



FLAGLER COUNTY BEACH MANAGEMENT REPORT



*Scenic A1A PRIDE Beach Management Committee
April 2004*

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1. BEACH MANAGEMENT COMMITTEE

The Beach Management Committee is a subcommittee of Scenic A1A PRIDE, originally formed to address issues pertaining to beach driving. This has become an issue of some controversy in unincorporated County beaches, where it is allowed subject to few restrictions and little enforcement activity. The committee's scope was then broadened at the request of Scenic A1A PRIDE to examine broader issues related to overall management of the beach ecosystem including beach driving, legal issues pertaining to beach access and the liability of private property owners and the County, environmental issues including turtle protection and dune preservation, and enforcement of current and future regulations. The intent of the committee was to gather information on this issue and provide a final report to be presented to Scenic A1A and the County Commission. The committee conducted numerous public meetings over a period of one year and heard from a variety of citizens and local, state, and federal public officials. Information in this report includes a blend of expert opinions and testimony by community residents. Meetings were posted and open to all. Testimony was received by experts and citizens alike. The final report was approved by unanimous vote by the Committee.

2. INTRODUCTION: THE TIME IS NOW

This report responds to the request of the County Commission for Scenic A1A PRIDE to study the issue of beach driving. This issue has generated controversy since the 1980s, pitting those who want to preserve the right to drive on the beach against those opposed to it for environmental and safety reasons.

After beginning the study, A1A PRIDE realized that the resolution to this controversy requires a long range planning perspective to address all issues related to maintaining a healthy beach environment for our residents, visitors and for wildlife. Resolving beach driving in a vacuum, separated from all of the issues that impact the overall health of the beach, would yield just another emotional battle with no productive good for the public.

These are indeed important issues to resolve. The beaches are critically important to our economy. They are the centerpiece of chamber of commerce literature as well as the icon for those interested in promoting the county's environmental resources. The beaches also produce significant ad valorem tax revenue and tourist development revenue in the county. The beach dunes additionally provide the natural armoring that protects our coastal homes and properties from catastrophic loss.

The beaches are also central to our quality of life. Our beaches are truly unique. On these shores the Spanish heritage of Florida was determined. Florida's first voice in the Congress lived on this beach. The world's first Oceanarium was built here and the world's first underwater film studio produced ground breaking work in cinematography. The beaches are on a National Scenic Byway, a corridor that contains what may be the most extensive hardwood hammock in Florida. The beach also is unique because it is a coquina sand beach which resists erosion and geologically represents the coquina that was formed at the end of the Ice Age. We have the

longest known outcropping of coquina on the eastern US shore. The beach is relatively unpolluted and our citizens gladly volunteer time for cleanups and other positive activities.

The importance of our beaches as nesting and breeding grounds for sea turtles and seabirds must be emphasized. Given the impact of beach driving and lighting on these endangered species, the County will eventually have to face the application of the federal Endangered Species Act.

The County and its municipalities have expended significant resources and time protecting beaches, acquiring more public access and parks and enhancing those resources. As noted in the A1A Charrette, the Treasure Coast planners determined that this beach contained the longest coastal bike path of any coastal community in the United States. It was the first area to be designated in Florida as part of the East Coast Birding Trail. The county also may have more publicly owned river to sea corridors than any other county in Florida (Gamble Rogers, Mala Compra Plantation Greenway, Washington Oaks, and River to Sea Preserve at Marineland).

The quality of the beaches, their long term economic value, and the investment made in enhancing them require careful stewardship for the public good. The interim ordinance covering the beach, however, was enacted in 2001, and has not been upgraded yet. The comprehensive plan also has not been amended to reflect the Corridor Management Plan for A1A, which affects the beach. Recently, a new lighting ordinance was enacted to protect sea turtle nesting. But beyond that change which was pushed by the state, there has been insufficient progress in managing and protecting the beach resources for present and future generations.

The time for addressing this void is now. Population increases in the county are staggering, ranking among the fastest in the Nation. The beaches are being eyed for commercial development and someone is going to want to run beach concessions that may involve rental of vehicles and other activities that may complicate our efforts in protecting our beaches. More alarming is the increasing use of our beaches by individuals who are not from Flagler who come to ride their vehicles and are the ones observed that destroy the dunes and sand shore with reckless behavior. When a survey was completed of all coastal counties in Florida, we learned why. Flagler has the most unregulated beach in the state of Florida. They come here, because we are a “no mans land.”

We can no longer afford to wait for developing a beach management code that will protect the unique and valuable qualities of the beach.

Unincorporated Flagler County’s beaches are special places. While the County continues to rapidly grow, the relative infrequency of higher intensity beachfront development and the quantity of coastal conservation and park areas along with undeveloped lands have given these beaches a pristine appearance. Residents and visitors enjoy the feeling of a wild beach, a throwback to Old Florida. The downside to a more rural beach is the lack of regulations and environmental protection. As more people are drawn to our beaches, problems are becoming evident. Such problems include safety and environmental impacts from beach driving, destruction of dunes, threats to endangered turtles and seabirds, dogs running wild, animal waste, and litter, among others. If the County continues to allow largely unregulated activities, it will be forced to develop a complex and very expensive Habitat Conservation Plan (HCP), in

accordance with federal regulations. Specifically, Volusia County spent over \$4 million dollars (much of this going to support a legal battle with anti-beach driving advocates) to develop their HCP, and spends approximately \$360,000 each year to implement it. St. Johns County spent \$215,000 to develop their HCP and \$310,000 each year for implementation. With the understanding that these estimates are very preliminary and rough, Volusia and St. Johns County staff estimated that Flagler County's costs to develop an HCP as between \$100,000 and \$250,000, with an estimated annual implementation cost exceeding \$100,000 per year. These costs could escalate considerably if third party legal action occurred.

The Beach Management Committee has spent a year studying these various issues, and believes that the citizens and elected officials of this County should take proactive steps to protect our beautiful beaches and to ensure that future generations will be able to enjoy them as we do. This report includes findings from committee meetings and a specific series of recommendations that constitute an action plan for beach management. The committee believes that beach management is a complex matter that will require active participation and cooperation between citizens and local, state, and federal officials. The Committee is grateful to Scenic A1A PRIDE for providing the opportunity to study these difficult issues, and is appreciative to the dedicated County officials and other resource people who took the time to educate us. We hope that this report will assist our elected officials in their deliberations.

3. *BEACH MANAGEMENT COMMITTEE PARTICIPANTS*

Thad Crowe, Chair	Bob Albert
Gail Albert	Diane Bagnall
George Bagnall	Julie Brumekhad
Gwen Butz	Jack Butz
Mary Ellen Campenni	Tom Campenni
Chuck Claysmith	Marianne Claysmith
Bill Conner	Mary Conner
Bob Cory	Jim Darby
Daniel Dean	Cosmo DiPerina
Donna Richardson-Drevniok	Tom Drevniok
John Feind	Kathy Feind
Jay Fischer	Rosemary Fischer
Frank Gromling	Al Hadeed
George Harnden	David W. Hartman
Linda M. Hartman	Bruce Haubenstein
Pat Hinman	Iris Holmes
Don Hoskins	Kevin Kennedy
Audrey Kessinger	Peter Kuchinsky
Arnold Levine	Marianne McNeil
Jane Monahan	Grace Nejaime
Jim Netherton	Charles Peele
Sharon Peele	Donna Petras
Dick Rubino	Tom Saurwein
Bonnie Simms	John Slattery

Mary Slattery
Darlene Van Lengen
Ann Vohs
Jack Wilson
Jean Woods

Maryann Taddeo
Paul Van Lengen
Dennis Vohs
Jim Wise
Tom Woods

4. REGULATORY ISSUES

As described in the section on Private/Public Beach Ownership Issues, there is a complex web of responsibilities over Florida beaches. To put it simply, the players include private landowners, Flagler County, the three coastal municipalities within Flagler County, the Flagler County Sheriff's Office (FSO), the Florida Department of Environmental Protection (FDEP), and the US Fish and Wildlife Service (USF&WS).

Private Landowners

State law generally allows customary beach recreational uses by the public on privately-owned dry sand land. However the law allows these landowners to utilize local law enforcement under trespassing laws to stop non-customary activities that constitute a nuisance.

Flagler County

The Flagler County Board of County Commissioners is responsible for passing local laws and ordinances, with its staff responsible for enforcing zoning, building, and nuisance codes. Applicable codes enforced by County staff include the County's beachfront lighting ordinance (developed to protect baby sea turtles from disorienting lights and also to prevent "false crawls" by egg-laying turtles) and animal control. County Development Services staff are responsible for enforcing building and other codes, as they pertain to construction within the CCCL. A common violation is the disturbance of dune vegetation by oceanfront homeowners, which carries with it penalties and the requirement by County Code Enforcement that such areas be replanted with appropriate vegetation.

Flagler County Sheriff's Office

The FSO enforces County and state criminal and civil laws. Applicable laws enforced by the FSO include enforcing speed limits on the beach and the prohibition on removing coquina rocks from the beach.

FDEP

The Florida Department of Environmental Protection's Bureau of Beaches and Wetlands program includes the following four areas:

- Beach and Coastal Ecosystem Management (beach erosion control);
- Coastal Data and Analysis (special studies, Geographic Information Systems modeling, and shoreline surveying and monitoring);
- Coastal Protection and Engineering (Coastal Construction Control Line permitting); and

➤ Environmental Permitting

FDEP is required to consult and receive approval of any activity which may adversely affect protected wildlife and wildlife habitat from the Florida Fish and Wildlife Conservation Commission. If such an activity is formally identified, an Incidental Take Permit is required from the US Fish and Wildlife Service.

The bottom line with FDEP is that they are not involved with beach issues other than specific development and dune walkover for commercial and multi-family projects.

US Fish and Wildlife Service

This federal agency is responsible for enforcing the landmark 1973 Federal Endangered Species Act. The ESA is regarded as the world's strongest and most effective wildlife conservation law. It set an ambitious goal: to reverse the alarming trend of human-caused extinctions that threatens the ecosystems we all share.

The ESA requires identification and protection measures for endangered and threatened species. "Endangered" means any species which is in danger of extinction throughout all or a significant portion of its range other than a species of the Class Insecta determined by the Secretary to constitute a pest whose protection under the provisions of this Act would present an overwhelming and overriding risk to man. A "threatened" species means any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. Endangered species on Flagler County beaches include the Green Sea Turtle, Hawksbill Sea Turtle, Kemps-Ridley Sea Turtle, Leatherback Sea Turtle, and Piping Plover (a sea bird). Threatened species include the Loggerhead Sea Turtle. The turtles lay eggs on the beaches, while the Plover uses areas on either side of the dunes for nesting and breeding grounds. The Piping Plover is also protected by the Migratory Bird Treaty Act, and all governmental agencies seeking or receiving an Incidental Take Permit must comply with the Act. (The ESA requires that when a developer or a local government jurisdiction wish to conduct activities on their land that might incidentally harm or "take" a species listed as threatened or endangered they must first obtain an Incidental Take Permit from the U.S. Fish and Wildlife Service.)

In the case of Flagler County, the primary activities that could harm the species above include beachfront lighting and beach driving. Oceanfront artificial lighting that is visible from the beach can attract baby hatchling turtles away from the ocean to their deaths. Beach driving can impact turtles directly, with vehicles running over them; or indirectly, with baby turtles being blocked from their march to the sea from tire ruts. (Baby turtles may also follow tire ruts and lose much-needed energy needed to swim out to the open ocean, or in their long trek be eaten by predatory sea birds.)

To obtain an incidental take permit, Flagler County must eventually develop a *Habitat Conservation Plan* (HCP), designed to offset any harmful effects the proposed activity might have on the species. The HCP process allows harmful activities to proceed while promoting listed species conservation. An Environmental Assessment is also required to ascertain the kinds

and numbers of species needing protection in the area. It should be noted that both these processes are complex and expensive undertakings.

The only other Florida counties that allow extensive beach driving, Volusia and St. Johns Counties, are in various stages of HCP development. Volusia County, after four years of legal battles with the USF&WS and third parties, approved in 1996 its HCP. Elements of the HCP include control of artificial lighting, beach cleaning, and stricter regulations on beach driving. Under the plan, three types of beach are recognized: natural, transitional, and urban. In natural beach areas, driving by the general public is completely prohibited. In transitional beach areas, vehicular traffic is prohibited in a thirty-foot-wide strip running the length of the area measured from the dune line toward the ocean. In urban areas, this strip is reduced to a fifteen-foot conservation zone. Other minimization requirements include limiting beach driving hours and educating beach users, including concessionaires, beach service personnel, tourists, and residents. For mitigation purposes, the plan also requires that a Beach Lighting Management Plan be developed. St. Johns County's HCP limits night-time beach driving during turtle season, and a federal judge has ruled that this ban be extended to year-round (this HCP has not been accepted yet). Both HCPs require an extensive (and expensive) system of regulation, patrol, and enforcement. The approximate annual cost of implementing the HCPs is \$360,000 for Volusia County and \$225,000 for St. Johns County.

Recommendations: Regulatory Issues

All regulations pertaining to beach management should be placed in a Beach code.

The County should establish a permanent Beach Management Advisory Board to monitor issues and provide policy recommendations on an ongoing basis.

5. ANIMAL CONTROL / CODE ENFORCEMENT ISSUES

Meeting date: August 20th, 2003

Resource Persons: Donna Doud, Flagler County Animal Control Officer; Chuck Hino and Norman Deitch, Flagler County Code Enforcement.

Flagler County has two full-time animal control officers. Due to the distance from the county offices, most complaints about animal control issues on the beach are not resolved, since the violators are gone by the time the officer arrives. Sheriff's deputies can issue citations as well, but code enforcement officers cannot. In the event that the County ever provides lifeguards at beach parks, they can issue citations as well, as they do in Flagler Beach.

The simple rule for all domesticated animals (including cats) is that when on public property (including the beach) they must be on a leash that is less than five feet in length. Controlling dogs by voice control is not an acceptable alternative. Dogs in the backs of pickup trucks must be in pens or tethered by two leashes. Pet excrement must be bagged up and removed by the owner.

Due to its relatively quiet beaches, Flagler County has not banned dogs on the beach, as has neighboring Volusia County. However as areas grow in population there is a trend toward restricting and eventually banning dogs and other pets on the beach.

Committee members noted that the two biggest animal control problems on the beach were dogs running loose and not being controlled by their owner, and dog excrement not being picked up by owners. Both issues are at best a nuisance to those trying to enjoy the beach, and at worst are a serious health and safety issue. (There is the additional problem of loose dogs harassing nesting and resting seabirds, including the endangered Piping Plover.)

Very few dog bite cases occur on the beach, according to Ms. Doud.

The County does not currently have pet licensing requirements in the unincorporated area, but will be considering this in the future. One problem is the different nature of unincorporated communities. While licensing may be appropriate and in fact needed on the barrier island, it may not be in the rural western County. Ordinances can be written that identify a particular section of the County if there are reasons to justify differing standards, such as the needs of a more urban beach environment contrasted with the needs of a more rural, agricultural area.

Regarding the problem of animal waste, other communities have successfully reduced the amount of dog excrement on the beach by installing pet waste receptacles at walkover entrances with available baggies or other waste containers. Committee members felt that this would be a positive step, along with the provision of trash cans at all walkovers. Many people help to keep the beach clean, but it is difficult to find places to deposit the trash.

Another issue brought up was the problems of horses on the beach. Outfitters are trailering horses to MalaCompra Beach Park to provide group horseback riding. While people were not necessarily opposed to horses on the beach, there has been a problem with large piles of horse excrement that is not cleaned up.

The County's code enforcement officers provide proactive education on the lighting ordinance. Presentations to associations of builders, developers, realtors, and other groups should help to get the message out. The lighting ordinance requires more than just shielding bulbs, but also do not allow lights to reflect on walls and produce a secondary light source.

Resource people agreed that voluntary code enforcement and education are the most effective ways to ensure that the codes are followed.

Recommendations: Animal Control / Code Enforcement

Scenic A1A PRIDE, Hammock Civic Association, and other groups should work with the Sheriff's Office to institute proactive and positive Citizen Patrol concept to help educate public on beach regulations.

The County should provide tasteful and positive signage outlining beach regulations and encouraging visitors to enjoy our beautiful beaches. An excellent source of funding for

such interpretative and educational signage is the \$100,000 for brochures from the Scenic Highway grant. The County should work with FDOT and design professionals to develop such a signage program.

The County should institute licensing of pets on the barrier island.

The County should provide “pet waste stations” at walkovers with bags and trash receptacles.

The County should provide trash cans at beach walkovers and arrange for regular pickup.

The County should require that those responsible for horses on the beach remove excrement from the beach.

The County should continue its efforts to implement and better enforce the lighting ordinance (see Turtle Protection recommendations).

6. BEACH PARK ACCESS

Meeting Date: February 12, 2003

Resource Person: Al Hadeed, former County Attorney, Scenic AIA PRIDE Counsel

Al Hadeed, legal counsel to Scenic AIA, provided background information on the beach parks and access issue. There has been an extraordinary community planning effort by the Board of County Commissioners, County staff, consultants, and citizen volunteers that has gone into the creation of a Greenway Plan within the Hammock that links future business areas, residential areas, and beach parks with bike and pedestrian trails. This work has evolved into the latest effort by the County to develop a “multimodal greenway system”, funded most recently by \$408,000 in a federal grant. This effort will plan and implement park improvements, corridor landscaping, signage, entryway elements, and a comprehensive interpretive program, among other things. Most beach parks are addressed in this effort.

The following is an accounting of the County’s beach parks, from south to north. The first is Varn Park, north of Painters Hill. This “bare-bones” 8-acre park includes an outdoor shower, restroom, and parking, with several walkovers – including a handicapped access walkover – to the beach.

Next is Jungle Hut beach park, at the end of Jungle Hut Road. This two-acre park includes restrooms, an outdoor shower, and around 20 parking places.

Next is Old Salt Road, or 16th Road Park beach park at the end of 16th Road. This park includes parking, restrooms, and around 30 parking places. This park has a history of controversy, as it used to be a 33-acre beachfront park, but the County traded 31 acres of beachfront park to the Hammock Dunes developers in exchange for 400-acres of land along MalaCompra Road and A1A known as the MalaCompra Greenway. The 31 beachfront acres were turned into a private golf course and high-rise condominium within the Ocean Hammock gated community. This was after area residents worked together to come up with a plan to transform what was a somewhat

ugly and barren, paved beach park into a vegetated and attractive park. Residents obtained a federal grant for this park renovation, but the County pursued the land swap as part of a complicated amendment of the DRI development order.

Next is MalaCompra beach park, at the end of MalaCompra Road, and extending north and south of this road along the beach. This 100-acre park, now mostly undeveloped, has tremendous potential. Currently it has restrooms, an outdoor shower, and around 30 parking spaces with a boardwalk walkover to the beach. County staff and consultants working with Scenic A1A PRIDE developed a site plan for the park that will include an extensive system of meandering nature and fitness trails in the coastal scrub and forested hammock and strategically placed pavilions and benches within those areas. Parking will not be in the form of large and hot stretches of asphalt, but smaller and landscaped parking areas. With the size of the park, many parking spaces would be provided without losing the planned landscaped character of the park.

Next is Bay Drive Park, located at the oceanfront between Sea Colony and Marineland Acres. Due to its location within a residential area, this undeveloped, 3+ acre park is planned to be a low-impact park, possibly with showers and restroom, and with a pavilion and around 10 parking spaces.

Next is Washington Oaks State Park, located north of Marineland Acres. The state park has three-quarters of a mile of public beach, and around 20 parking spaces. Admission is \$3 per car, on the honor system. There are no facilities except for a portable restroom and an observation deck and boardwalk walkover. There is plenty of room for expansion, if the state park system decided to add to the facilities for beach parking and other facilities.

Finally, there is Marineland, which has great potential for beach access. The Town of Marineland, located at the County's northern border, has almost a mile of public beachfront. The beach has been opened up in recent years because of the Preservation 2000 grant received by the County and Marineland. Marine Park of Flagler demolished the beachfront hotel, which further expanded public access. FEMA provided \$6 million dollars in federal funds to repair the dune and beach and to move the old dune line landward to its natural place. A boardwalk was also built along the dune line, which also serves as part of the anchoring system for the dunes. Federal grants from NOAA and the National Scenic Byway programs will pay for some of the revegetation of the beach and the parking areas. More than 24 parking spaces will be tucked into the vegetation by way of a winding drive. There also will be an additional 50 spaces in a parking area near the walkovers. Pavilions will provide for picnic and gathering spots along the beachfront. The County has said it will start the planting project this March, after missing the planting season last year.

While it is not a beach access point, the MalaCompra Greenway is an integral part of the barrier island's park resources. Trails will run through the Greenway parallel to A1A, MalaCompra Road, 16th Road, and Jungle Hut Road, resulting in a network of non-vehicular connections between the beach and various Hammock neighborhoods. Finally, a fishing pier on the ICW is planned for a location south of the toll bridge. The timeframe for the completion of the Greenway system and the park improvements is about four years.

There are several ways to assess public beach access. One is to simply calculate the amount of linear beachfront available in the form of publicly owned park, and adjacent accessible beach areas. These calculations are shown in the first table. A second way is the assessment used by the Florida Department of Environmental Protection as described in the FACT (Florida Assessment of Coastal Trends) report, last updated in the year 2000. The second table utilizes this approach.

The following table shows linear frontage of publicly owned beach. Almost 24% is publicly owned, and an additional 20% is within walking distance of park boundaries.

Unincorporated Flagler County & Marineland Public Beachfront

Park	Publicly-owned Beachfront (linear feet)
Marineland	3,294 *
Washington Oaks State Park	3,960'
Bay St. Park	370'
Malacompra Park	4,224'
16 th Rd. Park	60'
Jungle Hut Park	211'
Varn Park	1,373'
Subtotal	13,492
Beachfront Total (10.7 miles, St. Johns Co. Line to Beverly Beach)	56,496
Publicly-owned Beachfront Percent of Total	23.9%
Additional Accessible Beachfront **	17,160
Grand Total Accessible Beachfront	30,652
Accessible Beachfront Percent of Total	54.3%

* includes County-owned land north of Marineland in St. Johns County

** includes beachfront areas within ¼ mile walking distance of existing beach park boundaries

Source: Flagler County Property Appraiser Parcel Maps

FACT Assessment-State and Unincorporated Flagler County & Marineland Beach Access

Facility	Florida	Unincorp. County & Marineland
Public Parks	297	7
Street Ends w/ Public Walkways	897	6
Undeveloped lots		43 *
Pedestrian Walkways	313	N/A
Other	52	N/A
Total	1,692	56
Access Points Per Mile	.2	5.2
Access Points Per Mile (not including undeveloped lots)	N/A	1.2

* Undeveloped lots include: Marineland to Washington Oaks State Park – 14; Marineland Acres – 5; Varn Park to Beverly Beach - 24

This data shows a relatively high level of accessibility for beaches. Almost one quarter of unincorporated and Marineland beaches are publicly owned parks, and over half of these beaches are within such parks or easily accessible from such parks. Using the state's yardstick of public access, the access points per mile are 26 times the state average, and even without the inclusion of undeveloped lots, are six times the state average.

The question was raised concerning why vehicular beach ramps on either side of Varn Park can't be closed, as they negatively affect the park and are not needed since the park provides ample public beach access. Specifically, concerns were raised regarding the conflict between park beachgoers and vehicles and the liability of the County in permitting this activity to continue in the face of potential injury. The south ramp was privately owned. There was some debate about ownership of the north ramp, and it was not clear if it was owned by the Coast Guard or FDOT (current Property Appraiser records show County ownership).

The suggestion was made that the County should consider expansion of Varn Park to include vacant land to the north. This park is in an area of increasing population and also centered within the A1A corridor.

Committee members agreed that lack of beach parking did not seem to be a problem. Informal estimates indicate that the six beach parks and Flagler Beach A1A parking provide close to 1,000 parking spaces for beachgoers, and periodic checks of beach parking lots by the Chair and other Committee members during peak summer days indicated parking was usually always available. Areas planned for future parking and additional potential expansion areas promised to provide an ample supply of parking to meet the County's future beach access needs.

However Committee members were concerned about the ability of the handicapped and elderly to access the beach. Pedestrian walkways at Marineland, 16th Road, and other parks did not have handicapped ramps – in fact the only walkover that is handicapped accessible was at Varn Park.

Recommendations: Beach Parks

The County Commission should close the illegal ramps north and south of Varn Park, as well as the illegal ramp in Marineland, and require that fences and/or gates be installed to keep vehicles out.

The County Commission should consider expanding Varn Park to include undeveloped land to the north and south.

To accommodate the handicapped and elderly, the County should retrofit existing beach boardwalk walkovers to include ramps; and all new walkovers should include ramp sections. Funding is available from the Tourist Development Council ("bed tax") funds.

The County should actively plan for and seek funding for the development of the Bay Street Park.

7. BEACH WILDLIFE PROTECTION

Meeting Date: March 12, 2003

Resource Person: Beth Leibert, Director of Volusia-Flagler Turtle Patrol

The resource person for this subject was Beth Leibert, head of the Volusia-Flagler Turtle Patrol. The Chair also researched numerous scientific studies on this issue, including studies conducted in the Cape Hatteras National Seashore and in South Africa.

The Volusia-Flagler Turtle Patrol covered 25 miles of Volusia County beaches and all of Flagler County's beaches. Ms. Leibert reported that Volusia's hard sand beaches were more drivable than Flagler's soft coquina sand beaches.

Turtle nests are endangered by beach driving. This past season, four nests were run over by 4-wheel drive vehicles. The ruts left on the beach by the vehicles present an obstacle to baby turtles that cannot easily climb the steep grade, and end up walking in the ruts and losing their strength or being eaten by predators.

Beach driving also negatively affects shorebirds and other beach creatures. Eggs and sand crabs are crushed by vehicles. The oil and grease left from vehicles results in environmental degradation, and does not go away, but in fact can be found in the sand and in marine creatures and birds.

When asked if footprints represented a threat in the way that tire tracks did, Ms. Leibert responded that they are not as pervasive as ruts are, since the footprints are interspersed along the beach and relatively shallow, while the ruts represent a continuous blockade.

Ms. Leibert said that bonfires on the beach during turtle season were also a problem, since they draw hatchlings. Similarly, night beach driving is a menace to turtles. It was Ms. Leibert's opinion that lighting is a minor problem compared to beach driving.

Ms. Leibert said that Volusia's Habitat Conservation Plan (HCP) had resulted in nine miles of beach being closed for driving, mostly in northern Volusia County. These beaches were the coquina sand type very similar to Flagler beaches (St. Johns County has also closed or strictly regulated the North County coquina sand beaches for driving).

The HCP also requires trash clean up. Trash receptacles are provided along the beach, and are maintained by the County.

Ms. Leibert emphasized that Flagler's beaches are prime turtle habitat. She said that during the last season of 268 nests on unincorporated beaches, 207 hatched, with an average of 110 eggs a nest. These turtles will come back to the place of their birth some 19 years later to lay eggs.

Turtles are also susceptible to beach driving. As female turtles haul themselves out onto the beach, they can be distracted from their purpose by the presence of bright lights, such as vehicle headlights and torches. It has been shown that the mere presence of human habitation on beaches seems to reduce the likelihood that turtles will nest on adjacent beaches. Although the eggs are laid in the high shore and at an average depth of 60-80 cm below the surface, repeated passage of vehicles over the nests are likely to compact the sand, which could hinder or trap emergent hatchlings. Vehicles turning hard or becoming stuck in the soft sand above the high water mark easily churn up the sand to a depth that would expose the eggs, resulting in failure to hatch. Once the eggs have hatched, the hatchlings attempt to make their way to sea, however, deep tire tracks on the beach often force the hatchlings to explore the entire length of the track running parallel to the shoreline. Such delays in reaching the sea increase the chances of the hatchlings becoming prey to ghost crabs and gulls (natural predators) or desiccating. This also adds physiological stress at a vulnerable stage in their lives. The problem is exacerbated by the tendency of the hatchlings to invert when they fall into a tire track. The presence of unnatural lights or other obstructions on the beach during hatching can cause the hatchlings to become disoriented when trying to make their way to the sea and result in death.

A number of studies have shown that intertidal organisms like the benthic mysid (small, shrimplike, chiefly marine crustaceans) were negatively impacted by beach driving, as individuals migrated to the sand surface following several successive vehicle passes and became crushed by the following pass. The compacted sand in the experimental plots tended to become thixotropic (transformed into a more fluid state) after several vehicle passes causing the mysids to possibly mistake the vehicle pass for that of a wave. The behavior displayed by the mysids under these conditions was considered to be an anomaly and considered unlikely to occur under natural conditions, as vehicles seldom pass in such quick succession and the mysids would be expected to remain buried in the sand and not be damaged by passing vehicles.

Similarly, ghost crabs (*Ocypode* sp.) were immune to damage by beach driving. While they remain in their burrows during the day, they are highly susceptible to being killed by ORVs when they emerged from their burrows at night to feed. It is a typical behavioral pattern for ghost crabs to emerge from their burrows at night, particularly during low tide, to feed, and is also the case that they tend to accumulate on the foreshore area at night, which is relatively smooth and hard and is both the substrate against which crabs are easily crushed as well as being the preferred area for beach driving. They found that the crabs have no effective escape response when caught in the headlights of an oncoming vehicle. They usually responded to headlights by freezing and only mobilized again when the vehicle was within a few meters of them. Their escape routes were in seemingly random directions and often carried them under the wheels of the vehicle.

Disturbed nesting birds leave their nests and eggs unprotected causing the eggs to overheat and the developing chicks to die or become prey to other birds or scavengers. The nests and eggs are often well camouflaged as a natural adaptation to prevent predation, however, this also implies that nests and eggs are well camouflaged from beach drivers as well. Often beach drivers, and even pedestrians, are not even aware when they have just destroyed a nest or egg. Birds that nest in colonies (plovers and sandpipers) can be protected by fences and, provided beach drivers obey the rules, the nesting birds will be minimally impacted on beaches that are sufficiently wide to

accommodate both driving and the bird colonies. However, on narrow beaches, the large areas required for birds to nest place them in direct competition with ORV users. Constant disruption of the nesting flocks by passing vehicles is expected to have a negative impact on breeding success of the colony. Once the chicks hatch, there are additional threats imposed by vehicles. The precocial (fledgling) chicks more frequently move out of the protection of the colony to forage, and on approach of a vehicle, tend to seek shelter in tire tracks, only to be killed by the following vehicle passing. Certain coastal bird species nest on or just above the drift line. These species are particularly susceptible to vehicles on the beach as they are more readily forced to flee their nests by vehicles driving near the drift line. Beaches with heavy vehicle traffic have been shown to have decreasing numbers of these coastal birds present. Studies have also found that beach driving reaches highest proportions between October and March, which is the breeding season for most coastal birds.

Recommendations: Beach Wildlife Protection

The County should more strictly regulate beach driving to limit harm to beach wildlife (see Beach Driving recommendations).

The County should adopt an ordinance that requires a permit for beach bonfires and bans them during turtle nesting season (May through October). For clarification, bonfires would not include small grill fires or the equivalent open fire typically used in picnicking.

The County should more actively enforce the lighting ordinance during nesting months, including more frequent nighttime surveys, and should provide flyers and mailouts on a regular basis to oceanfront residents and renters with the reminder to keep house and porch lights directed away from the beach. The County should continue to educate trade groups such as builders, developers, and realtors on turtle protection and the lighting ordinance.

The County should enforce more strictly animal control ordinances to protect nesting/resting birds and other beach wildlife from harassing dogs.

8. DUNE PROTECTION AND PRESERVATION

Meeting Date: April 16, 2003

Resource People: Phil Flood, Environmental Manager for Florida Department of Environmental Protection; Phil Sanders, FDEP's Manager of Florida's East Coast Beaches; Kevin Patel, Coastal Engineering, Inc.

FDEP monitors beaches through intensive surveys that range 1000 feet from shore to the inland Coastal Construction Control Line (CCCL). The CCCL is the landward edge of the 100-year storm impact zone. FDEP is involved in regulatory issues – mainly the construction of dune walkovers – and in beach restoration efforts.

Flagler County has 18 miles of beachfront. Approximately four miles – or 22% - of the County's beaches are defined as critically eroded areas – located around Marineland, Beverly Beach, and

south Flagler Beach. This compares favorably with the state of Florida, which has 825 miles of beaches and 325 miles of critically eroded areas, a higher 39%.

Committee members asked about dune walkovers, and expressed concern that subdivisions like Hammock Beach Estates seemed to allow walkovers for every home, instead of shared walkovers which would not impact the dunes as much. Mr. Flood answered that only multi-family projects are regulated as to dune walkovers – they can only have a walkover every 150 feet or more. FDEP can only encourage shared walkovers for single-family developments.

Flagler County is blessed with strong dune systems, mostly because there are no inlets, which are the greatest source of erosion. It is well documented that erosion is magnified by dredging or jetties and the resulting interruption of the natural flow of sand down the shore, generally in a southward direction. The accelerated erosion south of such navigation projects is continuous and requires periodic and expensive beach renourishment efforts. The past summer's accounts of the unsatisfying results of both the St. Augustine Beach and the Jacksonville Beach renourishment projects should be recalled. The current coastal engineering projects planned for Nassau Sound and Fort George Inlets may make the Matanzas Inlet the last natural, unchannellized, non-armored inlet on the east coast of Florida. The natural Matanzas Inlet is truly a blessing to coastal Flagler County.

This being the case, the County should advocate for keeping the Matanzas Inlet and its associated shoal system in a natural state, as is, without dredging and construction of protective jetties. It is quite likely that increasing populations of new residents, many who do not understand the ecological, historical, and economic importance of the natural inlet, will be requesting public funds to improve navigation via the inlet.

The County's erosion problems are due to older structures – homes and roads – being too close to the ocean and thus being impacted by storms more frequently. In Flagler County there is less than one foot (horizontal) each year of erosion.

Flagler County's beaches are steep due to the shell and large grain content. This sand does not get blown by the wind into forming dunes, so the dunes are lower, but erosion is lessened due to the larger sand particle size. Healthy sandbars offshore and coquina outcroppings also help to protect the beaches and dunes.

Dune protection is critical also because of the economic impact of beaches. The total property value of state lands next to dunes is estimated at \$16 billion dollars. The cost of renourishing beaches is expensive – the US Army Corps of Engineers spends around \$30 million dollars a year replenishing beaches, an amount that is matched by the state. However the beach renourishment program focuses on areas that are critically eroded and cannot be used as preventative measures. Currently FDEP is working with the City of Flagler Beach to study the feasibility of such a program in the eroded southern part of the City along A1A. It is FDEP's opinion that FDOT mishandled its erosion control project in south Flagler Beach, using the wrong kind of rocks in the revetment along the dunes. Such hardscape shores often create more problems than they solve, with scouring occurring under and around the hard surfaces.

Mr. Flood confirmed that beachfront property owners in Florida owned to the high water line, but noted that this was a local government issue that FDEP did not get involved in. (However under beach renourishment programs, private property owners must give permanent easement in order for the renourishment to take place over their lands, after which those renourished lands are titled to the State and must be made available to the public for recreation.)

Mr. Sanders gave his office's website – www.dep.state.fl.us/beaches. He noted that the person to talk to at FDEP concerning permits for dune walkovers was Gene Varona, and Bobbie Nelson, at 877-732-4207. Mr. Varona also does permitting for dune fences, which require dual permitting by local government and FDEP.

To supplement and strengthen dunes, residents can plant sea oats, beach elder, and panic grass. Plants like beach sunflowers are not as hardy. Sand fences could be used to build up dunes, but are not as effective due to the larger grain size of Flagler County beach sand and its inability to be blown around by the wind. Kevin Patel at Coastal Engineering, an expert in the area of dune walkover construction and dune protection, noted that the single most effective measure of dune protection is to just stay out of the dunes. He suggested that the County should close the unofficial ramps north and south of Varn Park, which are damaging the dunes and causing erosion in that location. He promoted the value of sea oats and panic grass planting in dune areas, and also recommended spartina, gallardia, and dune sunflowers for dune planting.

Vegetation plays a crucial part in the formation and stabilization of sand dunes. Studies have shown that even a few vehicle passes are sufficient to break up the organic content in the drift zone and destroy the regenerating plants just below the surface of the sand. Pioneer plants trap and stabilize wind blown sand creating conditions for growth and establishment of other plant communities. Research has shown that vehicle and pedestrian traffic over the dunes decreases both the total cover and height of vegetation occurring. Some studies have indicated that it is the first few vehicle passes (as few as 10) that cause the most significant damage to dune vegetation, especially in the summer growing season. Further, it has been shown that intense, continued use of a single path over a dune can result in lowering of the dune crests, ultimately causing the dune to split and significantly altering the dune topography.

Vegetation destruction has been found to occur in two phases after vehicle passes. Vegetation height and cover were reduced initially, immediately following the impact. However, with time, further damage became evident as plants that initially appeared to have survived, died, further reducing height and cover. Prolonged, repeated impacts decrease the overall species diversity of dunes, as only the most tolerant species remain. Once vegetation has been removed from a stabilized dune area, bare, loose sand is exposed and there is increased risk of blow out formation and erosion of gullies, resulting in destabilization of the dunes. With more and more of the dune becoming destabilized, the dunes can begin to migrate, inundating other previously stabilized dunes with sand. Dunes will only become stable again once pioneer plants are able to colonize them and prevent the sand from being blown away. Removal of vegetation effectively alters soil and microclimate properties of the area. The microclimate properties that are altered with removal or destruction of vegetation include evaporation, salinity (atmosphere and soil), wind speeds near the ground, soil pH, soil temperature, bulk density and soil moisture. Changes in these properties further inhibit the ability of plants to re-colonize these areas. Generally the lee slopes (dune slope away from the sea) and inter-dune areas are more stable due to decreased

wind speed and less sea spray occurring, thus providing suitable microclimate habitat for pioneer plants to colonize.

Members expressed concern that more education is needed, as the occasional oceanfront property owner continues to replace dune vegetation with grass or other inappropriate landscaping, negatively impacting the beach ecosystem and the ability of the dunes to withstand erosion.

Concern was also expressed about the impact of St. Johns County beach renourishment programs on our beaches, namely the importation of grey sand that covers up the coquina sands. Impacts of this foreign material could negatively affect the beach ecosystem.

Finally, it is important to remember that public dune walkover construction is eligible for Tourist Development Council dollars (“bed tax” revenues).

Recommendation: Dune Protection

The County should provide educational materials to oceanfront and other nearby property owners on how to properly protect, and if necessary, replant and supplement dune vegetation, and distribute that information to oceanfront property owners.

The County should close the illegal ramps around Varn Park and at Marineland.

The Citizens Beach Patrol should monitor dune disturbance incidents and work with the County to report violations.

The County, or an entity like the Whitney Lab, should assess the impact of sand importation from St. Johns County beach renourishment programs.

The County should utilize TDC revenues to construct dune walkovers in the Marineland Acres and Hammock Beach Estates subdivisions, as well as to revegetate damaged dunes.

Future walkover construction should include board spacing or other means to provide light under such walkovers to allow vegetative growth.

To protect its beaches, the County should strongly advocate for keeping the Matanzas Inlet and its associated shoal system in a natural state, as is, without dredging and construction of protective jetties.

9. PRIVATE/PUBLIC BEACH OWNERSHIP ISSUES

Meeting date: July 16th, 2003

Resource Persons: Doug Doudney (President, Coalition for Property Rights), Al Hadeed (former County Attorney, Scenic AIA PRIDE Legal Counsel), Carl Kern (County Attorney)

There are constitutional and statutory issues that are somewhat at odds with each other, namely the right of the public to access beaches and the rights of the private property owner who often owns the sandy beach and dune area landward of the mean high water line (MHW). The MHW is identified over a 19-year period and is a difficult line to identify on the ground without detailed surveying. F.S. 161 states that the “public has a right to laterally traverse the beaches within the state.” An opinion from former Attorney General Bob Butterworth (AGO 2002-38) noted that lands landward of the MHW are subject to all benefits of private ownership including the right to remove trespassers.

The Committee examined maps from the Property Appraiser’s online site which showed that in general, private property lines extended seaward past the dunes, establishing the fact that in Flagler County parts of the beach designated for public use are under private ownership.

Carl Kern, Flagler County Attorney, stated that the issue is a complex one, which is currently being battled out in the Panhandle, in the Destin area. The Florida Constitution establishes that the lands seaward of the MHW are sovereign lands (of the state). There is a considerable amount of case and statutory laws regarding the issue of public utilization of privately-owned beach lands as well as the issue of beach and shoreline preservation. The state comprehensive plan ensures the public’s right of “reasonable” access – how this word is interpreted is not always clear. On the local level, Flagler County’s 2010 Plan affirms the public’s right to access beaches, and also calls for the County to provide beach access when approving new developments. Mr. Kern noted that under County Attorney Al Hadeed’s encouragement, the BCC did a good job of providing for public access in acquiring beach parks and requiring that large development set aside lands for beach parks.

Mr. Kern stated that one percent of coastal residents own beachfront property, which creates an inherent conflict, that being the right of public access vs. private rights. He confirmed that the MHW line was identified over a 19-year period.

Mr. Kern cited several cases that have been the basis for law governing this topic. One was *Matthews vs. Bayhead Improvement Association*, which was decided by the New Jersey Supreme Court. This ruling prescribed the public right of reasonable access, even if they had to go through private property. In Florida it appears that the doctrine of customary right of use rules allowable uses on the beach, as established in the Florida Supreme Court decision of the *City of Daytona Beach v. Tona-Rama, Inc.* This decision determined that the public had a right to the dry sand/privately owned part of the beach by custom. It also required courts to establish the degree of “customary and ancient” use the beach has been subjected to and, in addition, to balance whether the proposed use of the land by the owners will interfere with such use enjoyed by the public in the past. This decision determined that private owners cannot fence off beach areas. However the case is only a single and isolated one, narrowly ruling on one commercial parcel. This case also dodged final resolution of the issue by requiring that the courts must

ascertain on a case-by-case basis for each beach the customary use of that beach. Court cases in Oregon, Texas, and Hawaii also use the customary use doctrine.

In summary, Mr. Kern said that the issue of beach ownership and usage was a hodgepodge. He said that in his opinion the County would resist private attempts to fence off beach lands. However they would accept reasonable limits to beach activities. All measures taken to limit beach activities will require enforcement, which will be the key to the effectiveness of such measures.

The question was raised as to whether there was a case of public access of privately-owned beach lands being interrupted. No one present had any knowledge of such a ruling, although the law would block public access of privately-owned beach areas if the customary use doctrine was not met.

Committee members questioned whether beach driving was a “customary” or traditional use. It was the opinion of the Chair that this was not the case, according to a Florida Administrative judge finding in the Board of Commissioners of St. Johns County v. Department of Environmental Protection. This finding includes the following language:

“When constructing a statute, the mention of one thing in the statute implies the exclusion of things not mentioned. Another rule of statutory construction is that, where general words follow a list of particulars, the general words are presumed to be restricted by the nature of the particulars. Applying these rules, even assuming that the listing in the statute is non-exclusive, it is concluded that the mention of fishing, boating, and swimming in the statute was intended to exclude beach driving.”

The Committee heard testimony from the Director of the Coalition for Property Rights (CPR) an Orlando-based group, which maintains that this organization supports all issues that emphasized the right of property ownership, which CPR believed has greatly contributed to this country’s success and freedoms. CPR believes that the rights of beachfront property owners should, on a purely constitutional basis, outweigh the unreasonable use of their lands as sanctioned by local government. Governmental intrusion includes allowing non-customary beach activities like beach driving or concessions (i.e. rental of umbrellas, chairs, ATVs, etc.) on private property. Government intrusion would not include allowing such customary beach activities like strolling, sunbathing, fishing, and recreating on private property.

The Chair noted that a question that repeatedly comes up is whether a private property owner is liable for an accident that occurs on privately owned dry sand beach. Mr. Kern and Mr. Hadeed agreed that unless the property owner had created a hazard on that property, no liability would be incurred by that owner. An example of such a hazard would be a post erected that was sand colored and could present a danger to pedestrians or drivers. A coquina rock in its natural placement on the beach would not be considered such a hazard. Both attorneys were comfortable that private property owners were safe from legal actions of this variety, although they noted that people could certainly sue over anything. As to the question of whether there was precedence for absolving the homeowner of liability for incidents on privately-owned beach, Mr. Hadeed answered only in the context of the reasonable application of negligence law. Mr.

Kern replied that since the days of kings, governments have not offered indemnification. He said that if someone was hit by a car on privately-owned beach, the owner would not be responsible, since the local government allowed and regulated such driving. Mr. Hadeed added that if a local government had a high level of beach regulation like Volusia County, it could have more liability. Mr. Hadeed said it was important to separate the beach driving issue from the public access issue, although the former was a component of the latter. He said that there was no legal right to drive a vehicle that could not be interrupted by local law.

However in a differing opinion, Shirley Reynolds, a plaintiff in an active court case against Volusia County, maintains that upland owners have been sued, especially condo and/or hotel owners, for failure to warn of the dangers created by the commingling of vehicles and pedestrians on the beach. Ms. Reynolds believes that the owner has a duty to warn whether or not they created the hazard. The only way to avoid potential private property owner liability this is to post the land as private property as required by Statute, and prohibit the unsafe condition created by the trespasser. However FDEP will not give a permit to an owner to place posts on the open beach (although it allowed Volusia County to place more than 3000 of them on the open beach in front of private properties). Ms. Reynolds states that Volusia County, in its Charter language, indemnifies the State from liability on State Sovereign lands, but does not indemnify the cities on lands landward of the mean high water line, and certainly not the upland owners.

Mr. Kern offered that the state statutes require a three-fifths vote by the County Commission to ban beach driving. He noted that given the controversy of this subject, the BCC could also decide to hold a referendum to receive guidance in making their decision.

Discussion turned to the unauthorized vehicle ramps. One is just south of Marineland, and the other is just south of Varn Park, and both are on private property. (There is another ramp just north of Varn Park and there is some question as to whether the property is owned by the County.) While there was some question as to whether the County could control such use of private land, the Chair stated that the statute that prohibited dune disturbance except for authorized public purposes would allow the County to close such ramps. (F.S. 168.59 states that "Vehicular traffic, except that which is necessary for cleanup, repair, or public safety, and except for traffic upon authorized local or state dune crossovers, is prohibited on the dunes or native stabilizing vegetation of the dune system of coastal beaches.") It was the consensus of the Committee to identify ownership of these ramps and suggest to A1A Scenic PRIDE that they contact the owners to inform them of the public nuisance and dune destruction occurring on their property, and of the legal liability they could incur through allowing this access.

Recommendations: Private / Public Beach Ownership Issues

The County should continue to allow customary recreational use of beaches, including dry sand area under private ownership. However the County should make a determination of exactly what customary recreational use is.

The County should be receptive to the request of private property owners to not allow disruptive and inappropriate activities on their land including dry sand areas and dunes.

The County should pass an ordinance that clearly states which activities are appropriate, and should disallow activities such as driving and parking, camping, bonfires, public intoxication, etc. Bonfires and camping should be allowed by permit only. For clarification, bonfires would not include small grill fires or the equivalent open fire typically used in picnicking.

The County should contact owners of illegal vehicle ramps to inform them of their intent to close such ramps by a specific date, require that fences or gates be put up to block illegal access, and remind them of the potential legal liability faced by both private owners and the County in allowing such ramps to exist. FDEP may also be involved to declare such ramps a “public nuisance” and order them removed at owners expense, or remove it and lien the property for the costs of removal.

10. BEACH DRIVING

*Meeting dates: August 14th, 2002; August 28th, 2002; September 12th, 2002; May 21st, 2003;
Resource persons: Sheriff Jim Manfre, Marine Patrol Officer Grady Prather.*

Frank Gromling, a Beverly Beach resident, reported back to the Committee on his research on how beach driving was dealt with in other counties. His report is included with this document. Of the 35 coastal Florida counties, there are 7 that allow some form of beach driving. Two are in the Panhandle (Gulf and Walton) and allow limited driving on short stretches of beach. The others are in Northeast Florida: Nassau, Duval, St. Johns, Flagler, and Volusia County. Duval only allows beach driving only on in Huguenot Park. Nassau, St. Johns, and Volusia County allow beach driving on certain sections of incorporated and unincorporated beaches – for example, St. Johns County only allows beach driving on 14.6 of its 41.6 miles of beaches. All have speed limits of 10 or 15 MPH (Flagler’s is 25), and all require either permits or charge fees. None allow non-“street-legal” vehicles (those vehicles not customarily used on public streets and highways, including but not limited to, go-carts, all-terrain vehicles, and other similar vehicles). It should be noted that Sheriff Manfre addressed the Subcommittee and informed them that Flagler County did not allow non-street legal vehicles either, and in fact required that all beach driving be done by licensed drivers in registered vehicles.

The Chair offered the following information from his research on ATV use on the beach:

- ATVs may not be operated on public roads or streets (F.S. 316.2074(5))
- Only registered vehicles are allowed on public roads or streets (F.S. 320.02)
- ATV use on beaches is allowed for official purposes when allowed by the managing state or federal agency, like in the case of the Turtle Patrol (F.S. 316.2074(5)).
- Law enforcement can use ATVs on the beaches (F.S. 316.2074(6)).
- Any off-road vehicles used on public lands must be titled (F.S. 317.0006).

The Chair stated that it is his belief that as unregistered and untitled vehicles cannot access the beach, since such access is by public thoroughfares. Additionally, Statute language that specifically allows ATVs on the beach when used only by law enforcement officers suggests that other users are prohibited. Research done by committee member Frank Gromling indicates that

no other Florida jurisdictions allow the use of ATVs on the beach except for limited ATV rental in Volusia County, which is likely a violation of state law. The Flagler Sheriff's Office has declared in a 2003 press release that ATVs and other unregistered vehicles may not be used on the beach. This issue had come up in the May 6th (2002) Hammock Community Center meeting, where deputy sheriffs emphasized that ATV use on the beach was illegal, and the law would be enforced. Members agreed that the problem was in education, since the vast majority of ATV users appeared to be unaware of these laws. Members expressed concern with safety issues stemming from the danger of vehicles to beachgoers.

The Chair noted that he had observed numerous occasions where ATVs were speeding, jumping "sand moguls", driving in the dunes, and trespassing in Washington Oaks State Park beach (where driving is prohibited according to posted signs). He had also observed many children on ATVs on the beach, most without helmets, and some as young as 5 or 6. Some drivers speed and get airborne off the dunes or sand humps. He said that while many ATV drivers are careful and considerate, the lack of enforcement through regular patrols and the ability of these vehicles to impact dunes and private property outweighed any possible benefits of their use. There is the additional problem of these vehicles driving on public roads to access the beach, which is clearly illegal and dangerous as well.

Flagler County Chairman James Darby said that he was prepared to move forward on a county ordinance prohibiting ATVs and similar vehicles that would eliminate any ambiguity. After the adoption of such an ordinance, signs would be placed at all beach ramps.

The Committee agreed that the larger issue of beach driving should also be considered. Chairman Darby responded that the community was split over this issue, with emotional issues on both sides. He said that when he was a Flagler Beach commissioner, that city had banned beach driving due to the increasing conflicts between beach drivers and beachgoers. He said there was a group of people who fervently wanted to protect historic rights of beach driving. Several committee members noted that this was a small group of people, not a majority. Beach driving on Flagler County beaches is not as prevalent as in surrounding counties. Unofficial estimates by committee members indicate that on a typical day no more than 20 or 30 vehicles drove on the beach – this may be greater on peak summer weekend days, and considerably less in the winter. Committee members noted that infrequent traffic seemed to create a greater hazard, in the sense that beach pedestrians did not expect to contend with vehicular traffic and were not cognizant of this danger. Committee members also agreed that frequent and ample public beach access in Flagler County negated the need to open up the beach to vehicles, particularly since a relatively small number of vehicles utilized it.

Negative effects of beach driving include the following:

- Noise and air pollution
- Posing a danger to other beach users
- Disturbance of wildlife
- Damage to vegetation and soil
- Increasing the amount of litter left behind on the beach
- Detracting from the 'sense of place' the coastal environment offers to everyone

Extensive studies done on beach driving problems in the Cape Hatteras National Seashore document the destruction of nesting areas for federally-protected endangered species (piping plovers), dune destruction, erosion on narrow beaches, traffic violations including unsafe vehicle operation, operating without valid license or registration, speeding, driving under the influence of alcohol, entering closed areas, and complaints from visitors walking or "birding" along the beaches.

Research done nationally and around the world shows that one of the greatest dangers in use of beach driving is the fact that there are no clearly defined roads on beaches that pedestrians can avoid. This is because, structurally a beach, by its dynamic nature, can never support a publicly demarcated road. Regulations that are applicable to driving a vehicle on a public road, (e.g. not driving when under the influence of alcohol and having a valid drivers license) are not enforced on beaches and people are seldom apprehended for such acts mostly due to lack of patrol. In addition to this, the noise of the surf drowns out the sound of vehicle engines, eliminating the element of prior warning of an approaching vehicle that usually enables pedestrians to move out of the way. These elements of danger are exacerbated by those few irresponsible beach drivers who enjoy the adrenalin rush gained by "dune-hopping" or "dune-ramping." In more remote beaches around the world, it is not uncommon for vehicles to unexpectedly encounter people sheltering on the other side of a dune as the vehicle goes over the top. In these situations, it is usually too late for any impact avoidance actions. A survey conducted by Els & McLachlan (1990) on beach driving on beaches in the Eastern Cape, South Africa, reported that "generally *bona fide* anglers were considered responsible beach drivers, and non-anglers were held responsible for most of the disturbance and/or damage to the beaches and dunes." This can be attributed to a sense of 'self policing' by fellow anglers who belong to a club, who are local residents (or frequently return to the specific area) and who have a vested interest in obeying regulations. Non-anglers, however, are frequently tourists on vacation seeking some "fun and adventure" and would possibly only return to the area in six to twelve months time, and therefore have a reduced sense of responsibility for the well being of the environment. Many beach drivers were unaware of the diversity of fauna and sensitivity of flora occupying the dune and beach area, and therefore did not regard the effects of vehicles in these areas as harmful to the environment.

The noticeable increase in litter on beaches where vehicles are permitted to drive has been attributed to the fact that vehicles enable people to carry heavy loads including glass bottles and tins to isolated areas. This litter is often left in the area where the vehicle was parked for the day.

Other negative side effects of beach driving center around the soft coquina sand of the County's beaches and the growing number of non-residents who get stuck in the sand. The Chair noted that Marineland Acres residents have been informally monitoring the increasing number of times vehicles get stuck in the sand. The result of this is require expensive towing (well over \$100 per incident) and damage to the dunes and the beach by stuck vehicles and tow trucks. Moody Street residents report that on average vehicles are stuck and require towing one to three times a week. During weekends and holidays it is much worse, with occasional weekend days where up to five vehicles get stuck. While sometimes people just need to dig out with a shovel, more often towing assistance is required. On numerous occasions, the stuck vehicles are inundated by the incoming tide, which often results in severe damage to the vehicle. Residents report that not just

cars are getting stuck, but new four-wheel drive trucks as well. Stuck vehicles present an inconvenience to residents, who often voluntarily assist stranded motorists; present large ruts and damage to the beach and dunes; and also disrupt the quiet enjoyment of a neighborhood.

It is the opinion of the Chair and many Marineland Acres residents that the Moody Street ramp in this neighborhood is particularly inappropriate as a beach access point, since it is in the middle of a residential area and is an unimproved, substandard road.

Members also expressed concern that there was nothing to prevent concessionaires from renting out beach vehicles in association with resort activities or existing businesses.

Some members expressed concern that banning beach driving would limit the access to the beach of handicapped persons, particularly fishermen. Again, most agreed that most beach drivers are courteous and law-abiding, and that the problem is posed by a minority of mostly nonresidents. One member reported that St. Johns County beach patrol officers advised some rowdy beach drivers to go down to Flagler County where there was much less supervision of such activities.

The end result of allowing beach driving to continue could be a Flagler County that would increasingly resemble Daytona Beach in regard to commercialization and increasing numbers of vehicles on the beach.

Discussions with USF&WS representatives at a separate meeting indicated that this agency is busy now with Volusia and St. Johns Counties, but if Flagler County wishes to keep beach driving into the indefinite future, the agency will intervene to require the County to develop a Habitat Conservation Plan. Based on the experience of other counties, the cost of developing an HCP is several hundred thousand dollars, and requires the services of a highly specialized consultant. Also based on the experience of surrounding counties, the cost of developing an HCP and instituting a beach program aimed at regulating vehicular traffic and other aspects of beach management will cost millions of dollars over a long term period.

Flagler County's neighboring counties have provided estimates of HCP costs to the Committee, in an interview between the Chair and Volusia County Director of Environmental Management Steve Kintner and St. Johns County Recreation Director Dave Williams. St. Johns County spent \$215,000 in direct and indirect (staff time) costs to develop the HCP, will have to spend approximately \$400,000 over a four year period for capital outlay expenditures associated with HCP implementation, is hiring staff to implement the plan at a cost of \$85,000 per year, and a direct annual implementation cost of \$225,000. Volusia County spent \$4 million dollars to develop their HCP, much of it involved in legal battles. Volusia County has two full time employees to implement the plan, but utilizes 17 employees during turtle nesting season. The annual implementation cost is \$360,000 per year. A US Fish and Wildlife representative informed the committee that it is very likely that the County will eventually be compelled to prepare and implement an HCP if it wishes to continue to allow beach driving. Apparently the only factor delaying this requirement is the work program on the

part of this federal agency, which is currently occupied with St. Johns and Volusia Counties.

Recommendations: Beach Driving

The County Commission should pass an ordinance that prohibits ATVs and similar off-road vehicles, using the St. Johns County ordinance as a model. The apparent illegality of these vehicles, their ability to traverse sensitive beach areas including dunes more than conventional vehicles, and the inability to regulate ATV activities makes this a priority action.

The County should install signs at all vehicular beach ramps informing the public of this ordinance.

The County should pass an ordinance prohibiting all vehicular access at unauthorized vehicular beach ramps, including but not limited to the ramps north and south of Varn Park and the Marineland ramp.

While the Committee respects the importance of the local tradition of beach driving, we believe that it poses negative effects to our beach and our community due to environmental, safety, economic, and aesthetic impacts, as well as the ongoing lack of enforcement of beach regulations. Beach driving is not needed for public access, as the County's beaches have a high degree of access, particularly when compared to accepted state beach access standards and the access of surrounding counties. Therefore the Committee strongly recommends that the County ban beach driving.

If the County decides not to ban beach driving, it should institute a permit system to limit beach driving to County residents under a registration program. Permits should be issued under specific regulations, with violations resulting in permit revocation. This program must be developed in concert with a Habitat Conservation Plan. This program will also require hiring staff to develop a permitting system and beach patrol.

If beach driving is retained, two important changes should be made – namely the reduction of the speed limit from 25 to 10 or 15 mph, and the exploration of “safe zones” where driving is not allowed. In addition, the Moody Street ramp, which is in a residential neighborhood via an unimproved street, should be closed.

11. CITIZEN BEACH PATROL CONCEPT

Meeting date: April 16, 2003

The Committee believed that enforcement of current laws was lacking, due to there being no signage on what is permitted and not permitted on the beach. Members agreed that residents effectively were enforcing the law independently on an informal basis, sometimes at their own risk in the face of belligerent law-breakers.

The Citizens Beach patrol would be an educational-oriented citizen volunteer group that would not practice law enforcement, but would politely remind violators of applicable laws. The unincorporated beaches would be divided into 4 zones: Marineland to Washington Oaks, Washington Oaks to Hammock Dunes, Hammock Dunes to Varn Park, and Varn Park to Beverly Beach. Organizations like the Right Whale sighting group have achieved success, and this group would follow similar proactive procedures. The Committee believes that there is great value for a recognized organization representative to relay concerns to the Sheriff concerning beach problems, as opposed to random citizen calls. Committee members were very supportive of the Sheriff's plans to convert the old Hammock fire station to a Sheriff's substation. This will provide an opportunity to base such a citizen patrol, as well as to improve the poor radio reception through the use of a repeater, not to mention the efficiency of quicker response and elimination of long travel time from Bunnell to the Hammock. Committee members suggested combining litter pickup with this program as well, with the model of the successful "Adopt a Beach" programs in Cocoa Beach and other places. It was agreed that this program would be part of the Committee's final report.

Recommendation: Citizens Beach Patrol.

The County, FSO, Scenic A1A, Hammock Civic Association, Hammock Dunes Community Association, Town of Marineland, and other interested groups should work together to establish and maintain a Citizens Beach Patrol for the unincorporated County and Town of Marineland.

12. OVERALL RECOMMENDATIONS

REGULATORY ISSUES

All regulations pertaining to beach management should be placed in a Beach code.

The County should establish a permanent Beach Management Advisory Board to monitor issues and provide policy recommendations on an ongoing basis.

ANIMAL CONTROL / CODE ENFORCEMENT

Scenic A1A PRIDE, Hammock Civic Association, and other groups should work with the Sheriff's Office to institute proactive and positive Citizen Patrol concept to help educate public on beach regulations.

The County should provide tasteful and positive signage outlining beach regulations and encouraging visitors to enjoy our beautiful beaches. An excellent source of funding for such interpretative and educational signage is the \$100,000 for brochures from the National Scenic Highway grant. The County should work with FDOT and design professionals to develop such a signage program which emphasizes stewardship.

The County should institute licensing of pets on the barrier island.

The County should provide “pet waste stations” at walkovers with bags and trash receptacles.

The County should provide trash cans at beach walkovers and arrange for regular pickup.

The County should require that those responsible for horses on the beach remove excrement from the beach.

The County should continue its efforts to implement and better enforce the lighting ordinance (see Turtle Protection recommendations).

BEACH PARKS

The County should close the illegal ramps north and south of Varn Park, as well as the illegal ramp in Marineland, and require that fences and/or gates be installed to keep vehicles out.

The County should consider expanding Varn Park to include undeveloped land to the north and south.

To accommodate the handicapped and elderly, the County should retrofit existing beach boardwalk walkovers to include ramps; and all new walkovers should include ramp sections. Funding is available from the Tourist Development Council (“bed tax”) funds.

The County should actively plan for and seek funding for the development of the Bay Street Park.

PRIVATE / PUBLIC BEACH OWNERSHIP ISSUES

The County should continue to allow customary recreational use of beaches, including dry sand area under private ownership. However the County should make a determination of exactly what customary recreational use is.

The County should be receptive to the request of private property owners to not allow disruptive and inappropriate activities on their land including dry sand areas and dunes.

The County should pass an ordinance that clearly states which activities are appropriate, and should disallow activities such as driving and parking, camping, bonfires, public intoxication, etc. Bonfires and camping should be allowed by permit only. For clarification, bonfires would not include small grill fires or the equivalent open fire typically used in picnicking.

The County should contact owners of illegal vehicle ramps to inform them of their intent to close such ramps by a specific date, require that fences or gates be put up to block illegal access, and remind them of the potential legal liability faced by both private owners and

the County in allowing such ramps to exist. FDEP may also be involved to declare such ramps a “public nuisance” and order them removed at owners expense, or remove it and lien the property for the costs of removal.

BEACH DRIVING

The County Commission should pass an ordinance that prohibits ATVs and similar off-road vehicles, using the St. Johns County ordinance as a model. The apparent illegality of these vehicles, their ability to traverse sensitive beach areas including dunes more than conventional vehicles, and the inability to regulate ATV activities makes this a priority action.

The County should install signs at all vehicular beach ramps informing the public of this ordinance.

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