Shoreline

FLORIDA SHORE & BEACH PRESERVATION ASSOCIATION
A League of Cities and Counties on Beach and Coastal Issues

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news from the Florida Shore and Beach Preservation Association **June 2016**

FLORIDA'S BEACH MANAGEMENT PROGRAM
A 2017 Initiative to Ensure the Future Health of our Beaches

Debbie Flack, President and Jackie Larson, Executive Director

It is the perfect time to recommit and redirect our attention and mutual efforts to protect and maintain Florida's beaches. At a minimum, the starting point is to systematically revisit current funding and project ranking procedures associated with the statewide beach program and recommend improvements that better align state policies with member needs. FSBPA's intent is to **make Florida's beaches a major economic and resource management initiative for the 2017 Legislative Session**. It is not too early to get started. Florida's beaches deserve nothing less.

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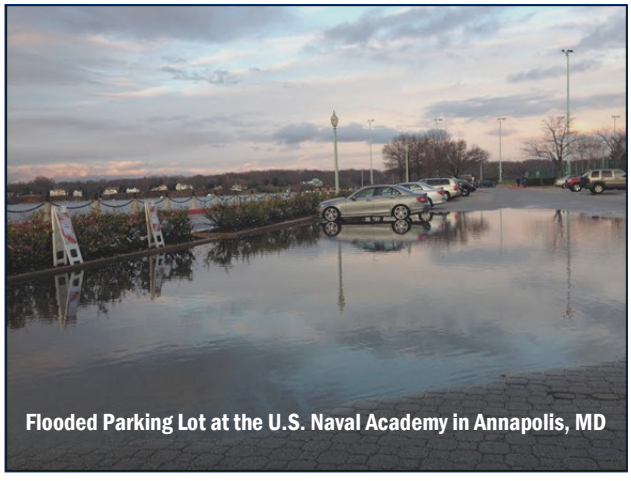
JUNE'S FEATURED ARTICLE
Are Flood Events Getting Worse? The Answer is Yes. And No.



Flooded Parking Lot at the U.S. Naval Academy in Annapolis, MD

Angela L. Schedel, Ph.D., P.E., Assistant Professor, Ocean Engineering Dept., U.S. Naval Academy
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Inside this Edition

SAVE THE DATE!
2017 Tech Conference
February 8-10, 2017
Hutchinson Island Marriott
Stuart, Florida

We are asking each of you with your unique perspective to be part of this dialogue and most importantly advocacy effort. The Association over the next several months will be using ***Shoreline*** to target our entire membership, in addition to our separate governmental **BeachWatch** program. The message has to resonate from each and every beach community, coastal city and county, and beach-related interests that support increased and predictable state funding, annual project ranking that better captures the economic benefits of individual beach and inlet projects, and a transparent and responsive administrative process. We will welcome your input, questions and concerns along the way regarding the focus of the "Beaches 2017" initiative, as it evolves**. (Debbie Flack (floridabeaches@fsbpa.com) or Jackie Larson (jackielarson@fsbpa.com), Executive Director)** If the message and information provided over the next several months is not clear or helpful to those of you that are willing to help spread the message then it needs honing, repackaging or doesn't need to be part of our ultimate message.

It isn't too soon to start getting mutual goals and objectives out within your beach communities, especially to locally-elected officials, as well as targeting potential new and of course likely-returning legislators. We can't wait until after elections—we cannot afford to miss a meaningful opportunity to talk about beaches, be it a local forum, commission meeting or other group meeting. After November's election, it will be exceedingly important for you to encourage local government officials to attend legislation delegation meetings or other opportunities to discuss the importance of beaches statewide, and your individual project funding requests for the next fiscal year with members of the 2017 Florida Legislature. Once the session begins, it is far more difficult to get your message heard.

As a member of FSBPA, you are the voice on behalf of Florida's beaches locally

As a member of FSBPA, you are the voice on behalf of Florida's beaches locally. FSBPA intends to have you well-armed. In turn, we hope you will find this and future information helpful, and will use it.

FSBPA is just beginning to reach out to possible House and Senate sponsors of legislation for 2017 to sustain Florida's beach program going forward. We hope to provide a more detailed strategy to you all along the way, including at our Annual Conference in Naples, September 14-16. While not fully developed or refined and certainly not yet vetted, our over-riding objective will be to earmark a dedicated annual funding source and a minimum dollar amount for statewide beach management to replace its historical doc stamp allocation and trust fund. With this significant request comes the responsibility to reexamine project selection by revising exiting ranking criteria to better capture return-on-investment and economic benefits to tourism and storm damage reduction to ensure the best projects rise to the top of the annual priority lists. As part of this initiative comes the added responsibility to consider how to transition the well-intended but failed 2008 inlet management incentive provisions of law to a more sustainable and supported critically-important program component, and further clarify the intent of existing statutory accountability and transparency provisions. **This brief and certainly incomplete description of FSBPA's anticipated governmental strategy for the**

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coming year is tentative and awaiting further Board of Directors input and yours as well. Once refined to reflect the wishes of legislative sponsors, it will be shared with our entire membership and other supporting interests; however, at this point in time we are clearly getting the cart before the horse.

Photo courtesy of Santa Rosa Island Authority

We hope to get the message out to all that can make a difference in the outcome, using a number of focused discussions, forums, and opportunities with reliance on elected officials, local government and interest group lobbyists, and a coalition of coastal interests, not dissimilar to what was used in FSBPA's 1998 effort to secure dedicated doc stamp funding of $30M. In this specific regard, FSBPA has already reached out to the Florida Association of Counties, the Florida Board of Realtors, and Associated Industries of Florida, and is now in the process of setting up additional meetings with other beach-related, tourism-based or business interest groups. So far this still-evolving initiative is being very well-received. We are hopeful to have an impressive list of interests in support. However, be assured our Board of Directors and limited staff can't do it alone. We have historically "sold" FSBPA as the "voice on behalf of Florida's Beaches". It will take every one of us being heard amongst the competing program interests in 2017.

What follows is the first briefing "bulletin" highlighting the economic value of healthy beaches to Florida. It relies on the report by the Legislature's well-respected economic forecasting unit, the Office of Economic & Demographic Research. To this report we have added additional information provided by EDR's Coordinator, Amy Baker, last session to the Senate General Government Appropriations Subcommittee. There will be additional economic data profiled for your use and our messaging as well in the near future.

Please take the time to review this document, consider our evolving strategy, and let us hear from you. To improve our chances for success will require greater member involvement, a louder voice, and a larger outreach effort. It's the right time!

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Economic Evaluation Of Florida's Beaches
Bulletin 1
"Beaches 2017"

Message

As beach advocates, we readily promote the benefits of beach nourishment, particularly the benefits of healthy beaches to state and local economies.

A series of bulletins are being prepared to highlight what state and local leaders and decision makers need to know about the economics of beach management and the 825 miles of sandy beaches that define the state's unique brand. This first bulletin particularly focuses on the research released in January 2015 by the **Office of Economic and Demographic Research (EDR)**, the Legislature's economic forecasting research team, where they calculated a return on investment using visitor spending data and the state's investment in the beach management program. We hope this paper will arm you with data you can use to support why healthy beaches drive Florida's tourism economy.

Beaches as the State Brand

EDR is principally tasked with forecasting economic and social trends that affect policy making, revenues, and appropriations. The Office was asked by Speaker Weatherford to evaluate the strength of the relationship between Florida's beaches and the attractiveness of beaches as a tourism destination.

Beaches are the #1 feature that attracts tourists to Florida.

EDR's research found that pristine beaches are the most important feature of Florida's brand, topping the list as our Number 1 tourist attraction. Florida's beaches have the strongest effect of attracting tourists over other destination features such as theme parks.

Healthy, picturesque beaches are critical to maintaining Florida's brand, and if they are not maintained, visitors will travel elsewhere. Because of this, beach nourishment was characterized by EDR as a form of quality control to ensure Florida's most important feature is a quality product when visitors arrive. Public and private advertisers can use a quality product to market Florida's beaches to visitors.




Photos courtesy of St.Pete/Clearwater CVB and Olsen Associates

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Return on Investment

> Florida's beach management program expended $44 million over three years increasing the overall collection of state revenues by $237.9 million. **That's an unprecedented return on investment for a natural resource program of 5.4.**

EDR used several data sources to populate the statewide economic model and calculate a return on investment (ROI) for the state's beach management program, including data from Visit Florida's visitor numbers, economic impacts from the tourism industry, the amount of state expenditures on the beach program, and information from previous studies. EDR determined over 18.6 million came to Florida in 2013 just because of our beaches. EDR also estimated the 18.6 million beach visitors spent over $2 billion, all directly attributable to Florida's beaches!

The results of EDR's ROI of the beach management program found it "generated a positive return on investment of 5.4" based on tangible financial gains to state revenues (i.e., no environmental, social, or future planning benefits were included). The ROI was based on the statewide economic model using three years of state expenditures on beach management and the collection of new state tax revenues attributed to beach nourishment.

Out of the 17 programs EDR evaluated for the state's ROI, the state's investment in beaches remarkably ranked #3 amongst economic development programs.

The number of visitors and state tax revenues continue to grow. In 2015, Florida surpassed 106 million visitors and generated $5.3 billion in tax revenues, compared to 94 million visitors and $4.6 billion in tax revenues two years prior. That's a 12.7% and 15% increase over the 2013 data. Although beach specific tourism spending data for 2015 are not readily available to update the ROI, there is every reason to assume a proportional increase occurred to the number of beach tourists who came to Florida for its pristine beaches and the influx of new spending while here.

Capturing Economic Benefits in Project Selection

Half of Florida's beaches are critically eroded but only half of these eroded beaches are part of the statewide beach program, leaving far too many worthy beach projects unfunded every year. Since passage of Amendment 1, the dedicated, historical (1998) beach management documentary stamp allocation and designated beach management trust fund are no longer in place, and the number of projects funded and amount of funding for beach preservation have declined. It is imperative to examine program procedures to ensure state funds are used to restore beaches in most critical need and that are supported by our local and state decision makers.

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Many state and local leaders and beach advocates have recommended revisions to the existing ranking criteria to better capture the return-on-investment and economic benefits relating to tourism and storm damage. Prior to considering enhanced economic criteria within the prioritization process, in 2014 Speaker Weatherford requested that EDR and Office of Policy Program Analysis and Government Accountability examine the beach project ranking criteria and recommend if improvements to the criteria were necessary to meet the objectives voiced by stakeholders. OPPAGA is also a research arm of the Legislature responsible for providing data, evaluative research, and objective analyses to assist legislative budget and policy discussions.

The results from this research noted that although an ROI on a project-by-project basis is not feasible, it is possible to include measures of economic benefit as part of the project ranking process. The following recommendations were offered as potential economic factors to use in the project ranking process:

- the value of property protected as a result of the project;
- the value of tourist development tax revenues as a percentage of all county revenues;
- a measure of each location's attractiveness to visitors can be determined by developing county factors that weight sales tax collections by tourist accommodations; and
- a measure of county employees in tourism-related occupations as a percentage of all employees in the county.

Last year, House Bill 877 and Senate Bill 1566 were filed proposing to revise the project ranking and selection criteria and include recommended economic factors. With a late start, other obstacles unrelated to the bill, and some concern that capturing the economic benefits and measures to do so fell short, the legislation addressing project ranking and selection criteria did not pass. We hope the criteria bill will gain momentum this year and be heard during the 2017 Legislative session.

Economic Risk of Disasters

Lastly EDR was asked to assess the impact of disasters and the state's economic risk. By evaluating Florida's responses to the 2004, 2005, 2012 storm seasons and the effects of the BP Oil Spill, EDR determined future costs to the state after experiencing these types of "shocks". EDR estimated the anticipated lost state revenues and storm specific beach nourishment appropriations needed to repair impacted beaches for high, medium and low impact disasters. The economic impacts are represented in the table below.

The estimated economic impacts of a high impact storm are:

- $159.5 billion in property damage, of which $80.4 billion would be uninsured
- $79.9 million appropriation needed for beach nourishment
- $56.8 million in tax revenues would be lost from reduced visitor spending

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This evaluation is important for our leaders when forecasting the economic impacts of future disasters and, as underscored by EDR from an economic perspective, **it is important to quickly address severe storm-related damage.**

Estimated Impact of Potential Shocks in Millions of 2014 Dollars			
	High-impact Disaster	**Medium-impact Disaster**	**Low-impact Disaster**
Storm-specific Beach Restoration Appropriation	$79.9 M	$33.9 M	$13.1 M
State Tax Revenue Loss from Reduced Visitor Spending	$56.8 M	$30.0 M	$3.3 M

Presentation to the Senate Appropriations Subcommittee on General Government

Amy Baker, Coordinator of EDR, presented the results from the Office's Report on the Economic Evaluation of Florida's Investment in Beaches, much of which is already highlighted in this bulletin, to the Senate Appropriations Subcommittee on General Government on November 18, 2015. Ms. Baker reinforced these additional key points to the Legislature during her presentation:

- With a strong ROI of 5.4, the state's investment in beaches is one of the better investments the state is making.
- In lieu of calculating ROIs for each beach project, county-wide measures of local economic value can be brought into the ranking process instead. Measures may include property tax data or the value of property protected as a result of the project.
- Statutory revisions should be considered for project ranking criteria that address beach impacts as a result of a natural disaster.

Summary

This bulletin provides a summary of EDR and OPPAGA's purposeful economic evaluation of the beach management program and beaches as an economic engine for Florida. We hope you can use these talking points with confidence as you promote beach nourishment when meeting with community and state decision-makers.

- Beaches are the number 1 feature that attracts tourists to Florida. Visitors will go elsewhere if our beaches are not maintained.
- 18.6 million visitors came to Florida in 2013 just for the beaches and spent $2 billion while they were here.

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- For each dollar the State of Florida spent on beach nourishment, $5.4 of state tax revenue was generated. This figure does not account for local revenues generated by tourist development taxes – a major contributor to county revenues.

- Existing beach management project ranking criteria should be re-evaluated to better capture the return-on-investment and economic benefits to tourism and storm damage and ensure the state's priorities rise to the top of the funding list.

- It is important to quickly address severe storm-related damage for many reasons, including curtailing economic losses from tourism and unplanned expenditures by the state.

5/27/16

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2016 Annual Conference

September 14-16, 2016

Naples Grande, Naples, Florida

We hope you are able to join us for the annual FSBPA conference to be held September 14-16, 2016, in Naples at the Naples Grande Hotel. Please review the key dates below for the **Call for Abstracts deadline of June 10** and the **Award nominations deadline of July 29**. Also, reserve your hotel room now to ensure availability and save $50 by registering for the conference by August 24, 2016.

For complete details on submitting your abstract, go to www.fsbpa.com/annual-conference/call.html. The Awards Committee is accepting nominations through July 29, 2016. The nomination form and complete details can be found at www.fsbpa.com/annual-conference/awards.html.

Visit www.fsbpa.com/annual.htm for complete details on submitting your abstract or award nomination, as well as conference registration information and hotel reservations.

Key dates to remember:

- **May 6 - Registration Opens**
- **June 10 - Call for Abstracts DEADLINE**
- **July 29 - Awards Nomination DEADLINE**
- **August 24 - last day Hotel Room Reservations guaranteed at $149**
- **Through August 24 - Early Conference Registration**
- **After August 24 - Regular Registration**
- **September 14-16 - Annual Conference**

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Are Flood Events Getting Worse? The Answer is Yes. And No.

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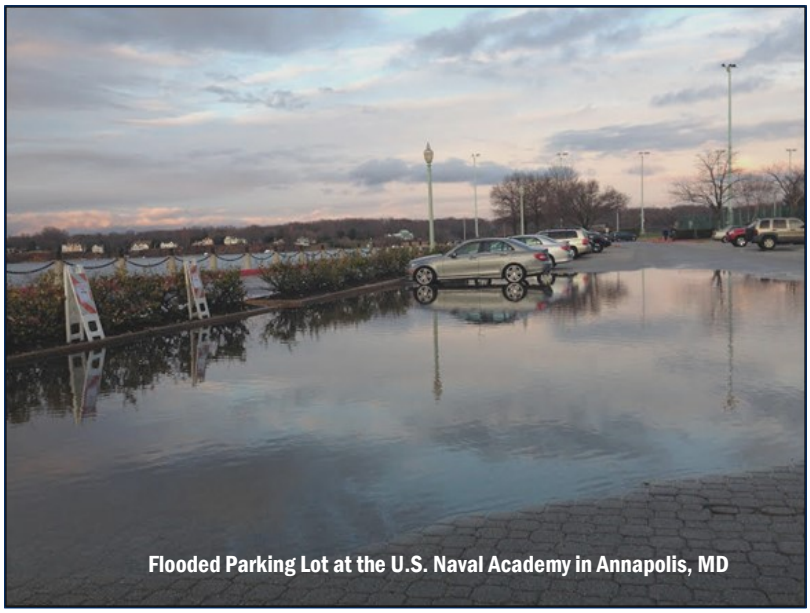

Flooded Parking Lot at the U.S. Naval Academy in Annapolis, MD

If you live in Annapolis, Maryland, or Miami Beach, Florida, you probably have a personal relationship with nuisance flood events. They affect your daily commute, where you park your car overnight when a coastal flood advisory is issued, and how much longer you plan to live in your current house. Throughout America, coastal communities are experiencing similar issues.

Flood events seem to occur more often and with greater intensity than ever before. But does the data support such an observation? Are flood events getting worse? Do they occur more frequently than in the past? The answers to these questions might surprise you. Because, at least for flood events, the answer to each question is yes. And the answer is no. It depends on how "worse" and "more frequently" are defined.

The cause of this mixed answer is sea level rise. Based on absolute flood heights, flood events are more severe and more frequent than in the past. However, if the effects of sea level rise are negated, flood events show no change in severity or frequency. Based on historical data, flood events on the U.S. East Coast are not more severe or frequent than in the past. However, due to sea level rise, these events are starting from a higher baseline height than in the past. Thus, the same severity of a flood event in 2016 as one in 1956 is reaching a greater absolute height and thus threatening more assets.

How Much Has Sea Level Risen? And How Much More Will It Rise?

Globally, the mean sea level has risen at an average rate of 1.7 mm per year over the past century. Global sea level has risen approximately 0.2 meters, or 8 inches, since 1900. In Fernandina Beach, Florida, due to a variety of regional causes in addition to the global trend, the rate of local sea level rise is slightly higher. Based on NOAA tidal gage data since 1897, Fernandina Beach has averaged 2.1 mm per year of local sea level rise. The figure shows monthly mean sea level values in Fernandina Beach from 1897 to 2015, with a best fit

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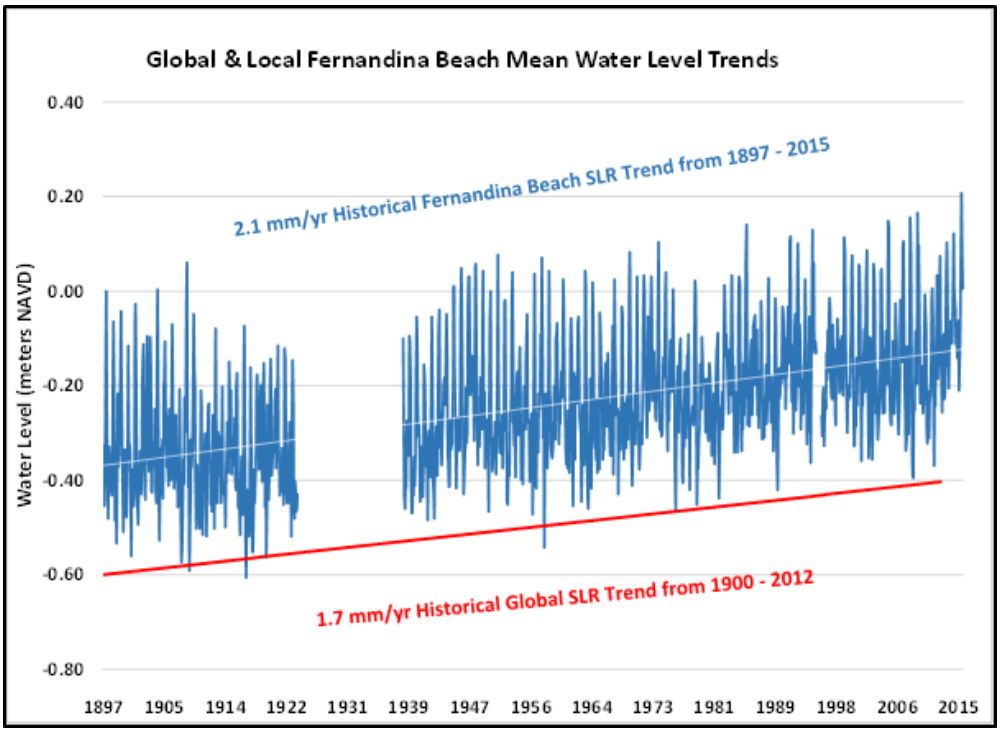
line through the data. Note that this figure shows the monthly means; the seasonal variation in average tide heights from month to month is evident. The NOAA tidal gage in Fernandina Beach was inoperable from



1924 to 1938, so there is a large gap in the data for these years. Since 1990, the rate of global sea level rise has shown an accelerating trend of 3.2 mm per year. Looking forward, an additional 0.2 to 0.7 meters, or 8 to 28 inches, of global sea level rise is predicted by the year 2050, compared to 1992 levels. The variation in these estimates is due to uncertainty about the rate of melting of glaciers and ice sheets around the globe, as well as accounting for different scenarios of future greenhouse gas emissions and their impact on global warming. However, even the most conservative estimates project sea level rise in the coming few decades equal to that of the past century.

Are Flood Events Increasing in Severity?

Within any day, week, or month, the tide height at a location varies greatly. At each of its tidal gages around the coastal United States, NOAA records the water level every six minutes. The monthly mean sea level is calculated as the average of all the tide heights recorded at a given station over the course of a month – over 7,000 readings per month. The monthly maximum water level is defined as the highest individual water level value recorded in a month. The next figure shows both the mean sea level and the maximum water level in Fernandina Beach for each month from 1897 until 2015.

As expected, there is significantly more variation in the monthly maximum water level values, which are based on a single maximum value each month, than in the monthly mean sea level values, which are calculated from the average of thousands of readings per month. However, despite the difference in

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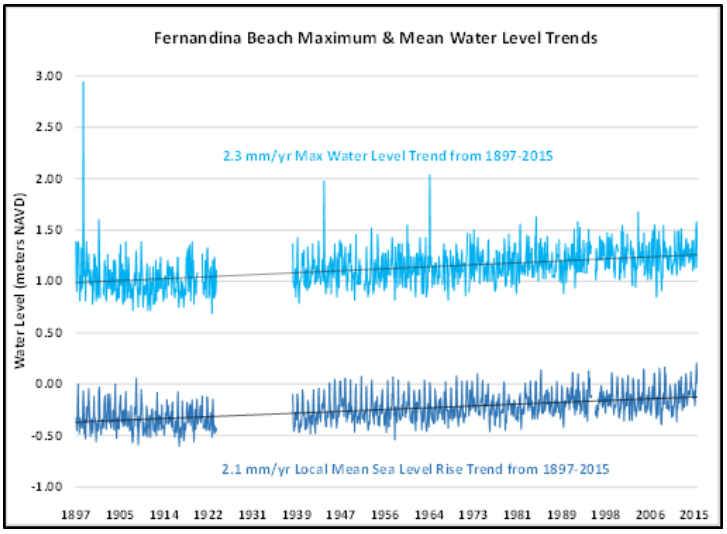
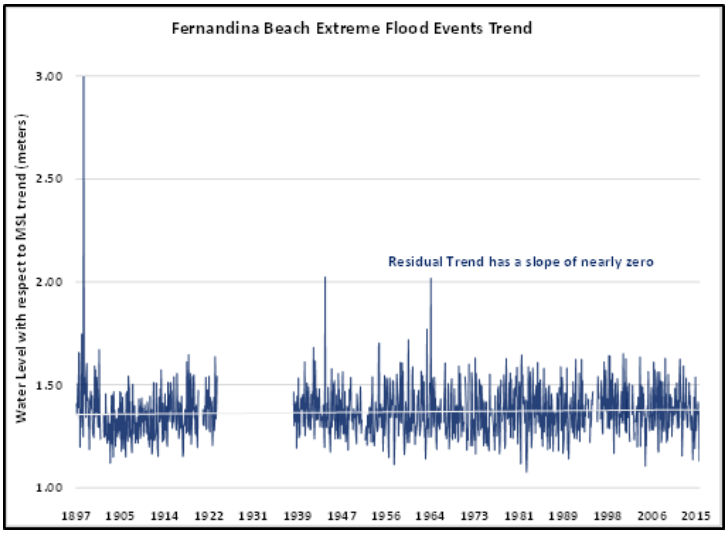
variation between the two data sets, both trend upward at almost the same average rate. Mean sea level rises at a rate of 2.1 mm/year in Fernandina Beach, while maximum water level rises at a rate of 2.3 mm/year.

To determine if coastal flood events are increasing in severity, it is necessary to remove the effect of sea level rise within the dataset. A monthly extreme flood event height is calculated by subtracting the monthly mean sea level from the monthly maximum water level. This residual value shows the severity of each month's extreme flood event with respect to the month's mean sea level. This negates the influence of sea level rise and shows how extreme a flood event is compared to the rest of the tides that month. The figure on the right shows Fernandina Beach's monthly extreme flood event values for each month from 1897 to 2015. The slope of the best fit line through this residual, 0.2 mm/year, is nearly zero. This indicates that the severity of local flood events in Fernandina Beach is not increasing in magnitude. They only seem more severe due to the local sea level rise trend.





Data at other locations supports this same conclusion. A similar analysis of NOAA tidal gage data at six other sites along the U.S. East Coast was conducted. At these locations, each of which houses a major U.S. Naval base, the monthly maximum water level and monthly mean sea level have almost identical, upward-rising trends. Thus, at each location, the extreme flood event trend of the residual is nearly zero.

Based on this analysis, the severity of flood events along the U.S. East Coast is not increasing. However, due to sea level rise, the flood events are now starting from a higher baseline height. Thus, the same severity of a flood event today reaches a higher absolute height than ever before, threatening areas that once had been safe from flooding.

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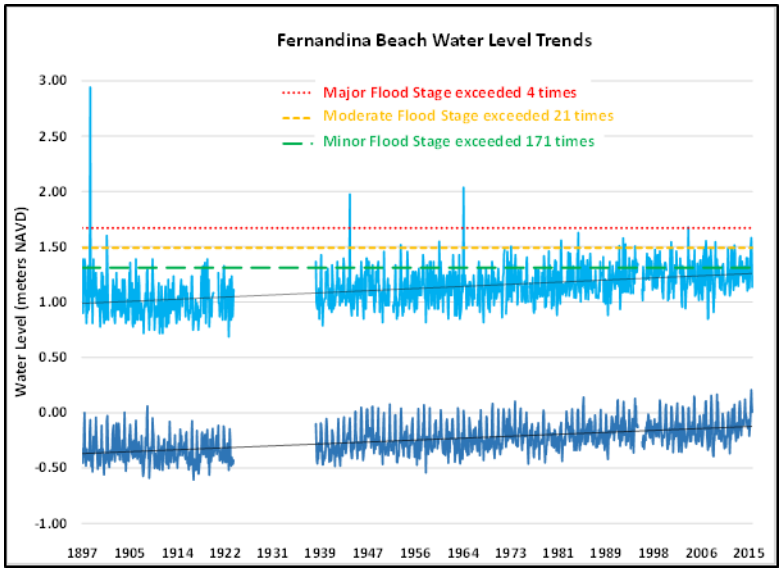
Sea Level Rise Trends at Naval Installations on the U.S. East Coast

Location	Date Range	Number of Data Points	Maximum Water Level Trend (mm/yr)	Mean Water Level Trend (mm/yr)	Extreme Flood Events Trend (mm/yr)
Newport, RI	1930 - 2014	843	2.64	2.73	-0.08
New London, CT	1938 - 2014	885	1.98	2.58	-0.44
Solomon's Island, MD	1937 - 2014	898	3.53	3.78	-0.25
Norfolk, VA	1928 - 2014	1041	4.43	4.60	-0.16
Charleston, SC	1921 - 2014	1119	3.55	3.17	0.38
Fernandina Beach, FL	1897 - 2014	1169	2.27	2.04	0.22
Key West, FL	1913 - 2014	1141	2.45	2.36	0.08

Are Flood Events Occurring More Frequently?

The other half of the question about whether flood events are becoming "worse" deals with frequency. Are flood events occurring more frequently than in the past? Again, the answer is yes – and no. And the cause of such an ambivalent answer is sea level rise.

At each tidal gage station near a river, three levels of flooding are defined - Major Flood Stage, Moderate Flood Stage, and Minor Flood Stage. In Fernandina Beach, the flood heights for Major, Moderate, and Minor flooding are 1.3, 1.5, and 1.7 meters above the North American Vertical Datum of 1988 (NAVD88). The figure below shows the same monthly mean sea level and monthly maximum water level data as previously displayed. However, horizontal lines for the Major, Moderate, and Minor Flood Stages have been added to the graph at 1.3, 1.5, and 1.7 meters. Each time the monthly maximum water level exceeds one of these stages is considered a significant flood event.



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Flood event frequencies were compared pre-1990 versus post-1990. 1990 was chosen as the dividing point because global sea level rise began to show an accelerating trend in 1990. Of the 899 months with data prior to 1990, the Major, Moderate, and Minor Flood Stages were exceeded 3, 9, and 84 times, respectively. These correspond to percentages of 0.3%, 1%, and 9% of months. Of the 282 months since 1990, the Major, Moderate, and Minor Flood Stages were exceeded 1 (0.3%), 12 (4%), and 87 (31%) times.

A statistical comparison tool called ANOVA was used to determine whether there is a difference in the frequency of flood events pre-1990 versus post-1990. ("Isn't ANOVA a TV show on PBS?" you might be asking. No. That's NOVA. ANOVA stands for Analysis of Variance.) ANOVA compares two sets of data and determines the probability that there is a statistically significant difference between them. ANOVA compares three main factors of each set to make this determination: its average, how spread out it is, and how many data points it contains. For sets with a lot of variation, such as water level data, a large number of points are generally needed to draw a definite conclusion.

For Fernandina Beach, the number of months between actual flood events, pre-1990 and post-1990, was compared using ANOVA. For Major Flood Stages, there were not enough data points to draw a definite conclusion about flood frequency. However, for both Moderate and Minor Flood Stages, ANOVA concluded definitively that these flood stages are being exceeded more often now than in the past. Prior to 1990, an average of 97 months passed between Moderate flood events and 11 months passed between Minor flood events. Since 1990, these values have dropped to an average of 30 months for Moderate and 3 months for Minor flood events. Based on ANOVA results, there is clearly a greater frequency of flood events in recent years than in the past, when analyzed based on absolute flood height.

However, with sea level rise negated from the Flood Stage values, it can be concluded that flood events are not more frequent. Of the 899 months with data prior to 1990, the Residual Major, Moderate, and Minor Flood Stages were exceeded only 3 (0.3%) , 5 (0.6%), and 51 (6%) times, respectively. Without sea level rise, of the 282 months since 1990, the Residual Major, Moderate, and Minor Flood Stages were exceeded in 0 (0%), 0 (0%), and 21 (7%) months. ANOVA analysis of these results was inconclusive for Major and Moderate flood events due to the lack of post-1990 data points. However, for Minor Flood Stages, with the effects of sea level rise negated, ANOVA concluded that there was no statistical difference in the number of months between flood events for the pre-1990 versus post-1990 data.

Data at each of the other six East Coast sites supports the same conclusion about flood event frequency. Flood Stages are being exceeded more frequently now than in the past. However, based on current data, this increase in frequency is due to the effects of sea level rise, not as a result of storms themselves occurring more often or with greater severity.

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What Can I Do About It?

In response to the question of whether flood events are getting worse, the answer is a definitive yes. And a definitive no. It all depends on what is meant by "worse." Absolute severity and frequency of flood events is increasing. However, this increase is due to sea level rise. The actual severity and frequency of flood events, when compared to average water levels, remains fairly constant. The apparent increase is due to flood events starting from a higher baseline height today than in the past.

However, the reality is that, due to sea level rise, facilities fixed at an absolute height will face an increasing number of flood events in the coming years. For many, protecting property from flooding will be necessary in order to ensure its continued, uninterrupted use. Because global sea level rise is a gradually occurring event, time is on the side of the proper planner. Enough time is available now to assess the threat of future flooding, make informed decisions, and take action to reduce the severity and impact of flood events.

New construction can be designed and built with flood damage prevention in mind. By taking into account sea level rise scenarios and raising the elevation of the finished first floor to a height above future flood projections, new facilities can be floodproofed when built.

Existing infrastructure is more difficult to adapt. However, a variety of preventive measures exist for retrofitting structures to withstand and recover from flood events. The options for protecting existing structures from flooding can be divided into the following categories: wet floodproofing, dry floodproofing, barrier systems, elevation, relocation, and demolition.

Temporary, Removable Door Dams at the U.S. Naval Academy in Annapolis, MD

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Furthermore, adaptations can be made that protect a series of facilities, a community, a city, or an even larger region. At times, the economies of scale involved make such options desirable. At other times, such solutions are not economically viable.

In general, it is not financially possible (and often not cost effective) to attempt to protect every facility immediately. Simply put, due to their location, construction type, use, and height above mean sea level, some assets are at much greater risk than others. Some assets, which have very low risk today, will be at higher risk in the future as sea levels continue to rise. Risk-based analysis and financial forecasting are useful for creating adaptation plans for both what to do and when to do it.

The worst course of action, in the face of future sea level rise, is to deny the imminent threat and do nothing. However, spending money haphazardly and shortsightedly to fix the problem is almost as bad as doing nothing. An informed, long-range, big-picture plan for adaptation, followed by diligent execution of that plan, is the best defense against the effects of sea level rise.

Based on current data, the good news is that the apparent "worsening" of flood events is due to a single, primary cause: sea level rise. Flood events themselves are not getting stronger or occurring more frequently than in the past. They are just starting from a higher point, allowing them to reach higher levels more often. The bad news is that sea level rise will be with us for many years into the future. We need to start making informed plans and decisions now about how best to adapt to this threat.

Career Naval officers, Angela and John Schedel both teach engineering at the U.S. Naval Academy. They recently launched their company, Coastal Solutions, with the mission of helping communities make informed decisions to adapt to sea level rise. For more information, visit www.coastalsolutions.org. Both Florida natives, Angela and John love to spend time in, under and on the water.

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FDEP Division of Water Resource Management Updates

Welcome to Director John Coates

John Coates is the new Director for the Division of Water Resource Management at the Florida Department of Environmental Protection. John has served the department in a number of leadership roles, most recently in the Division of Waste Management, and previously in the Division of Water Resource Management. His time at the department throughout the last 20 years, along with his prior private sector experience, provide John with a keen set of skills for his current role overseeing the division's water resource programs. He values individuals who are solution oriented, constructive communicators and willing to be held accountable. John has a Master's degree in Environmental Engineering from the University of Florida and a Bachelor's degree with majors in Environmental Management and Biology from Jacksonville University. John looks forward to working with FSBPA and the coastal community.

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LGFR process for 2017/18 Beach Management Funding Assistance Program

FY2017-2018 Local Government Funding Request

- **Call for Submittals will be sent June 1, 2016.**
- **Applications will be due August 1, 2016**

A webinar will be hosted by Beach Management Staff on June 15, from 10-12. An invitation with contact information will be included with the Call for Submittals email and posted to the program webpage.

Topics of discussion will include:

- FY2017-18 application process
- Regional Sand Management strategies
- AG audit resolution regarding Conflicts of Interest
- Tips for more efficient grant administration

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UPCOMING WEBINARS

Rule 62B-41, Florida Administrative Code Rule Development Webinar Scheduled

The Department will hold a **rule development workshop via webinar on June 7, 2016 from 9:30 – 11:30 am.** Changes proposed include updating information, eliminating duplicities with Rule 62B-49, F.A.C., revisions to conform the rule with 2012 statutory changes and addressing Joint Administrative Procedures Committee comments.

See http://www.dep.state.fl.us/beaches/rule-dev.htm for a color coded draft of the proposed changes, and to sign into the webinar.

Nearshore Hardbottom Monitoring Webinar

The Department will host a webinar on **Wed, Jun 8, 2016 1:30 PM EDT**

The "Standard Operating Procedures for Nearshore Hardbottom Biological Monitoring of Beach Nourishment Projects" document was developed to assist those applying for Joint Coastal Permits for beach nourishment projects that have nearshore hardbottom with the potential of being impacted by the project. The document was developed by DEP staff in conjunction with monitoring crews who have conducted the majority of the nearshore hardbottom monitoring for nourishment projects in the state of Florida. It provides guidance to applicants on hardbottom monitoring protocols.

The purpose of this webinar will be to discuss the document and answer questions about hardbottom monitoring procedures.

Register now at https://attendee.gotowebinar.com/register/44874741993014788

The agenda is posted at http://www.dep.state.fl.us/beaches/.

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Shoreline

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CALENDAR OF EVENTS

FSBPA Conferences

September 14-16, 2016
2016 FSBPA Annual Conference
Naples Grande, Naples, Florida

February 8 - 10, 2017
2017 Tech Conference
Hutchinson Island Marriott, Stuart, Florida

OTHER DATES OF INTEREST

October 25-28, 2016
ASBPA 2016 National Coastal Conference
Long Branch, NJ

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