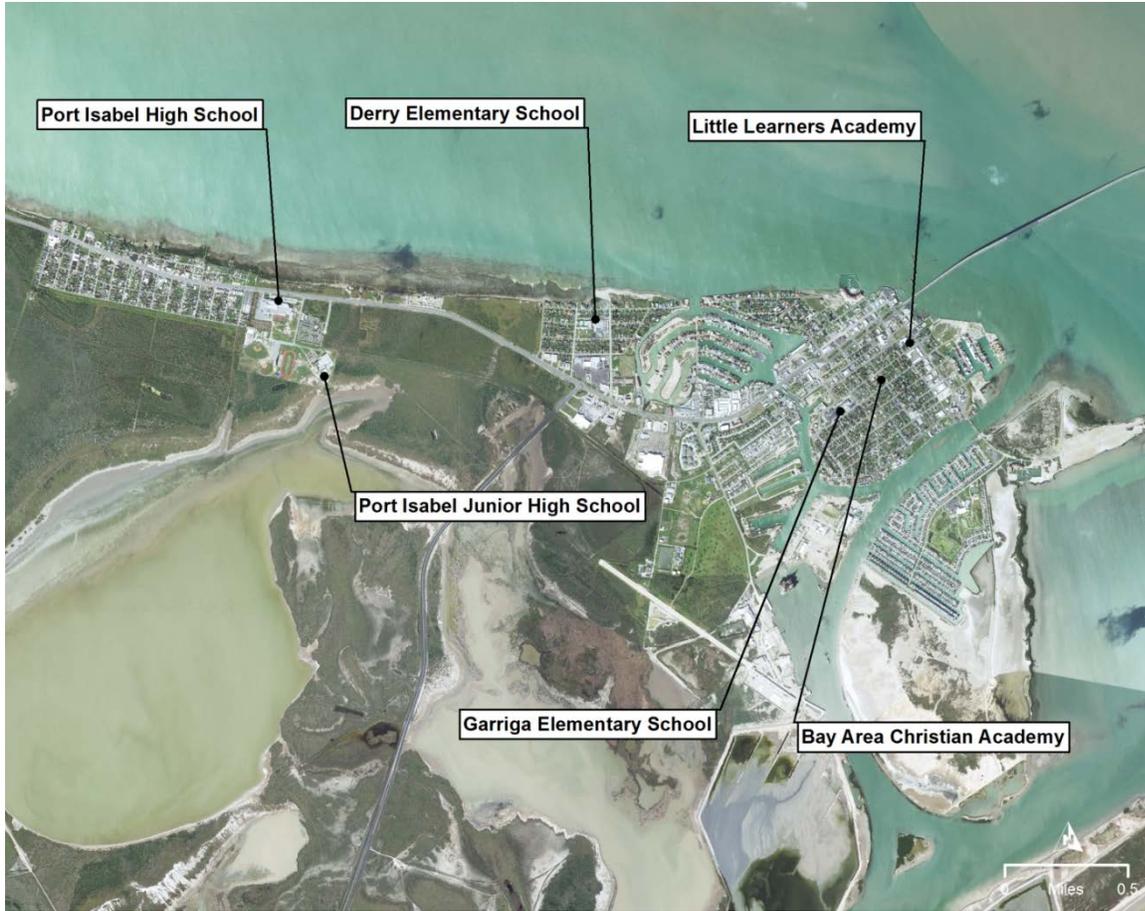


Figure 1-2. Existing Formal Education Resources within the City of Port Isabel
(Orthoimagery Program (TOP) 2015 50cm NC\CIR Orthoimagery)

1.2.1.2 Non-Formal Education

Non-formal environmental education opportunities are generally described as voluntary and can occur anywhere people are interested in learning. Providers of non-formal environmental education often work for a wide variety of organizations such as:

- Private, non-profit organizations and education centers
- Governmental agencies
- Private organizations
- Businesses
- Foundations
- Religious or spiritual organizations

Non-formal environmental education opportunities can last from just a few minutes to several days in duration and include:

- Visitor sessions
- Interactive exhibits
- Guided tours, walks, programs
- Guided field trips (indoor or outdoor)
- Special events and festivals
- Family learning
- Overnight camps

Non-Formal Education Opportunities

SPI has several non-formal settings located within or adjacent to the City that offer environmental education opportunities geared toward a variety of audiences, including residents, youth groups, post-secondary groups, naturalist and birding societies, visitors and retired and/or senior citizens. These opportunities include programmed (guided bird walks, field trips, etc.) and non-programmed (interpretative signage, wayfinding signs, brochures, online sources, etc.) resources, many of which are government-sponsored or are sponsored by non-profit organizations (**Table 1-1**). Non-formal education resources can be found at these locations on SPI (**Figure 1-3**):

- SPI Birding and Nature Center
- SPI Visitors Center
- The Native Plant Center and Island Arboretum
- Sea Turtle, Inc.
- Boy Scouts of America: Laguna Station Sea Base
- University of Texas Rio Grande Valley Coastal Studies Laboratory
- Laguna Madre Nature Trail

The City also hosts several community events that provide environmental education opportunities and promote environmental awareness. These include the Winter Outdoor Wildlife Expo, SPI Sandcastle Days, RecycleLand, HalloWings, the Arroyo Colorado Audubon Society Spring Migration Field Trip, the State of Texas General Land Office (GLO) Adopt-A-Beach cleanups and various beach monitoring programs and recycling events. Two faith-based organizations exist on SPI that provide informal settings for environmental outreach. Additionally, the City utilizes social media and a community forum to distribute environmental information and encourage participation in community-wide events.

Within the City of Port Isabel, existing non-formal environmental education resources can be found at the SPI Dolphin Research and Sealife Nature Center, Port Isabel Lighthouse State Historical Park, Port Isabel Public Library and Port Isabel Historical Museum (**Figure 1-4**). Several faith-based organizations also provide a non-formal setting for educational outreach.

Table 1-1. Environmental Education Opportunities Offered at SPI’s Non-formal Education Resources

Non-Formal Environmental Education Resources	Description	Environmental Education Opportunities							
		Interactive Exhibits	Field Trips/Pre-K through 12 grade	Guided Tours	Lectures/ Classes	Interpretative Signage	Recreation Trails	Internships	Online Resources
SPI Birding and Nature Center	SPI Birding and Nature Center is a World Birding Center situated on 7 acres near the SPI Convention Centre. Habitats include dune meadows, salt marsh and intertidal flats, which are essential for migratory birds. The center offers 3,300 linear feet of boardwalks, five bird blinds and an observation tower and deck (<i>World Birding Center, 2010</i>).	X	X	X	X	X	X	X	X
SPI Visitors Center	The SPI Visitors Center provides information to ensure that visitors make the most of their visit to the Island. Professional staff provides visitor guides, city maps and information on local attractions (<i>City of South Padre Island 2018g</i>).					X			X
The Native Plant Center and Island Arboretum	The Native Plant Center & Island Arboretum is a non-profit community project that enhances eco-tourism and conservation on SPI. The Center features an outdoor garden with native plant exhibits unique to SPI. (<i>SPI Chamber of Commerce 2018</i>)	X			X	X			X
Sea Turtle, Inc.	Sea Turtle, Inc. is a sea turtle education, research, rescue and rehabilitation facility located on SPI. In addition to rescuing, rehabilitating and releasing sea turtles, Sea Turtle, Inc. educates the public and assists with conservation efforts for all marine turtle species. (<i>Sea Turtle, Inc. 2018</i>)	X	X	X	X	X		X	X
Boy Scouts of America: Laguna Station Sea Base	Operated by the Rio Grande Council, Laguna Station is a 2017 nationally accredited Boy Scouts of America adventure camp that provides Scouting programs for ages 6 to 20. Programs include camping, educational activities and outdoor experiences. The camp is also available for use by a variety of organizations, including religious, civic groups and professional groups. (<i>Rio Grande Council, Boy Scouts of America 2014</i>)				X		X		X
University of Texas Rio Grande Valley Coastal Studies Laboratory	Established in 1973, the CSL is dedicated to providing educational opportunities, enhancing research, engaging in public service and providing community outreach related to coastal and marine concerns in the Gulf (<i>UTRGV n.d.</i>)	X	X	X	X				X
Laguna Madre Nature Trail	Located on the north end of SPI, in close proximity to the SPI Convention Centre, the Laguna Madre Nature Trail is a 1,500-foot boardwalk that crosses four acres of marshland. This trail is ideal for bird watching and hiking. (<i>City of South Padre Island 2018e</i>)					X	X		



Figure 1-3. Existing Non-Formal Education Resources within the City of South Padre Island
(Source: Texas Orthoimagery Program (TOP) 2015 50cm NC\CIR Orthoimagery)

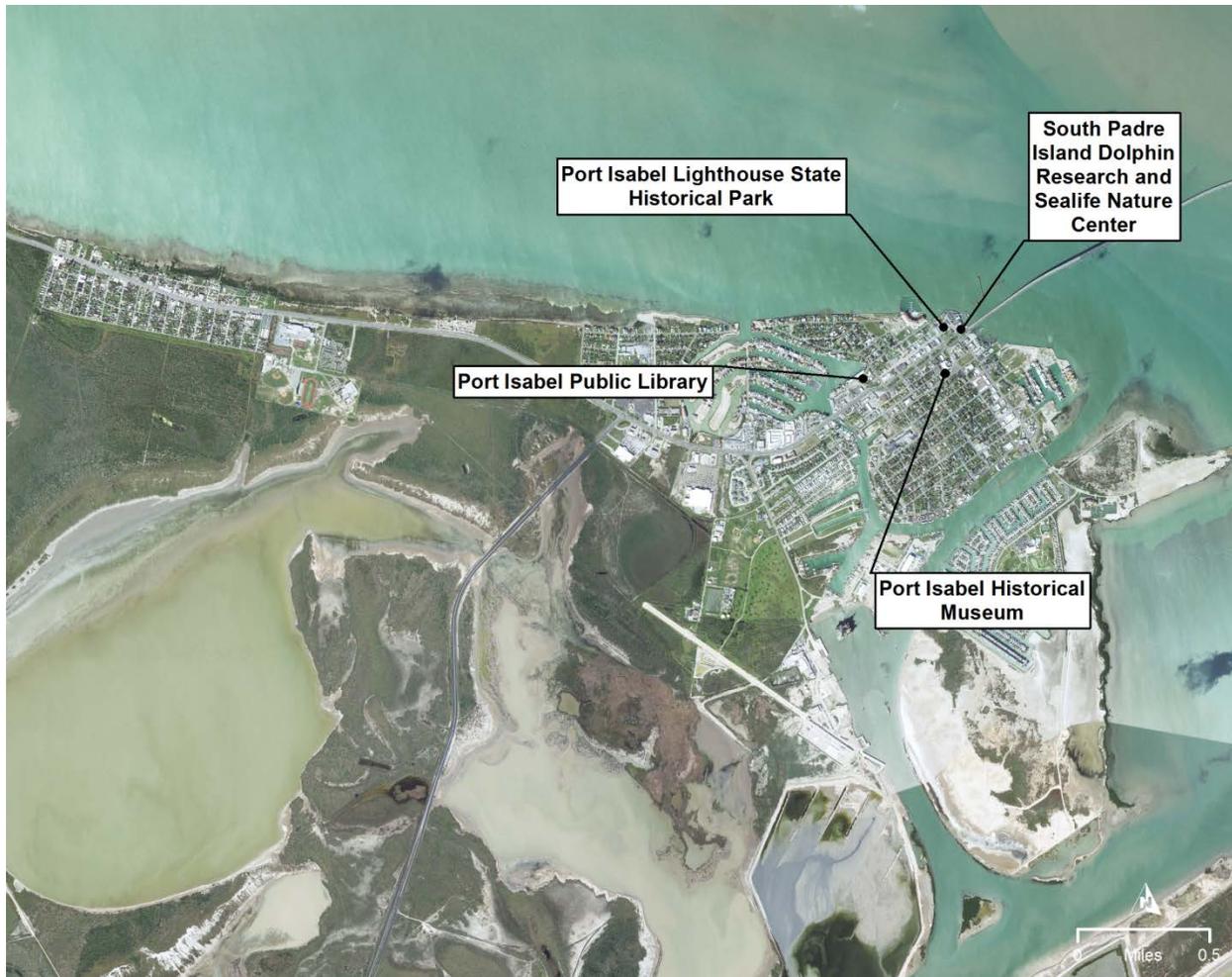


Figure 1-4. Existing Non-Formal Education Resources within the City of Port Isabel
 (Source: Texas Orthoimagery Program (TOP) 2015 50cm NC\CIR Orthoimagery)

1.2.2 Environmental Education

The City provides the public with opportunities to better understand and form a deeper connection with the world around them. This process conveys the economic, environmental and cultural benefits that SPI's natural resources offer and reinforces the need to protect the Island's unique assets and habitats. It is important to stress that it is not necessary to be a member of an organization or formal program to participate or support environmental education opportunities or to advance environmental education opportunities within the City. Individuals or groups that share information about what they learn are useful tools for advancing this plan. Similarly, individuals and groups that financially support projects and programs make critical contributions to protect SPI's natural resources. Further, those that make environmentally responsible choices and take environmentally responsible actions act as influential role models for the larger community and help drive the City toward the larger goal.

1.3 A Plan for the Future

The City seeks to embrace, support and integrate environmental education into everyday experiences so that residents and visitors alike can learn about the environment and their relationship to it from a time they are young, or from their first visit to the Island, and continue that relationship throughout their life. Individuals should have the opportunity to explore an array of issues directly and indirectly related to SPI's natural resources. Educational programs and facilities should provide individuals with the knowledge and skills to be effective stewards, allowing them to take action that will effectively improve and preserve the quality and abundance of the Island's natural resources for future generations. The City's vision includes providing environmental experiences at home, school and in recreational settings by utilizing existing local, regional and statewide resources and recognizing areas for expansion. It also includes promoting and supporting robust educational facilities and programs that are adaptable to change. Overall, these efforts should increase resident and visitor stewardship, resulting in a greater personal connection to SPI and an island that is stable and resistant to decline from human and environmental pressures. This section identifies five broad, interrelated goals for advancing environmental education in the City and indicates several important strategies for meeting each goal. All of these goals are mutually supportive and are not listed in any specific order of importance:

Goal 1: Public Engagement

Increase public participation in environmental education opportunities.

Goal 2: Diversity

Increase the diversity of environmental education audiences, providers and programs.

Goal 3: Collaboration

Encourage collaboration and partnerships among environmental education providers in formal and non-formal settings.

Goal 4: Professional Development

Support opportunities that develop and elevate the knowledge and skills of all stakeholders in environmental education.

Goal 5: Assessment and Support

Strengthen the City's ability to provide sustainable, quality environmental education programs.

Goal 1: Public Engagement

Increase public participation in environmental education opportunities.

Strategy 1.1: Improve public access to quality environmental education materials, resources and facilities.

Actions:

- Develop a searchable online directory of environmental education resources that target a broad audience, including formal and non-formal educators, parents, students and the general public.
- Expand the existing web-based shoreline landing page. The page should document the work of environmental organizations, the University of Texas Rio Grande Valley, published journal articles and other scientific research to foster the exchange of ideas and make research readily available. Provide an online listing of environmental education professional development, internship and grant opportunities.

- Develop the proposed Dune Garden adjacent to the parking area for the La Copa beach access point. The Dune Garden would consist of a dune feature that has native dune plantings, a walk through and walk around component plus educational signage. This highly visible and accessible feature can serve as an important education opportunity to learn how dunes function as part of the beach system as well as the importance of their preservation.

Strategy 1.2: Increase public use of environmental education centers.

Actions:

- Provide public space that supports educational opportunities. On the bayside, access is lacking; however, the Convention Centre site provides an ideal space to gather large groups and explore the bay either in non-motorized vessels or by wading and casting seine nets. However, to support use by large groups, restrooms outside of the Convention Centre and spray showers are required. Similarly, while two restroom locations exist on the beachside, activities such as beach cleanups are typically geographically limited to these two locations so that participants have access to facilities. To provide increased educational opportunities, additional facilities are needed.
- Provide information to pre-K through post-secondary groups and homeschool programs on how they can collaborate with environmental education centers to meet curriculum standards.
- Encourage communication between environmental education centers on and off the Island so they can identify opportunities to coordinate programs to maximize benefits to centers and customers. This should include coordination with the City on community events (i.e. music festivals, farmer's markets, art festivals/walks, fitness events, etc.).
- Assist with marketing and promotion of environmental education center events, workshops, programs, etc. Produce a guide (online and printed version) to all the environmental education centers in and around the City and market to the general public, as well as formal educators.

Strategy 1.3: Increase awareness of environmental education events and promote regional and statewide opportunities.

Actions:

- The City should have one staff member that is responsible for acting as an active education liaison, facilitating cross-collaboration of ideas and activities between education providers. While not all providers are located on the Island, the City can serve as a hub for eco-tourism and education opportunities in the area. This education liaison would also be responsible for coordinating research activities within the City limits, archiving any research completed on the Island and within the larger eco-region on the City's website and connecting researchers with potential volunteers to support data collection activities.
- Become a media source for environmental education by using social media platforms and online community forums, as well as newsletters and brochures, to target a variety of audiences. Outreach should continue to regularly celebrate the work already being accomplished, thereby raising awareness and visibility of existing offerings, research and volunteer events. An example of this is the existing Anti-Litter Mid-Year Celebration.
- Distribute environmental education marketing materials to SPI's Visitor Center and surrounding establishments (i.e. Schlitterbahn Waterpark and Beach Resort).

Goal 2: Diversity

Increase the diversity of environmental education audiences, providers and programs.

Strategy 2.1: Increase and broaden the diversity of environmental education audiences.

Actions:

- Support environmental education for both residents and visitor groups, by focusing on target audiences. Engaging in educational outreach serves residents and tourists. Such programming builds strong and meaningful connections to South Padre Island, enhancing the experience of both groups. The 2010 census notes that citizens over the age of 50 represent 50.4% of the population, while only 3.7% are of school age (5 to 19 years old). With a median age of 60, adult education activities would best serve the existing population, as well as visiting winter Texans (*United States Census Bureau 2018*). School-age activities would support visitors from the larger surrounding area and tourists, therefore activities geared at school aged groups that occur during summer and school breaks may be more effective at engaging younger populations. The Sea Turtle Kids Camp, consisting of three-day Camp sessions held throughout the summer by Sea Turtle Inc, is a good example of such programming. Each week's session repeats throughout the summer, making the short program accessible to both residents and families who are on an extended stay.
- Encourage environmental education providers to participate in training opportunities that address the different needs of targeted audiences. The Texas Association for Environmental Education leads an annual conference, which was last held on SPI in 2000. Hosting such events raises awareness of the educational opportunities on the Island and in the region. CVB should continue to seek out events that draw the target audience and support City goals.

Strategy 2.2: Increase and broaden the diversity of environmental education providers.

Actions:

- Identify and support programs that recruit diverse audiences to environmental education career options (i.e. career fairs, recruiting bilingual environmental education providers, etc.). Provide this information to environmental educators and the public through the City's website.
- Develop partnerships with organizations and post-secondary groups in and around the City to promote diversity in the field. As an example, Sea Turtle Inc. has a Volunteer Coordinator/Education Assistant staff member who could work with a City education liaison to post volunteer programs on a City website, promote special events and market volunteer opportunities.

Strategy 2.3: Increase and broaden the diversity of environmental education experiences.

Actions:

- Encourage and promote programs that take interdisciplinary approaches to environmental education. Infuse environmental education into other public programming, such as the arts, health, recreation, tourism, cultural/heritage, etc.
- Increase the number of internships/apprenticeship opportunities in the environmental education field for high school and college students. As mentioned in Strategy 1.3, a City education liaison could facilitate connecting students with opportunities and programs.
- Install educational signage on the beach and bay to provide visitors more information on SPI's unique habitats and systems (i.e. mangroves, beach nourishment, trash and turtles, dunes, oysters, etc.).

- Draw more attention to SPI's bayside environmental resources by providing and promoting bayside educational opportunities. This could include the establishment of a kayak trail that offers interpretative signage, wayfinding and a waterway connection to Boy Scouts of America Camp Perry located near Rio Hondo, Texas.
 - Would need to create guidelines for establishing a kayak trail that covered trail management, trail "right-of-ways", funding, etc. Through partnerships with a variety of organizations, Texas Parks and Wildlife maintains nine coastal paddling trails within the State that offer paddling opportunities for all skill levels. The Seadrift Paddling Trail, recently opened in June 2018, provides river and bay paddling, making it a great trail for the City to reference in their own design of a paddling trail that offers coastal and inland paddling opportunities. The Texas Parks and Wildlife "Future Trails" website (<https://tpwd.texas.gov/fishboat/boat/paddlingtrails/future/>) offers more information on funding opportunities as well as desirable paddling trail characteristics.
-

Goal 3: Collaboration

Encourage collaboration and partnerships among environmental education providers in formal and non-formal settings.

Strategy 3.1: Promote increased communication and coordination among environmental education educators.

Actions:

- As part of Strategy 1.3, an education liaison for the City would:
 - Assist in setting up summer learning camps and weekly lectures;
 - Host and coordinate a City landing page for educational opportunities and current and past research;
 - Facilitate communication between the City and those within the public that are interested in education and educational programming;
 - Promote an understanding between formal and non-formal educators on the issues that are relevant to both groups;
 - Encourage the integration of environmental education into the formal education system (pre-K through post-secondary schools);
 - Review opportunities for City facilities to host non-profit groups and/or research institutions; and
 - Promote events that are the result of collaborations and recognize and award successful partnerships.
- Support participation in the Texas Association for Environmental Education as a vehicle for collaboration. The Texas Association for Environmental Education is a professional organization that provides educational resources, networking opportunities and certification programs for environmental educators. The association's Advisory Committee coordinates with state agencies and works with environmental education providers at universities and within industry, museums and nature centers. The City should encourage local environmental educators to utilize the Texas Association for Environmental Education resources and to participate in their certification process, which aims to enhance the ability of educators and organizations to provide quality programs and resources (*TAAEE 2013*).

Strategy 3.2: Strengthen and re-invigorate environmental educators and environmental education programs in and around the City.

Actions:

- Work with local educators to develop curriculum at multiple grade levels that can be used in classrooms that ties into local ecology and environmental issues. A City education liaison could act as a connection between student and teachers and organizations with programs, field events for hands-on learning and university researchers seeking volunteers and/or willing to share their work and experiences.
- Increase communication between designated leadership about the importance of the environmental education to the community and the value of environmental education programs.
- Encourage Island resident participation in education organizations such as the Rio Grande Valley Chapter of the Texas Master Naturalist.
- Host or sponsor an annual environmental educator awards banquet.
- Encourage participation and partnerships in regional or statewide formal and non-formal environmental education opportunities.

Goal 4: Professional Development

Support opportunities that develop and elevate the knowledge and skills of all stakeholders in environmental education.

Strategy 4.1: Encourage participation in professional development and training programs for formal educators and non-formal educators.

Actions:

- Encourage partnerships and exchange programs between formal and non-formal environmental education providers.
- Help formal and non-formal educators find professional development opportunities.
- Encourage active involvement in local, regional, state, or national environmental education professional associations.
- Endorse and promote existing training that meets the needs of the environmental education community.
- Disseminate recent research on environmental education that demonstrates the value of environmental education to the community.

Goal 5: Assessment and Support

Strengthen the City's ability to provide sustainable, quality environmental education programs.

Strategy 5.1: Evaluate the overall success of each goal and identify areas for ongoing improvement.

Actions:

- Establish or assign a City education liaison responsible for continuously evaluating the progress of the implementation of the education strategies and actions. The City education liaison should provide regular progress reports.
- Identify adaptive management techniques that can be used to update the implementation of the educational strategies and actions.

Strategy 5.2: Acquire and maintain funding and support for environmental education.

Actions:

- Identify local, regional, state and federal government programs that support environmental education or could support environmental education resources (i.e. SPI's proposed Beach User Fee Program, EPA Environmental Education Grants and Environmental Research and Education Foundation Grants).
- Partner with new public, private and non-profit entities and stakeholders.
- Develop guidelines for educational and wayfinding signage that reinforces the City brand.
- Strengthen existing relationships with funders and support groups.
- Continue to grow volunteer base and utilize volunteer groups.

1.4 Conclusion

This chapter is intended to serve as a source of information and inspiration for supporting, implementing and sustaining environmental education resources within the City. Attaining a level of awareness and action, no matter how small, can make a positive impact on environmental education in and around the City. Key actions that will directly enhance environmental education associated with the shoreline are:

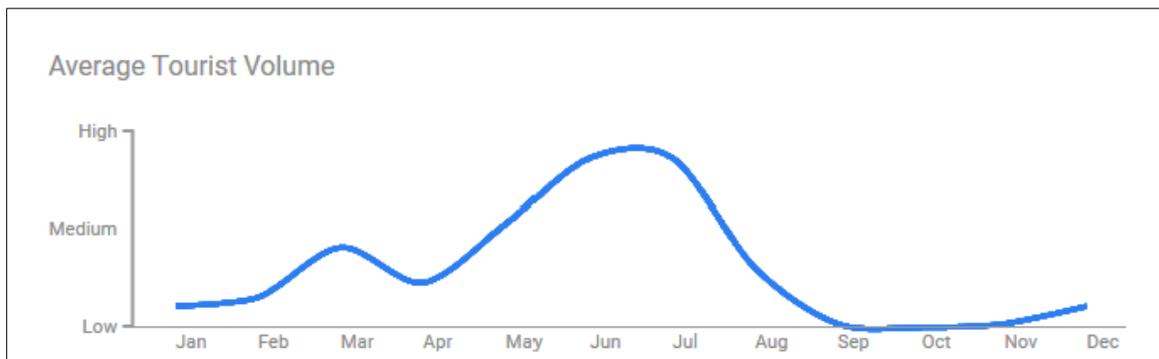
1. **Educational Liaison:** There are a number of entities on SPI and in the region promoting and/or providing educational opportunities, including the Parents of Port Isabel Schools, Boy Scouts of America, The University of Texas Rio Grande, The Convention & Visitors Bureau and Laguna Atascosa National Wildlife Refuge. The City should have one staff member that is responsible for acting as an active education liaison, ensuring events are posted to the City's calendar and facilitating cross-collaboration of ideas and activities. While not all providers are located on the Island, the City can serve as a hub for eco-tourism and education opportunities in the area. To advance environmental education efforts, the City could host an annual forum for local and regional environmental educators, thereby developing networking and collaboration opportunities. This education liaison would also be responsible for coordinating research activities within the City limits and archiving any research completed on the Island and within the larger eco-region on the City's website, thereby making the work of scientists more visible and readily available to the public. The education liaison could also connect researchers with potential volunteers to support data collection activities.
2. **Create a Forum:** Expand the education activities landing page on www.sopadre.com to promote local education providers and programs not listed currently. This should be a forum to connect residents and visitors to a range of educational activities such as Boy Scout events, University led research, summer programming, homeschooling co-op classes and adult learning opportunities. It is recommended that the City's education liaison above have ownership of this forum to ensure consistent messaging.
3. **Provide Facilities:** Group activities, particularly for older and younger age groups, require access to bathroom facilities. Currently, only two beach access points have restroom facilities and there are no similar public facilities at bayside access points. More advanced programs may require classroom space, storage space for field equipment and laboratory equipment. Such facilities should be co-located together. At a minimum, any restroom facilities should include storage space, to facilitate the limited needs of existing programs.

Chapter 2. Tourism

2.1 Introduction

SPI is a premier tourist destination in Texas, offering a variety of beachside and bayside activities for visitors of all ages and backgrounds. Located at the southern tip of the barrier Island, visitors to the City can immerse themselves in the outdoors, riding waves at City and County beaches, fishing with local guides, building sandcastles, or birding at the SPI Birding and Nature Center. Additionally, the City hosts many local events that offer unique opportunities for outdoor recreation and relaxation.

Domestic visitors to SPI are primarily from Texas, followed by Oklahoma, Minnesota, Missouri and Wisconsin. International visitors are primarily from Mexico and then Canada, the UK, Germany and Switzerland (*Arrivalist 2018*). Seasonal disparities in terms of economic activity indicate that there are periods of peak visitation on SPI (*Aaron 2016*). On average, tourism begins to increase in November with the arrival of winter Texans, followed by a small peak February through April, primarily due to spring break tourists and a much larger peak in the summer months of June and July (**Figure 2-1**; *U.S. News and World Report 2018*). To move SPI toward more of a year-round destination, SPI must attract more off-peak month visitors (*Aaron 2016*). To achieve this, communities in and around SPI need to continue to invest in tourism and visitor experience infrastructure.



Note: Tourist volume is estimated based on in-market destination search query interest from Google and on www.travel.usnews.com in 2015-2016.

Figure 2-1. Popular Times to Visit South Padre Island
(Source: *U.S. News and World Report 2018*)

Throughout April 2018, a public survey was distributed by the City to gather feedback on a wide range of topics, including tourism (Appendix B). Survey respondents (primarily SPI residents) indicated that tourism is the most important factor for SPI's growth and success, followed by public access to water, conservation and education (*City of South Padre Island 2018c*). The survey also asked respondents to select the tourism activities that the City should focus on maintaining or expanding to ensure a resilient economy in the future (**Figure 2-2**). Beach activities and access (55.26%), followed closely by eco-tourism (45.32%), wind sports (36.26%) and recreational fishing (34.21%) are the activities the public would like to see the City prioritize (*City of South Padre Island 2018c*).

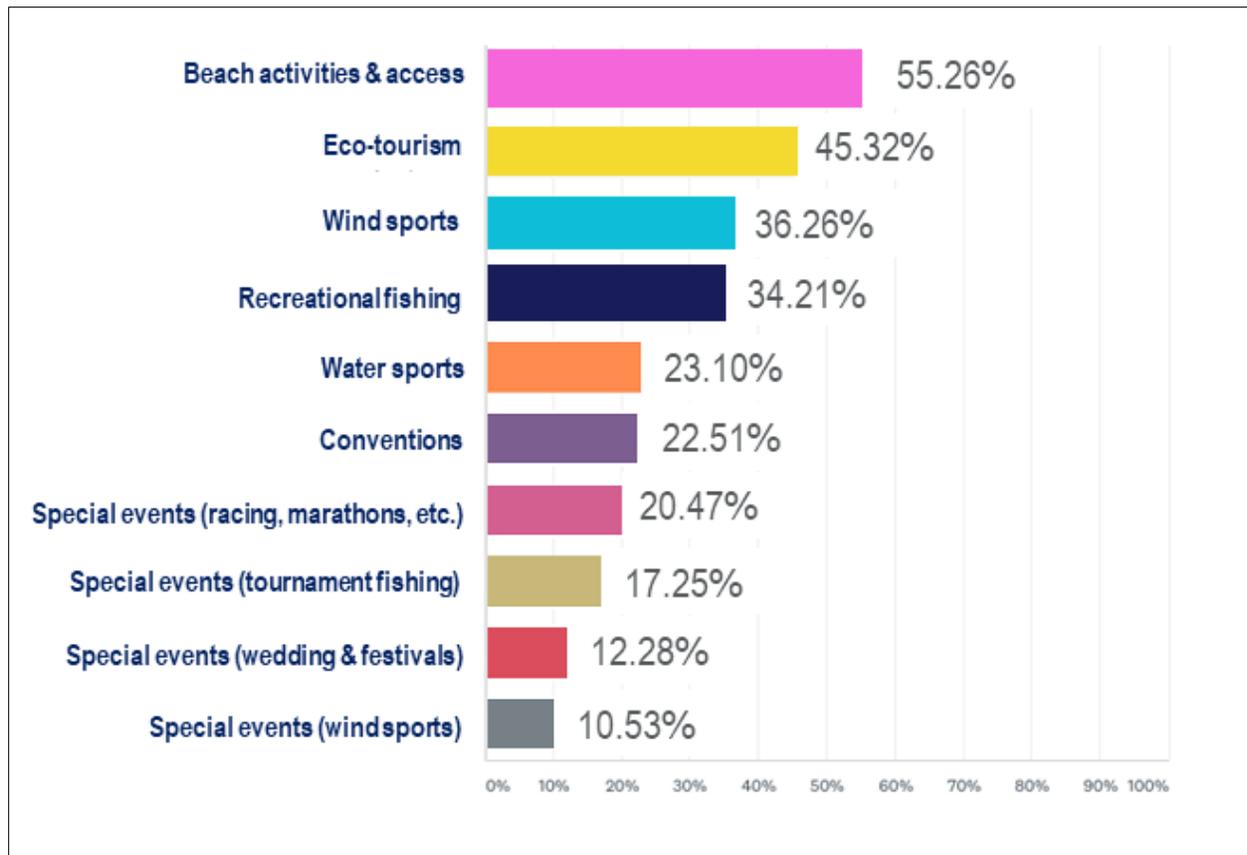


Figure 2-2. Tourism Activities the City Should Focus on Maintaining or Expanding Per the South Padre Island Master Plan Survey Results
(City of South Padre Island 2018c)

This chapter is intended to guide the investments within SPI to improve the overall shoreline and eco-tourism experience. In association with bay and beach activities, tourism activities identified by the public as priorities will be the driving factors central to this investment guidance. A general introduction to the long-term vision for tourism is provided in Section 2.2. This section also discusses the role of local tourism-oriented entities and existing tourism projects.

Section 2.3 includes a summary of SPI's broad tourism goals provided to enhance the area's tourism industry, including:

- **Providing visitors with desirable activities and amenities;**
- **Ensuring adequate access to activities and amenities;**
- **Maintaining a strong tourism marketing and group sales approach; and**
- **Sustaining and establishing new funding and support for tourism infrastructure.**

Following the summary, each goal is described individually; the goals are mutually supportive and not listed in any specific order. Each goal is accompanied by several strategies and suggested actions to support their obtainment. The amount of effort required per strategy will vary; some are already being

accomplished while others will require innovation and greater resources. The list of strategies is not exhaustive, but rather represents suggestions for accomplishing each goal.

2.2 Tourism Today

2.2.1 Collaboration

The City has multiple entities working together toward achieving similar tourism goals. The Economic Development Corporation, the SPI Convention and Visitors Bureau and the Chamber of Commerce endorse projects and programs that have an overall emphasis on improving the City's economy. One goal is to guide tourism investment strategies that build on SPI's strengths, capitalize on the natural environment and support environmental stewardship of SPI and the surrounding communities. This includes promoting a thriving workforce, which is also critical to the economy. Tourism works to achieve this through the creation and generation of jobs, increased spending in the local community and the diversification of the market. The ultimate goal is to promote the City as a premier domestic and international tourism destination by supporting business efforts that economically, environmentally and culturally enhance the area. Even in cooperation with one another, the Economic Development Corporation, Convention and Visitors Bureau and the Chamber of Commerce cannot accomplish all of SPI's tourism goals and strategies; however, they may serve as advocates for various projects. As an action plan moves forward, the lead agency or organization must work in concert with these entities to develop and identify additional strategies, detailed implementation plans and funding sources to achieve each strategy and realize the overall goal.

2.2.2 Existing Projects

Through the collaboration of many partners, including the Texas Parks and Wildlife Department, Rio Grande Valley Communities, the U.S. Fish and Wildlife Service and the City, a number of undertakings have already been made to improve the visitor experience on SPI and market the Island as a destination for outdoor recreation. Large tourism-generating projects to date include Sea Turtle Inc., the SPI Birding and Nature Center, the Native Plant Center and the Rio Grande Valley Reef Project. The SPI Birding and Nature Center offers a variety of indoor and outdoor activities for first-time visitors to expert birders and, as a recognized World Birding Center, SPI Birding and Nature Center has strengthened SPI's marketing as a premier birding destination. The facility offers bay-front boardwalks, birding tours, a nature center with interactive exhibits and a gift shop. Visitors to the SPI Birding and Nature Center can also utilize a five-story tower offering spectacular views of Laguna Madre, beaches and dunes of SPI, the Gulf of Mexico and the SPI skyline. (*SPI Birding and Nature Center 2015*). The Rio Grande Valley Reef Project is a 1,600-acre artificial reef located 13 miles north of the City in 65 to 70 feet of water. The project is a partnership between the Texas Parks & Wildlife Department and the Coastal Conservation Association to support the growth of juvenile red snapper (*Lutjanus campechanus*) as well as larger pelagic fish, which has increased recreational fishing in the area (*Friends of RGV Reef 2018, CCA 2018*).

Additional tourism generating amenities include Isla Blanca County Park, Sea Turtle, Inc. and Schlitterbahn Beach Resort and Waterpark. The City also hosts dozens of shoreline based sport events including the South Padre Island Sand Crab Run and the Texas International Fishing Tournament, Texas' largest saltwater fishing tournament that draws thousands of spectators to SPI (*Tour Texas n.d.*). In 2017, 39 events were directly funded by the City through the Conventions and Visitors Advisory Board, including shoreline based events such as the Lighted Boat Parade, Sandcastle Days and musical performances at the Holiday Sand Castle Village exhibit. Additionally, increased access to visitor information has been made possible via the SPI Visitors Center and the SPI Visitor Guide. The City's Convention and Visitors Bureau purchases and ships approximately 18,000 visitor guides for national

distribution every year (*M. Flores, pers. communication, 2018*). Additionally, more than \$2.7 million annually are spent with a national marketing firm to market SPI. New technologies have been employed to measure the effectiveness of these efforts.

This Plan is intended to build on these successes and refine SPI's tourism goals to meet the changing needs and expectations of visitors to SPI. The City must find ways to distinguish SPI from competing for niche markets and continue to promote SPI as a tourist destination for outdoor enthusiasts seeking adventure and relaxation in a beautiful natural environment. The primary goal of this plan is to leverage the available natural resources in and around SPI as an economic development strategy.

2.3 A Plan for the Future

The City wants a visit to SPI to be seen as an integral part of living in and visiting southern Texas and the greater Gulf Coast. To achieve this goal, the City must engage target visitor audiences with a variety of shoreline and eco-tourism based attractions unique to SPI and continue to support projects that market SPI as a world-class destination.

This section identifies four broad, interrelated goals to grow the area's economy, while simultaneously promoting priority tourism activities (i.e. beach activities and access, ecotourism, windsurfing/kiteboarding and recreational fishing), as identified by the public via the SPI Master Plan Survey (*City of South Padre Island 2018c*). Several important strategies for meeting each goal are provided. Goals are mutually supportive and are not listed in any specific order of importance:

Goal 1: Visitor Activities and Amenities

Provide desirable activities, in-destination shoreline and eco-tourism based attractions and facilities.

Goal 2: Accessibility

Provide a variety of transportation improvements getting to SPI as well as options in and around the City.

Goal 3: Leisure Marketing and Group Sales

Establish a highly measurable, digital leisure marketing platform and a robust group sales approach to attract diversified visitor base throughout the year to SPI.

Goal 4: Funding

Maintain current funding and identify regional, national, or international resources for tourism development and marketing.

Goal 1: Visitor Activities and Amenities

Provide desirable activities, in-destination shoreline and eco-tourism based attractions and facilities.

Strategy 1.1: Promote ecotourism projects that highlight the unique nature of the Island.

Actions:

- Establish a network of trails and preserved land that affords access to wildlife corridors and provides sufficient space for recreation.
 - This could include the establishment of a new kayak trail; planning efforts would need to consider kayak/boat launch locations, restroom facilities and how those may influence natural resources, as well as the feasibility of the project. Larger tracts should be

acquired to add a diversity of habitat types and wildlife viewing opportunities, including the area to the south of the Causeway. This wetland, as well as those adjacent to The Birding and Nature Center, would be ideal areas to include in a kayaking trail.

Opportunities for wildlife observations would be highest in areas with mangroves, additionally, kayakers would be protected from faster moving motorized vessels.

- This network could also be land-based by adding to the existing bicycle system a route primarily along Laguna Madre; connecting visitors with wildlife viewing opportunities from Laguna Madre Nature Trail and The Birding and Nature Center to the north, the native plant area between West Sheeps Head Street and West Pompano Street and ending at the viewing platform along Padre Boulevard, south of the Queen Isabella Causeway. Vacant land with existing wetlands and mangroves could be acquired to augment this network as well. With the population expected to continue to grow, the City could create a wetland mitigation bank now and sell the credits to future developers, thereby preserving high quality existing wetlands, which help maintain wildlife populations on SPI and draw eco-tourists and supporting future development. Allowing the natural environment to weave into the fabric of the Island will strengthen the image of SPI as a community that can balance tourism and growth while providing areas for nature to co-exist.
- “Voluntourism” is the combination of volunteering, tourism and traveling, making it an important part of a well-rounded eco-tourism program. The City would not have to host events but could facilitate opportunities and help market volunteer programs. Popular programs in other beach communities often center on nesting sea turtles, trail construction and festival event support.
- Provide the means to be green. Fishing is a large draw to the area; however, this Island does not have a sewage pump-out facility for boats. Providing access to a pump-out facility improves not only local water quality and user experience, but has the potential to drive business if the pump-out has other amenities associated with it. Within the City limits, a pump station near the entertainment district would serve to draw people to a central location and provide marina facilities and proximity to restaurants and bars.
- Encourage and support partnerships between existing environmental education organizations (i.e. SPI Birding and Nature Center, Sea Turtle, Inc., etc.) and businesses (i.e. hotels, Schlitterbahn Waterpark and Beach Resort, etc.). These partnerships should offer visitors opportunities for “hands-on” experiences and active participation, as well as inform visitors of available activities.

Strategy 1.2: Develop bayside open space and vacant lots.

Actions:

- Identify open space and vacant lots and assess for acquisition and potential development to support public access through boat ramps, restroom facilities and parking. Suggested improvements include:
 - Improvements to Palm Street boat ramp and acquiring property on Corral to support a boat ramp through additional parking, facilities (such as fish cleaning stations), a parking lot for fishing tournament weigh-ins and/or additional ramp and dockage. A Texas RESTORE grant was awarded, but funds are still pending to implement improvements at this location.
 - Addition of public boat ramp on West Marlin Street.
- Consider property access that would provide more non-motorized watersport access and recreation for users and consider parking requirements for vehicles and trailers.
 - The Convention Centre site is ideal for silent watersport activities such as windsurfing, kiteboarding and kayaking.

- Allowing separation of motorized and non-motorized vessels will improve the user experience by reducing congestion at access points and improve safety during loading and unloading.

Strategy 1.3: Support recreational fishing in and around SPI.

Actions:

- Maintain boating access in Tompkins Channel through routine dredging. Develop a long-term maintenance plan that addresses monitoring, dredging needs, project timing and funding sources.
- Partner with the Friends of Rio Grande Valley Reef for recreational access to the artificial reef located 13 miles northeast of the SPI Jetties. Identify ways to diversify artificial reef funding. Seek to remove the old Queen Isabella Causeway and place materials as part of the reef.
- Explore the establishment of large boat slips that could be used for offshore fishing boats, pleasure boats, winter stays, etc. This would require identification of property owners and potential improvements/deepening to Tompkins Channel as well as establish permitting needs. There is potential to enhance boat slips in the central portion of the island, as well as expanding upon facilities in the vicinity of the Palm Street boat ramp. These areas could provide larger boat slips as well as pump-out stations. Dredging and permitting would be necessary, particularly considering potential seagrass impacts if deepening is pursued; however, it may be feasible to tie into the proposed existing channel extension and associated mitigation.

Strategy 1.4: Ensure that future demands are met through the creation or expansion of existing facilities/services.

Actions:

- Identify facilities for redevelopment, specifically in the entertainment district of SPI. A market feasibility study conducted in 2010 for the Padre Boulevard Initiative indicated the projected population of SPI would increase by approximately 40 percent from 2018 to 2030 (*TXP, Inc. 2010*). This recommendation aligns with the goals of the SPI Comprehensive Plan and the Padre Boulevard and Entertainment District Plan and will help the Island achieve its overall goal of continued development of attractions for both tourists and residents (*TXP, Inc. 2010; SPI 2015*). During community interviews, residents specifically identified the entertainment district as an area to expand access to the bay with additional public parking and a public boat launch. In particular, the expansion of infrastructure that supports tournament fishing, outside of residential areas, is desired to dissipate congestion at the existing launch points and avoid parking conflicts with residents.
- Add user amenities to existing trail systems and beach access points, such as restrooms, water fountains, bike racks and trail signage.
- Consider constructing or expanding facilities that promote tourism (i.e. butterfly pavilion, Convention Centre expansion, sporting facilities). New facilities should sustain and maintain the cost of operations through additional programs and amenities (i.e. restaurant, gift shop, snack bar, etc.). Studies should be completed for each potential new construction or existing expansion project to fully understand how said facilities would compete with existing facilities in the surrounding region. Efforts to capitalize on eco-tourism should also be included.
- Expand the existing SPI Convention Centre; the expansion plan must demonstrate to the public that the expansion is needed, will be efficiently utilized and will provide economic benefits to the community. This will allow for enhanced eco-tourism events and educational forums.
- Establish annual re-appraisal of existing parks, facilities and services within the City.

Strategy 1.5: Diversify tourism opportunities in an effort to attract a more diverse visitor audience throughout the year.

Actions:

- Schedule annual high-participatory, eco-tourism and other local events during the low-tourist or shoulder seasons, that support the SPI brand (i.e. concerts, festivals, Sandcastle Days, etc.). Annual events will take up to five years to establish, but once established they can grow and become part of the SPI tourism brand to counterbalance the notion that SPI is only a spring and summer destination. These events can also tie into ecological events such as bird and butterfly migrations.
- Expand unique touch points that reinforce the primary beach and bay to positively emphasize the SPI brand. For instance, litter is a key issue for both user experience and ecosystem health. Keeping the beach and bay clean is essential to promoting the City as a beautiful and safe destination, which SPI does extremely well. In June 2018, SPI was given Gold Star Affiliate recognition by Keep Texas Beautiful. There may be opportunities to celebrate the work of the City and continue to raise environmental awareness through temporary sculptures or installations made from collected trash. Found object sculptures can be highly educational, impactful and leave a lasting impression on visitors. If developed into an annual local or national event or competition, it could elevate an issue all beachfront towns struggle with and provide an educational opportunity and reinforce the SPI brand by emphasizing the concept that the community cares about the responsible enjoyment of their shorelines. Additionally, a Beach Ambassador program could further support the work of the City. Ambassadors could interact one-on-one with beach and bay users and student groups to engage them on eco-tourism activities such as beach walks discussing dunes and Sargassum, seining the bayside to discuss the importance of seagrass beds and educating beach users on City rules and regulations regarding litter.
- Promote non-beach activities. Encourage visits to SPI's nature centers, the 1.1-mile Laguna Madre Nature Trail located near the Convention Centre, restaurants, waterpark and participation in SPI's art community.
- Connect with the local population to encourage day or overnight trips. The City should continue to target local Rio Grande Valley communities, which are expanding rapidly and have income that can be used in SPI, especially on short notice.
- Promote SPI as a tourist destination for SpaceX events, such as launches and night sky events. The SpaceX South Texas Launch Site is located less than 10 miles from SPI; launches could potentially be viewed from any location in the City. To support this opportunity, develop a space education center that includes viewing platforms and star observation areas.
- Update and restructure the SPI Birding and Nature Center interactive exhibits to offer new opportunities to visitors and make connections across different skillsets.
- Establish and market the Island as a location for ecological and shoreline based filming by making it accessible, providing for police coordination, road closures, etc. a simple process.

Goal 2: Accessibility

Provide a variety of transportation improvements for getting to SPI as well as options in and around the City.

Strategy 2.1: Provide a variety of transportation improvements to increase accessibility to activities and amenities.

Actions:

- Maintain boating access in Tompkins Channel by performing routine dredging of the shallow-water channel. The City should also explore the expansion of Tompkins Channel (i.e. widening and/or extending further north), which would require environmental impact assessments and mitigation plans. Mitigation of seagrass beds is limited because a healthy community already exists. Regulatory authorities would need to be close partners to identify potential mitigation strategies that include mitigation alternatives such as conservation or restoration of alternative habitat types. Extension of Tompkins Channel would also impact existing buried power cables that connect to the Island from across the Laguna Madre near the Convention Centre. The utility provider AEP would need to perform a study to determine the required elevation to lower the cables, associated costs for the project and anticipated timelines. The lowering of the cables may also impact additional seagrass areas that would need to be mitigated.
- Support and advocate for the Texas Department of Transportation's SPI Second Access Project. Considerations should include the economic and environmental impacts of construction, health and safety benefits of a second access/exit route and the impact on tourism, including the added environmental pressures associated with increased tourism.

Strategy 2.2: Ensure SPI's destinations and facilities are distributed equitably through the City.

Actions:

- Identify opportunities to balance the amount and types of parkland, open space, trails and access by focusing on new recreational/tourism development in areas that are currently underserved.
- Ensure there is ease of access to recreational areas with careful planning of parking facilities and public transit stops.
- Continue to work with developers to identify opportunities for new park and open space facilities in new regions of the City based on the City of SPI's Parks and Open Space Master Plan.
- Enhance walkability between trails, fountains, exercise kiosks, parks and bay/beach shoreline facilities.

Goal 3: Leisure Marketing and Group Sales

Establish a highly measurable, digital leisure marketing platform and a robust group sales approach to attract diversified visitor base throughout the year to SPI

Strategy 3.1: Understand the SPI visitor.

Actions:

- Utilize the 2018 Young Strategies, Inc. Visitor Survey profiles to best understand our visitors by demographic, originating region, HHI, etc. Regularly update guidelines to preserve the City's brand. These guidelines should identify SPI's core business values, marketing strategies for the SPI visitor audience and ways to remain committed to SPI's overall business culture/heritage, while adapting to trends in the tourism market place. Create greater collaboration and communication opportunities between vested parties, including business owners, the Chamber of Commerce, the Convention and Visitors Bureau and the Economic Development Corporation, to

align goals and identify issues that may affect tourism or business growth. Public perception is that SPI has a number of great ideas being explored to diversify the tourist base, while not focusing enough on maximizing what is working. The beach is the biggest draw for tourists and there are amenities that could enhance the visitor experience, such as the addition of more restroom facilities. Restroom facilities should be prioritized over other capital improvements that may be less valuable in contributing to a positive resident and tourist experience within the City. Additionally, bay access could be greatly enhanced with additional public boat ramps, land-based fishing, and a boat pump-out facility, as discussed in Chapter 4: Public Access.

- Several existing tourism features can be enhanced to expand upon the current market trend in eco-tourism. Birding, kayaking, stand-up paddle boarding, surfing, and wind sports all currently exist on SPI. SPI was identified in a 2017 article as #5 in the top 10 best windsurfing destination in the world (Baginski 2017). Activities such as windsurfing, birding, and kite festival support off-peak season tourism, which is critical to supporting a year-round visitorship. Growing eco-tourism opportunities and awareness will help build year-round tourism. Preservation of land, extension of existing trails (land and water), and public access will contribute to the continuing development of this market. Niche markets, which are already bringing visitors, should be capitalized on following the Strategic Plan based on the work of Young Strategies.
- Enhance collaboration with regional partners to promote the Island in the ever-expanding Rio Grande Valley market to capture day visitations, particularly during off-peak season.

Strategy 3.2: Enhance visitor experience by connecting visitors to SPI's top activities, destinations and facilities.

Actions:

- Implement user-friendly technology accessible on a variety of devices to promote SPI's attractions and official Visitor Guide.
- Share information with visitors once they are in SPI via the Visitors Center, visitor information displays in nature centers, brochures in lodging properties, restaurants, etc. The City should explore using mobile communication technology to advise visitors of delays or emergencies, offer deals and sponsor location-based advertising via temporary emails/text messaging and GPS tagging.
- Invest in tourism amenities such as bike racks, trail signage, restrooms and water fountains.
- Make activities, destinations and facilities more accessible through additional parking, additional bay access, etc.
- Establish a training program (i.e. Island Ambassador Program/Internship) for the service industry that focuses on a culture of hospitality in an effort to improve the visitor experience and encourage repeat visitation. Explore the option of making this part of the vocational high school experience.

Goal 4: Funding

Ensure an adequate level of financing for tourism development and marketing.

Strategy 4.1: Maintain and strengthen current funding resources for tourism infrastructure and enhancements.

Actions:

- Strengthen existing relationships with funders and supporters.
- Explore opportunities and encourage the Birding and Nature Center to continue to strive to be economically self-sustaining by expanding existing revenue-generating offerings and services, including special events such as ticketed sunset food and beverage tastings. If the Birding and Nature Center can support its operating budget, more Economic Development Corporation funding could be directed to business development and other projects.
- Provide information and expertise to existing tourism-generating facilities/businesses.
- Develop sustainable practices to ensure funding for acquisition, development and maintenance is maintained at a level necessary to support the City's future growth.

Strategy 4.2: Diversify funding resources for tourism infrastructure and enhancements.

Actions:

- Identify new regional, state, national, or international resources for tourism development and marketing (i.e. Texas RESTORE grants for restoration/preservation projects that would enhance eco-tourism opportunities).
 - Pursue joint funding of projects with regional, state, national, or international agencies.
-

2.4 Conclusion

Tourism is SPI's primary economic driver and will continue to be for years to come. This chapter is intended to guide tourism investments based on the Economic Development Corporation's previous successful tourism initiatives and the public's responses to the SPI Master Plan Survey. Strengthening the City's economic vitality through the preservation and enhancement of SPI's existing natural and cultural conditions will help the community continue to build a sturdy foundation for tourism that can be expanded in the future. Key actions that will directly enhance tourism associated with the shoreline are:

1. **Enhance Beach Access Facilities:** Tourists come to SPI first and foremost for the beach experience. The City has done an excellent job of improving beach access points. This work should continue so that users have convenient access to the beach. However, restrooms and shower/foot washing stations are limited and need to be expanded to facilitate a positive experience for all users.
2. **Enhance Bayside Access and Facilities:** Bayside activities, particularly fishing and wind sports, are a large secondary draw to the Island. Public access, parking, restrooms and facilities are significantly lacking. Opportunities for land acquisition should be explored, particularly clustering around the entertainment district for motorized vessel ramps and north of the Convention Centre for non-motorized access. Other acquisitions for wind-sport oriented parks and access should also be pursued. A cost vs. benefits analysis that incorporates impacts to residents (including traffic impacts, restrooms and parking) should be considered in any new access development.

3. **Diversify tourism opportunities:** Develop eco-tourism and other local events during the low-tourist or shoulder seasons. These efforts should include opportunities with Space tourism, cruise lines, trail expansion, Birding and Nature Center interactive exhibits and nature based filming. Addition projects such as dismantling sections of the old Queen Isabella Causeway and using the material to expand the Rio Grande Valley Reef could promote increased offshore tourism.
4. **Establish Guidelines to Preserve the City's Brand:** SPI's brand is inherently linked with the shoreline, particularly the beach and spring break. The City, EDC and CVB all work to strengthen the SPI brand and diversify tourism, however, this work should be directed by a set of guidelines and priorities that is clear to the public and helps prioritize investments with the greatest potential benefit. These guidelines should identify SPI's core business values, marketing strategies for the SPI visitor audience and ways to remain committed to SPI's overall business culture/heritage. For example, several desired improvements to beach-side access were noted in the public survey, namely additional restrooms and spray showers. By establishing clear guidelines, including a decision matrix, proposed projects could be evaluated against each other and the projects that rank highest in supporting the City's brand would move forward ahead of other lower-ranking projects.

Chapter 3. Conservation

3.1 Introduction

SPI's wealth of natural resources has made the City a premier destination for vacationing and living. Miles of shoreline and abundant opportunities for watersports, ecotourism and beach activities attract approximately 4.5 million visitors to the City per year (*Seatrade Cruise News 2018*). The visitor population, in addition to the City's current 5,000 inhabitants, results in increasing pressure on the City's ecological assets (*City of South Padre 2013*). Maintaining the health and viability of these resources is central to the long-term sustainability of the economy, the environment and livability of SPI; therefore, careful planning for future land use is necessary to sustain the quality of life that visitors and residents currently enjoy and wildlife will require.

During April 2018, a public survey was distributed by the City to gather feedback on a variety of topics, including conservation. The survey asked respondents, the majority of whom reside on SPI, to select conservation activities that the City should focus on maintaining or expanding in the future (**Figure 3-1**). Maintaining the beach nourishment program (50.29%) was closely followed by the protection/enhancement of natural habitats (46.20%). Additionally, the survey revealed strong support for bayside conservation efforts, including improvements to existing infrastructure to reduce flooding (53.51%) and preservation of existing mangroves and wetlands (49.12%) (**Figure 3-2**; *City of South Padre Island 2018c*).

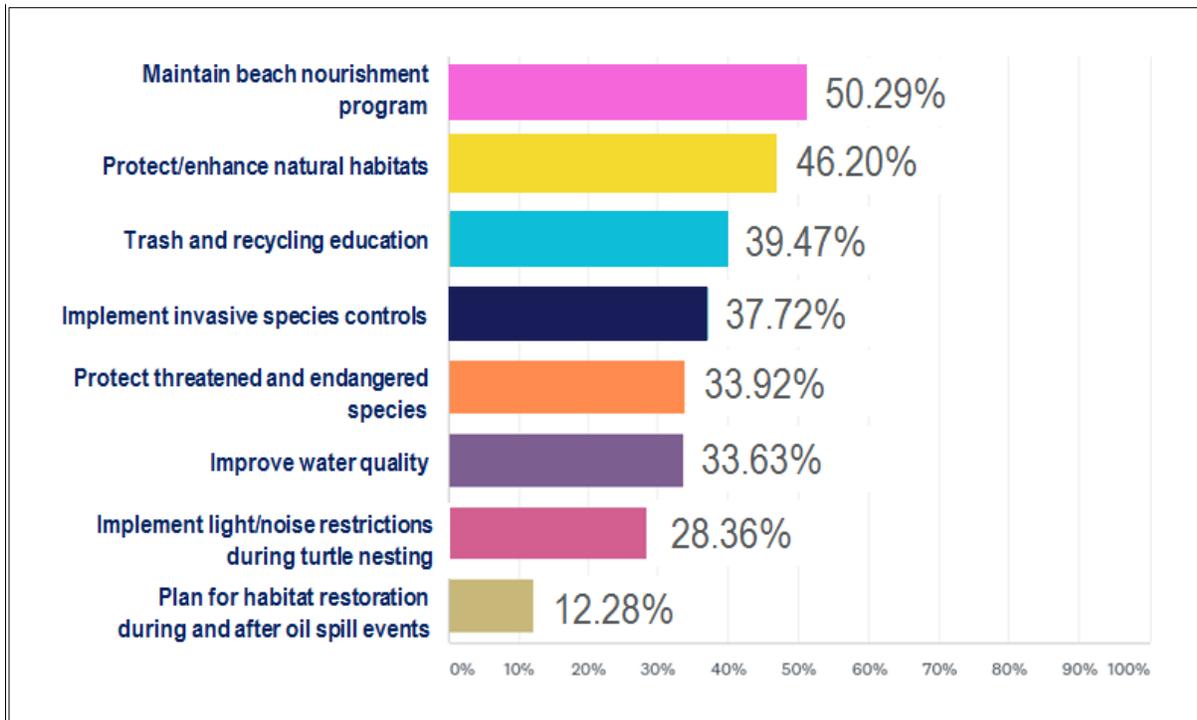


Figure 3-1. Conservation Activities the City Should Focus on Maintaining or Expanding
(Source: *City of South Padre Island 2018c*)



Figure 3-2. Conservation Activities the City Should Prioritize on the Bayside to Increase Public Utilization

(Source: *City of South Padre Island 2018c*)

As indicated by the results of the City-wide survey, preservation, protection and/or restoration of the natural environment, natural ecosystems, vegetation and wildlife should be the focus of conservation efforts in the next five to ten years to support the long-term future of SPI. This chapter is intended to guide these efforts. A general introduction to the City's existing conservation efforts is provided in Section 3.2. This section describes the City's resources in more detail and discusses the actions the City is currently taking to protect SPI's unique assets per the City's 2008 Comprehensive Plan which is currently being updated.

Section 3.3 includes a summary of the City's broad conservation goals to protect resources and mitigate the effects of various types of human-induced and natural disturbances in the future. Goals generally include:

- **Protecting, preserving and enhancing critical ecosystems;**
- **Participation in resiliency projects (i.e. beach nourishment) and identification of new resiliency opportunities (i.e. flood protection);**
- **Bayside conservation and infrastructure improvements to increase public utilization; and**
- **Enhancement of community conservation programs.**

Following the summary, each goal is described individually; goals are mutually supportive and not listed in specific order. Each goal is accompanied by several strategies and suggested actions. The amount of effort required per strategy will vary; some are already being accomplished while others will require innovation (i.e. research, the establishment of a committee to initiate the work, etc.). The list of strategies is not exhaustive, but rather represents suggestions for accomplishing a goal.

3.2 Conservation Today

3.2.1 Resources

SPI is endowed with an abundance of natural features and scenic areas. Clean air, water and land offer key opportunities for visitors and residents to experience the natural environment. Such unique opportunities are the primary reason why SPI is revered as a premier location for vacationing and living and also the reason why SPI's resources must be enhanced and protected.

3.2.1.1 Natural Resources

The City is located within Cameron County, Texas on the southern tip of Padre Island, the world's largest barrier island. Padre Island has 70 miles of undeveloped shoreline and ranges in width from one-half to three miles. It is bordered on the east by the Gulf and the west by the Laguna Madre Bay, one of only two hypersaline (i.e. containing significant concentrations of salt at higher levels than ocean water) lagoons in North America and also one of the most productive estuarine systems. A number of aquatic and terrestrial ecosystems exist on the barrier island, including dunes and beaches, ponds and wetlands and estuaries (*Diamond et al. 2017*).

Padre Island's ecosystems provide a critical resource for several resident and migrating species. Padre Island National Seashore, located approximately 30 miles north of the City, contains tens-of-thousands of acres of pristine wetlands and 29 rookery islands. A number of surveys and studies, dating back to 1891, have been conducted on Padre Island, including Padre Island National Seashore and north and south Padre Island, as well as surrounding areas including Mustang Island and Laguna Atascosa National Wildlife Refuge (**Figure 3-3**). Data has been collected on vegetation, with a majority of research focused on aquatic vegetation (i.e. seagrass beds) and mammals, herpetofauna (i.e. turtles, lizards, snakes, etc.) and birds. Studies focused on a variety of topics including, but not limited to, abundance, food sources and availability, species diversity, reproduction, the effect of human activity and natural disturbances and habitat use. Although there have been no large-scale fish surveys, Texas Parks and Wildlife has monitored finfish in the area for an extended period of time and species are well documented through commercial and recreational fishing (*Cooper et al. 2005*).

Studies indicate that SPI and surrounding areas are dynamic and rich in biodiversity. The region is characterized by its hypersaline lagoon system, vast seagrass meadows, wide tidal mud flats, a large overwintering bird population and great fishery productivity. While urban development will bring the greatest predictable changes to SPI, tropical storms and hurricanes have the potential to bring large changes to the region, including flooding, Island breaches spanning from Gulf to the bay and morphological shoreline changes (*Griffith et al. 2007, Cooper et al. 2005, Del Angel 2011*).

The Laguna Madre is one of five hypersaline lagoons worldwide and is known for shallow, clear water and vast seagrass meadows (*Smith et. al 2013*). Oysters (*Crassostrea virginica*) are not commercially harvested because of hypersalinity and the blue crab (*Callinectes sapidus*) harvest is small compared to regions to the north; however, pink shrimp (*Penaeus duorarum*) make up an important part of the commercial harvest. Sport fishing for species such as red drum (*Sciaenops ocellatus*), black drum (*Pogonias cromis*) and spotted seatrout (*Cynoscion nebulosus*) is increasing (*Griffith et al. 2007*).

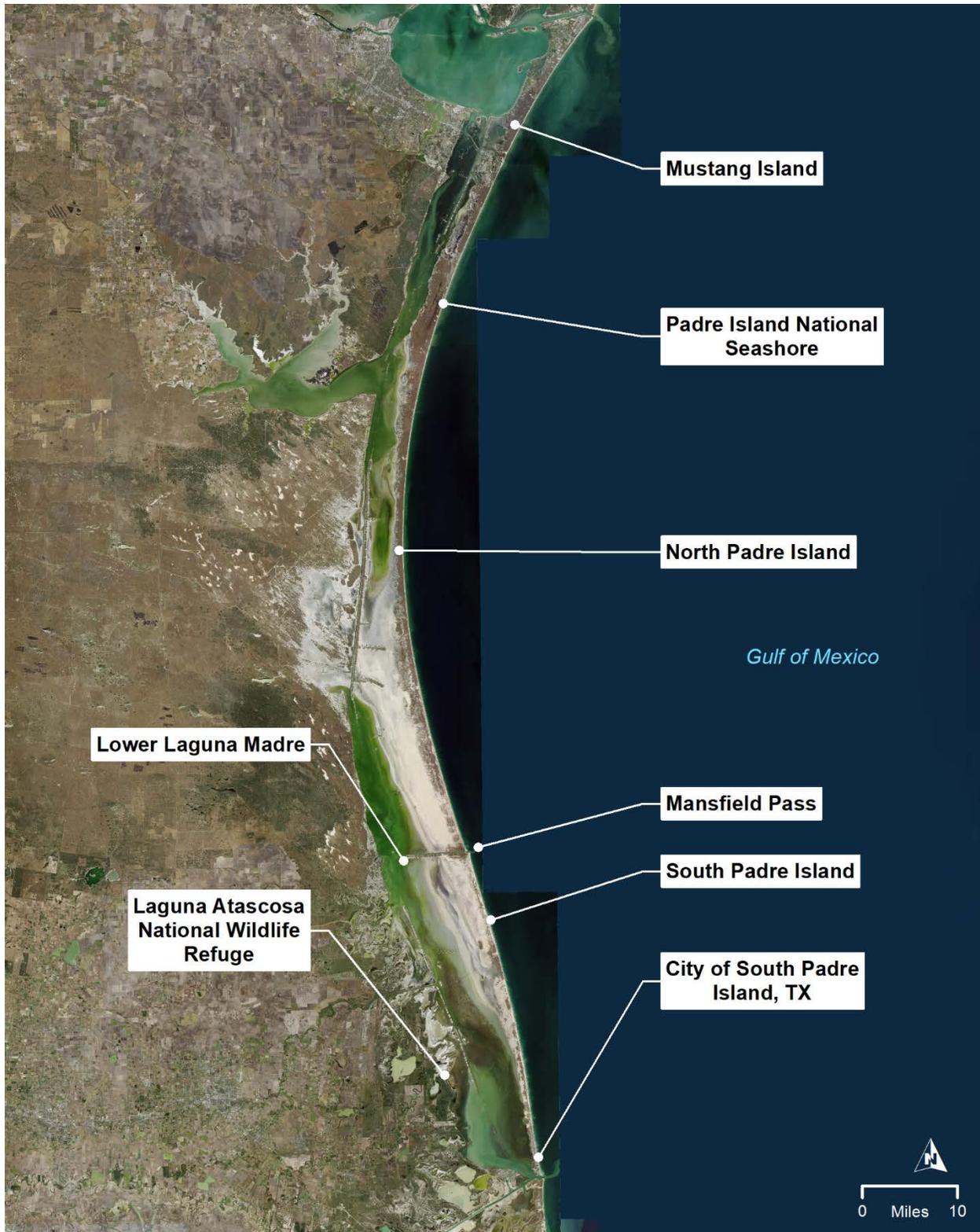


Figure 3-3. Location and Extent of Natural Resource Surveys and Studies on Padre Island and in Surrounding Areas

(Source: Texas Orthoimagery Program (TOP) 2015 50cm NC\CIR Orthoimagery)

Padre Island also supports many animals, with the Island's largest native mammal being the coyote (*Canis latrans*). Padre Island National Seashore has documented over 350 species of birds and many reptiles, including five species of sea turtle: the leatherback (*Dermochelys coriacea*), green (*Chelonia mydas*), Kemp's ridley (*Lepidochelys kempi*), hawksbill (*Eretmochelys imbricate*) and loggerhead (*Caretta caretta*) (Griffith et al. 2007).

Fishing resources offshore of SPI have been enhanced through the introduction of the 1,600 acre Rio Grande Valley Reef project at South Padre Island. This artificial reef complex is located 13 miles north of the City in 65 to 70 feet of water and includes partnerships with Texas Parks & Wildlife Department and the Coastal Conservation Association. Work on the reef is ongoing and includes the placement of reef pyramids and low relief structures to support the growth of juvenile red snapper (*Lutjanus campechanus*), as well as sunken boats and higher reefs for larger pelagic fish (*Friends of RGV Reef 2018, CCA 2018*).

The beaches on South Padre Island are low, fine-grained beaches with median grain sizes ranging between 0.18 and 0.21 mm (Kraus, et. al 1996, HDR 2010). The shoreline along all of South Padre Island has been erosional over the long-term, except in the vicinity of Isla Blanca Park and the north jetty at Brazos Santiago Pass. The Texas Bureau of Economic Geology has calculated shoreline change rates for the Island based on historic topographic surveys, aerial photographs and LIDAR (Light Detection and Ranging) surveys. The most recent shoreline change calculations consider data from the 1930's through 2012 (Figure 3-4) and show the long-term trends of erosion on average of -2 up to -5 ft/yr for the middle to northern shoreline sections. These calculations have resulted in the northern portion of the City being described as a critical erosion area by the GLO (GLO 2014). Figure 3-4 also shows the more recent era from 2000-2012, which includes the multiple beach nourishment and nearshore berm projects performed by USACE, GLO and the City. The 2000-2012 data show the shoreline along the northern section of the City has shifted from erosional to accretional/stable over the 12 year period, which agrees with findings from annual monitoring surveys performed by the City and GLO (HDR 2017). This change indicates the importance of the beach nourishment program that has added sand to the beach system, which offsets ongoing erosional forces and has been a significant contributor to beach stability and dune growth.

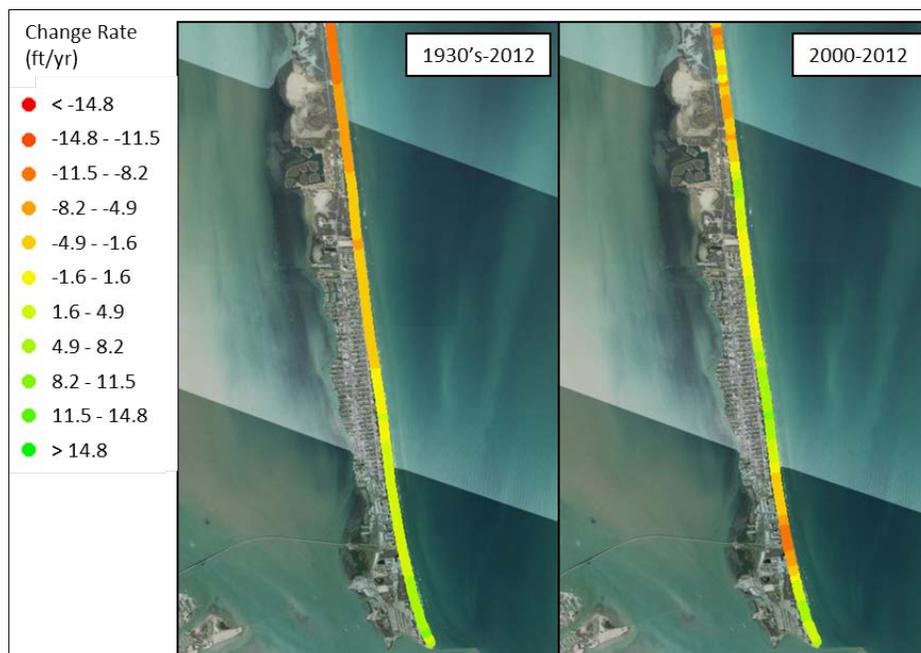


Figure 3-4. Shoreline Change Rates Calculated by the Bureau of Economic Geology (BEG 2018)

The dune system along the Island varies between the undeveloped shoreline north of the City and the developed section within the City limits. Northern Island dunes are typically largely unvegetated transverse dunes that consist of a mobile sand supply that not only encroaches on to Park Road 100 but also into the lagoon shoreline to create extensive tidal flats. This section does contain foredunes that are 12-20 feet high, but there are large numbers of overwash areas from storm impacts. The southern section of the island within the City limits consists of sections of dune that are typically 6 to 13-foot high fronting seawalls/bulkheads (Del Angel 2011). The dunes in the City are not continuous and have breaks at several properties in addition to 156 breaks/cuts for pedestrian access in the dune system. The large open areas will reduce storm protection for landward properties. The permanent footpaths across dunes can result in low elevation points where flood waters can intrude or wind erosion can focus, compromising an otherwise continuous stretch of dune height and volume (Elko et. al. 2016).

3.2.2 Existing Conservation Efforts

The interconnectedness of the Island's habitats, species and people is undeniable; therefore, conservation of natural resources within SPI must be a priority for the City. By investing in projects that enhance natural features and functions and protect natural resources, the City invests in its future. In 2008, the City released a Comprehensive Plan that highlights goals for both land use and parks and resources. The new 2018 Shoreline Master Plan provides a roadmap for conservation in the City to improve the overall functionality of the City's natural systems and ensure visitors and residents benefit from what the Island offers. Goals, objectives, policies and strategies for land use and parks and resources are presented in the Plan.

3.2.2.1 Recent Operations

Per state requirements, the City has adopted a Dune Protection, Beach Nourishment and Access Plan as well as an Erosion Response Plan (ERP) that addresses beach and dune management. One of the primary components of these plans is establishing coastal resiliency via beach nourishment and dune protection and enhancement. The City participates in beach nourishment projects with USACE and GLO on a biennial basis and has implemented strict dune protection ordinances. More recently, the City has developed management strategies for Sargassum species (*Sargassum* spp.) on the beach that includes limiting raking/removal and when removed, placement within the upper beach to preserve and enhance the natural cycle of the beach and dune systems. Dune enhancement activities by the City also include dune planting events by staff and volunteers to reinforce dune areas and fill vegetation gaps to create a more comprehensive dune field. Additionally, the City is identifying land for potential acquisition and collaborating with stakeholders and organizations to accomplish resource management goals.

Beach Nourishment

Beach nourishment provides:

- Storm Protection - Protecting residences, hotels and businesses from wave energy during storm events;
- Sand Source for Dunes – Wind-blown sand is the primary contributor to dune growth, which serves as a sand reserve for the beach in storm conditions;
- Habitat Restoration - Providing healthy systems that numerous species (i.e. Kemp Ridley sea turtles [*Lepidochelys kempi*] and Piping Plovers [*Charadrius melodus*]) use as a place to live, feed and nest and;
- Economic Stimulation – Drawing visitors to the shoreline that support local economies.

Beach erosion was identified as a problem along the approximately five miles of City beachfront (*Town of South Padre Island 2005*). The federal government has partially funded dredging and beach nourishment

projects, in cooperation with the City and the State of Texas GLO, since 1997 (*CBI 2018*). This partnership has resulted in the Beneficial Use of Dredge Material (BUDM) project that has been shown to restore and protect the quality and function of SPI's beaches, dunes and adjacent areas, by adding sand to the system and widening the beaches. These projects generally coincide with maintenance dredging of the Brownsville Ship Channel, a federal navigation channel. The timing of BUDM projects is limited, as they must be conducted outside turtle nesting season, which means construction only between October and mid-March. In addition, the schedule is dictated by the Federal government, as the project is overseen by the U.S. Army Corps of Engineers (*City of South Padre Island 2018d*).

These efforts have slowed shoreline erosion and created a relatively stable beach system, particularly along the southern and middle section of the City. As described in Section 3.2.1.1, analysis of annual beach profile monitoring report surveys show the City shoreline has been typically stable from 1995 (prior to implementation of U.S. Army Corps of Engineers beach projects) through 2016 (*HDR 2017*). It should also be noted that the period between 2005 and 2008, when no beach nourishment occurred and the shoreline was impacted by storm waves and tides from Hurricanes Katrina, Rita, Dolly and Ike, experienced significant erosion to the beach and dune system. Currently, the City is working with GLO and professional coastal engineering firms to research long-term projects to address beach erosion. One consultant helped identify a large sand source 20 miles offshore that could be used if the City needs to rebuild after a major storm event (*City of South Padre Island 2010*). The City also recently updated their U.S. Army Corps of Engineers beach nourishment permit to include a new nearshore berm placement area offshore of the northern part of the City's beach. The purpose of this new nearshore placement area is to provide sand to the lower portion of the beach profile and to help develop a protective submerged berm, similar to what has been created along the middle portion of the City shoreline. To further review the movement of sand placed in the new nearshore placement area up to the beach, the City is working with a separate consultant to track tracer particles from the berm area to the beach profile. All of these studies and survey results have served as the basis for a five-year placement plan developed by the City to guide placement of sand along the beach or within the nearshore from BUDM projects.

Dune Protection

In addition to the protection afforded by the beach, vegetated sand dunes absorb wave energy, block storm surge and act as a sand reservoir, thereby reducing damage to infrastructure (*Pries et al. 2008*). As a result, stabilized vegetated dunes offer storm protection that is cost-efficient and effective for upland infrastructure protection (*NRC 2014*). The Dune Ridge Construction section of Chapter 22 of the City's Code of Ordinances recognizes the importance of dunes and proposes to construct a continuous dune ridge along the entire length of the City shoreline.

After significant damages to the beach and particularly the dunes following Hurricanes Dolly and Ike in 2008, the City took additional steps to enhance existing dunes and develop new dune areas. In 2008, the City collaborated with Surfrider Foundation and the University of Texas Brownsville to create a Dune Vegetation Harvest, which collected natural dune vegetation and propagated it in the University of Texas Brownsville greenhouse for future plantings. After planting a few thousand plants in 2009 and 2010, the City developed an aggressive planting schedule with the goal of planting 8,000 to 10,000 plants per event (*City of South Padre Island 2010*). Between 2012 and 2014, volunteers planted approximately 180,000 indigenous plants at various planting events sponsored by the SPI Dune Restoration Volunteer Program (*GLO 2015*). Native plant species include Bitter Panicum (*Panicum amarum*) and Sea oats (*Uniola paniculata*). These steps have helped enhance existing dunes along the southern shoreline of the City and expand dune footprint limits on the northern City shoreline.

Storm Protection

Development of a continuous dune system is one component of storm protection and the existing dunes, which reach +16 feet North American Vertical Datum (NAVD) in some areas, will help limit surge and wave impacts to Gulf-front properties. However, focusing only on beachside protections leaves the bayside vulnerable to flooding during storm events. Increased storm frequency (**Figure 3-5**), combined with SPI's maximum elevation of ± 9 feet NAVD of 1988 (NAVD88), landward of the dune field, makes SPI susceptible to flooding (*USGS 2016*). Currently, the City seeks to establish a continuous dune system with a minimum elevation of +10 feet; however, hurricanes in 1933 and 1967 resulted in water levels above this height (**Figure 3-5**). Hurricane and tropical storm events are not the only concern, minor storms and king high tides result in more frequent localized flooding. Regionally nuisance flooding is on the rise, with a 547 percent increase reported in Port Isabel since the 1960s (*Houston Chronicle, 2016*).

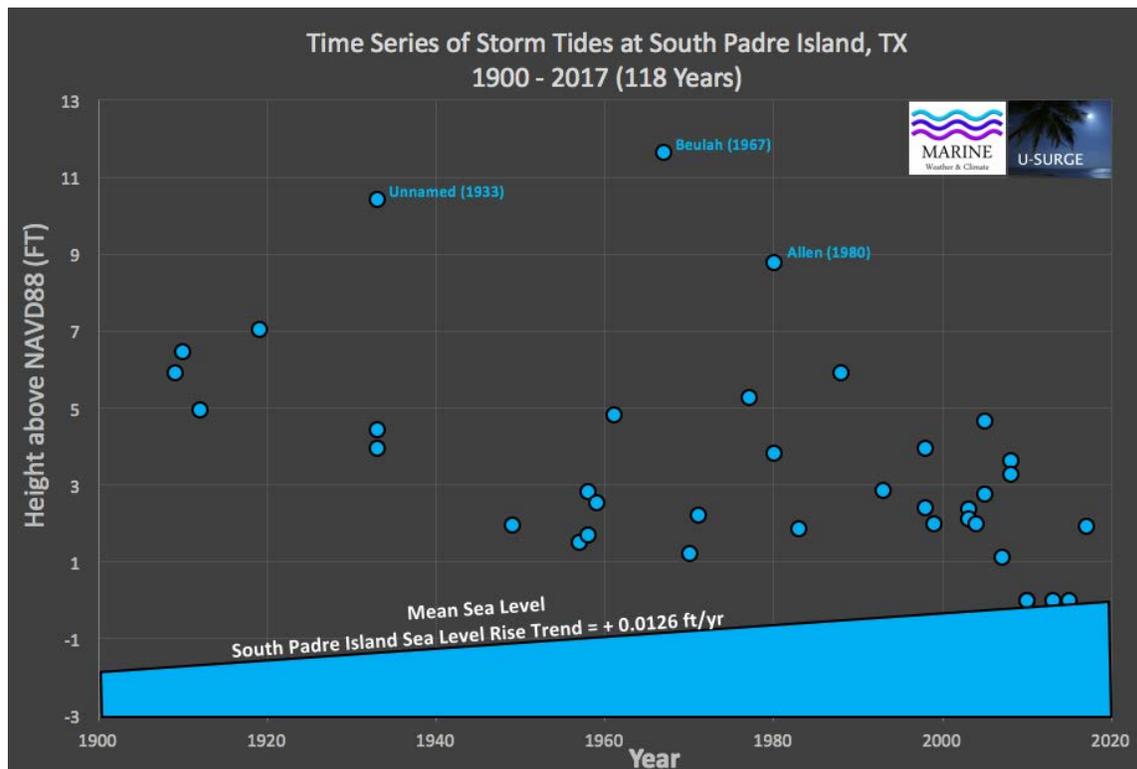


Figure 3-5. Maximum Recorded Water Levels during Storm Tide Events
(Source: *U-Surge, 2015*)

Natural Cycles

The City is committed to protecting species that play a critical role in the natural cycle of the beach and dune system. For example, Sargassum species, a type of brown seaweed found on SPI, abate beach erosion by trapping and keeping sand in place and allowing dunes to re-vegetate and strengthen by adding nutrients to the system that are used by dune vegetation. Historically, seaweed was removed from beaches by raking or grooming; however, with current knowledge, the City only removes seaweed that washes up in significant amounts and even then, the City strategically locates it at the base of the dunes for possible relocation at a later time to assist with dune restoration (*City of South Padre Island 2018b*).

Acquisition

The City has started to assess vacant lots for potential acquisition. Several available lots are located on either side of Queen Isabella Causeway, the only road connecting SPI to the mainland. These lots currently contain mangroves and offer visitors a first impression of the Island. How these lots are developed will impact the first impression of visitors for years to come. There are additional lots on both beach and bayside that may offer opportunities for parking, public access, or wetland conservation. SPI will only continue to develop and as time passes the opportunities for acquisition of key buildable properties that may enhance resident or visitor experience by providing restrooms, access, or parking, will be reduced. Properties with existing wetlands will be more difficult to develop due to federal and state regulations; therefore, they will likely be available for purchase for a longer period of time.

Lots to the north outside the City limits are being evaluated as part of the SPI Second Access Project, a Cameron County Regional Mobility Authority project, in partnership with the Texas Department of Transportation and the Federal Highway Administration, which is proposing a second access point to and from SPI in the north (*TxDOT 2017*). The second access route would potentially improve safety, increase mobility and encourage economic development, including tourism, in the area.

Resource Management

In 2008, the City created a new staff position of Coastal Resources Manager that has since evolved into the current Shoreline Department, with associated Director, to help centralize and coordinate City operations related to protection, enhancement and regulation of beach and dune issues. To further involve the community in shoreline management, the Shoreline Task Force was created, which is a combination of the Beach & Dunes Task Force and the Bay Area Task Force developed under earlier management plans. The Shoreline Task Force is responsible for beach maintenance activities, including dune mitigation and beach nourishment projects. These staff and community positions are an important driver in the success of resource management.

The City cooperates and coordinates with many stakeholders and organizations to accomplish resource management goals. The City has created the Parks and Keep SPI Beautiful Committee, which makes recommendations to the City regarding enhancing the beauty and overall appearance of the City and maintaining a community park system for the enjoyment of residents and visitors (*City of South Padre Island 2018f*). These committees are instrumental in organizing various community programs and activities, such as beach cleanup events and Earth Day festivities. Additionally, several volunteer events have taken place over the last decade in partnership with the local branch of the University of Texas, South Texas Surfriders, Texas Master Naturalist and interested community members, resulting in the planting of over 20,000 plants at 10 different gaps in the dune line (*City of South Padre Island 2018b*).

3.2.2.2 Regional Operations

In 2007, the Nature Conservancy donated its 1,500-acre SPI Preserve to the U.S. Fish and Wildlife Service for inclusion in the Laguna Atascosa National Wildlife Refuge. This preserved land was added to the wildlife refuge to ensure that the critical wildlife habitat, which provides resources for 17 species listed as endangered or threatened, is adequately protected (*The Nature Conservancy 2018*). The preservation of this land ensures that SPI will continue to be a haven for wildlife, which the City can support in its own conservation and eco-tourism efforts.

3.3 A Plan for the Future

This chapter is intended to be included in the City's Comprehensive Plan and build upon the City's existing conservation efforts. This section identifies four broad, interrelated conservation goals that will protect and enhance SPI's resources while simultaneously ensuring residents, business owners and

future generations benefit from these resources. These goals also take into account the priority conservation activities identified by the public via the SPI Master Plan Survey (*City of South Padre Island 2018c*) and encourage the City to take a holistic approach toward shoreline conservation efforts. Several important strategies for meeting each goal are provided. Goals are mutually supportive and are not listed in any specific order of importance.

Goal 1: Protect, preserve and enhance critical ecosystems

Ensure that natural resource management strategies protect, preserve and enhance nature reserve areas, sensitive lands and valuable open space in an effort to prevent degradation and increase ecosystem function.

Goal 2: Participate in resiliency projects

Improve SPI livability by improving the resiliency of the region's ecosystems and infrastructure.

Goal 3: Invest in bayside conservation to increase public utilization

Preserve critical habitat and improve infrastructure to ensure economic needs and opportunities are enjoyed by the public and future generations.

Goal 4: Enhance community programs and encourage community participation

Support and encourage community programs that take measures to conserve and/or promote conservation of SPI's resources.

Goal 1: Protect, preserve and enhance critical ecosystems

Ensure that natural resource management strategies protect, preserve and enhance nature reserve areas, sensitive lands and valuable open space in an effort to prevent degradation and increase ecosystem function.

Strategy 1.1: Protect beaches and dunes from degradation, as they are the first line of defense against natural processes such as storms and flooding.

Actions:

- Continue participation in beach nourishment projects, in partnership with the Texas GLO and USACE, as a way to preserve and restore the beach in eroding areas. Work with USACE to utilize the City's beach nourishment permit to allow beach placement during sea turtle nesting season (with required monitoring protocols) so that opportunities to place sand on the beach aren't missed.
- Continue research on sand movement within the system to review the efficacy of nearshore berms. Increased understanding of sand transport can also help improve beach nourishment projects, making them more effective and reducing inefficient use of funding and resources.
- Review the City's Erosion Response Plan based on current conditions and revise as needed. The City should review how well the plan is being implemented and whether it is successful via monitoring. Monitoring should include observations at key sites (i.e. public access points) and assessment of seasonal weather activity and human-induced effects on beaches/sand dunes.
- Review and revise Chapter 22 of the Code of Ordinances for the City of SPI as it relates to alteration of the dune ridge. The City will currently allow lowering or alteration of dune topography if the proposed plan meets certain criteria, which includes demonstrating that the proposed plan provides equal or better protection than the existing dune system. The code may want to consider a minimum level of protection provided by all dune systems that would be

determined by the methodology described in Strategy 2.1, Action bullet 3 below. The code should also include a procedure to evaluate the comparison of storm protection benefits. USACE uses the cross-shore modeling program SBEACH developed by their Engineer Research Development Center's Coastal Hydraulic Center to analyze storm impacts, beach and dune erosion (USACE 2018). Another modeling application is XBeach, which is an open source model by the Delft University of Technology in the Netherlands that was developed in partnership with USACE to evaluate wave propagation, sediment transport and changes to beaches and dunes during storms (Deltares 2018). Updated protection levels and analysis procedures can help maintain the balance between storm protection and homeowner views.

- Promote variable elevation dunes within the overall continuous system. The lack of diversity of topography and vegetation in engineered dunes in developed areas may limit their ability to provide the full suite of benefits provided by natural (i.e. geomorphologically and ecologically dynamic) dunes (Elko et. al. 2016).

Strategy 1.2: Enhance, restore and protect seagrass

Actions:

- The seagrass beds within the Laguna Madre are a unique ecological resource with, "...26 of the 31 species of fish identified from Gulf of Mexico estuaries as having ecological, commercial, or recreational value have been found..." in the bay (Port Isabel EDC 2018). This resource is equally important to other species including shorebirds and the redhead duck population. However, between 1975 and 1994 a 63-percent decline in the vegetative biomass was seen; Ducks Unlimited de México and the University of Tamaulipas are currently partnering to evaluate the status of the seagrass beds (Ducks Unlimited 2018). The health of this system is key to maintaining the economic health of SPI and the region. While predominately outside of the City limits, SPI should take a leadership role within the community of monitoring water quality and working with regional leaders to ensure this valuable resource is maintained. Tourism, particularly birding, dolphin viewing and fishing, depends on maintaining a healthy bay.

Strategy 1.3: Enhance, restore, create and protect wetlands and mangroves, critical habitat for a variety of wildlife including the aquatic bay community and migratory birds.

Actions:

- Existing wetlands and mangroves will be under increasing pressure with the anticipated growth within the City and region. SPI should inventory the extent of existing wetlands and mangroves adjacent to the Laguna Madre and complete a functional assessment of those over one acre. SPI then can prioritize lots that can be conserved, preserved or enhanced for either a targeted species (i.e. shorebirds) or recreational/educational opportunities, such as nature trails, boardwalks or viewing platforms. Larger lots that are contiguous with existing City property or natural areas should be prioritized over smaller lots that are isolated from existing wetlands or mangroves.

Strategy 1.4: Coordinate and collaborate.

Actions:

- Coordinate with Cameron County and the State of Texas to preserve sand dunes, wetlands and mangroves and ensure future developments avoid any negative impacts to these critical habitats.
- Collaborate with environmental education providers to encourage education programs that promote conservation and management of these critical habitats. Educational programs should include opportunities for outdoor classroom activities.
- Continue to lead the region in conservation and education efforts by enhancing existing programs and implementing new programs. The City should consider hosting community events/workshops

that highlight the City's expertise and leadership in the conservation and education fields and collaborating with Cameron County and the State of Texas officials/programs/organizations to achieve regional conservation and education goals.

- One focus should be on trash and its impacts on the region and its wildlife. Particular emphasis should be placed on plastics, including bags and straws.
- Pursue funding from a variety of local, state, regional and national programs:
 - GOMESA (Gulf of Mexico Energy Security Act) funding (state and county grants).
 - RESTORE Act funding.
 - National Oceanic and Atmospheric Administration (NOAA) Programs and Grants.
 - GLO Coastal Erosion Planning and Response Act and Coastal Management Program.
 - Proposed Beach User Fees.
 - Coastal and Estuarine Land Conservation Program.

Goal 2: Participate in Resiliency Projects

Improve SPI livability by improving the resiliency of the region's ecosystems and infrastructure.

Strategy 2.1: Reduce flood risk due to coastal storms and sea level rise.

Actions:

- Complete a vulnerability study and assessment to understand how storm surge and flooding would impact SPI's properties and infrastructure for the City as a whole.
- Continue participation in beach nourishment projects in partnership with the Texas General Land Office and the U.S. Army Corps of Engineers.
- Invest in a storm model that takes into account the existing dune system and bayside bulkheads, to identify vulnerabilities. Once vulnerabilities are identified, short-term and long-term projects should be developed that work toward creating a City that withstands minor events and recovers from major storms more quickly.
 - The height, volume and width of the dune system should be validated to ensure sufficient absorption of storm surge and wave energy to protect structures. It is recommended that the City follow a design process similar to that used by the U.S. Army Corps of Engineers when developing shore protection projects. FEMA and the U.S. Army Corps of Engineers recognize that every coast has differing topographies, geologies, and protection requirements, which is why they provide analysis guidance rather than specific beach and dune dimensions. The U.S. Army Corps of Engineers design methodology includes the establishment of a design storm scenario (typically 1% return interval or 100-year storm), associated water levels and wave conditions to determine the level of protection to be provided by the beach and dune system (*USACE 1997*). These design factors are then compared to anticipated project costs to review the level of protection versus expense, which may result in the need to revise the level of protection criteria. The assessments can then be utilized to update or verify the guidelines originally developed by Morton 25 years ago that are included within Chapter 22. It is also recommended that the design assessment consider future changes in sea level to account for long-term management.
 - Projects may include floodgates on drainage structures, minimum height requirements for bulkheads, installation of flood protection such as stop gates for boat access ramps or emergency vehicle access points, pump stations and/or changes to building codes.

- Establish a management plan that addresses flood risk for dunes, wetlands and mangroves.
- Pursue funding from a variety of local, state, regional and national programs.

Strategy 2.2: Develop and implement new resiliency and adaptation projects.

Actions:

- Identify resilient sites for coastal conservation (i.e. mangrove and wetlands preservation, restoration and creation as a way to mitigate flooding impacts).
 - Establish living shorelines on bayside where practical to reduce impacts of flooding and sea level rise. The guidance should address public access, boat ramp locations and parking, etc. According to NOAA, living shorelines can allow the shoreline to migrate inland with sea level rise and coastal erosion; therefore, they may be a better alternative for preserving shoreline access compared to hard stabilization structures, which can erode shore-ward of the structure (*NOAA 2015*). The intent should be to build living shorelines where it is practical and feasible; natural resources should be conserved and recreational opportunities should be enhanced as part of these projects. The City might consider using a hybrid approach that combines living shorelines and hard stabilization structures (*OSTP 2015*).
 - Review climate resiliency studies that detail designing infrastructure for flood risk. Incorporate flood risk designs into new buildings within the flood zone in an effort to withstand a coastal flooding event.
 - Establish a crisis response/disaster resiliency plan that details a whole community approach to an emergency event (i.e. oil spills, natural disasters, etc.).
-

Goal 3: Invest in bayside conservation to increase public utilization

Improve infrastructure and preserve critical habitat to ensure economic needs and opportunities are enjoyed by the public and future generations.

Strategy 3.1: Preserve SPI's bayside.

Actions:

- Take a holistic approach to improve bayside resiliency by identifying the different challenges faced by the bayside, including public access, ecosystem protection, projected increases in water level due to climate change and better stormwater flow control.
- Complete a vulnerability study and assessment to understand how storm surge and flooding would influence SPI's bayside infrastructure. Suggest reviewing the entire City system and what would happen during various types of storm events.
- Invest in bulkhead improvements. This should include identifying existing problem-areas and future areas of concern and establishing the appropriate elevation of the bulkhead. Opportunities for stormwater flow control should be considered (i.e. stop gates).
 - The City could hold a bayside resiliency/bulkhead design challenge, seeking concepts that would mitigate rising water levels and stormwater overflow. Invite the public to view concepts and provide input. This effort would need to incorporate any storm surge modeling to ensure designs include protective measures and do not create more vulnerability.
- Revise Chapter 22 of the Code of Ordinances for the City of SPI to address bayside protection, erosion and access. Chapter 22 should detail the roles of the Shoreline Task Force in implementing bayside protections.

Strategy 3.2: Invest in the development of bayside open space and vacant lots.

Actions:

- Identify open space and vacant lots and assess for acquisition and potential development. This could include business development in the entertainment district of SPI.
 - Incorporate flood risk designs into new buildings within the flood zone in an effort to withstand a coastal flooding event.
- Establish living shoreline guidance for bayside infrastructure development and improvements. The guidance should address public access, boat ramp locations and parking, etc. and how those may impact conservation efforts.
- Coordinate with the County and other stakeholders to increase boat access on bayside, while simultaneously avoiding any negative impacts on critical habitats or water quality.

Strategy 3.3: Maintain and preserve bayside mangroves and wetlands habitat.

Actions:

- Identify open space and vacant lots and assess for preservation or restoration.
- Design mangrove and wetland habitat preserve to provide eco-tourism opportunities (i.e. kayak trail, boardwalks, etc.), as well as long-term resiliency to flooding from storm surge and sea level rise.
 - Identify state or local coastal construction codes for building adjacent to mangrove stands.
 - Consider offsets for development within mangrove stands.

Goal 4: Enhance community programs and encourage community participation

Support and encourage community programs that take measures to conserve and/or promote conservation of SPI's resources.

Strategy 4.1: Maintain and strengthen current funding resources for community conservation programs.

Actions:

- Strengthen existing relationships with funders and supporters.
 - The Coastal Management Program (CMP) provides funding opportunities for community conservation projects.
 - Coordinate with Cameron County regarding opportunities to use County direct funds from GOMESA (Gulf of Mexico Energy Security Act). The GLO is also allocated GOMESA funds that could be used for community programs.
 - RESTORE Act funding has several pots of funds that can be used for various types of projects from conservation to enhancing tourism and public access.
- Provide information and expertise to existing conservation programs.

Strategy 4.2: Support collaboration and communication.

Actions:

- Provide networking opportunities for conservation organizations, committees and task forces such as forums or meetings, to share ideas, resources, best practices, etc.
- Create greater collaboration and communication opportunities between vested parties, including business owners, the chamber of commerce, the visitor's bureau, to align goals and identify issues that may influence conservation activities.

Strategy 4.3: Encourage community participation in local conservation programs.

Actions:

- Promote conservation events via social media to boost participation numbers.
- Model conservation programs after similar, successful programs found in neighboring coastal communities (i.e. Coastal Bend Bays & Estuaries Program, Galveston Bay Foundation).
- Establish beach and bay ambassadors to improve on the City's existing Code Enforcement Department and Anti-Litter Beach Program duties. Currently, the City's programs educate beachgoers about City littering policies and ensure compliance with laws related to littering on the public beach within the City limits. To enhance outreach and to increase awareness around the impacts of littering, many coastal cities have had success with citizen and student volunteers who perform the role as beach and bay ambassadors.

3.4 Conclusion

Beach nourishment and protection of natural habitats and ecosystems receive wide public support. In addition, bayside conservation activities, including flooding protection and mangrove and wetland preservation are popular and will be important resiliency measures as sea levels change. The City has already implemented several strategies to preserve critical ecosystems (i.e. SPI Dune Restoration Volunteer Program, Anti-Litter Beach Program, etc.) and should continue doing so, while also assessing new opportunities for preservation, restoration, resiliency and recreation. As indicated above, conservation efforts within SPI and the surrounding areas are complex, with many features and multiple stakeholders and partners. Therefore, collaboration and flexibility are essential to ensure SPI's resources are protected and enhanced while simultaneously providing benefits to residents, business owners and future generations. Key action items that will directly enhance conservation efforts associated with the shoreline include:

1. **Storm Resiliency:** In the coming decades, rising sea levels will pose a serious threat to the integrity and vitality of SPI's businesses and neighborhoods. To protect infrastructure, it will be necessary to improve flood and storm resiliency. SPI is currently completing a Drainage Master Plan to minimize the potential for flooding. The City should build upon the Drainage Master Plan by performing a study to review storm surge and wave modeling for the Island. Planning can then be completed to:
 - a. Implement protections that limit impacts, such as floodgates, bayside resiliency projects and continuous dune system management;
 - b. Improve resistance to impacts, including updating building codes and creating a bayside shoreline guidance document;
 - c. Prepare for post-event recovery, including tourism marketing to limit the duration of economic impacts.
2. **Updates to Building Codes:** SPI has experienced multiple storm events, including hurricanes in 1933, 1936, 1967 (Beulah), 1980 (Allen), and 2008 (Dolly). More flood risk reduction is recommended for the City based on wave height (*U-Surge 2015*), past storms and the projected sea level rise in 2020. The City should strengthen their building codes for increased resiliency from flooding, particularly along the beachfront side of Padre Boulevard. The coastal city of Galveston, Texas has promoted a freeboard requirement that requires elevation of a building's lowest floor above the required flood elevations by a small additional height, typically one to three feet (*City of Galveston 2011*). Currently, the FEMA Flood Zone VE ends at the City bulkhead. Though not required, it is recommended that building requirements, especially along the

beachfront side of Padre Boulevard, should meet or exceed the building requirements of FEMA Flood Zone in an effort to increase resiliency. The benefit of updating building codes to increase resiliency against flooding includes faster storm recovery and far fewer structures that sustain damage. Those structures that are not damaged even though flooding occurred are less likely to have steep declines in property value. The City should work with the Development Standards Review Task Force to review guidance that could include occupiable first floor elevations located above a projected base flood elevation, location of electrical panels and HVAC equipment above base flood elevation and flood vents. The City should also encourage builders to implement the Insurance Institute for Business and Home Safety FORTIFIED Home Program voluntary building standards to help strengthen homes against storm impacts. Recent events (i.e. Hurricane Katrina) indicate that hurricane-impacted areas show long-term reductions in tourism; therefore, the more resilient to flooding the City can be, the more confident it can be in preserving tourism.

3. **Revision of Chapter 22 of the Code of Ordinances for the City:** In SPI, the offshore water depth is deeper than other areas along the Gulf Coast in Texas. The depth does reduce storm surge levels; however, it also increases wave height (*U-Surge, 2015*). Dunes are the primary protection from wave energy and are a key component to storm protection. Prior to the current dune ordinance, the beach directly abutted the seawall, leaving residences and businesses exposed to potential storm damage. Chapter 22 references a report by Robert Morton from the Texas Bureau of Economic Geology that was developed in 1993 and describes proposed dune features that should survive most large storms. This guideline, prior to the establishment of a significant dune system on SPI, has since resulted in the successful establishment of a dune system for much of the beach. However, the ordinance was developed under conditions that no longer exist and prior to the majority of current research on climate change and sea-level rise. Now that a dune system is present, the City should review the ordinance based on the current conditions and research. The proposed review should incorporate updated storm surge estimates, wave impacts and performance of dunes of varying dimensions to maximize shoreline protection, as well as, incorporating additional benefits. The ordinance should also update dune maintenance and access construction guidelines, including dune topping and the distance between walkovers and dune crest (or maximum/minimum walkover deck elevation). Finally, Chapter 22 currently contains no guidance on bayside access. An update to this ordinance should be comprehensive of both bay and beach shorelines; addressing bayside access and protections.
4. **Beach / Bay Ambassadors:** The health and cleanliness of the beach and bay are what will continue to draw people to SPI. Currently, the City's Environmental Health Department and Anti-Litter Beach Program educate beachgoers about City littering policies and ensure compliance with laws related to littering on the public beach within the City limits. To enhance educational outreach and to increase awareness around the impacts of littering, many coastal cities have had success with citizen and student volunteers who perform the role as beach and bay ambassadors. Duties of ambassadors could include regularly scheduled beach and bay walks to provide information to visitors and the community on the history of the Island and environmental outreach, such as the impacts of litter, the unique importance of Sargassum, the importance of seagrass beds, etc. Beach and bay ambassadors could also patrol the beaches to provide one-on-one interactions with visitors, remind users of fines associated with glass and litter, monofilament recycling programs and coordinate and oversee social events that raise awareness about litter policies and the importance of respecting and protecting the beach and bay natural resources. The recommendation is for the City to expand their litter control efforts to include an ambassadors program that is citizen and school-oriented, thereby creating a more community-

based, volunteer-driven approach to educational outreach regarding beach policies and shoreline protection.

Chapter 4. Public Access

4.1 Introduction

Public access to Texas Gulf Coast Beaches, "... is not just the law, it is a constitutional right" (*GLO 2015*). Under the Texas Open Beaches Act, the Texas General Land Commissioner protects the public's free and unrestricted right to access Texas beaches, commonly referred to as the "wet beach," from the water to the line of mean high tide. Dry sandy areas that extend from the "wet beach" to the natural line of vegetation, which may shift due to the wind as well as wave and tidal actions caused by storms and hurricanes, are generally privately owned but may be subject to public beach easement (*GLO 2015*).

The City is dedicated to providing the public access to the beach. Currently, there are 24 City public beach accesses along Gulf Boulevard, which provide access to the beach via natural trails, concrete drives that support emergency vehicles, at-grade beach mats, or wooden walkovers. Each access is unique and provides various levels of amenities, including parking, Americans with Disabilities Act bathrooms, spray showers and drinking water. There are three additional public beach access points on Padre Boulevard; White Sands Street, the Pearl Beach Access and the La Copa Beach Access. The City also provides access to the bay via two free public boat ramps; one located on West Polaris Drive and one located on West Palm Street. There are also three paid locations, one located at Parrot Eyes Restaurant and Watersports-Bar and Marina, one at Amberjack's and one located at Jim's Pier on Swordfish Street (**Figure 4-1**). An additional fee based boat ramp is located within the County's Isla Blanca Park. Several bay street endings provide views of the bay, with some providing additional access to the water (*City of South Padre Island 2018a*). Outside of the City limits paid access and parking are available to the north at County owned access points and to the south at Isla Blanca Park and the Kampgrounds of America (KOA).

In April 2018, a public survey was distributed by the City to gather feedback on a variety of topics, including public access (Appendix B). Survey respondents (primarily SPI residents) indicated that public access to water, both beach and bayside, is the second most important factor for SPI's growth and success, following tourism (*City of South Padre Island 2018c*). When considering improvements to existing or new beach access points, survey respondents indicated that providing accessibility for all capabilities was an important consideration. According to the survey, wooden walkovers (59.36%) are favored over ground-level beach access mats (28.65%) to accommodate wheelchair and accessibility for people with disabilities (**Figure 4-2**). Additionally, survey results revealed that restroom facilities (72.22%), wash stations (i.e. foot spray and shower) (64.33%) and additional parking (50.88%) are key amenities that would enhance the beach experience (**Figure 4-3**). Survey results also identified additional motorized and non-motorized boat access on the bay as a need (**Figure 4-4**) (*City of South Padre Island 2018c*).

On June 19, 2018, a Comprehensive Plan Open House was conducted. During this meeting, citizens were specifically asked about their preferences regarding access types and restroom facilities. The previous survey results were further confirmed, with 37 people (77.1%) preferring walk-overs versus 11 residents (22.9%) preferring at-grade access mats. When asked about bathroom location options for beach access cul-de-sacs, 33 people (80.5%) preferred permanent restroom facilities versus 4 people (9.7%) for temporary restroom facilities. Sixteen people (48.5%) preferred a permanent restroom facility at the Historic Building Line, 9 people (27.3%) preferred a permanent facility located at Gulf Boulevard and 8 people (24.2%) preferred a permanent facility at mid-Cul-De-Sac. Sapphire Circle had the most support as a public beach access restroom location, followed by an equal number of votes for Pearl, White Cap Circle, Gay Dawn Circle, Good Hope Circle and White Sands Circle.

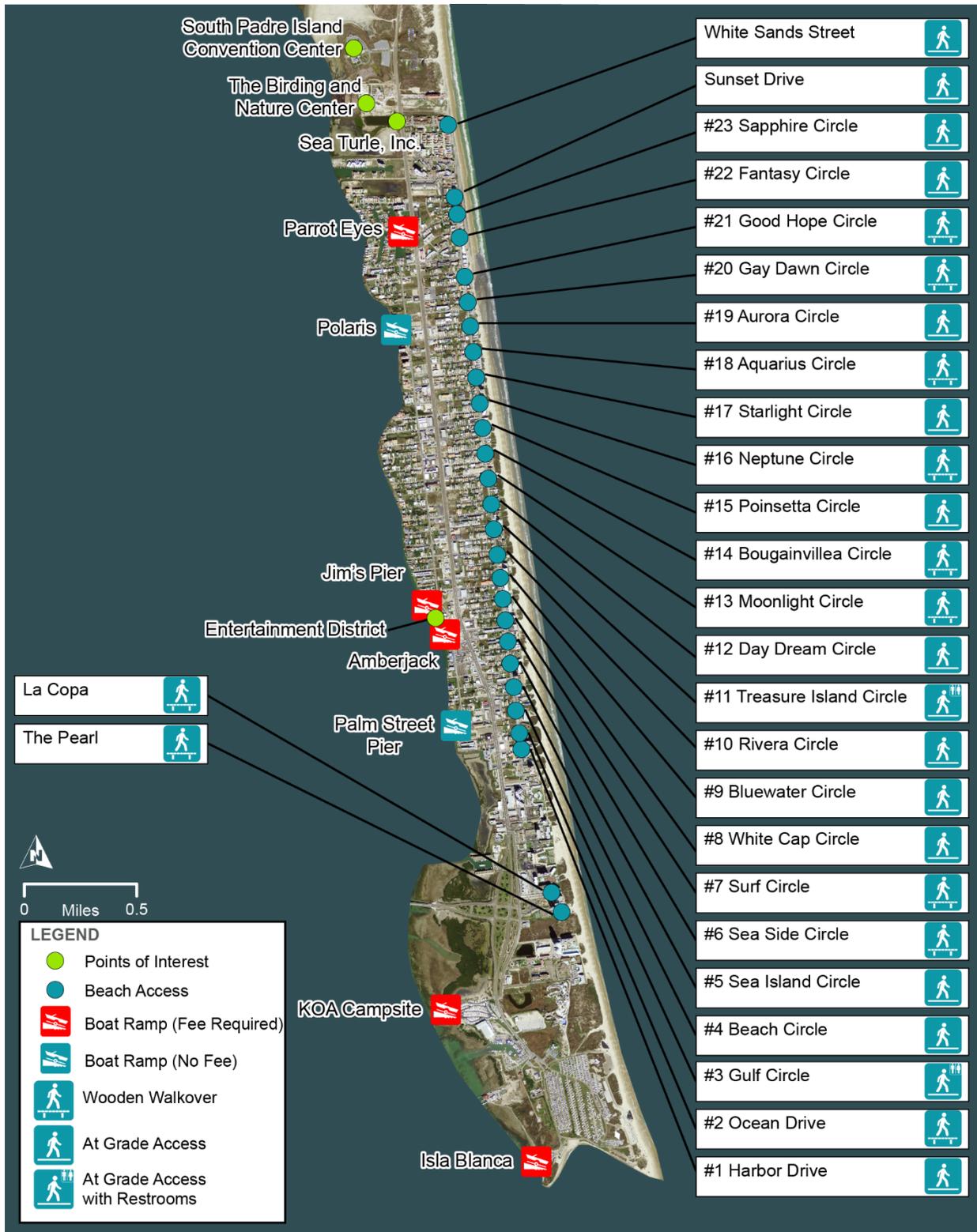


Figure 4-1. Public Access and Boat Ramp Locations within the City of South Padre Island
 (Source: Texas Orthoimagery Program (TOP) 2015 50cm NC\CIR Orthoimagery)

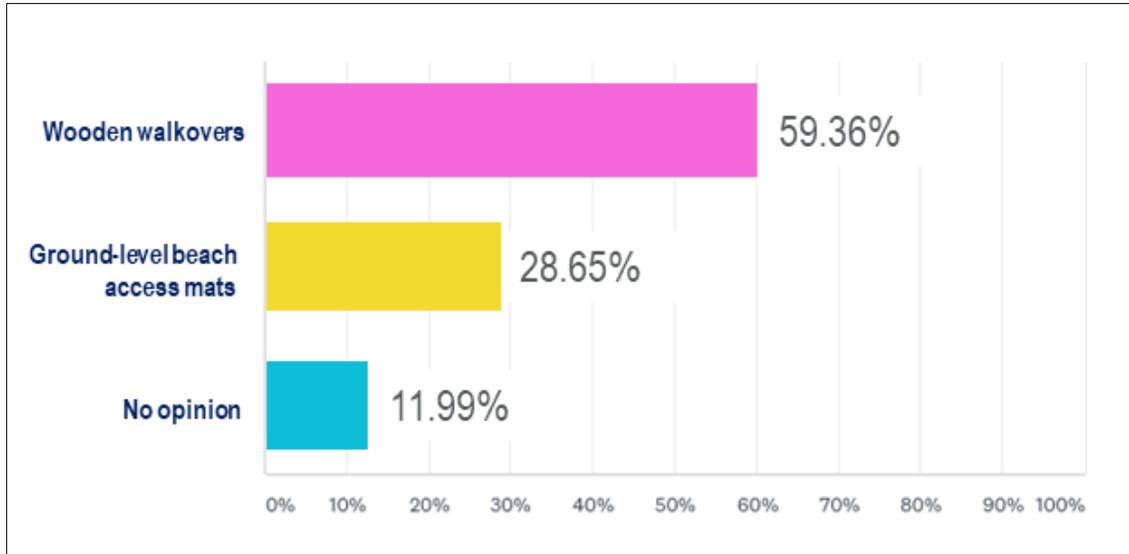


Figure 4-2. Types of Beach Access the City Should Consider When Improving Existing or New Beach Access Points per the South Padre Island Master Plan Survey Results
(City of South Padre Island 2018c)

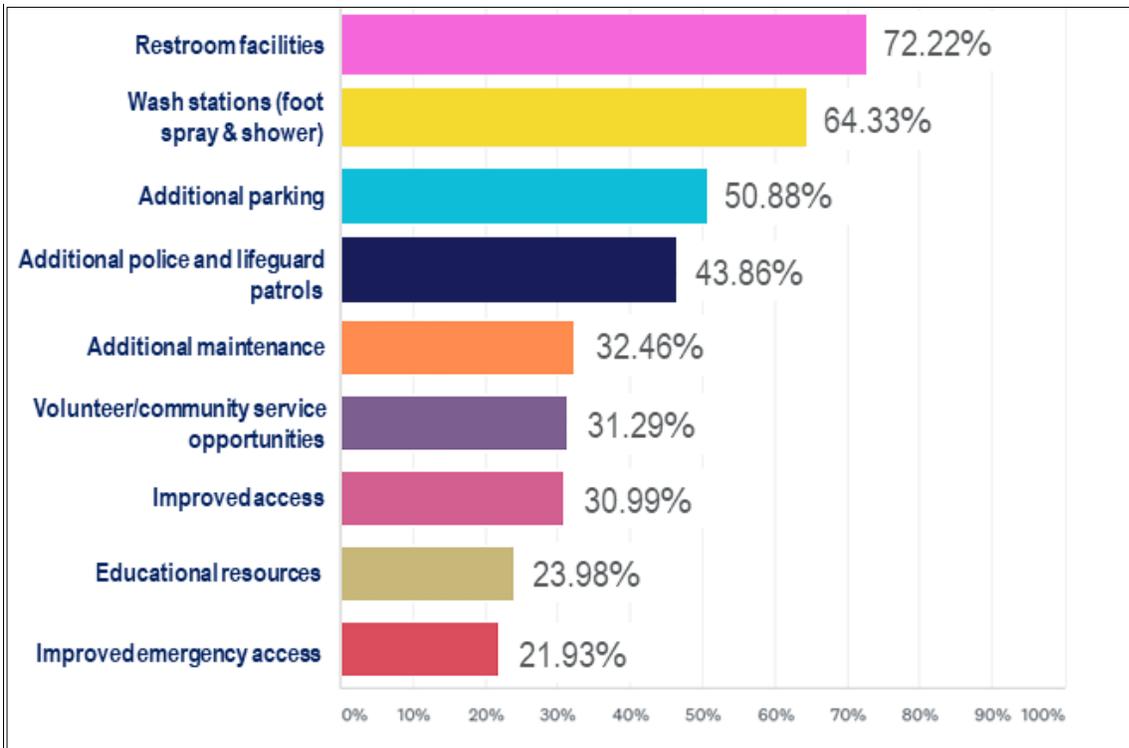


Figure 4-3. Types of Amenities That Would Improve the Beach User Experience per the South Padre Island Master Plan Survey Results
(City of South Padre Island 2018c)

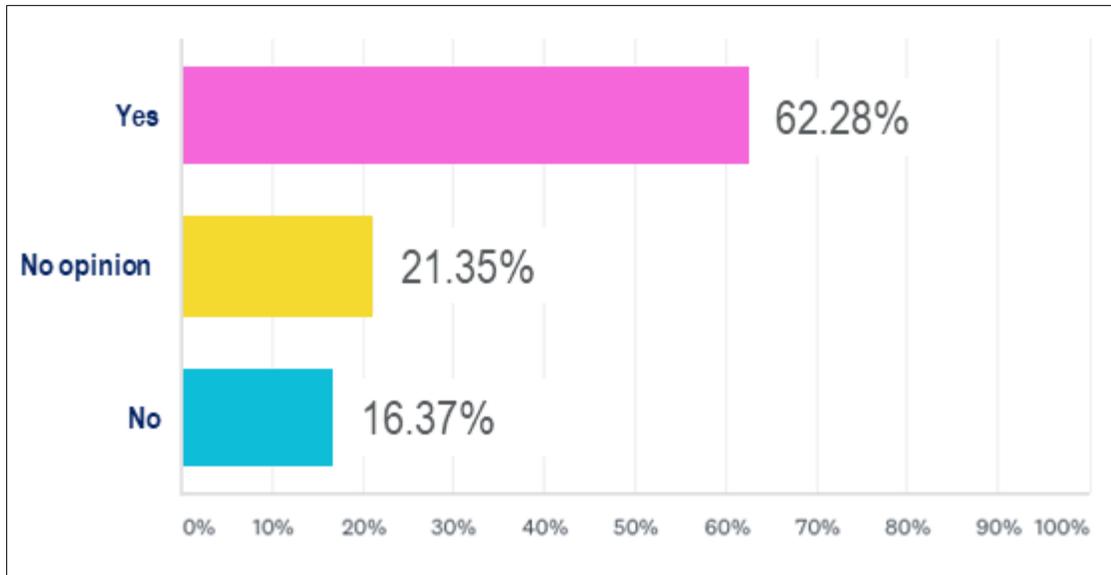


Figure 4-4. SPI Master Plan Survey Respondents Opinions on Additional Motorized and Non-Motorized Boat Access on the Bayside
(City of South Padre Island 2018c)

As part of public access, the City must also consider beach and dune protection. The growth of the City and increasing development and recreational use on SPI can impact the stability of the dune environment, which acts as a defense against destructive forces of wind and waves. Additionally, construction and heavy recreational use of the beaches can contribute to fragmentation of the beach/dune system and deterioration of the dunes (*GLO 2015*). The Texas Coastal Resiliency Master Plan, dated March 2017 and developed by the State of Texas General Land Office and the City's Erosion Response Plan recommend SPI establish a connected dune system to reduce potential property damage during storm events. Survey results reveal that the majority of SPI respondents (72.22%) are supportive of establishing a connected dune system on SPI (**Figure 4-5**) (City of South Padre Island 2018c). There is no variation on these results even when considering people who live on the beach and whose views would be impacted (*City of South Padre Island 2018c*). Dunes exist on SPI; however, they do not continue across every property due to on-grade footpaths and property owner actions. Emergency vehicle access points also create low points in the dune system that may be vulnerable during storm events. Vehicle access points may need to incorporate flood controls that can be put in place prior to an event to limit wave damage and potential washout (i.e. drive-overs).

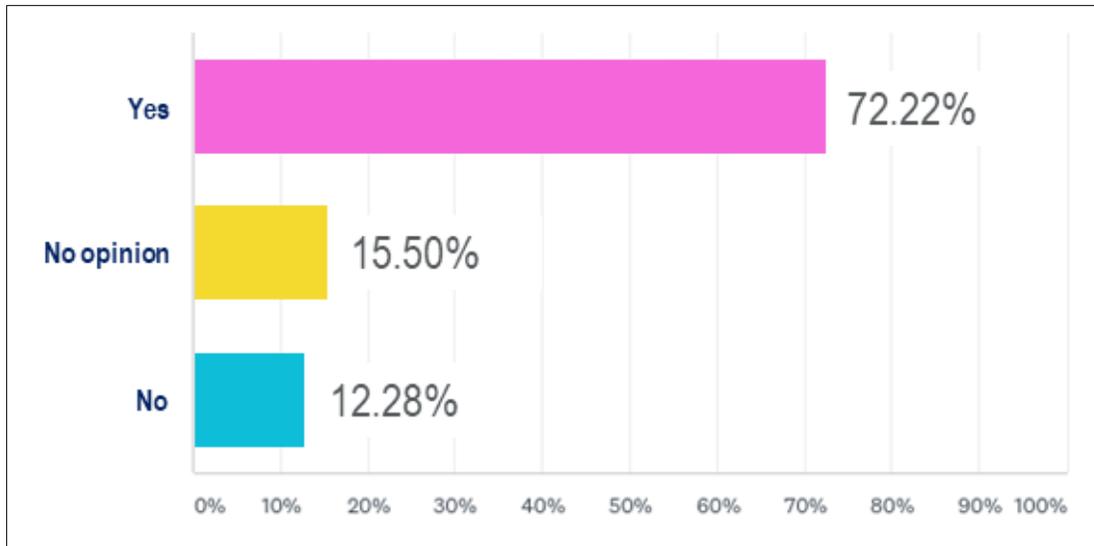


Figure 4-5. SPI Master Plan Survey Respondents Opinions on Establishing a Continuous Dune System on SPI
(City of South Padre Island 2018c)

This chapter is intended to guide improvements to existing or new beach and bayside access points; access needs identified by the public as priority will be central to these recommendations. A general introduction to the City's current public access policies is provided in Section 4.2. This section also touches on how beaches and sand dunes enhance the coastal resilience of SPI. This topic is further discussed in the Conservation Chapter of this Master Plan.

Section 4.3 includes a summary of SPI's broad public access goals provided to improve accessibility to the water on both the beach and bay side of the Island, while simultaneously protecting the Island's resilient natural barriers (i.e. beach, sand dunes, etc.). Goals generally include:

- **Improvements to existing or new public access points;**
- **Ensuring that improvements to existing or new public access points prioritize coastal resiliency; and**
- **Sustaining and establishing funding and support for public access infrastructure.**

Following the summary, each goal is described individually; goals are mutually supportive and not listed in specific order. Each goal is accompanied by several strategies and suggested actions for implementation. The amount of effort required per strategy will vary; some are already being accomplished while others will require innovation. The list of strategies is not exhaustive, but rather represents suggestions for accomplishing a goal.

4.2 Public Access Today

Per state requirements, the City has adopted a Dune Protection, Beach Nourishment and Access Plan that addresses beach and dune management. Primary components of the plan include beach access and coastal resiliency via beach nourishment and dune protection and enhancement. Beach management generally addresses enhancing and preserving public access, which, in the past, has included parking improvements, signage and additional beach access via dune walkovers and ground-level beach access mats. DMAIC, which stands for Define, Measure, Analyze, Improve and Control, is an extensive analysis tool used by the City to address various components of public access, including, primarily, parking. The

DMAIC tool has allowed the City to implement important strategies to ensure parking availability is in compliance with state public beach access regulations.

As mentioned above, the City maintains 27 public beach access points providing access to the Gulf. There are also two free public boat launches on the bayside, located on West Polaris Drive and Palm Street, as well as several bay street endings that provide views of the bay and, occasionally, access to the water. Of the 27 public beach access points, 19 provide over 250 parking spaces with 23 of those being handicap spaces. These beach access points all have a walk-over, stairs, or ground-level beach access with mats or concrete and offer varying amenities, including restrooms, showers, or handicap accessibility. For example, Beach Access #20, also called Gay Dawn Circle Beach Access, is wheelchair accessible, but does not have public restrooms; however, public restrooms and showers are located at Beach Access #3 and #11. Every public City beach access point has signage set up with flags to inform beachgoers of any potential risks (i.e. rip currents, dangerous marine life) in the water. The SPI Beach Patrol monitors conditions and changes the flags as needed. In addition to parking spaces at beach access points, the City provides parking all along Gulf Boulevard and at the Multimodal Facility, among others. At present, there are 1,910 public beach access parking spaces.

With the current amenities available, some beach access points are heavily used, while others are less frequented. This plan is intended to build on the City's existing public access policies and refine public access goals to meet the changing needs and expectations of SPI residents and visitors. The City must find strategies to improve public access in ways that enhance the user experience while simultaneously preserving and protecting vital natural resources for future generations.

4.3 A Plan for the Future

In considering improvements to existing or new public access locations, the City must enhance the utilization of access points while prioritizing beach and dune protection, particularly in areas experiencing shoreline erosion and increasing development.

This section identifies three broad, interrelated goals to address the City's public access, while simultaneously promoting priority public access needs, as identified through results of the SPI Master Plan Survey (*City of South Padre Island 2018c*). Several important strategies for meeting each goal are provided. Goals are mutually supportive and are not listed in any specific order.

Goal 1: Public Access Points

Improve existing or create new beach and bayside public access points.

Goal 2: Coastal Resiliency

Support public access improvements and infrastructure that enhance SPI's coastal resiliency.

Goal 3: Funding

Maintain current funding and identify regional, national, or international resources for public access infrastructure.

Goal 1: Public Access Points

Improve existing or create new beach and bayside public access points.

Strategy 1.1: Enhance waterfront access on the Gulf.

Actions:

- Continue to improve beach access points, particularly with wooden walkovers and restroom facilities, as identified as a preference by residents surveyed. Wooden walkovers across dunes are recommended to prevent vegetation damage and weakening of the dunes by heavy pedestrian traffic (*Morton 1993*). Damage to dunes from pedestrian traffic will be avoided with the use of elevated walkovers that are placed near access roads, parking and public facilities (*GLO 2015*). When storm surge and waves impact a coastline, the lowest areas are the most susceptible as water will seek the lowest elevation. As seen in Ocean and Monmouth Counties in New Jersey, “the access ways where elevations were lowered to allow grade-on access with the berm [dune] became easily-available conduits, for Hurricane Sandy’s storm waters and damages of structures adjacent to them were extensive” (*Barone et al. 2014*). Pathways that lower the elevation of the dune compared to adjacent areas will create a pathway for dune breach and overwash (*Barone et al. 2014*). As a result, state agencies that oversee dune protection, such as the Texas GLO, Florida Department of Environmental Protection, South Carolina Department of Health and Environmental Control and the North Carolina Department of Environmental Quality, typically recommend dune walkovers with sufficient elevations above the dune to allow sand migration to promote a continuous dune field for shoreline protection. Providing walkovers is likely to increase public awareness of the importance of dunes and the sensitivity of the ecosystem (*GLO 2015*). In situations where walkovers are not possible, such as areas of minimal dune development, sparse vegetation, or low foot traffic, a preferable alternative for storm protection, would include angling entrances at least 45 degrees with respect to the shoreline or incorporating a feature that would deflect surge away from the access way (*New Jersey Sea Grant n.d.*).
- Encourage property owners and residents to tie beach access points in with existing walkovers as described in the City’s Erosion Response Plan.
- Establish additional emergency waterfront access points to facilitate emergency response and reduce response time. These could be designated existing waterfront access locations or newly created access points. Vehicular access should be carefully considered and designed to limit the potential for overwash and washout. Flood controls may need to be incorporated into vehicular access points so that egress can be closed and secured prior to a storm event.
- Increase parking facilities. The City investigated vertical parking in the past; however, multi-level parking facilities are exponentially more expensive than at-grade parking. The City should continue to maximize at-grade parking, including the purchase of vacant lots to support visitors. Parking expansion should focus on access points with existing restroom facilities, or where new facilities are proposed, as these access points are frequently visited and are in high demand. In 2018, the City met the GLO parking requirements (i.e. one public off-beach parking space for every 15 linear feet of beach that is closed to vehicular traffic) and may implement parking fees that can be used to support shoreline improvements and maintenance.

Strategy 1.2: Enhance waterfront access on the bayside.

Actions:

- Increase the number of public boat launch sites. This is especially important in drawing tournament/recreational fishing to the Island. The City should work with tournament organizers to have events operate from multiple launch points, to reduce traffic conflicts, increase public safety at ramps during loading/unloading and dissipate parking congestion.
- Create boat and equipment storage locations.
- Provide sewage pump-out facilities for boat holding tanks.
- Provide improvements (i.e. drainage, maintenance) at bayside access points, specifically existing piers, public lots and boat ramps (i.e. Palm Street Pier, Jim's Pier, Polaris, etc.).
- Support additional motorized and non-motorized boat access. This should include increasing the number of public boat launch sites and regular maintenance/improvements to existing access areas. Motorized and non-motorized boat access points should be separate facilities:
 - Motorized boat access points: locate primarily in the entertainment district of SPI to avoid disturbance, parking conflicts and over-use in residential areas.
 - Non-motorized boat access points: located at the northern end of City limits, near Laguna Madre Nature Trail and Convention Centre where ample parking facilities already exist.
 - Designate specific watersport event areas that are away from residential areas.
- Establish emergency waterfront access points. These could be designated existing waterfront access locations or newly created access points.
- Increase parking facilities. Consider potential north side parking and bayside street widening that could be funded by public-private partnerships.

Strategy 1.3: Enhance beach access.

Actions:

- Add user amenities (i.e. restroom facilities, wash stations, water fountains, bike racks, trail signage, lighting, etc.) to make beach accesses more user-friendly and to help evenly distribute use of facilities throughout the Island.
 - Add viewing areas/platforms to beach access points that provide views of the Gulf to accommodate people with disabilities and aging populations who may not be able to walk on the beach itself.
- Provide accessibility for people with all capabilities (those who use wheelchairs, have sight impairments, or have difficulty walking on loose sand, etc.). Ground-level beach access mats, concrete vehicular access and wooden walkovers all have the potential to provide access to meet Americans with Disabilities Act guidelines.
- Based on public survey and open-house results wooden walkovers are the access typology preferred by residents, over ground-level beach access mats. As discussed under Strategy 1.1, wooden walkovers across dunes are recommended to prevent vegetation damage and weakening of the dunes by heavy pedestrian traffic (*Morton, 1993*). Walkovers allow dunes to naturally vegetate and migrate under them, when elevated to the correct height, to support shoreline protection and formation of continuous dune systems. Walkovers should be designed to maintain or support a continuous dune line. See Public Access Strategy 1.1 for further discussion.

Goal 2: Coastal Resiliency

Support public access improvements and infrastructure that enhance SPI's coastal resiliency.

Strategy 2.1: Promote public access strategies that support beach and dune protection.

Actions:

- Reduce erosion and storm damage to coastal properties through the use of properly designed access structures. Access structures should allow for natural movement of sand and sediment.
- Establish beach access in strategic locations along the coastline to prevent future overwash areas.
- Define and maintain pedestrian access in specified locations through the installation of elevated structures (i.e. wooden walkovers). Elevated structures define and designate access more clearly than ground-level access, thereby reducing the number of pedestrian trails and walkways through the dunes.
- Rebuild or build access points in ways that minimize impacts to the dune system. This should include considerations for the size (i.e. width) of boardwalks/walkways/stairways, elevation, shading impacts on plants, orientation to avoid damaging wind or waves, runoff reduction, sectional/adjustable/temporary design elements, the timing of construction, materials and maintenance.
- Per the ERP, GLO rules require that the City specify the target dune elevation for its dune protection and enhancement program (*City of South Padre Island 2012*). The City seeks to establish a continuous dune system with a minimum 10-foot elevation and 60-foot base depth. In accreting areas and areas where beach nourishment has created and can sustain a beach width of 200 feet, the City's goal is to establish the dunes with a minimum base depth of 100 feet (*City of South Padre Island 2012*).
 - The City should review and revise dune management ordinances, specifically in regards to dune height and width based on current conditions (i.e. City of SPI Code of Ordinances Chapter 22 – Dune Protection, Beach Nourishment and Access Plan Implementing Provisions). Dune height and width should be established based on scientific literature and data regarding storm surge and flooding on SPI. The original dune guidelines developed by Morton in 1993 were based on conditions and assessment methodologies at the time. Over the past 25 years, there is a new understanding of storm surge estimates, changes in sea level and numerical modeling methodologies to predict storm impacts to beaches and dunes. Federal Emergency Management Agency (FEMA) mapping procedures consider 540 square feet/linear foot above the 100-year still water elevation an indicator of whether a dune will be overwashed in a storm or just experience retreat (*FEMA 2011*). An assessment of existing dune heights and volumes above the 100-year still water elevation was performed using the 2016 beach monitoring survey performed for the City and the GLO. Results indicate that the only dunes with more than the 540 square feet/linear foot guidance are located in Isla Blanca Park. However, there are areas with dune heights above the 100-year still water elevation (Figure 4-6). We recommend the City review the updated storm and sea level scenarios along with the current condition of dunes to determine the level of protection, damage reduction and risk acceptable to upland infrastructure. Methodologies for performing the level of protection assessment are discussed in Strategy 2.1 of Chapter 3 – Conservation.

Strategy 2.2: Inform the Public.**Actions:**

- Engage with community task forces, boards and volunteer groups to discuss and find a balance between access, conservation and homeowner priorities. The planning process and public survey for the Plan have shown that the Island is well known for active community participation in shoreline projects and policies. This high level of engagement can be an asset to long-term planning.
- Install signage that reiterates the importance of beach nourishment and healthy dune systems. This should include information on the importance of vegetation and dune and bank stability to discourage trampling of vegetation.



Figure 4-6. Existing Dune Height Exceeding 100 year Storm Surge Elevation of +9.3 ft NAVD
(Source: Texas Orthoimagery Program (TOP) 2015 50cm NC\CIR Orthoimagery)

Goal 3: Funding

Maintain current funding and identify regional, national, or international resources for public access infrastructure.

Strategy 3.1: Maintain and strengthen current funding resources for public access infrastructure and improvements.

Actions:

- Strengthen existing relationships with funders and supporters such as the GLO Coastal Erosion Planning and Response Act program and the Coastal Management Program.
- Continue investigation of SPI Beach User Fee Program and if adopted utilize funds for public access improvements and maintenance.

Strategy 3.2: Diversify funding resources for public access infrastructure and improvements.

Actions:

- Identify new regional, state, national, or international resources for public access
 - Texas Parks and Wildlife Department Boating Access Grants. Activities the grants will fund include new boat ramps, land acquisition, restrooms, parking facilities and signage.
 - RESTORE Act funds. It is understood that the City has applied for funding from this program, but there are multiple avenues within this funding source that could address access issues. In addition, funds will be dispersed over a 15 year period so additional opportunities may arise.
 - NOAA Coastal Resilience Grants Program - a new grant program, administered by the National Fish and Wildlife Foundation, in partnership with NOAA, protects coastal communities from storms and flooding impacts by funding projects that restore and strengthen protective natural systems
- Work with the County to establish a regional public access plan. GOMESA funds are beginning to be distributed to coastal counties and could be a source for cooperative plans. The GLO is also a recipient of GOMESA funds and could be a partner on access projects. Funds will be provided to Texas and counties on an annual basis.

4.4 Conclusion

Visitors and residents of the City expect public access to the water on both the beach and bay side of the Island. While there are several unique opportunities for access to the extensive shorelines of the Gulf Coast and the bay, the City must prioritize improvements to existing and new public access points that combine storm protection, habitat restoration and visitor amenities to support tourism. These include opportunities that enhance the public's utilization of the beach and the bay (i.e. restrooms, wash stations, additional parking, increased boat access, etc.) and preserve and protect the natural resources of SPI for future generations. Key actions that will directly enhance public access associated with the shoreline are:

1. **Enhance Existing Beach Access Points With Restrooms, Wash Stations and Additional Parking:** The results of a public survey conducted in April 2018 and direct conversation with citizens at a Comprehensive Plan Open House held in June 2018 reveal strong community support for the addition of permanent restroom facilities over temporary restroom facilities at beach access points. By enhancing existing beach access points and creating new ones with

amenities such as restrooms, wash stations and parking facilities, the City can help alleviate over-use at current beach access points that offer more user-friendly amenities and improve the overall beach user experience.

2. **Increase Boat Access on the Bayside:** Public boat access is currently limited within the City, with only two free public boat access ramps and three fee based ramps on the bayside. The City needs to create and/or expand boat access and associated parking, primarily in the entertainment district to draw more tourists to the area and reduce use at the residentially located boat access point.
3. **Separate Motorized and Non-Motorized Boat Access Points:** The City should separate motorized boat access points from non-motorized boat access to improve the bayside user experience, public safety and avoid over-use and/or habitat degradation at one particular boat access point. Motorized boat access is recommended in the entertainment district, while non-motorized boat access is recommended on the northern end of the Island, in close proximity to the Laguna Madre Nature Trail, the Convention Centre and the SPI Birding and Nature Center, where parking facilities and amenities already exist.
4. **Protect the Continuous Dune System:** The City has an opportunity to make beach access points user-friendly for all abilities, including access points that provide accessibility for people with disabilities as well as the aging demographic. The results of a public survey conducted in April 2018 and direct conversation with citizens at a Comprehensive Plan Open House held in June 2018 reveal strong community support for dune walk-overs versus at-grade access mats, which will protect and promote the vital dune system that is important for coastal resiliency. Dune walkovers provide additional protection to a continuous dune system, which in turn provides shoreline protection to upland properties. However, the City may need to implement a variety of access options due to existing and future conditions along the Gulf shoreline. As a result, adjustments to orientation or implementation should be reviewed and included within City codes to provide the most protection to the dune system.

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Appendix A

December 6, 2017 Public Planning Meeting Notes

1. Education

- a. Existing education
 - i. Service Organizations
 - ii. Chamber of Commerce
 - iii. Rotary Club
 - iv. Other Communities / Countywide
- b. Share Information. Disseminate information via one website / social media to engage natural partners.
 - i. Bilingual
 - ii. Visitor education – Entertainment district, visitor center, mobile ambassadors, hotels, marinas, Schlitterbahn, fishing piers, marine sanitation / monofilament recycling
 - iii. Youth – schools, boy scouts
 - iv. Community
- c. Research
 - i. ASBCA
 - ii. U. Texas
 - iii. Scouting Projects
- d. Ecology / Conservation
 - i. Coastal: Nourishment Methods
 - ii. Bayside
 - iii. Birding and Nature Center “Educational Ecosystem” – underutilized resource
 - iv. Plant Center
 - v. Camp Perry, Trails, Water Sports, Dolphin Attractions
 - vi. Kayak / waterboard Trail with education
 - vii. Use venue tax to support watersport facility that could include eco-park / education

2. Tourism

- a. Traditional
 - i. Family
- b. Eco
 - i. Birding
 - ii. Nature
 - iii. Photography
- c. Sport
 - i. Boating
 - ii. Hunting
 - iii. Fishing
 - iv. Silent Sports
 - v. Water Sports
- d. Visitors
 - i. Winter Texan
 - ii. Spring Break
 - iii. Historic / Treasure Hunter
 - iv. Beach Wedding
 - v. Music Event
 - vi. Local / Regional Day Visit
 - vii. International
- e. Year-round Tourism Opportunities (Flatten Peaks and Valleys)
 - i. Cruise Ships
 - ii. Off season Events (Music, Festivals, Pirate Days, Sand Castle Days)
 - iii. Space X
 - iv. Auto Rally
 - v. Fairs / Crafts
 - vi. Fishing & Fishing Expo
 - vii. Regional opportunities (draw within 100 miles)
 - viii. Combine events for larger draw
- f. Help expand existing businesses
 - i. EDC/CVA/Chamber should work cooperatively
 - ii. Worker training
 - iii. Improve convention center / conference attendee experience
 - iv. Emphasize a culture of welcome
 - v. Island ambassador
- g. Emphasize Sports
 - i. Fishing (Bay and Gulf)

1. May-August Public Tournaments
 2. Boat ramp and parking improvements are needed on bay
 3. Beach tournaments need different access
- ii. Surfing
 - iii. Volleyball
 - iv. College Basketball at Convention Center
 - v. Indoor or outdoor aquatic center
 - vi. Miss Texas / Miss Universe
 - vii. Marathons / Triathlons
 - viii. Pedal to Padre
 - ix. Jail Break
 - x. Color me Rap
 - xi. Company Sponsored Private Events
- h. Non-beach / bay Attractions
- i. Nature Center
 - ii. Repurpose Chaos Building
 - iii. Art Community
 - iv. Cooking

3. Conservation

- a. Property owners should have a voice in conservation / preservation / and maintenance. Residents can sign-up for the City newsletter to stay abreast of the latest information and public meetings.
- b. Dunes – discussion on dune height, regulations related to grading, ordinance related to access, and storm protection.
- c. Maintain/Enhance Critical Ecosystems
 - i. Seagrass
 - ii. Oyster / Mangroves
 - iii. Dunes
 - iv. Birding
 - v. Fishing
 - vi. Scuba
 - vii. Water / Air Quality
 - viii. Light / Noise
- d. Resilience
- e. Beach Nourishment – without beach there is no tourism
- f. Invasive Species / Species of Concern – Fever tick, Mosquitos, Red Tide
- g. Trash / Recycling

- i. Keep SPI Beautiful
 - ii. Packaging – Straws
 - iii. Education in multiple languages
- h. Restoration / Enhancement
- i. Spill response / Post Event Restoration – establish plan for quick local response for restoration following clean-up.
- j. Dunes – Access
 - i. Review Dune Access and Management
 - ii. Balance / Cooperative
 - iii. Safety / Storm Impacts
- k. Bayside
 - i. Second Causeway – Seagrass Impacts
 - ii. Boating – Prop scars; marking channels would be useful
 - iii. Water quality / nutrients. Should complete a watershed analysis to understand over enrichment.
 - iv. Oyster Beds
 - v. Connection with Arroyo
 - vi. Living shorelines
 - 1. Limits / guidelines (when to choose riprap, bulkhead, or living shoreline)
 - 2. Implementation – balance access and use with habitat improvements. Limit impacts to recreation and oysters
 - 3. Involvement of regional concerns
 - 4. Benchmarking shoreline
 - vii. Coordination with Port Isabel and conservation groups. There is interest in development of a lower Laguna Madre Estuary Program to bring together stakeholders. Development of a regional plan for bay conservation and access would be beneficial and is currently lacking
 - viii. Artificial reefs & Fishery Enhancements
 - ix. CBRA Zones, north of City. City should develop best practices and process for future development.

4. Public Access

- a. Access silent Water Sports / light sailboats
- b. Boat and equipment storage locations
 - i. White Sands and Emergency Points
 - ii. Dedicated access location with Mobi-mats
 - iii. Parking Facility for Trailers

- c. Parking
 - i. Gulf
 - ii. Bay – Fees should be concentrated areas
 - iii. City Sponsored
- d. Develop watersport Event Areas, away from residential areas
- e. Water Taxi Services
- f. Parking / Roadways
 - i. Fee will create funding for maintenance (Beach User Fee Plan has been filed to establish paid parking plan).
 - ii. County Park has a user fee
 - iii. County parking improvements; attract parking away from City by facilitating access to the North (two lanes).
 - iv. Road network improvements / widening. Could utilize bike lanes for traffic during certain periods.
 - v. City is mandated to meet GLO Parking Requirements, Gulf-side
 - vi. Interior parking needs
 - vii. Bicycle / pedestrian expansion
- g. Boardwalks / Piers
- h. First class Marina
- i. Active tourism trail
- j. Reef - access
- k. Causeway Access
 - i. New Causeway should have bicycle / multi-modal option
 - ii. Dedicated lanes for emergency vehicles
 - iii. Helipad / bus / walking
- l. Bay Access
 - i. Limited – opportunities to North
 - ii. Needs drainage improvements
 - iii. Potential north side parking, PPP
- m. Regional
 - i. Better utilize County as a partner / County coordination and funding
 - ii. Waterfront access coordination with neighboring communities
 - iii. State and Federal Grants
 - iv. Regional Plan with County

Appendix B

2018 City of South Padre Island Master Plan Survey Results



City of South Padre Island Master Plan Survey Results

May 21, 2018



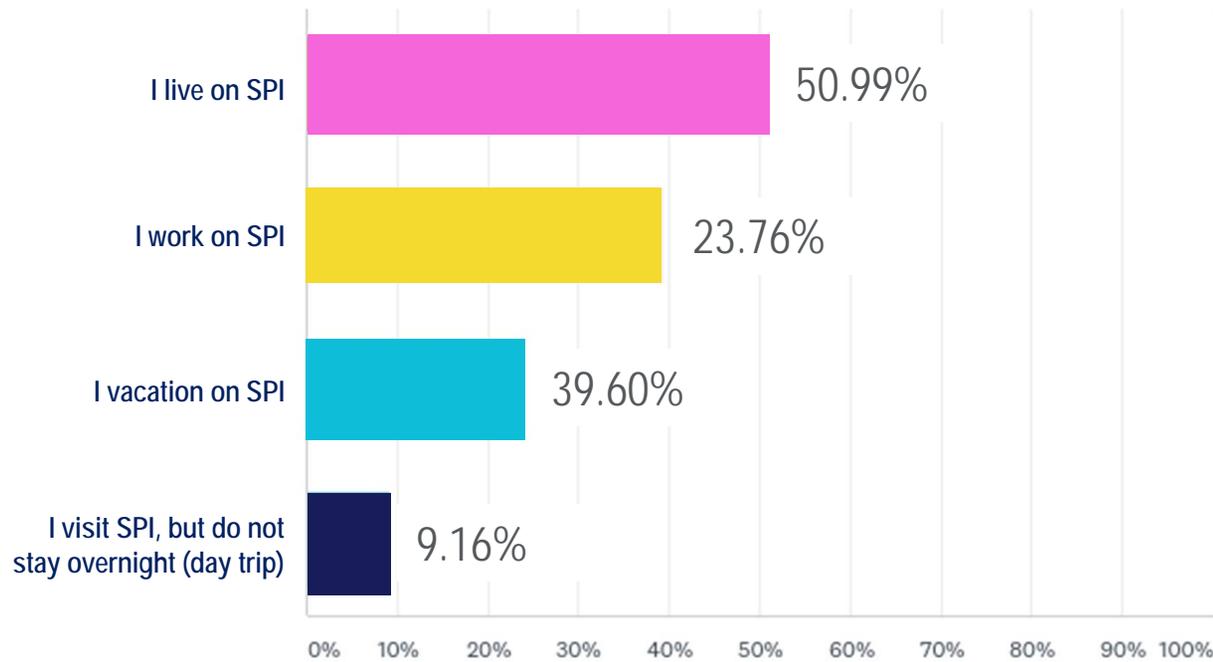
Survey Highlights

- Total respondents: 404
- Complete responses: 342
- Number of interviews requested: 67
- Survey went live on April 4 and was closed on April 20
- Nearly 75 percent of respondents live or work on South Padre Island
- Respondents were primarily concerned about the environment, conservation, and beach access



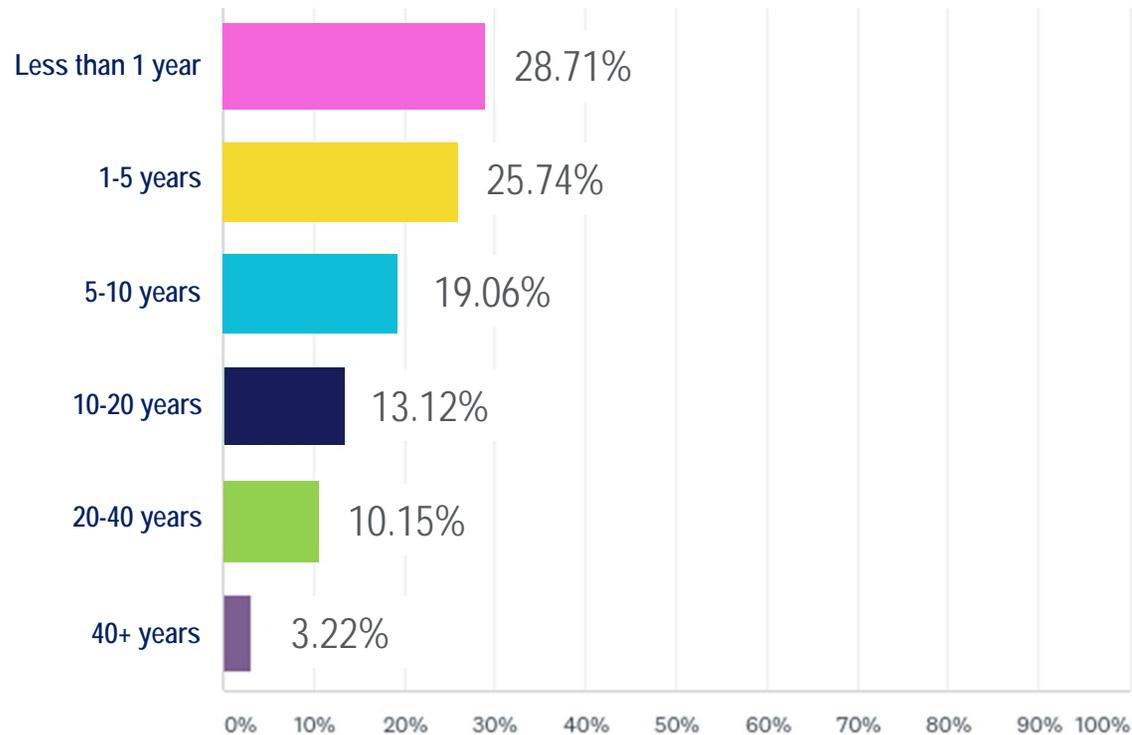
Q1: Check all that apply:

▪ Respondents: 404



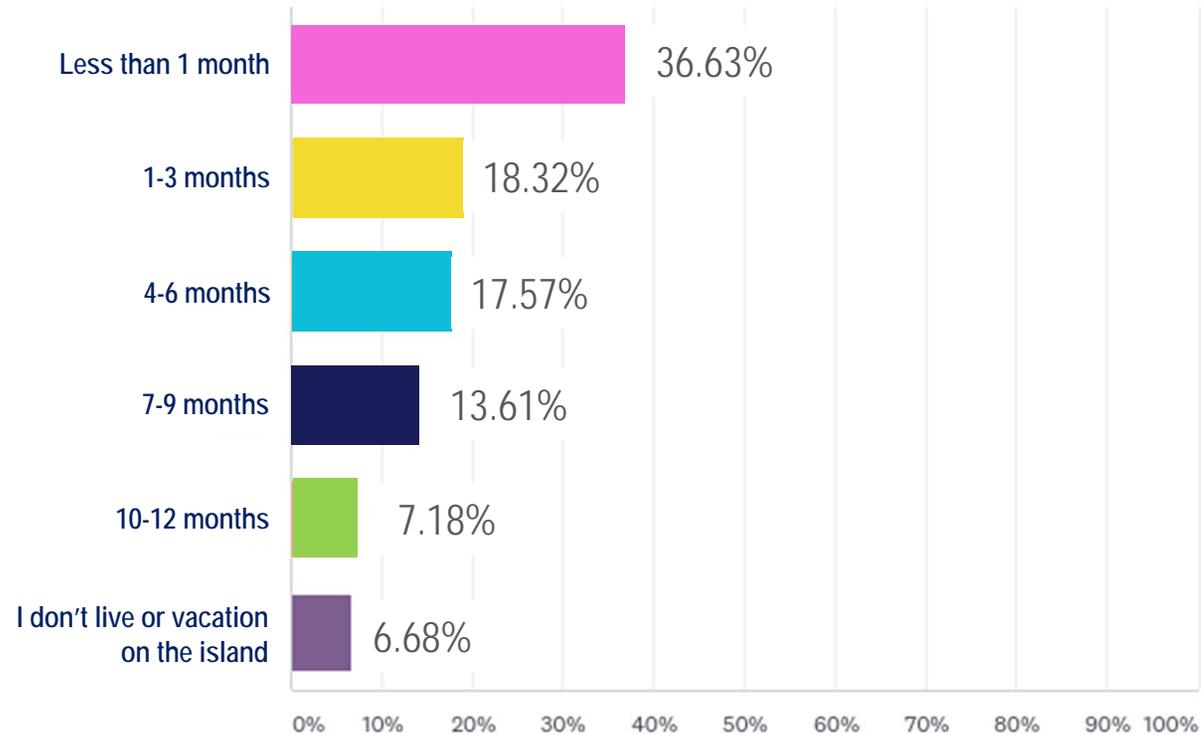
Q2: How many years have you lived, worked, or vacationed/visited SPI?

▪ Respondents: 404



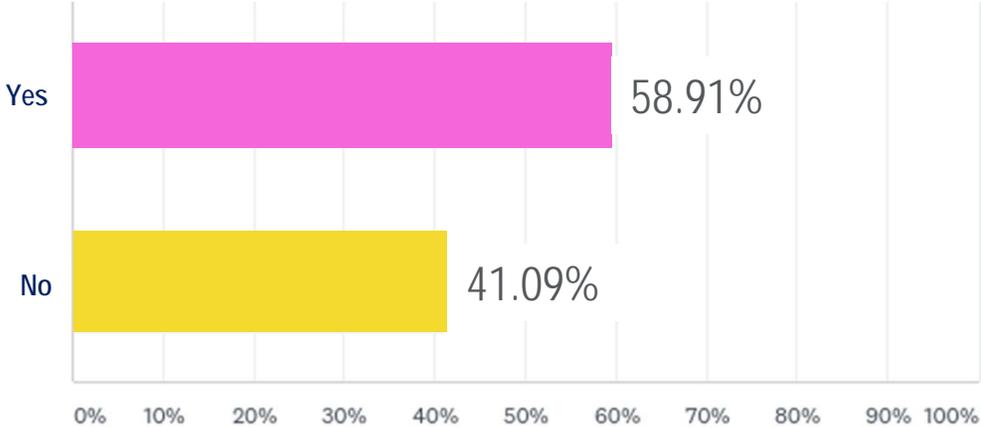
Q3: If you live or vacation on SPI, how much time within one calendar year do you reside on the island?

▪ Respondents: 404



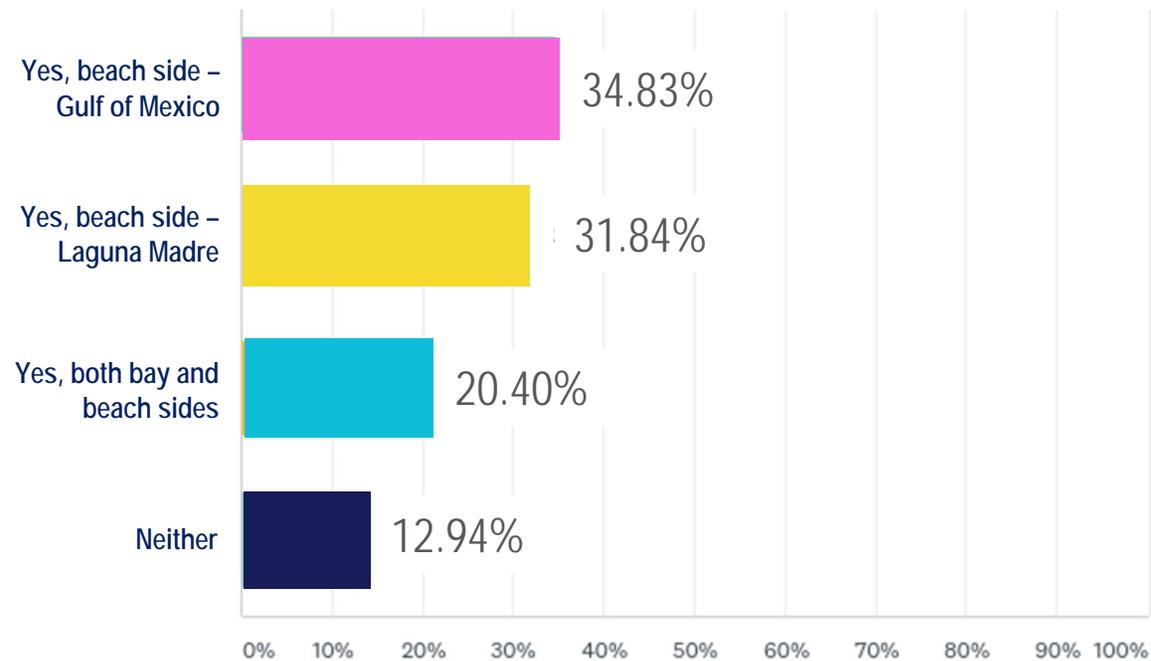
Q4: Do you own property on SPI?

▪ Respondents: 404



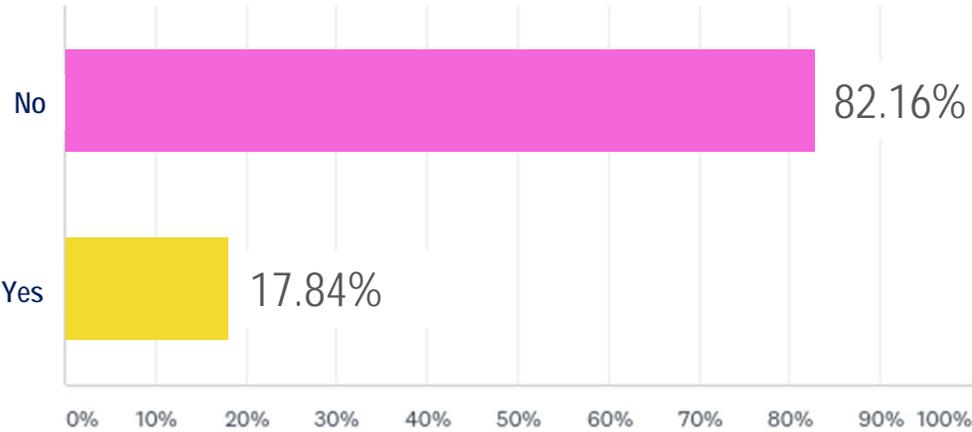
Q5: Does your property have a view of the water?

▪ Respondents: 201 Skipped: 203



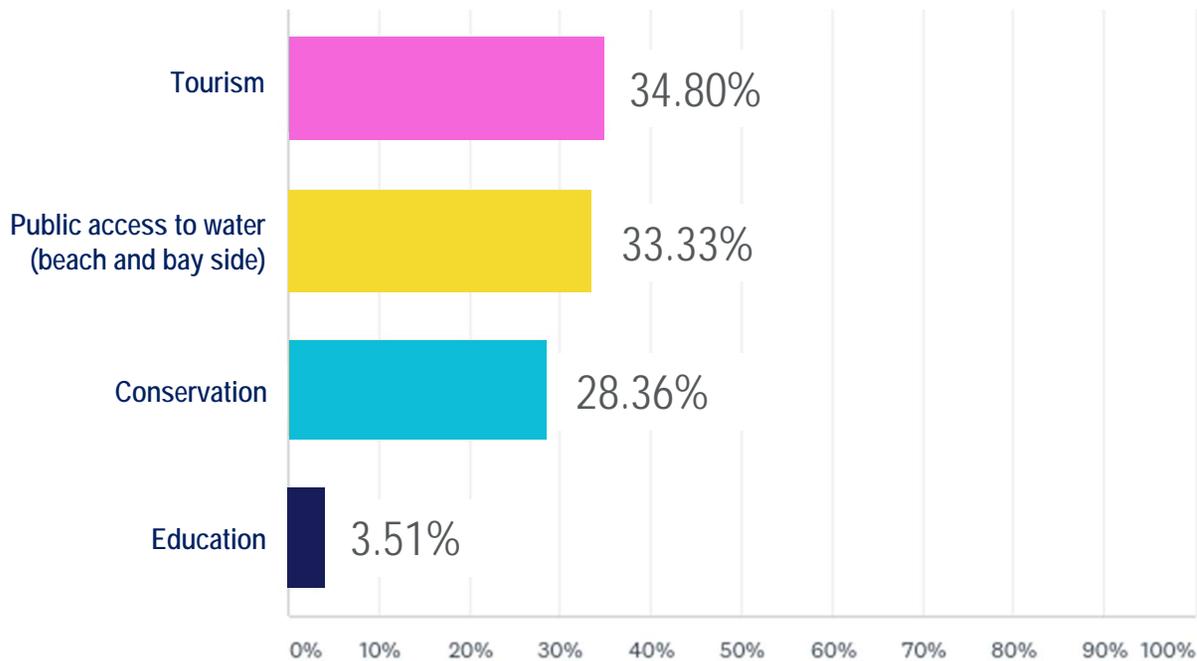
Q6: Do you own a business on SPI?

▪ Respondents: 342 Skipped: 62



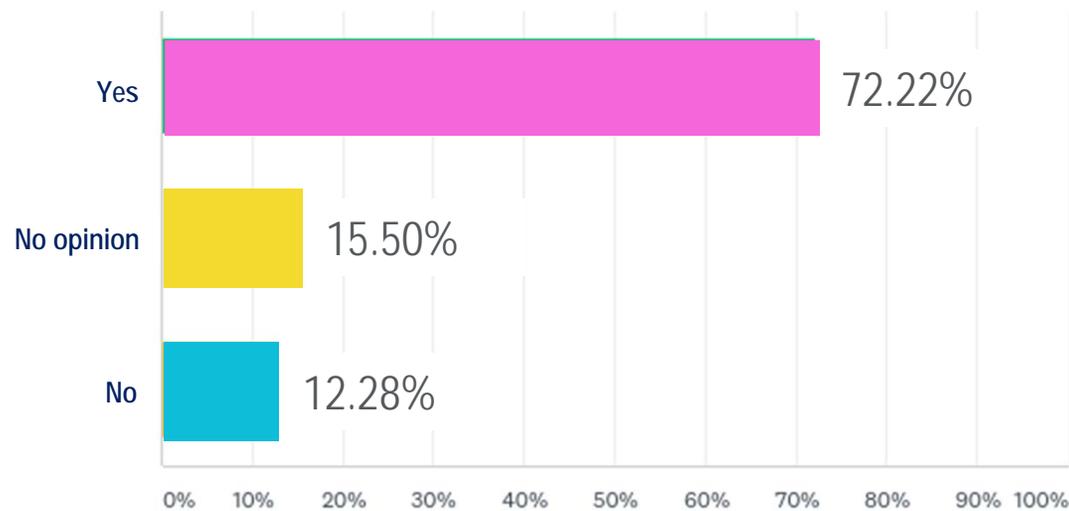
Q7: Which of the following is most important for SPI's growth and success?

▪ Respondents: 342 Skipped: 62



Q8: The Texas Coastal Resiliency Master Plan, dated March 2017 and developed by the Texas General Land Office, recommends SPI establish a connected dune system to reduce potential property damage during storm events. Dunes exist on SPI; however, they do not continue across every property. Are you supportive of establishing a connected dune system on SPI?

- Respondents: 342 Skipped: 62



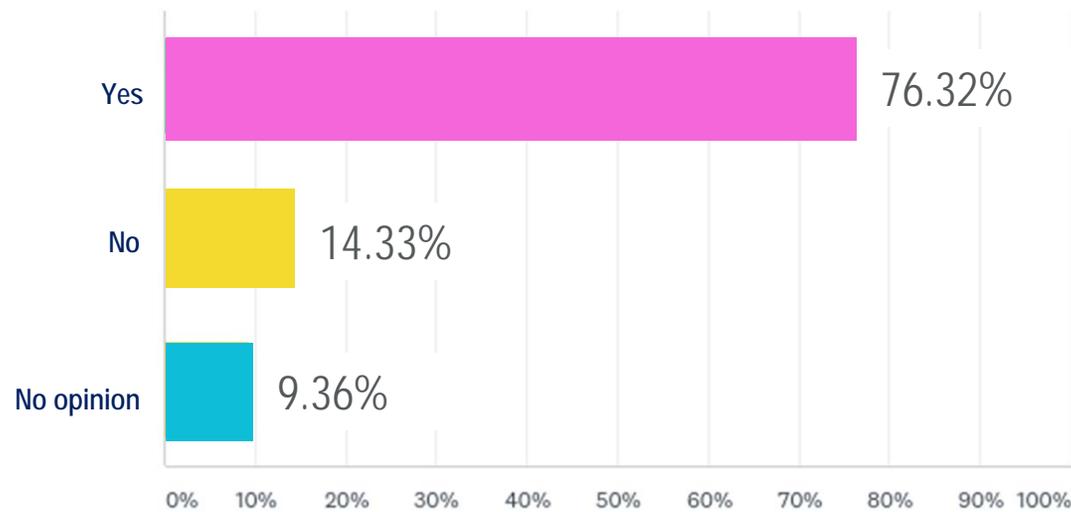
Q8. Support for establishing a connected dune by demographic:

Demographic	Responses to Q8 (reported as percentage (%))		
	Yes	No	No Opinion
Cumulative Response to Q8	72.22	12.28	15.50
SPI Property Owners			
Beach View	67.14	12.86	20.00
Bay View	68.75	15.63	15.63
Beach and Bay View	69.23	19.23	11.54
Neither	63.41	9.76	26.83
Time spent living/vacationing on SPI in one calendar year			
Less than 1 month	76.19	9.52	14.29
1-3 months	66.67	12.70	20.63
4-6 months	70.00	8.33	21.67
7-9 months	45.83	29.17	25.00
10-12 months	79.84	10.85	9.30
Do not live/vacation on SPI	70.83	16.67	12.5
Length of time lived, worked, or vacationed/visited SPI			
Less than 1 year	75.00	12.50	12.50
1-5 years	76.81	8.70	14.49
5-10 years	80.39	5.88	13.73
10-20 years	67.68	14.44	17.78
20-40 years	70.97	13.98	15.05
40+ years	64.25	19.35	16.13



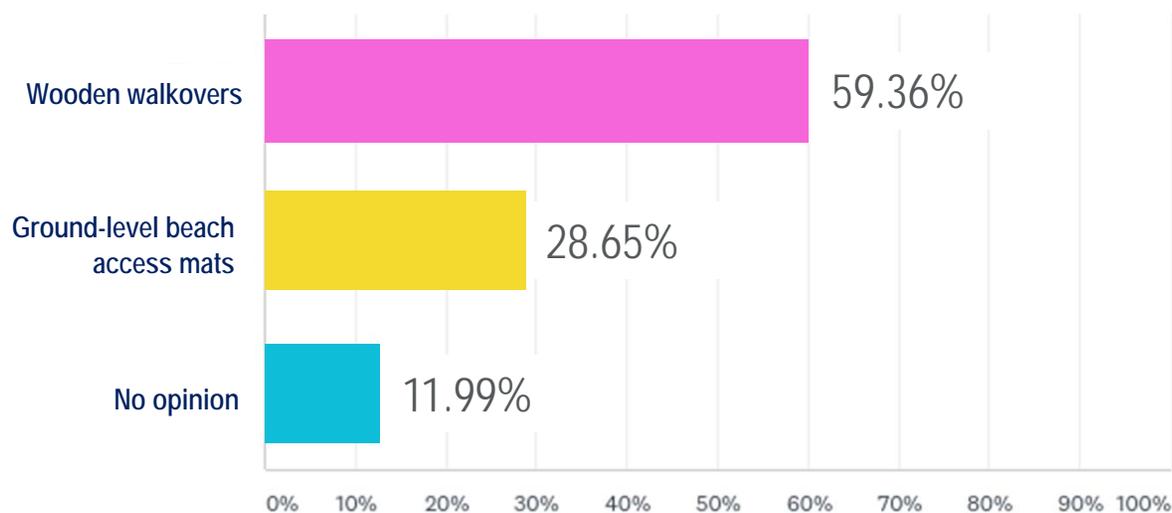
Q9: Under the Texas Open Beaches Act, the public has the right to free and unrestricted access to beaches. When considering improvements to existing or new beach access points, is providing accessibility for all capabilities (for example those who may use a wheelchair, have sight impairments, or have difficulty walking on loose sand) an important consideration?

- Respondent: 342 Skipped: 62



Q10: Depending on site conditions and design, many types of access can provide wheelchair and accessibility for those with disabilities. Which type of beach access do you prefer?

- Respondent: 342 Skipped: 62



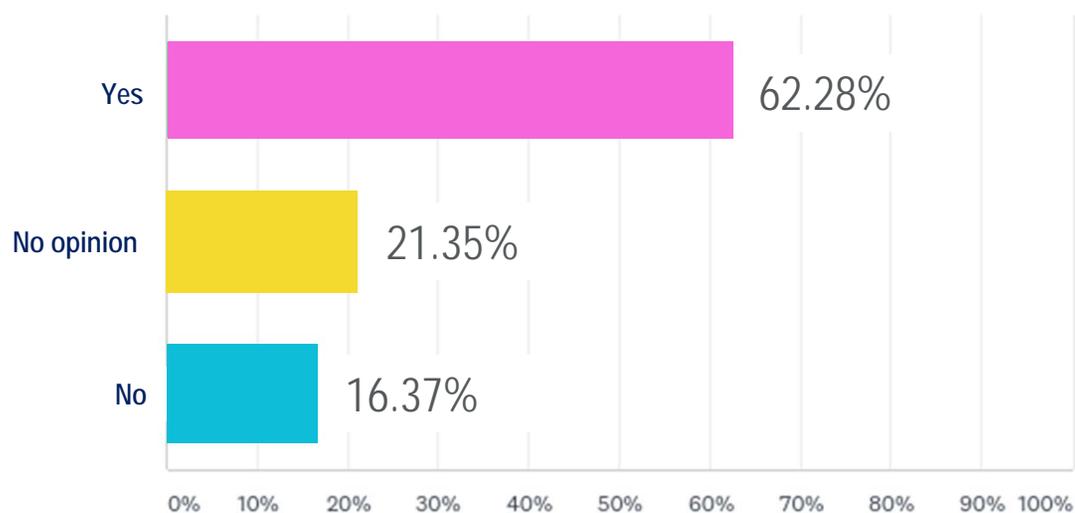
Q10. Type of beach access preferred by demographic:

Demographic	Responses to Q10 (reported as percentage (%))		
	Wooden Walkovers	Ground-level Beach Access Mats	No Opinion
Cumulative Response to Q10	59.36	28.65	11.99
SPI Property Owners			
Beach View	47.14	31.43	21.43
Bay View	65.63	20.31	14.06
Beach and Bay View	50.00	38.46	11.54
Neither	68.29	21.95	9.76
Time spent living/vacationing on SPI in one calendar year			
Less than 1 month	54.76	26.19	19.05
1-3 months	58.73	30.16	11.11
4-6 months	60.00	30.00	10.00
7-9 months	45.83	41.67	12.5
10-12 months	62.02	27.91	10.08
Do not live/vacation on SPI	66.67	16.67	16.67
Length of time lived, worked, or vacationed/visited SPI			
Less than 1 year	62.50	25.00	12.50
1-5 years	65.22	27.54	7.25
5-10 years	64.71	25.49	9.80
10-20 years	57.78	27.78	14.44
20-40 years	52.69	33.33	13.98
40+ years	61.29	25.81	12.90

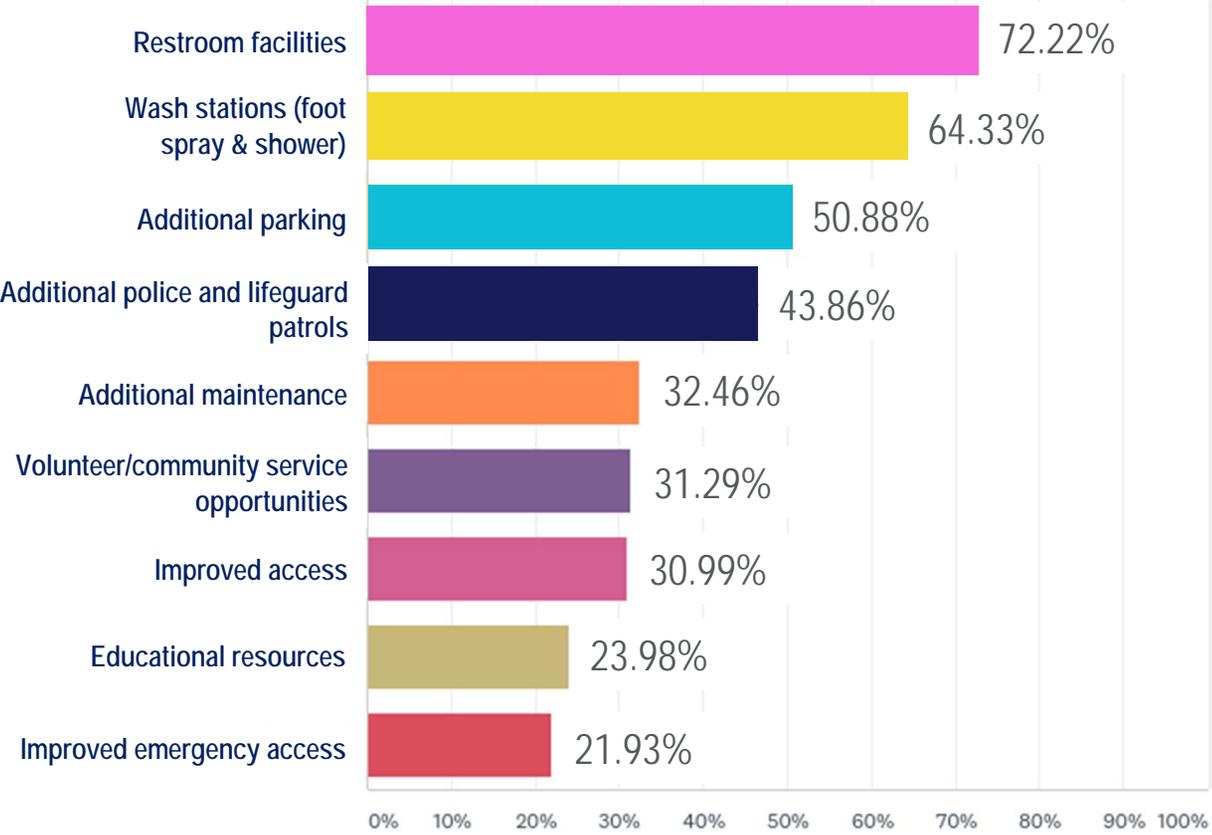


Q11: During the last public meeting in Dec. 2017, additional motorized and non-motorized boat access on the bay side was identified as a need. Do you agree?

- Respondent: 342 Skipped: 62



Q12: The following would improve your experience utilizing the beach (check all that apply):





Q12. The top five beach experience improvements per demographic:

Demographic	Responses to Q12 (reported as percentage %)							
	Restroom Facilities	Wash Stations	Additional Parking	Additional Police and Lifeguard Patrols	Additional Maintenance	Volunteer/Community Service Opportunities	Improved Access	Educational Resources
Cumulative Response to Q12	72.22	64.33	50.88	43.86	32.46	31.29	30.99	23.98
SPI Property Owners								
Beach View	48.57*	48.57*	35.71	42.86	34.29	--	--	--
Bay View	90.63	78.13	67.19	40.63	32.81	--	--	--
Beach and Bay View	61.54	69.00	--	42.31	46.15	34.62	--	--
Neither	80.49	73.17	43.90	51.22	31.71	--	--	--
Time spent living/vacationing on SPI in one calendar year								
Less than 1 month	71.43	59.52	45.24	42.86	--	--	38.10	--
1-3 months	73.02	65.08	53.97	52.38	--	38.10	--	--
4-6 months	73.33	63.33	45.00	43.33	33.33*	33.33*	--	--
7-9 months	83.33	54.17	37.5	50.00	62.50	--	--	--
10-12 months	67.44	65.89	52.71	39.53	31.78*	31.78*	--	--
Do not live/vacation on SPI	83.33	75.00	70.83	41.67	--	--	58.33	--
Length of time lived, worked, or vacationed/visited SPI								
Less than 1 year	62.50	62.50	37.50*	62.50	37.50*	50.00	--	37.50*
1-5 years	75.36	71.01	56.52	50.72	37.68	--	--	--
5-10 years	66.67	56.86	58.82	47.06	--	--	47.06	--
10-20 years	78.89	64.44	50.00	41.11	--	35.56	--	--
20-40 years	64.52	63.44	40.86	40.86	34.41	--	--	--
40+ years	80.65	64.52	61.29	35.48	--	--	32.26	--

Notes:

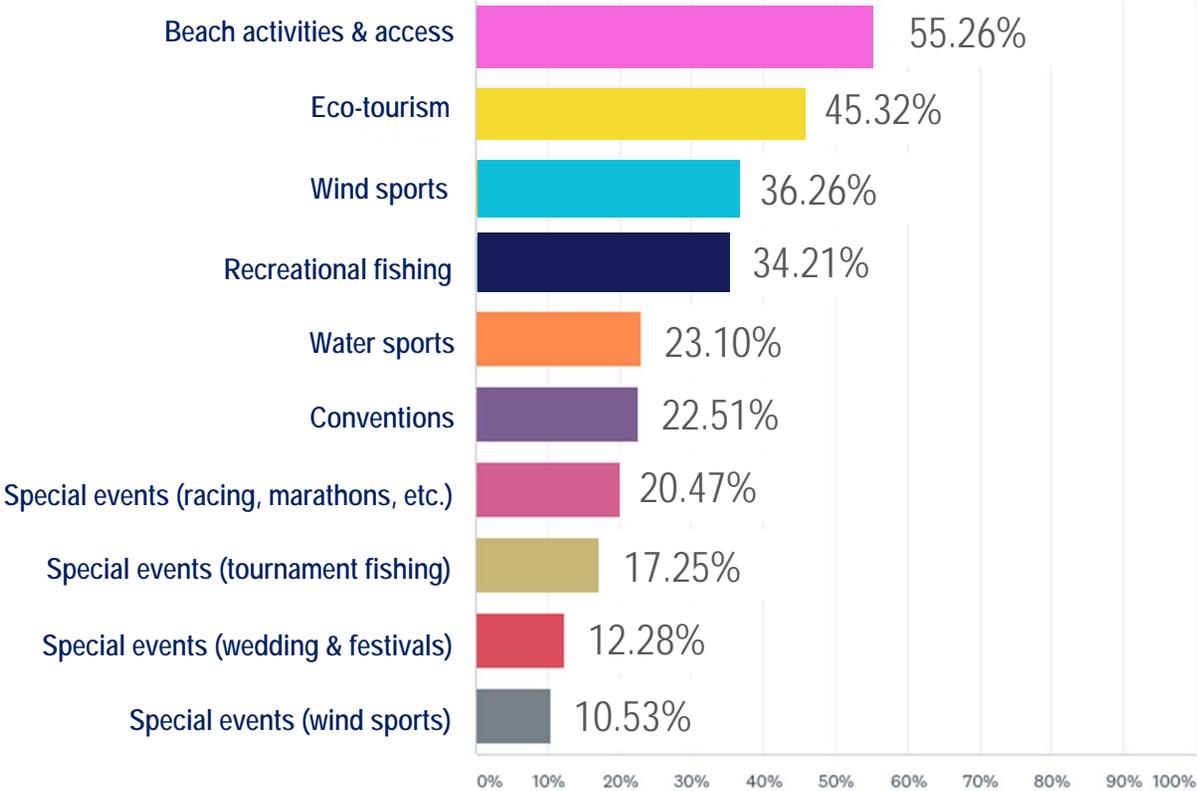
-- = An improvement that is not ranked as a top five for improving the beach experience

* = Tie: Percentage is the same for two or more utilities per a single demographic

Q13: The following would improve your experience utilizing the bayside (check all that apply):

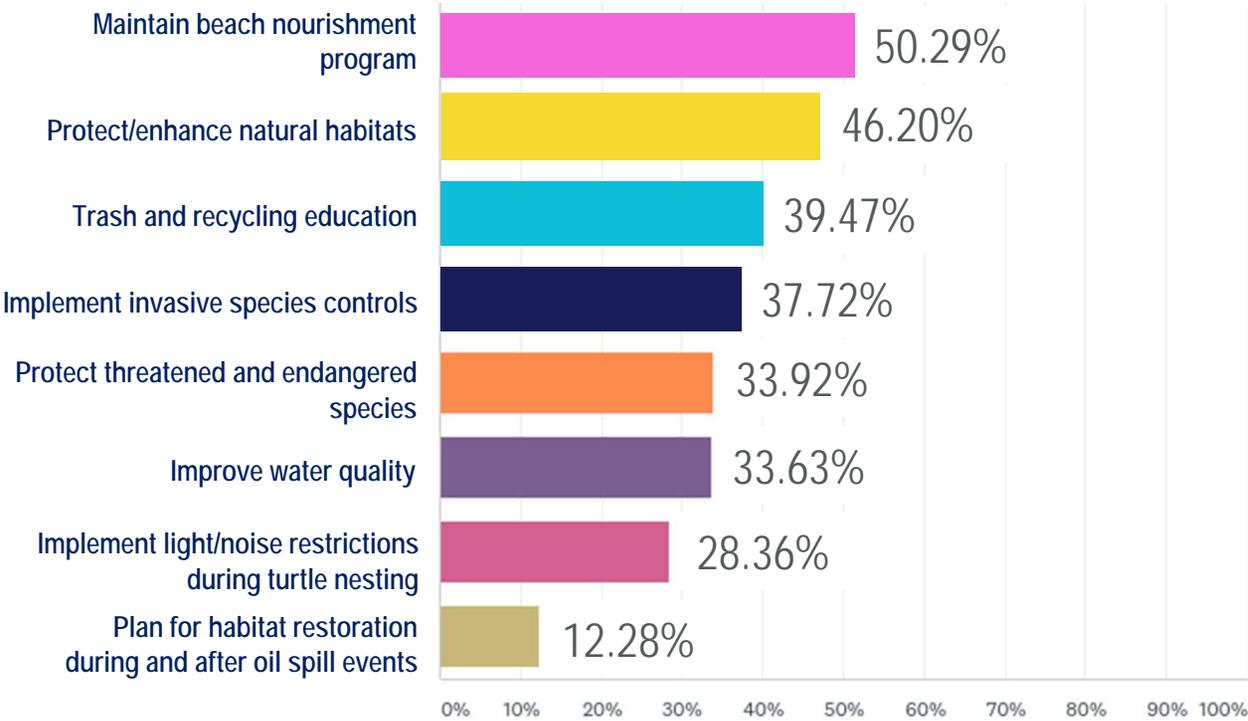


Q14: The City should focus on maintaining or expanding the following tourism activities to ensure a resilient economy in the future (select up to three):

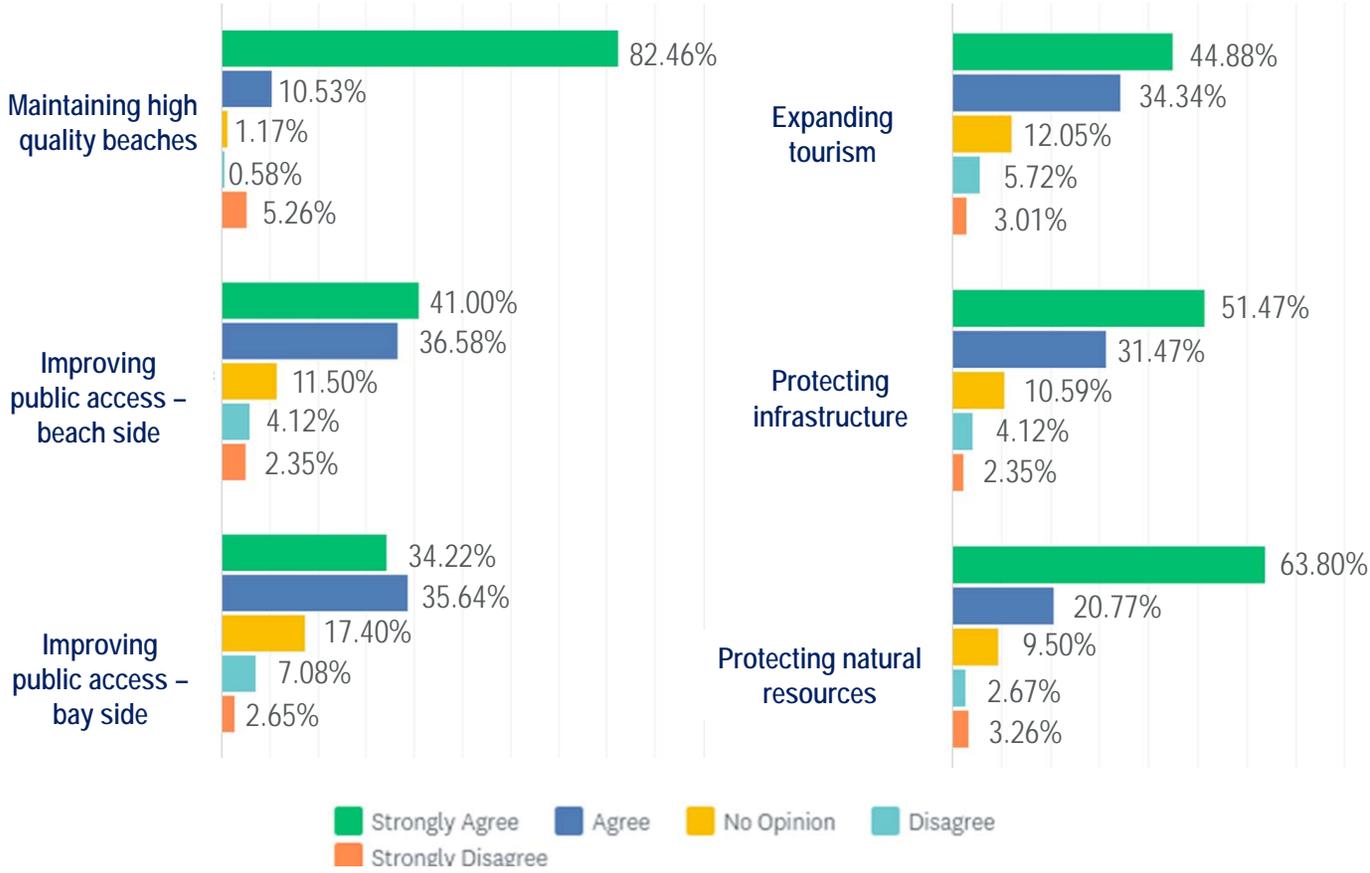


Q15: The City should focus on maintaining or expanding the following conservation activities in the future (select up to three):

▪ Respondent: 342 Skipped: 62



Q16: The items below should be addressed in the next five to 10 years to support the long-term future of SPI:



Q17: Twenty-minute, one-on-one interviews will be conducted in May 2018 by the City's consultants, HDR Inc., to help further develop a comprehensive Master Plan with themes regarding public access and education, conservation and tourism. If you are interested in sharing further your ideas or thoughts, please provide your contact information below so that an interview may be scheduled:

Total Responses with Contact Information: 67

Data Received:

- Responses to Interview Request: 29 (43.3%)
- Interviews Completed/Scheduled: 25 (37.3%)



Appendix C: One-on-One Interviews

Respondent's Number	Comments	Public Access	Conservation	Tourism	Education	Comprehensive Plan	Other
1	The dune growth should continue to be closely monitored and studied. However, dunes should balance protection with tourism. During certain times of the year, such as spring high tide, there are no open public beach in the more narrow sections. Would like to see dunes go up instead of out. Property owners are disillusioned with the dunes, however public beach access can not be taken away.		X	X			
1	City should monitor sand accretion after Clayton's pier is installed. The study should measure sand yearly / quarterly to illustrate how pier structures trap sand. Pile structures work differently than groins and SPI could benefit from installing piles in certain erosion prone areas (tiki beach front). The study of Clayton's Pier would potentially provide alternative solutions for beach maintenance.		X	X			
1	The toe of the dune was lost during Hurricane Harvey. If sargassum was placed on top of the dune instead of the toe, the dune would grow vertically instead of horizontally.		X	X			
1	Resources are available on and off Island to coordinate educational programs for students, Superintendent Dr. Lisa Garcia and P.O.P.S – Parents of Port Isabel schools. It would be beneficial for residents and tourists to know what opportunities are available during the summer (summer camps run by private entities, City-organized summer camp). The City should consider hiring a part-time Education Liaison to coordinate activities and research into centralized location for easier dissemination.				X	X	
2	Dunes offer protection, they need to be vegetated and continuous. Width 75-100' wide, in south end causes problems for property owners. Would like to see minimum elevation at 12'. Morton study stated that the minimum elevation should be 10-12', however this is an old study.		X				
2	Beach users should be educated on the natural processes that the beach goes through and the maintenance practices on beach that support a healthy system. Sargassum is important and incorporated into the dunes for a reason; outreach should explain why it is important and why it is left. There was a period when it was raked every day, then not at all, and it is intermittent (seasonal raking or if impeding access, beach use for a certain period of time, or attracting flies). A large deposition of sargassum has not occurred for two years. Beach maintenance should not include raking down small 'baby' dunes.		X		X		
2	Five existing beach access points were designated as educational nature trails, however that designation has gone by the wayside – with the seeming desire by the City to construct walkovers at every access. Where possible access from private properties should be combined, with gates, verse multiple individual access points; however, there should not be one boardwalk that connects all access points.	X					
2	City needs to install more public restrooms on beachside; however, opposed to using parking spots on Gulf Blvd to place restroom (port of potty). We could use restroom on end of public access on beach or on walkover. Best option is to use access, but parking is an issue.	X					
2	Aesthetic improvements could increase approval of walkovers, such as using wire on walkovers railings because it is less obtrusive. Post and rope fencing at access points could also serve to mount signs	X			X		

Respondent's Number	Comments	Public Access	Conservation	Tourism	Education	Comprehensive Plan	Other
2	Need more education about dunes. Signage at access points, which varies at each, would be great to have.	X			X		
2	Opposed to additional wash stations, as they have a tendency to be left running and rust.	X					
2	Trash will always be a problem. Stronger enforcement could be helpful, however it shouldn't just rely on the City. Vigorous anti-litter campaign may help individuals take responsibility.				X		
2	Supportive of silent water sports on bayside. The City is applying for grants now to provide more bayside access.	X		X			
2	Conservation of undeveloped properties is important. The City has grant applications out now to purchase lands on either side of causeway, which would connect state properties.	X		X			
2	Supportive of land-based fishing [pier / boardwalk] and kayak launching areas on bayside if a location could be identified, possibly the convention center north of center – where no mangroves are located.	X		X			
2	The Birding and Nature Center and native plant center both do quite a lot of education. There is a Captain Crab program in schools, which focuses on coastal ecology. Birding center and Sea Turtle Inc. are both offering summer camps. The City could incorporate education into what is already going on.				X		
2	Would like to see medians planted for a passive park and include some education.				X	X	
2	The Bird and Nature Center is applying for beer and wine license to expand offerings and increase revenue. Looking at options currently, but a lot of issues to work through.						X
2	Planning should start now for annexation of northern county properties, to identify issues that will need to be resolved in association with expansion. Public access, parking, facilities, beach nourishment, and maintenance and operations are all considerations to be financially prepared for. City would need to be more involved in County ERP. This could be an opportunity for the City to have beach front property. Currently the City only has public access points, not beach front property. Therefore it would be beneficial for the City to invest; however, there is a question of what would be done with the property.	X				X	
3	Trash on the beach is always a problem. More emphasis would be good.				X		
3	Bayside Public Access. Privately-owned Holly Beach was closed to public access in 2017, making bay access even more limited. There may be opportunities to partner with Port Isabel and Laguna Beach to increase regional access to bay.	X		X			
3	RBG Beach Project – More money should be put into this.	X		X			
3	Provide bay access closer to the convention center.	X					
3	Continue sharing education through social media (sargassum), great to focus on dune.				X		
3	Tournaments put pressure on the limited number of access points. City could work with tournaments to create multiple locations for check-ins and access, using both Island and off-Island locations. This would ease congestion at access points, increase participation and enjoyment, and raise regional participation levels.						

Respondent's Number	Comments	Public Access	Conservation	Tourism	Education	Comprehensive Plan	Other
3	Spring Break: If the City could partner with towns and promote within the region it would help build larger regional economy. Prompting the Island and the Valley attractions.			X			
3	Trash bag handout on County property is great. Really like access 5.						X
3	Music and spring break, comes with living on Island, and it is not an issue. Supportive of Clayton's Pier, would be good to have nice section of boardwalk/ esplanade between access 5 and 4.	X		X			X
3	Wedding venue on bayside would be a draw for sunset weddings, however it can be unpleasant on low tide. It would be good to have venue on beachside to support weddings and other events. City venue fee for events could be beneficial for revenue.			X			
3	Bayside tourism: Overlooked educational opportunity, would be great to have education on conservation and harvesting of sea life (oysters, shrimp, etc.).				X		
3	Clayton's pier is a good thing and will provide a place to pier fish. It would be nice to have piers by the jetties to allow bay fishing. Currently the bay is packed on weekends with fishermen, it is a big draw and could be expanded, particularly for those without a boat.			X			
3	Sidewalks improvements are all great						X
3	Open space north of access 5 should be preserved.		X				X
3	Area where Singer House was located is now known for treasure hunting; it would be nice to focus on history and historic presence. Lots of people do not know this is the Texas gold coast.				X		X
3	City-wide events that are promoted through Valley, San Antonio, and south Texas would help draw people in, more amateur fishing tournaments would be beneficial.			X			
4	Texas public beach act, believes applies to all waterways. Why doesn't this apply to bayside?	X					
4	Public parking accommodates the day visitors, who bring food, drinks, and supplies and therefore don't spend money on Island.	X					
4	The Valley is not economically strong, it is difficult to develop a larger regional draw. Outside the region, within Texas, it is easier for someone in Dallas to go to Florida than SPI. Improving connections to larger metro areas would be useful			X			
4	Golf carts are an issue, the City needs to regulate.						X
4	Texas Week and Spring Break giving SPI a bad name by attracting the wrong crowd. Trash and poor behavior is an issue and puts a strain on resources to handle the chaos. The City should move away from the anything goes attitude to promote clean and safe vacationing.			X			
4	The City needs to develop a noise ordinance.						X
4	Litter had gotten better, but it can still improve. Much of the problem stems from a lack of education and discourtesy. More enforcement and ticketing (with large fines) is necessary.			X			

Respondent's Number	Comments	Public Access	Conservation	Tourism	Education	Comprehensive Plan	Other
4	SPI should focus on strengths and what is currently working, fishing, family vacationing, wind/kite surfing, a great place for birding, etc. Market to people who are more respectful - Eco tourists, families, surfers. Play on what is unique and distinguish itself, verses sinking to lowest common denominator to be a party place – party goers do not spend money throughout the City; a handful of businesses are making money on the spring break crowd. City funding is wasted on cleaning and policing, spring breakers do not return with their families. In 2017 it was a particularly bad year and spring break seems to be getting more and more out of control. Coca Cola no longer sponsors spring break activities on South Padre Island after 20 years of sponsorship.			X			
4	Need to downplay Texas Week, particularly criminal element that is coming in. Music draws crowd that are not conducive to SPI brand.			X			
4	Ordinance / regulations should be put in place limiting the time a building can be under construction. There are buildings that should be condemned on this Island. Construction started, but then stagnated, leaving unfinished structures that pose safety concerns and reduce property values. The City should require proof that full funding is in place before granting building permits, full funding should be in place in escrow.						X
4	It would be good to identify homes and structures of historic significance that should be preserved, particularly as redevelopment happens. The Yacht Club could be fantastic tourist draw and has historic significance.		X			X	
4	Property taxes are high in Texas, as there is no state income tax. Are property owners paying a larger portion of the 'Spring Break' bill verses the limited individuals and business that benefit from spring break? What is the private property owner's money funding versus businesses (whose voice pays the larger % of the bill)? The City should be clear on who pays and who benefits, is spring break a value to all?						X
5	Golf Carts. Can there be any rules put in place to limit quantity of carts and rules to improve safety?						X
5	The bike path on Padre Blvd is dangerous for bikers, most people bike on sidewalk. Could safety be improved or bike path taken off Padre Blvd?					X	
5	It is hard to tell where the bus stops are, particularly on Gulf Blvd and the online app is not intuitive. The City needs to better defined stops.					X	
5	Need more pedestrian crossings on Padre Blvd for safety.					X	
5	Airport shuttle is great and works well						X
5	Public access to beach is good, the City should focus improvements to the Bayside.	X					
5	It would be good to have a more regional marketing approach for ecotourism and link the Bird and Nature Center to natural areas within the Valley.			X	X		
5	New commercial properties are being built when old structures are derelict. Can City market old structures or incentivize redevelopment over new development to limit eye-sores?					X	

Respondent's Number	Comments	Public Access	Conservation	Tourism	Education	Comprehensive Plan	Other
5	Rowdy spring break crowd is not good for tourism and makes a bad impression. SPI leadership is pro-business, which is understandable, but spring break comes at a cost. Have to have a tourism balance, more events to balance out March so that the impression points for SPI are more multifaceted, not just spring break.			X			
6	City's main priority is the beach and maintaining a pristine beach at all times. This includes trash pickup and raking the beach.			X			
6	Conservation would be the second most important priority.		X				
6	Does not see the City as resident friendly. Feels they cater towards business and tourists. If the residents are taken care of they will be here to help support the business community in off-season.						X
6	Believes the City has a good city manager and staff.						X
6	The City should focus on what we have instead of seeking to expand areas of tourism. Instead of trying to be a cruise port of call (that would not work because there area sufficient excursions and transportation) the City should seek to improve the beaches, encourage fishing (which is top notch), and wind sports.			X			
6	Spring Break is an issue and has become one of the worst in the country. A big issue is the need to better enforce the laws. The City does not need new laws, just stricter enforcement (ex. drunk & disorderly people, drug dealers). Not against Spring Break, just how it is handled.			X			
6	Spring break benefits hotels and some business, but many do not like it. It is not good for residents. Previous valuations presented to Council stated that after the expenses by City, the net gain is approximately \$1 per day per visitor during spring break. Is that worth the effort by the City and staff?			X			
6	Marketing money should focus on increasing Winter Texans and work to encourage them to come. They will help businesses in winter/offseason.			X			
6	Plenty of public access to the beach.	X					
6	The City needs to define the problem and/or communicate to the citizens what the need really is for bathrooms. Is there a real issue or is the City is seeking a solution to a problem that is not there.	X					
6	Wooden walkover for the dunes should be used, but in select locations where it makes sense. At the south end of the Island it makes sense because there is a larger dune and wider beach. At the north end the beach is much narrower and in the winter the water is up to the dunes. A walkover in this area would lead out into the water in the winter. The City should consider multiple solutions based on conditions rather than just one.	X					
7	Should expand focus to address local visitors from RGV area. These residents can visit the Island at any time, especially during the winter and slower seasons. These can be day visitors or even single night visitors who spend money on hotels, restaurants, etc. These local resident visitors help drive the economy and will maintain local businesses.			X			
7	Need to advertise to local area residents. Just because they know about the Island is not always sufficient. Reminding them about the Island, amenities, the beach, etc. will help spur local tourism during off peak times.			X			

Respondent's Number	Comments	Public Access	Conservation	Tourism	Education	Comprehensive Plan	Other
7	To alleviate traffic issues on Padre Blvd, the City can change the existing bike lanes to turning lanes to improve traffic flow			X			
7	Sufficient access to the beach exists.	X					
7	Can improve bay access at street ends by putting in a turnaround and/or a small wood dock to facilitate access, fishing, etc. Parking could be along the streets or even in parks or other areas. Access points would be good for locals who live in the area, visitors who rent houses near the bay, and even visitors from other areas.	X					
8	Controlled growth would be beneficial, including residential areas without short-term rentals					X	
8	Bayside public access needs improvement, but a viable solution isn't to put ramps at each street end.	X					
8	Bayside flooding is already a problem; the City needs to continue working on repaving and improving drainage.		X			X	
8	There was an old building requirement that homes should be elevated 10-15' above sea level. The City should reconsider building requirements related to flooding.					X	
8	The City should reconsider building requirements, zoning, and ordinances.					X	
8	Gulf Blvd bike lane and parking could be better planned. There are impediments to that block views for turning on Padre Blvd. The City should plan better before initiating improvements					X	
8	Spring break is always a draw there were more people attending in the 90s, but it is scarier now due to guns and violence. Spreading it out over two weeks helps			X			
8	Unclear how SPI would support a cruise ship. What would they do and how would they get around? Does the Island have the space and resources to accommodate?			X			
8	The City sold two bayside street ends and allowed them to be privatized. The City should not be selling street ends as they are a public resource. The public should have a voice in these decisions.	X					
9	Sidewalks could be improved with trees and Gulf Boulevard needs cross walks.					X	
9	Leaflets near beach access points pose an increased litter risk.	X					
9	Advertising to families in the UK, where school is out until around the 6th of September, when I believe most American schools are back in early to mid August. My experience of British families is that they would really like the shuttle from the airport to the Island and would use shuttle as they would not want to rent a car that drives "on the wrong side of the road"			X		X	
9	Bike stands at the attractions & stores so we do not just have to lean a bike against an available wall.	X				X	
10	Dunes make the beach smaller, however dune work and beach access phenomenal. People previously lacked respect for shoreline ecology, SPI was a place to party, and there has been a really positive change. Individual changes are important to get people off dunes through – education regarding the dunes and their importance is critical for people who own property and visit. Island more than just place to come, it is a place to preserve as a very special and unique place.	X	X	X	X		
10	Improvements in environmental awareness has expanded greatly over the years (sea turtles, birding center) and would be great to see that continue – people are drawn to Island for all wonderful things that exist.		X		X		

Respondent's Number	Comments	Public Access	Conservation	Tourism	Education	Comprehensive Plan	Other
10	Need improvements to garbage management. Recycling is now available but at a cost, should have free recycling and pay for garbage removal. Evolve from party central to more eco-tourism and SPI will be very positive and more respectful of place. Enforcement of rules should be emphasized.						X
10	Ability to get information about the Island has greatly changed in last five years, much easier to get information.				X		
10	The City should create more formalized paths to the beach, versus foot paths.	X					
10	Ability to launch non-motorized vessels on bayside is limited. Improvement of windsurfing areas would be great and help develop to have better recreation on the Bay.	X					
10	Cruise lines. It is unclear if it will be positive or negative. Could support improvement of tourism and funding to improve facilities; however, there is a concern regarding garbage, discharge into water, and the environmental footprint those ships leave on Island. Should be carefully considered. A cruise port-of-call may strengthen the economy of Island, but the City and residents need to understand the environmental impacts.		X	X			
10	County-owned property to the north is a free for all (garbage / vehicles). The City should develop a plan for preservation and how to use this area. In the future there will be more interest in Island and growth is a good thing, it just needs a plan so it is developed well. Currently unmanaged but need to manage growth and development.		X			X	
11	SPI is a small intimate place where you can walk anywhere. The clustering of entertainment areas, residential area, and ecological area (Birding and Nature Center and Sea Turtle Inc.) is great. Continue building on this.					X	
11	Padre Blvd has limited crosswalks, continue working with State to install more crossings.					X	
11	SPI has lost high-end shopping and upscale restaurants due to the loss in Mexican national tourism. Monotone shopping primarily exists with the same types of stores over and over and restaurants that are mid-range family and chains. Need a strategy to encourage diversification of business, perhaps EDC loans. San Antonio picked up SPI's lost Mexican national tourism, as the shopping and entertainment is better. The City needs a strategic plan.			X			
11	Lack of direct air flights to regional airports, particularly San Antonio and Austin. Mexican nationals have 50% ownership of Island properties and it is a huge economic loss, as people are not coming across the border. People who could be or were Winter Texans from Canada, are often flying over SPI and into Mexico.			X		X	
11	Community should continue investment in reef, however to bring in boats other marinas are needed.	X					
11	Supportive of a connected dune system. Need to listen to science, not opinions. Drop aesthetic preferences and determine what the best pathway is forward for the future of the Island. When the storm hits, what will happen? What is the best way to protect? Residents predominantly have a high education level, if given good scientific information, citizens will follow it.		X				

Respondent's Number	Comments	Public Access	Conservation	Tourism	Education	Comprehensive Plan	Other
11	Most access on bayside is private, which does not attract tourists. Public docking, ramps, and marina space is needed.	X		X			
11	Tourism is linked to the aesthetic of the Island and SPI needs to do better job of tropical Island feel. Increased vertical growth, palm trees and tall plants, would help. Urban developers can currently remove tree without replacement, a tree ordinance for planting and replacements would increase the appeal of the Island. The City should create a 'lushness strategy', particularly mid-Island where it is desolate. Vegetation will help ameliorate breezes, keeps Island cooler, and strengthen SPI's brand. Ordinances should include landscaping (tree and planting ordinance with same detail and strategy as buildings).			X		X	
11	Birding Center. The City is paying off debt, therefore they are not forced to run efficiently. During peak season they close during at 5pm. Given their location they should own sunset – events focused on funding and ticketing opportunities (wine events) should be developed.			X			
12	Need to express importance of the role of dunes, as more than just a pile of sand they are for the defense against storms. It would be beneficial to connect economics of dunes related to storm protection, which will speak to people who have interest in shoreline, verses just ecological interest. Signage on walkovers may be beneficial to articulate multiple values of the dunes.		X		X		
12	Continuous dunes are the way to ensure what is behind is protected, mobi mats cut through the dunes provide channels to focus storm surge.		X				
12	The mangroves on either side of the Causeway would be great to preserve instead of develop. Island could really benefit from making existing area that are open preserved to balance development and tourism. More educational based attractions to make whole day or weekend out of it, this would be a great area for kayak launch and the creation of a kayak trail.	X	X		X		
12	Junior ranger type program could be incorporated into Birding and Nature Center for participants learn about the unique environment outside of just beach. Could get local businesses involved as well.				X		
12	Public outreach through a bucket brigade type program would be another form of education outreach with proven success in other towns.				X		
12	University of Texas professors want to come down to SPI for research but it is hard for them to get ball rolling down here. One single person to orchestrate would be beneficial.				X		
12	The bayside needs attention. There is a desire for wind and water sports, however there are only a few locations on the Island for access. Need to develop more access and encourage use by providing the parking that goes with it.	X		X			
12	Living shorelines are key to future Island health to provide a buffer along shoreline / bulkhead. Ideally, the channel could be pushed north to allow room for living shorelines, while still allowing access.						
12	Motorized boat access in entertainment district would benefit businesses and provide an all in one stop with restaurants and parking all in one place. Motorized and non-motorized public access should be spread out to limit congestion.	X					

Respondent's Number	Comments	Public Access	Conservation	Tourism	Education	Comprehensive Plan	Other
12	Tourism. Marketing should advertise to a range of demographics. Family vacation tourism is a huge benefit, SPI benefits from older and younger visitors. Some places that are not so welcoming to younger families and recent advertisements not family focus.			X			
12	Spring Break is necessary evil as businesses depend upon it. Managed chaos is helpful.			X			
12	During April/May and September/October more educational outreach could happen in these low seasons. Including conferences and school events.			X	X		
12	The new parking by the Causeway has helped. A plan for parking associated with big events would be helpful, including how to let people know ahead of time of the parking and public transportation options.	X		X			
12	Events during offseason would be easy to have, such as festivals to draw people to the City.			X			
12	Bikes & walking. On Gulf Blvd the plastic posts do not prevent cars from entering pedestrian and bike lane. A fixed post would be preferable.					X	
12	The County does not have much interest in northern area. There could be more of a relationship between County and City regarding what happens (or does not) related to beach nourishment and it's impacts to City beaches. SPI should annex the area between The Shores and the City.					X	
12	Building regulations should be updated to reflect potential flooding (first floor). Island should be more cohesive in buildings and aesthetics, many buildings are in disrepair and it makes the Island look downtrodden less appealing.					X	
12	Looking to the future, City planning should consider that the north is geared towards ecotourism, that type of development should happen versus residential or commercial development.					X	
12	The dunes provide defense, they should not be topped and walkovers should be used to prevent cut-throughs.		X				
12	Supportive of any sort of eco-tourism, particularly ecotourism that results in wetland/mangrove preservation.		X	X			
13	A balance between the economy and the environment is critical, particularly for eco-tourism boats. People will want to see wild and natural environments, lowest impact as possible without harming sea life. Dolphins should be approached respectfully, not chased, and sea life that brought out of the water should be returned alive. Little enforcement currently on how ecotourism boats conduct themselves in the Bay. Enforcement of marine mammal protection act should occur. Currently there is a blatant disregard for laws to protect wildlife. Closest NOAA station takes a day to rescue a dolphin (5 babies lost within 3 weeks during spring break). Seeing increasing injuries to dolphins as the number of jet skis have tripled or quadrupled in last few years.		X	X			

Respondent's Number	Comments	Public Access	Conservation	Tourism	Education	Comprehensive Plan	Other
13	Would like to have a designated area for jet skis located outside of the channel. Currently it is very dangerous as there are conflicts between jet skis, tourist vessels, commercial boats, and wildlife (turtle and dolphins). One jet ski company forces renters to have guides to improve safety and behavior on water, but the guides cannot always control people. Designated areas would be best, outside of channel, for free styling – with rules within channel. Fins to Feathers completed a survey in Spring 2018 regarding jet skis – receiving 39 responses in total. A majority of responses stated that the Laguna Madre should be a sanctuary, there should be operational zones and speed limits, better enforcement of the marine mammals act, protecting wildlife in the Laguna Madre is important, and there should be additional education on how to maneuver safely and rules.		X				
13	Seagrass takes 10 yrs. to establish and the Laguna Madre is the last grassland in the Gulf. Nothing is being done to protect the grasslands. It could be made a sanctuary, with allowances for fishing and recreation. Tax money and grants are possible with such a designation and would support eco-tourism. The Bay is a nursery and an important place for mothers and baby dolphins as it is a safer environment than the Gulf in terms of sharks. Additionally, 4 out of 5 endangered sea turtles are found in the Bay. Fish, birds, mammals, reptiles, all have nitch in SPI – T&E species 38.		X				
13	Tourism should be more family and eco-friendly to draw people. SPI does not want the stigma of a party city (Panama City, FL), therefore there should be laws and rules during this time to allow people to enjoy the Island without destroying it.			X			
13	Game Warden and NOAA would love opportunity to dock boats in SPI, so that they can respond more rapidly. The City should invest in a location to host NOAA, if they are serious about ecotourism and the environment.						X
13	Golf carts need regulations for safety					X	
13	Beautifying Port Isabel would be helpful as it is the first impression of the area. It would be good to collaborate more between the cities – particularly as each could offer unique ecotourism options.						X
13	Pump outs needed on the Island, at least one.						X
14	Public Access. Pressure needs to be taken off of the Polaris Boat Ramp by providing other public ramps and associated parking. Fishing tournaments are large revenue generating events, however there is a need for more ramps and parking to support these events.	X		X			
14	Location of potential ramps should be in the entertainment district for motorized vessels and potentially north for non-motorized vessels. Safety concern with motorized and non-motorized vessels using the same ramps particularly at dusk.	X		X			
14	Would like to see better accounting of what is gained through Spring Break versus what is lost in expenses and revenue (from lack of other tourists).			X			
14	The Birding Center needs to meet its baseline budget so that the EDC budget could be applied to other projects and work on diversifying businesses and tourism. Center should be a more multipurpose facility to support revenue streams.				X		
15	Beach Access 3 and 4 are undeveloped accesses need to be finished. Parking lot and mobi mat would be a good start.	X					

Respondent's Number	Comments	Public Access	Conservation	Tourism	Education	Comprehensive Plan	Other
15	Continue to extend medians; they are a proven safety and traffic control devise that changes the whole aesthetic.					X	
15	Now that Padre and Gulf Boulevards are fairly fixed, SPI should work on a bike lane on Laguna Blvd with landscaping improvements to make it look like a boulevard.					X	
15	Would like to see the City purchase the land north of the Convention Center, as well as north of The Shores, on the Bayside, and develop a park.		X	X			
15	Improve transportation for tourists by providing bus shelters, with a bench and trash can, and bus stops every two block. Improve outreach, people will not utilize it if they do not know how the bus works.					X	
15	Why so many studies? Currently the City is updating the comprehensive plan, completing a cruise ship study, and tourist visitor study. Need to focus efforts. Could improve consistency in government by hiring locally.						X
15	Focus on things that are here now and who we are, the beach. Should focus efforts on improving beach and Gulf Blvd experience, as well as how tourist get around the Island. Not ecotourism.			X			
15	Nothing wrong with spring break, it is no more offensive than July or Winter Texans. It has toned down from past and it is fine as it is.			X			
15	Sign pollution is an issue, need to balance directional signage with identification of main attractions, but do not overdo it.					X	
15	No new areas of conservation are needed, SPI is over conserved. GLO and USACE have regulated.		X				
15	A better noise ordinance is needed, remove the holes in the current ordinance.					X	
15	Very little trash, the City does good job.						X
15	Time and money is being spent for a third time on cruise ships, it is not going to happen. Why spend money on more studies? Focus on what is working and improve that.			X			
16	Spring Break. College kids will mature and if they had a nice safe spring break they will likely return at a later time of the year. Texas is growing fast and there are not enough recreational opportunities (50.6% increase in population). It won't take much for SPI to gain tourists			X			
16	Some large green spaces within the developed part of the Island would be great.		X			X	
16	In favor of a wind sport venue, it would be worth it to the City.	X		X			
16	Additional way finding signage is not needed	X				X	
16	The City does a pretty good job of keeping the beach clean, except during spring break. But the City does clean it up overnight.			X			
16	The EDC should have a program to redevelop older buildings that is consistent with tropical feel of Island.					X	
16	The City has had a hard time meeting GLO requirements in the past; if land to the north is acquired the City should meet the requirements plus some.	X					
16	The path the City is on, related to development, is making the City better all the time. Focus on developing facilities that support tourism.			X			
16	Cruise ship would be great, but doubt ships will make a stop on SPI.			X			
16	SPI and region should work together to support tourism. Currently three airports are competing, where one may be viable to pull in more direct flights.			X		X	

Respondent's Number	Comments	Public Access	Conservation	Tourism	Education	Comprehensive Plan	Other
16	The City does a very good job at government disclosure.						X
16	The City did a nice job of making Padre Boulevard attractive.					X	
16	Nicest times of year on SPI are April/May and Sept/October. These are prime event times; the City should work on events comparable to Port of Aransas and San Antonio.			X			
17	Garbage. Sea Turtle Inc. does a good job of informing visitors to the Center, but more outreach could be completed outside of the Center. The City does a great job of keeping the beaches clean, but it would be great to outreach to individuals so they can be stewards.		X	X	X		
17	Connected Dunes. Responded yes to this question [supportive of connected dunes] in the online survey; however, it needs to be balanced with property owner views and businesses who need the views or space.		X				
17	Wooden Walkovers. Supportive, but would like to see gathering spaces or benches incorporated for people who cannot access the sand, but would want an opportunity to view the water. It also acts as a gathering place and way for the community members to interact and meet new people. Important for aging population.	X					
17	Spring Break. Overwhelms the Island and it would be nice if there were more family opportunities during this time. Also, diversity of live music would be beneficial to draw in all types of visitors during this time.			X			
17	Nature Center. Would be good if they could expand programs and coordinate with regional nature centers.				X		
17	Public fishing pier would be great on Gulf side to attract people and also act as a gathering space.			X			
17	Cruise Ships. If SPI is a port of call, the City would need to put restrictions on the cruise lines regarding ownership in shops and restaurants. Typically Cruise lines own many of the restaurants and shops in a port of call, directing profits out of the port. Would need a way to preserve/expand local businesses.			X			
17	Tourism. Encourage Winter Texans to stay through March. Many leave at the end of February.			X			
18	Need to balance in tourism investment with investment in infrastructure. In public meetings these two things seem at odds, but they do work together. It is not all for locals or all for tourists, need to balance both. The City puts out a big investment in spring break, but does the value balance out? The investment in biking and walking is large and it is great. Would like to see more of this, making driving less appealing than walking/biking by creating more parking availability while making driving difficult. Such as lowering speed limit on Gulf Blvd – to 20-25 to enhance walking and crossing.					X	
18	Eco-tourism would help diversify and spread tourism out over longer periods. Should be an innovative approach to home school families who may travel more readily during off season and be seeking destinations that offer unique educational experiences.			X			

Respondent's Number	Comments	Public Access	Conservation	Tourism	Education	Comprehensive Plan	Other
18	Padre Blvd, aesthetic is important the new True Value created parking in the back, but so is the entrance. The store turns its back on the Boulevard, the City should address this in future redevelopment. The City should encourage business to add bike and bike parking.					X	
18	The City should encourage business to add bike and bike parking.					X	
18	Bike racks at beach access is great; would like to see more.	X					
18	Public transportation. The Winter Texans and work force take advantage of busing, but not tourists. The City should identify how to get people comfortable with the bus system. Provide more shade structures. Pay attention to design – some bike racks next to sprinklers. Make walking and waiting comfortable for people (natural shade or structure). More benches to stop and rest, benches that call your attention out (aesthetic not just utilitarian) and support SPI Brand.					X	
18	Beachside. Walkovers and showers are great. Having foot spray available is important, either on its own or as option to shower. Trash receptacles and restrictions on taking glass onto the beach are great. Access is improving and the City is doing well with its efforts. Should continue to move forward with access improvements and making parking part of that. Would like to see more consolidation of parking and use of bus.	X					
18	Bayside. Would like the entertainment district and contiguous boardwalk to continue and expand. More public facilities and access in entertainment district would enliven the area. The City should close Laguna Blvd on a more frequent basis, a regular schedule not just spring break, to encourage transportation options and special events. If Louis to Jim's Pier were blocked to traffic it would facilitate people gathering. SPI could come up with regular schedule that would make the area safer and more comfortable. If business could continue boardwalks access it would be helpful and increase foot traffic for businesses. Particularly if combined with events, like art markets.	X		X			
18	Several annual events have been started, but were not invested in long enough to build a following. Annual events would provide more steady tourism base. For example Music on the Bay, was an event in September to October; however, it only lasted a year or two years. It had the potential to develop a following much like Austin, but the City would need to make a 5 year investment – to get more steam built up. It was not given enough time to establish. Sustainable tourism throughout the year for businesses is needed.			X			
18	The areas around the Convention Center and Birding Center are very important areas to preserve, including the flats to the north.		X	X			
18	The City and residents need to have a honest conversation at end of year, to review the investment in spring break and the revenue generated verse how much was invested in other events or other types of tourists. There is a perceived high value, but the City needs to phase out of spring break business, as there is an over dependence on that one event. It supports a business model to make killing in March and board up rest of year, which does not move SPI into the future.			X			

Respondent's Number	Comments	Public Access	Conservation	Tourism	Education	Comprehensive Plan	Other
19	Would like to see SPI move away from 'party town' that is attracting gangs from the Valley during spring break and move toward a more family friendly environment. The Bayside should remain residential with affordable housing for employees to live on Island. Zone E should be single occupancy with less than 30 day rentals disallowed.			X		X	
19	There are groups who are interested in keeping SPI a place to party. Beachfront could remain this type of place. Possibly with the City becoming dry, allowing purchase of alcohol in bars and restaurants, or at stores with a club card. The City revenue will increase per drink purchased at a bar/restaurant versus a liquor store purchase. The number of liquor stores could be reduced.			X		X	
19	Sea turtle currently do not nest on City beaches due to spring break noise. Would be great to see turtles nesting on SPI beaches again.		X				
19	The City would better serve residents and long-term renters with a community center. Particularly if activities for retirees were provided. The City needs an air conditioned community space. Brownsville has a 'Trade Center' with only vendors from Mexico. Something similar could develop on SPI if space was available. Space should also include a public health center for Winter Texans to receive check-ups and medicine. There should be a program for hotel staff to receive cardiac training.					X	
19	Each beachside access should have an ADA restroom to serve elderly and families.	X					
19	The flats and bayside ecology is really amazing. Island should preserve areas that support bird migration. Birders spend money in hotels and restaurants, should support wildlife that draws these tourists to SPI. Sub-woofers should be illegal (as they disturb birds), but music is fine at a respectable level.		X	X			
19	SPI could band itself as La Buena Vita - The Good Life. Everyone on Island could have a good time, in a responsible way. With areas and activities that unite around that theme, while respecting everyone. The City should create zones to enjoy quiet family time or boisterous events at an outside bar. Could play up the City's location, all the fun of Mexico without the danger, a winter tropical vacation. Focus creating an image of beautiful beaches and clean amenities.			X		X	
19	Bayside access needs improvement as not all access locations have a bulkhead and in some areas the failing bulkhead is supported by material illegally dumped bayside of the wall.	X					
19	City should increase fines for littering and enforcement officers should follow-up on City ordinances more. Mayor did a great job this year in bringing the noise levels down during spring break.		X			X	
19	10' alligator needs to be removed from Birding and Nature Center, as people do snorkel and swim in this area						X
20	Education: Outreach to Public schools, libraries, community centers in the Valley would be helpful to get people engaged in understanding the importance of the regional ecology and trash impacts before they get to the beaches.				X		

Respondent's Number	Comments	Public Access	Conservation	Tourism	Education	Comprehensive Plan	Other
20	Level of trash during the summer months increases. Managing the trash level is really important to keep people coming.			X			
20	More temporary walkways and wash stations would be helpful (the hard plastic mats would be fine).	X					
20	Sea turtles get showcased well on SPI, but other animals that are native and unique to the area would be nice.				X		
20	Special annual events would be good. Turtle run (to support Sea Turtle, Inc.), food festival, or small music events would be nice (south Texas does not have events like Austin or Houston). Underground artists may help draw more artists in.			X			
20	Support conservation by maintaining the same level of development as currently seen. The Space X facility will be developed; it would be good to conserve areas for animals to offset that facility.		X				X
21	Beachside. More public bathrooms needed beachside, as it is really important as a service. Particularly for families and older residents/visitors.	X		X			
21	Beachside. Currently there are very long spaces between public spaces on the beachside; places for people to sit would be helpful.	X					
21	Beachside. Really like mobi mats to facilitate coolers and things that are pulled.	X					
21	Beachside. Currently hotel row, behind the Visitors Center, there is no easy place to get to beach in that area. Access should be improved.	X					
21	Beachside. As the City moves north, how development occurs is an important consideration. Should seek out an area for a public beach/park, particularly where the sand narrows and development may be limited. Could include a band shell, concessions, or boardwalk. As development occurs, view points of beach should be preserved, requiring people to glance through buildings.	X	X				
21	Beachside. A nature walk would be useful, particularly connecting all access points (there may be some mapped access points that are undeveloped).	X					
21	Beachside. Parking is an issue, particularly for group activities such as sandcastle lessons.	X					
21	Beachside. In Australia there are beaches that allow dogs at certain hours. Owners are still responsible for their dogs (litter/keeping animals under control). Why not here?						X
21	Bayside access. Appealing to people with non-motorized vessels and getting them into the water is important to support visitorship during the shoulder seasons. Saturn Street end may be good possibility for access, as lots cannot be built on because of wetland.	X					
22	Major concerns: Lack of parking for the day visitors and the need for additional boat ramps (free) for bay access. My condo building has to battle the boat launchers to even get into our garage. Also, some of the vendors for chairs and umbrellas monopolize the prime beach access areas and act like they own that area.	X					
24	Public Parking. SPI is in compliance with GLO, however not supportive of paid parking. There is a lot of mis-information, residents believe Island overwhelmed by visitors because of free parking. However, other parks have grills, pavilions, restrooms, when they fill up you see people coming to the Island.	X					

Respondent's Number	Comments	Public Access	Conservation	Tourism	Education	Comprehensive Plan	Other
24	Dunes. Conservation is great and the City should keep doing it; natural protection is better than a seawall. Prefer the dunes to grow naturally, but understand need to manage; however, would prefer the dunes to stay at 15' and not lowered to 10'.		X				
24	City and County have both done a good job with access. Would like to see existing plan, with more detail, that limits parking on Highway 100. County needs to plan better for parking and access available for beaches. County and State allow The Shores to have de facto private 1.5 miles of private beach as there is no public access (would like to avoid in future) better planning and need for access required if the City expands to the north.	X					
24	Supportive of offshore nourishment as it is less impactful than beach nourishment and seems to last longer. Would like to see hard numbers on off-shore sand tracking in forthcoming study. Likely less impactful to birds, turtles, and benthic species. The City should limit groins, jetties, and geotubes as they cause more harm than they are worth and cannot easily be pulled out.		X				
24	Regional campaign needed to address trash being left behind, followed by enforcement. Station code enforcement and police at key times (5/6pm) to ticket people and encourage people to pick up trash.						X
24	Bathrooms on beachside needed.	X					
24	De facto private neighborhoods on bayside needs to be addressed. People come to fish and explore both sides of the Island. As a child, I could explore the bay by walking in at multiple points and casting a net. Currently there is not a lot of access for bay exploration, neighborhoods need southern, mid, and northern locations to provide access and parking. Other than two piers, no land based fishing is available.	X					
24	More access is needed with less retaining wall/hard structure. Would like to see more of a living shoreline to encourage more biodiversity. The City should develop a shoreline management plan, that engages property owners in its development. Compared to other Texas costal areas SPI is severely lacking access to Bay, with three of the five ramp being barely usable.	X					
24	Palm Street could be turned into public access, to the redevelop area. A temporary dock is needed at Louis to facilitate high-end tournaments.	X		X			
24	Supportive of providing access to all and the promotion of ecotourism. Sea Turtle Inc. and Birding and Nature Center have promoted ecotourism well, but the City has not been promoted in the right way in general.			X			
24	The City is completing a walkway through mangroves, but would like to see a less formal trail experience nature. It would need to be controlled to limit human impacts, possibly by having limited guided tours.			X			
25	It is important for the City to maintain environmental health and it should seek opportunities to improve stewardship. Could possibly improve stewardship with litter patrol (education on impacts of littering on Island, cost to tourism that that brings, directly speak to beach users and direct to trash receptacles). People see others as responsible party not themselves, need to motivate people to see it as a personal responsibility through education and negative reinforcement (tickets).		X		X		

Respondent's Number	Comments	Public Access	Conservation	Tourism	Education	Comprehensive Plan	Other
25	Use social media to reach out to people on Island to disseminate information, particularly to tourists. The City could work with hotels to put something in rooms – packages that locate where to put trash, impacts on beach. Appeal to emotional side and use good informative graphics.			X	X		
25	There are informal cultural landmarks that should be preserved: Beach (north of last access [outside of city limits]) "spaceship" (Old ship with nude beach sign) – would like to see preservation. However, it is a zone for trash to be dumped inside.						X
25	City should look for opportunities to conserve/preserve seagrass and mangroves. These habitats attract unique wildlife.		X				
25	AirBnB and similar short-term rentals limit the availability of rentals for people to live and work on the Island. Affordable housing stock an issue that will only become worse overtime. Local community is key to maintaining the Island. Regulations or tax abatements, to grow diversified communities should be considered. Exclusive tourism economy is prone to one environmental disaster to wiping out economy. A more diverse and stable localized resident economy will be able to stabilize the ups and downs related to tourism. If a greater percentage of the residents live full time on the Island, a more local economy would likely develop.					X	
25	Tourism focus on more local annual events, particularly in winter and shoulder seasons.			X			
25	City should have someone in charge of filming and filming permits. It would be beneficial to promote the Island as a location for commercials and movies - particularly during the low tourist season.						X
25	City should have a recycling transfer station, possibly centralized drop-off area once a week for collection.						X
25	Shark populations around coast are important – should have protections for sharks [particularly related to fishing] and information on what species are typically in the area. Education outreach should build on current public interest (Discovery Channel's Shark Week) educate and inform residents and tourists.		X		X		
25	City should celebrate the trash problem as a way to educate and inform. There are informal trash art installations on the Island; combine beach clean-up with an art festival to inspire better stewardship. The trash from clean up events could be repurposed by local artists into an annual festival. The sculptures could be placed a key locations with informative graphics on the issues faced on SPI and globally; pounds of trash per year, Gulf dead zones, floating plastic islands, etc.			X	X		
25	Traffic is an issue during high season; alternative means of transportation on Island is beneficial. Getting more people motivated to not drive is difficult. Informing tourists on public transportation and bike routes would be useful so that it is easy for them to know the alternatives and utilize the services. Increase public places to sit and provide shade, water fountains, and more trees.	X	X	X			
25	Increase public access on bayside.	X					
25	City should encourage more tournaments in kiteboard and surfing. This demographic is supportive of preservation and ecotourism; if they had a bigger presence the surfers/kiteboarders would encourage protection of beach/bay.		X	X			

Respondent's Number	Comments	Public Access	Conservation	Tourism	Education	Comprehensive Plan	Other
25	Brownsville Airport is a deceiving name and should be updated to limit confusion by tourists. There are limited ways of getting from Island to airport/Greyhound station or outside community by public transportation. Would be beneficial to increase public transportation options for tourists and residents						X
25	Lifeguards have a hard time finding affordable housing – often they have to live off Island, which becomes an issue with summer traffic. City should look into subsidized housing or hostel type living. Could be rented in the winter when not needed.						X
26	City should keep Island family friendly outside of spring break, focusing on clean and enjoyable beaches. Limit vehicles on beaches [County]. City is doing a good job with improvements so far.			X			
26	Golf course on Island would be nice somewhere (9 hole).						X
26	City could do better job at public awareness of what is available in terms of programs (i.e. here is what to do in South Padre [besides beaches]). Emphasize the good things going on that people can see / do, particularly free events. Perhaps could be part of a welcome package.			X	X		
26	Improve outreach/marketing to key markets within Texas - San Antonio / Austin / Houston / Dallas. Consider digital billboards along select roadways.			X			
26	Future development/re-development should be more focused on aesthetics, ordinances to encourage a certain look or feel that supports the SPI brand					X	
26	Public access – parking is always an issue on beach; continue to enhance beachside parking. Bayside is a popular sunset destination, a location to watch the sunset on bayside would be helpful.	X					
27	Bayside Access. Each time new access is provided more cement/pavement is added, which takes away from the natural beauty. With the parking by Jim’s Pier, access is not an issue here like other places. Should have more access available, but balance accessibility with green and natural spaces. The Island is starting to get overbuilt, the City needs to be more conscientious about managing growth (particularly northern part of Island). City needs to keep natural spaces and integrate them more consciously.	X	X	X			
27	Buggy and golf carts should be limited; there is enough currently and more are not needed. Currently volume is overkill. Supportive on options for maintaining current level, but needs to be restricted from expanding.					X	
27	Turtles. Tourists and residents need to be educated on filling holes.		X		X		
27	Glass bottles are still used by people out on beach, despite regulations. Needs enforcement through plain clothed patrol to catch people. Patrol should be on foot to enforce regulations.		X		X		
27	Access has gotten better overtime, would like to see more ADA access. Would like to see areas integrated into walkover where people can congregate, particularly those folks who may not be able to directly access beach.	X					
27	Police Department – Doing a good job, appreciate that police are not putting up speeding traps. On days with a lot of traffic, could enforce more on the causeway, but typically not an issue. Address egregious issues, but not aggressive ticketing on roadway. Would like to see more beach enforcement as it impacts wildlife						X

Respondent's Number	Comments	Public Access	Conservation	Tourism	Education	Comprehensive Plan	Other
27	Traffic: After the last light at Amberjack, there is a long stretch to next light. People back up behind Amberjack, may need one more light in-between Amberjack and Constellation to limit people blocking intersections. If there was a light then there would be the ability to cross.					X	
27	Conservation: Patches of land for sale should be purchased by City to have open space and preserve natural beauty. City should identify key potential parcels.		X				
27	Future development: City should limit building heights along the strip, there should not be high buildings along the strip.						X
27	City should evaluate having separate area(s) for jet skiing as it would be easier to keep an eye on people and improve safety. Typically, renters cross waterway and explore shallows. Would need to a good sized area, but could be beneficial.		X	X			
27	Kayak trail has been recommended in the Brownsville Recreation Plan between South Padre and Port Isabel, what are your thoughts? Interesting idea, but would not impact tourism necessarily – particularly on windy days. One hour is enough for most kayakers, particular people who rent kayaks. A trail could be a good ecotourism element – if closer to SPI and offered a length or segments accomplishable in an hour. Marketing would have to focus on Paddle to Padre type people, not average tourists or residents. Eco-tours are difficult on SPI as there are not a lot of places to pull into or to look at along the shoreline.			X			
27	Having the street names visible from the water would be helpful in orienting tourists.						X
27	The City should permit the use of fireworks over the water to limit impacts						X
27	More benches on bayside for congregating and watching sunset would be good.	X					
27	More people from the Valley coming Friday, Saturday, and Sunday – as economic status has increased. City should consider the tourism from this visitor group and what their needs and impacts are.			X			
27	Increased outreach to reinforce/improve image would be great.			X			
27	People out of state and in-state think South Padre is in Corpus Christie. Branding / marketing should reinforce location, such as South Padre Island, "The tip of Texas".			X			
27	Visitor Bureau website: Posting is free and is a big driver for local businesses. I commend them for allowing businesses to post for free. Keep up the good work, really helpful.			X			
28	Beachside. Do not believe it is a valid concept that dunes will build up and provide protection. Over decades, the City has allowed development of a beach to certain height and setback, which has impacted ground floor units that are already invested. Not sure I want the town protecting me from myself; if owner is willing to risk wash through why does town care? FEMA will help rebuild if there is a storm.	X					
28	Beachside. The City is calling nature and mobi-mat access paths risks. City should consider making zigzag paths (nature trail and mobi-mat) instead of straight, to avoid cut-through. At grade access is unobtrusive, walkovers are intrusive to residents, with ADA ramps making structures even more intrusive.	X					
28	Beachside. City taking GLO vision and taking it to the extreme. City has exceeded GLO parameters instead of meeting minimum requirements. GLO does not regulate height; where is the height requirement coming from?	X					

Respondent's Number	Comments	Public Access	Conservation	Tourism	Education	Comprehensive Plan	Other
28	During spring break – issues with people urinating and smoking pot at walkover. Enforcement is an issue.			X			
28	No issue with the 10' standard dune height, but walkovers are not a standard 11.5 height. They are 1.5' above highest elevation of the dune. If walkovers are going to be built they should be a height of 11.5'.	X					
28	Beach wheelchair should be advertised at ADA access point. Parking must service access, ADA ramp only has one ADA parking spot.	X					
28	Padre Blvd. Medians. When trying to navigate the Island, the median makes it difficult. The City will need to install more pedestrian crossings and lights. Additional traffic lights will not beautify the Boulevard. The vision for Island is different than what it is; there is a desire for pristine / upscale, which takes away what long time residents/visitors like about it.					X	
28	Spring Break. Spring break will not end, but strong promotion has more negatives than positives. More family friendly events are necessary to offset spring break impression.			X			
28	County and City rely on venue tax. The County is making public parks too expensive for locals to use, which drives them to non-county beaches. Why does the County regulate entrance to beach when the City cannot?			X			
28	Cruise Ships. SPI has tried this in the past and spending money to attract cruise ship is a waste. There is no reason to stop at SPI before Mexico when coming out of New Orleans or Corpus Christie. What are daytrip people going to do when they come to port?			X			
28	Multi-Mobil transportation center, a waste, do not see visitors using it. Acts as overflow parking for employees coming from off Island.					X	
28	Bayside. The entertainment area improvements are good, but the improvements were driven by private enterprise and had little to do with the City. Within the residential area there are limited opportunities, the City missed an opportunity at Tequila Frogs. A good place to add access may be passed Long Board Bar, in entertainment district.	X					
28	Clayton's Pier results in traffic impacts when events are occurring.						X
28	It is difficult to change the mindset of people regarding trash. The City should enforce more and add another cycle of picking up barrels during mid-day or more barrels during high season. Would it be possible for the legal system to require more community service or certain misdemeanors and require beach cleaning? Involve more boy/girl scouts, youth groups, and church groups in beach clean up days. Work to change behaviors in school age kids.				X		
28	Conservation. The City does not need to fill in wetlands or create more land through dredge.		X				
28	The second causeway will change Island. Conservation of land near landfall will be important. The City should think about why they want to become bigger and bigger. What are the goals?		X				
28	Do not agree with the current vision for SPI of upscale, pristine, spotless - this is not what we are. SPI is a home town that is a little messy, that is what we are.					X	

Respondent's Number	Comments	Public Access	Conservation	Tourism	Education	Comprehensive Plan	Other
28	Not every access needs a restroom, but should have them at the minimum number of required access. Could be temporary port-o-potties, but this would not be a long-term solution. Parking and bathrooms on west side could be a solution, should be unobtrusive to residents.	X					
29	Land is vanishing and mitigation area is very limited. The City needs a mitigation area to support growth and expansion. Mitigation is huge as it will become a barrier to development on SPI.		X			X	
29	There are 21 miles of non-developed land to the cut, both private and public. In the future people will be seeking buildable land, which could naturally develop with sand accretion and vegetation; however, vehicles on dunes will prevent that. If steps are implemented now, to prepare for eventual development, growth could occur in an economically feasible and environmentally sensitive way.		X			X	
29	Dunes. SPI is the only city that allows dune topping. In North Carolina, FEMA will not payout if dune elevation is not a certain height. Locally there seems to be the opposite attitude. It is the duty of the City to protect public and private property. The City depends on successful real estate for tax revenue. SPI could set TX standard for advanced planning, particularly to the north.		X			X	
29	Predominant shrimping industry is locally dying as there is no nursery; seagrass needs to be protected to support fisheries. Regional watershed approach would be required.		X			X	
29	City needs to invest planning effort to support more than just kiteboards. There is private development money out there; however, where is that person going to build if no mitigation available?		X				
29	Spend more money getting a long-term plan and than look into skateboard park, cruise port-of-call, etc. SPI is within the most economically depressed area in TX and cruise lines are not going to find activities here to support themselves. It is better to focus on flights into the area from US and Mexico.					X	
29	Every business should have direct link on one page with all links on one page. SPI is a small community, it should be easy to disseminate information.						X
29	Greatest resource is the beach and bay. Money should be spent on beautification and management to keep people coming.	X		X			
29	Kiteboarding is specialized and can damage seagrass estuaries, which impact fishing. The City should be sure this is the right activity to support overall goals			X			
29	SPI is not serving the Winter Texan community well. The City is considering a skatepark, but what about shuffle board, bocce, or a community center?						X
29	Things to do need to be expanded – Clayton's will be a great attraction if pier is managed and built well. It is an entertainment facility that supports the destination.			X			
30	There is an important environmental story on this Island that is connected to tourism. Tourism will be lost if you do not have what draws them. Rather than looking to new avenues for tourism, look inward at what is working and augment that first (completing walkovers, adding restrooms, keeping bay/beach clean).	X		X			

Respondent's Number	Comments	Public Access	Conservation	Tourism	Education	Comprehensive Plan	Other
30	Cleaning of beaches and public spaces is important for tourism (beach and bay including fishing and watersports), which seems to get lost on City officials and employees. Clean beaches are good for everyone and attracts tourists. The City is doing a good job, but has gotten away from beach and bay clean-ups. Spring breakers are fined for public intoxication – could public service as beach clean-up be added to fine or in place of?			X			
30	Previous beautification committee was working on an educational program with schools building on 'waste in place' program. Program would provide high school students with volunteer credits and these students would mentor elementary and middle-school kids on importance of keeping trash off beach and beach ecology. Ideally the kids would then change their habits and influence their parents. The biggest complaint is that visitors from the Valley do not pick up after themselves; this would help educate people and encourage changes in behaviors. The City should revisit building this program				X		
30	Maintain list of beach clean-up volunteers, participants of City and County events. Increase frequency of clean-up events.				X		
30	Public Access. Continue to maintain access on beach and bay (improve bay access). Bay access improvements need parking for vehicles and trailers. Fishing is a big money maker and consists of the type of clientele that SPI is looking for, as they spend money and many buy property. Need to improve access to emphasize what works and make it easy for people to use.	X		X			
30	Parking (Multi-Modal) – short sited and expensive investment by City that is not working, as it is rarely used. Similarly the City is discussing a boardwalk, but how will it be maintained? The City should fix what it has before investing in new, such as short-term easy solutions like improving roads and drainage. Keep working on beach access, make sure mats are in good shape, add showers. Make the beaches the best they can be and keep up with maintenance. Keep working on what you have. Ace Hardware store example of City approving a plan that was not well thought out (entrance in back, not on main street).	X					X
30	City allowed food trucks on the Island, but poorly handled if you only allow existing Island restaurants to operate. The idea is to bring new flavors in; it does not make sense to only allow existing restaurants to offer trucks. the Bay and Gulf are full of fresh fish; however, the restaurants that serve fresh fish are extremely limited. Local seafood and produce should be celebrated, matching nationwide trend – Bay to Table. Would better match clientele (wind sports, birding, eco-tourists) that the Island is seeking and who are interested in healthy options. Ecotourism attracts people who have money to spend and creating a good impression is critical. Avoid reliance on spring break and look at the long term to diversify the tourism draw. Spend less marketing on spring break, focus on other trends and what SPI has to offer to help businesses thrive by bringing families and money to Island.			X			

Respondent's Number	Comments	Public Access	Conservation	Tourism	Education	Comprehensive Plan	Other
30	Conservation – City looked into purchasing property by BNC – the marshy area is important for birds, during migration area is full of birds. City talked about installing boardwalks, but would be better to leave it alone as a preserve and undeveloped. Not every space needs to be filled.		X				
30	Cruise ship would not be bad if it is done right, but more likely City will do it shortsighted. What is the cost of clean up and infrastructure, and who benefits? It would not bring hotel bookings; is the money better spent elsewhere that will bring in more revenue.			X			
31	The City should promote a welcoming atmosphere for everyone that is safe						X
31	The main draw is the beach; it is the best beach in Texas. The City needs to maintain this draw and keep it clean. Over the last 30 years the beach has really changed and the City is doing a good job of improving the quality of the beach access and keeping the beach groomed	X					
31	Padre Blvd is dangerous and should have additional lights and crossings.					X	
31	Improve access to bay, particularly for children.	X					
31	City should consider limiting fireworks if Bay health is negatively impacted.		X				
31	Green space is very important and the Island is losing open space to development. Some lots need to be left natural for wildlife and aesthetic value.		X				
31	Golf carts should be prohibited on Padre Blvd as they cannot signal turns and it is very dangerous.					X	
32	Spring Break. Inconsistent plan for what Island tourism should be. SPI should follow the Disney example, going from unsafe dirty amusement parks to clean, safe, and wholesome family fun. Is the tax payer expense of extra police and M&O during spring break, economically worth it compared to the loss of revenue from Winter Texans (who leave in late February) and businesses who suffer losses in March and April? Local mainland tourism is non-existent during this period as well. The argument that spring breakers come back later with their own families does not ring true based on personal experience. There should be a study completed to determine the economic balance sheet related to spring break and how many people come back in subsequent years outside that window. Cruise Ships bring in an older clientele, which would not work with the spring break season – this needs to be considered with discussing SPI as a possible port of call. This will be a particular concern when next year, Texas Week (week of university spring break) extends from one week to two due to staggered schedule.			X		X	
32	Existing boardwalks. They are working well and would like to see an expansion of them.	X					
32	Northern dunes. They are a fragile system, would like to see a balance of off-road vehicles and dune protections.		X				
32	Yummi's creates a dangerous double parking condition on the weekends that needs to be addressed / parking regulations enforced. There are too many uncontrolled driveways on the main roadway and it is a conflict between pedestrians/bikes and vehicles.					X	

Respondent's Number	Comments	Public Access	Conservation	Tourism	Education	Comprehensive Plan	Other
32	Connected dunes. Some hotels are allowed to not have connected dunes, this should not be the case. During a storm these will likely form cut throughs and impact the Island negatively.		X				
32	Bayside. Additional public access and opportunities for birding would be beneficial	X					
33	Do not reinvent the wheel, just improve on existing.						X
33	Dune Ridge Construction – Dune 1st protection, retaining wall 2nd protection, and buildings 3rd protection level. Beach nourishment in the 90's, Morton recommended 10' by 100' deep with 45 angle (60 angle is better with existing system). A meaningful discussion regarding this past study and the current City policy needs to occur. SPI does need protection provided by a dune, but balance it with property owners, understand Island history and make it better, while looking well into future. There needs to be plan that respects property owners, majority which are absentee. The City needs a clear ordinance that is not open to interpretation and based on science.		X				
33	Grading plans should be required for any dune lowering. Would like to see the full length of beach at 10' elevation (like at Palms) with back dunes filled and have a maintenance program for dunes and manmade beach. Do not allow for-dune to get too tall moving forward.		X				
33	Supporter of mobi-mats, but they need to be maintained and moved.	X					
33	Beach Restrooms. Locate temporary toilet on west side of Gulf Blvd in parking areas. Five years ago temporary facilities were located on the beach, but they were not removed prior to a storm. As a result all temporary toilets removed from beach permanently.	X					
33	Bayside. Need annexation plan to move the City limits constantly beyond channel.					X	
34	There have been instances of aggressive policing on SPI. During spring break countless cars are pulled over by police, if you want to attract people the City needs to lighten up. The City does not monitor speeders and reckless driving on causeway. This is a public safety issue. The SPI police should introduce speed monitoring, which will send a message that will not detract from tourism. Police have responsibility to protect and serve, not to harass. If the City completes more training for police and screening, they will naturally do a good job. Lawsuit much more expensive than testing, training, and screening.						X
34	Beach access. Would like to see more access north, but no cars and trucks on beach.	X					
34	Bayside. Would like to see more parking for boat and storage of boats.	X					
34	Trash. Increase enforcement and make the fine higher. The City should get strict and tough, plenty of places for people to throw trash in receptacles.						X
34	Noise not a concern						X
34	No issues with spring break.			X			

Respondent's Number	Comments	Public Access	Conservation	Tourism	Education	Comprehensive Plan	Other
34	Waste of money to put new Causeway in, as it will hurt Port Isabel. Money would be better spent by putting access on the existing causeway for bike and walking path. A ferry would be a better choice than bridge; would be more quaint than commercial.						X
35	City has a litter patrol up and down beach through summer, not daily (may be Wednesday to Sunday). There has been a significant improvement seen since implementation. People on foot and bike would be more approachable and preferable to ATVs, similar to Galveston. The City is doing good job and could continue to improve.			X			
35	Fines are a revenue stream, but could possibly have people complete community service instead of fines. Businesses along beach and bay should take responsibility for property around them including frontage.			X			
35	SPI should have 'packing' list on website to inform visitors. SPI does need to enforce and let people know when they are coming to visit the City's expectations and rules. Anything we can do to educate people will come back in spades. City has campaign running now that is working, 'treasure it don't trash it'.			X			
35	Recycling at access was piloted but taken away as someone was cut. Would be great if that was back.						X
35	Whatever is in street will end up in water; litter is a citywide issue and outreach should reinforce that.						X
35	Education occurs on so many levels on the Island. ArtSpace leads an annual Trash and Fashion show. The show should be scheduled during Sand Castle Days to expand the audience.				X		
35	The County has a full time paid position; the City should as well to coordinate clean-ups and outreach.	X					
35	Pumping stations are critically needed. With 250 boats in the Bay on summer weekends, where are they all dumping? This should be the main concern, other than trash on beach.	X					
35	Clean-up Events. People come from as far as San Antonio to participate. There is a lot happening in the County and City, but separately. If there could be week of united events it would be powerful.						X
35	Conservation. The shoreline along the bayside seems unattended and would benefit from more protection, including clean ups and shoreline conservation.		X				
35	Would like to see sifting machine used more – perhaps have businesses pay for it – particularly volleyball areas.			X			

Appendix D: Comprehensive Plan Open House Results

Open House Results

Beach Access

Beach Access Options		
Type of Beach Access	Access Mating	Walkovers
Votes For	11	37

Bathroom Locations

		Bathroom Location Options for Beach Access Cul-De-Sacs		
Type of Restroom	Votes For		Yes	No
Temporary	4	On the Beach (Temporary Restrooms)	6	2
Permanent	33	At the Historic Building Line (Retaining Wall) Permanent Facility	16	0
		Mid Cul-De-Sac Permanent Facility	8	0
		Gulf Blvd (Permanent Facility)	9	0

Public Request Beach Access Locations

Public Requested Beach Access Restroom Locations	
Pearl	3
La Copa	2
Harbor Circle	1
Ocean Circle	1
Gulf Circle	2
Beach Circle	0
Sea Island Circle	1
Seaside Circle	1
Surf Circle	1
White Cap Circle	3
Blue Water Circle	1
Riviera Circle	1
DayDream Circle	2
Moonlight Circle	1
Bougainvillea Circle	2
Poinsettia Circle	2
Neptune Circle	1
Starlight Circle	1
Aquarius Circle	2
Aurora Circle	1
Gay Dawn Circle	3
Good Hope Circle	3
Fantasy Circle	1
Sapphire Circle	5



Where to go?
Where do you want to see the City install restrooms?

1. ~~||||~~ | X No.  1. On-beach temporary restrooms (b/w Co 5 & 6)

2. ~~||||~~ |||| |||| Alternate locations

3. ~~||||~~ ||||  2. At historic building line (retaining wall) permanent facility

4. ~~||||~~ |||| 3. Mid cul-de-sac permanent facility

4. Gulf Boulevard side permanent facility



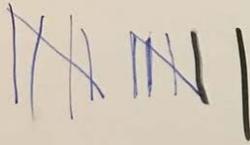
White-Cap Circle

South Padre

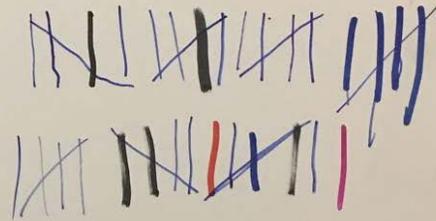
Additional Comments

Votes For	Additional Comments
	Post signs at bay water popular entrances to be warned of stingrays etc. - how to handle snorkeling
	More walkovers
	Paid parking on Gulf and Accesses
	MORE lights on Padre Boulevard
	add trash barrel to rinse area at Gay Dawn
	Access mats vs beach walkovers should be a technical decision, not a popularity contest
	Directional signage on the beach, address on hotel/names of hotel, public exits off the beach.
	Beach rules posted
4	rake the beach (check competition groom the beach)
	Benches for all to rest
	Dredge Channel
	Boat Ramp Maintenance
2	Don't rake the beach
	A few access points = loading zone (10 min) or allow a vendor to assist with a cart to help families unload beach equipment
	Public Art Sculptures
	"washed up" focusing on importance of keeping the beaches clean
	Educational program focusing on our oceans and beaches "trash"
	plastics in Ocean - Public sculptures created by Beach trash to make public more aware - public involvement in collection and creation of art
4	Marine Pump Station
	More ADA Access to and From Beach
	Services to help handicap and families to the beach
4	recycling receptacles on the beach
12	Support RGV Reef project
6	More Boat Ramps and Parking
2	Porto-Poties are not safe prefer permanent buildings
	Want mobi-mat at Access #1 extended to line of vegetation

Access-mats



Walkovers



Appendix E: Additional References

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Appendix F: Funding Sources

Funding Source	Website	Application	Deadlines	Project Areas
NOAA Sea Grant	Resilient Communities and Economies	Funding	Deadline passed	Storm Impact Resilience
NOAA Office for Coastal Management	Funding Opportunities	Announcement of Notice of Funding Opportunity	Deadline passed	Storm Impact Resilience
NOAA	Grants.gov	Package	Deadline passed	Education
NOAA	NOAA Coastal Resilience Grants Program	National Coastal Resilience Fund 2018 Request for Proposals	Deadline passed	Storm Impact Resilience
Texas Parks & Wildlife	Conservation Grant Projects	Conservation Grant Criteria	May 1st	Eco-tourism
Texas Parks & Wildlife	TPWD Grants and Assistance	See website	vary per grant type	Recreation, Eco-tourism
Texas Parks & Wildlife	TPWD Boating Access Grants	See website	October 1st	Boat Ramps/Access
The Lawrence Foundation	The Lawrence Foundation	Common Grant Application	April 30th November 1st	Storm Impact Resilience
Gulf of Mexico Alliance	Gulf of Mexico Alliance	Gulf Star Grants Program RFP	Deadline passed	Storm Impact Resilience
Clif Bar Family Foundation	Clif Bar Family Foundation	See application process on website	June 1st	Storm Impact Resilience
The Cynthia & George Mitchell Foundation	About the Foundation	Grantmaking	Rolling Applications	Storm Impact Resilience
Shell	Shell Grants	Shell US Grant Application	Rolling Applications	Storm Impact Resilience
Wells Fargo	Environmental Grant Program	See website	Deadline passed	Storm Impact Resilience
The Conservation Alliance	Funding Criteria	How to Apply	June 1st December 1st	Beach and Public Access
The David & Lucile Packard Foundation	For Grantseekers	Grant Inquiry	None	Storm Impact Resilience
Ruby Bruner Award for Urban Excellence	About	Apply	12/12/2018	Urban Design
Patagonia Corporate Grants Program	Corporate Grants Program	See website	April 30th or August 31st	Conservation
Patagonia Environmental Grants	Grant Guidelines	See website	Rolling Applications	Conservation
Captain Planet Foundation	Grants	See website	Deadlines based on grant applied	Education

Funding Source	Website	Application	Deadlines	Project Areas
NEEF	Grants	See website	Deadline passed	Education; Conservation; Storm Impact Resilience
NFWF	Five Star and Urban Waters Restoration Grant Program 2018 RFP	Full Proposal Tip Sheet	CLOSED	Storm Impact Resilience; Beach and Public Access;
GLO (CEPRA - CMP)	GLO Funding Opportunities	See website	CEPRA July 1, 2019 CMP - Deadline	Coastal Erosion
EPA	Environmental Education Grants	See website	No 2019 grants, 2020 announced in fall 2019	Education
EPA	Environmental Research Grants	See website	vary by opportunity	Education-Research, Ecosystems
RESTORE - Texas	RESTORE Texas Grant Opportunities	See website	vary by funding source	Restoration-Conservation-Education