

Air Odor Noise Committee

Amy Fu, P.E. – Chair
Caleena Shirley
David Wood
Thomas Deck
Edmund Clark, M.D.

Education & Public Outreach

David Wood – Chair
Lucinda Sonnenberg, Ph.D.
Bobby Baker, P.E.



Water Committee

Bobby L. Baker, P.E. – Chair
Thomas Deck
Roi Dagan, M.D.
Edmund Clark, M.D.
Caleena Shirley

Lucinda Sonnenberg, Ph.D. – Chairman
Amy Fu, P.E. – Vice Chairman
Bobby L. Baker, P.E., Edmund Clark, M.D., Roi Dagan, M.D.,
Thomas Deck, Caleena Shirley, David Wood

JEPB Monthly Meeting Notice and Agenda

Monday, June 17, 2019

5:00 p.m. - Ed Ball Building

214 N. Hogan Street – Conference Room 5016

To participate via phone, please contact staff **prior to 3 pm**

Phone Number to Participate via Phone:

Dial 630-2501 -- or -- (toll free) 1-800-299-9355 ext. 2501 - Enter the Password: 98765#

BOARD MEETING AGENDA

CALL TO ORDER INTRODUCTIONS

LUCINDA SONNENBERG

I. CHAIRMAN'S REMARKS

II. COMMENTS FROM THE PUBLIC

The public is invited to address the board at this time on general topics you might have. Please note that there will be a separate opportunity to speak before each action item. All those who wish to address the Board should complete a request to speak card and give it to the EPB staff. When making comments, please identify yourself, stating your full name and address. Comments should be addressed to the Board as a body and not to any member directly and will be limited to 3 minutes each.

III. APPROVAL OF MINUTES

- Minutes of April 15, 2019 Monthly Meeting
- Minutes of May 20, 2019 Monthly Meeting

IV. CONSENT ORDERS

(Air/Odor/Noise)
None

TREE KILBOURN

(Water/Haz Mat)

- **BW Philips Bowden, LLC (WP-19-52)** - Unlawful discharge to ground, surrounding environment and stormwater (MS4) (indirect); Failure to comply with erosion and sediment control standards – **proposed settlement fee: \$1,472** [\$2,300 less 20% for good faith efforts to cooperate and 20% discount for unique circumstances at the site]
- **Pipeline Constructors, Inc. (WP-19-42)** - Unlawful discharge to stormwater (MS4); Failure to comply with erosion and sediment control standards – **proposed settlement fee: \$6,400** [\$8,000 less 20% for good faith efforts to cooperate]

- **Petticoat-Schmitt Civil Contractors, Inc. (WP-19-39)** - Unlawful discharge to stormwater (MS4) and surface waters (Seaton Creek) overland flow; Failure to comply with erosion and sediment control standards – **proposed settlement fee: \$0** due to demonstrated inability to pay
- **The Haskell Company (WP-19-31)** - Unlawful discharge of turbid water to surface waters; Failure to comply with erosion and sediment control standards – **proposed settlement fee: \$6,400** [\$8,000 less 20% for good faith efforts to cooperate]
- **IM6282, LLC c/o Pattillo Industrial Real Estate (WP-19-27)** - Unlawful indirect discharge of turbid water to wetlands and sediment to stormwater (MS4); Failure to comply with erosion and sediment control standards – proposed settlement fee: **\$2,300**
- **Unifirst Corporation (WP-18-82)** - Unlawful discharge to streets and wetlands; Failure to comply with erosion and sediment control standards – **proposed settlement fee: \$6,720** [\$8,400 less 20% for good faith efforts to cooperate]
- **United Parcel Service, Inc. (WP-18-35)** - Unlawful discharge of sediment and turbid water to stormwaters (MS4); Failure to comply with erosion and sediment control standards – **proposed settlement fee: \$8,320** [\$10,400 less 20% for good faith efforts to cooperate]

V. ENFORCEMENT REPORT

TREE KILBOURN

- Compliance Plan - **Winn Dixie Stores Leasing, LLC (WP-19-25)** - Unlawful discharge of sewage or other untreated wastewater to surrounding environment and stormwater (MS4); Failure to maintain wastewater collection/transmission system to function as intended; Unlawful bypass of wastewater collection/transmission system or treatment facility

Consent Order settlement fee: \$16,000 assessed; SEP approved mitigation credit of \$1,360 for autodialer; Remaining penalty \$14,640

Consent Order requirements: SEP photos and invoices due to EQD by 6/30/19 by previous order; First monthly status report by 7/1/19; DEP permit application by 9/30/19 with work completed and DEP Request for Approval by 3/15/20; If independent connections can be made, modification request by 11/30/19; \$14,640 penalty paid or SEP proposals by 6/30/20

VI. PRESENTATION(s)

- None

VII. PUBLIC HEARING(s)

- Noise Variance Appeal / Request for Reconsideration – Vista Brooklyn Project

VIII. COMMISSION & JEPB COMMITTEE UPDATES & REPORTS

- Waterways Commission
- KJB Commission
- JEPB Water Committee
- JEPB Air Committee
- JEPB Education & Outreach Committee
- SSO Prevention Committee

**BOBBY BAKER
JAMES RICHARDSON
MELISSA LONG
MELISSA LONG
DAVID WOOD
SONNENBERG**

IX. EPB ADMINISTRATOR REPORT

JAMES RICHARDSON

X. ENVIRONMENTAL QUALITY DIVISION REPORT

MELISSA LONG

XI. LEGISLATIVE UPDATE

RICHARDSON/LONG

XII. OLD BUSINESS

- none

XIII. NEW BUSINESS

- EPTF Policy Discussion – Budget Item to Boost EPTF

BOBBY BAKER

XIV. ITEMS REFERRED TO COMMITTEES

XV. NEXT SCHEDULED BOARD MEETING(s)

- EPB Committees
 - Joint Air & Water – Monday, June 24, 2019 at 4:30 pm – 5:00 pm
 - SSO Prevention – Monday, June 24, 2019 at 5:00 pm – 6:00 pm
 - Education & Public Outreach – no June Meeting
- EPB Steering Committee – Monday, July 8, 2019 at 4:00 pm
- EPB monthly meeting – Monday, July 15, 2019 at 5:00 pm

XVI. ADJOURNMENT



City of Jacksonville, Florida

Lenny Curry, Mayor

Environmental Quality Division
Ed Ball Building
214 N. Hogan Street, 5th Floor
Jacksonville, Florida 32202

ONE CITY. ONE JACKSONVILLE.

MEMORANDUM

June 6, 2019

TO: Jacksonville Environmental Protection Board Steering Committee
THROUGH: James A. Richardson, II, Board Administrator
THROUGH: Melissa M. Long, P.E., Chief
Environmental Quality Division
FROM: Tree Kilbourn, Environmental Enforcement Officer
Environmental Quality Division
RE: **PROPOSED PRESENTATION TO JEPB – June 17, 2019**
APPROVAL OF CONSENT ORDER SETTLEMENTS

Water

BW Philips Bowden, LLC (WP-19-52)

Unlawful discharge to ground, surrounding environment and stormwater (MS4) (indirect); Failure to comply with erosion and sediment control standards

Pipeline Constructors, Inc. (WP-19-42)

Unlawful discharge to stormwater (MS4); Failure to comply with erosion and sediment control standards

Petticoat-Schmitt Civil Contractors, Inc. (WP-19-39)

Unlawful discharge to stormwater (MS4) and surface waters (Seaton Creek) overland flow; Failure to comply with erosion and sediment control standards

The Haskell Company (WP-19-31)

Unlawful discharge of turbid water to surface waters; Failure to comply with erosion and sediment control standards

IM6282, LLC c/o Pattillo Industrial Real Estate (WP-19-27)

Unlawful indirect discharge of turbid water to wetlands and sediment to stormwater (MS4); Failure to comply with erosion and sediment control standards

Unifirst Corporation (WP-18-82)

Unlawful discharge to streets and wetlands; Failure to comply with erosion and sediment control standards

United Parcel Service, Inc. (WP-18-35)

Unlawful discharge of sediment and turbid water to stormwaters (MS4); Failure to comply with erosion and sediment control standards

Compliance Plan:

Winn Dixie Stores Leasing, LLC (WP-19-25)

Unlawful discharge of sewage or other untreated wastewater to surrounding environment and stormwater (MS4); Failure to maintain wastewater collection/transmission system to function as intended; Unlawful bypass of wastewater collection/transmission system or treatment facility

**THE ENVIRONMENTAL PROTECTION BOARD
CITY OF JACKSONVILLE, FLORIDA
June 17, 2019**

Consideration of a negotiated Consent Order settlement of:

**CITY OF JACKSONVILLE
NEIGHBORHOODS DEPARTMENT,**

-vs-

BW Philips Bowden, LLC,

Petitioner,

Respondent.

Type of alleged violation(s): Unlawful discharge to ground, surrounding environment and stormwater (MS4) (indirect); Failure to comply with erosion and sediment control standards

Source of alleged violation(s): Construction project site located at Real Estate Parcel ID Number 152997-0020, 0 Philips Highway, Jacksonville, FL

Date of alleged violation(s): 4/1/19

Method of determining alleged violation(s): Field investigation and file review

Rules allegedly violated: FS § 403.161(1)(b); JEPB Rules 3.103B and D; JEPB Rule 3.604

ND response to alleged violation(s): Cease and Desist Citation WP-19-52 issued 4/6/19 to BW Philips Bowden, LLC; White Oak Contracting, Inc. and WAWA Florida, LLC

Respondent's corrective actions: Enhanced performance measures installed.

Consent Order settlement fee: **\$1,472** [\$2,300 less 20% for good faith efforts to cooperate and 20% discount for unique circumstances at the site]

Consent Order requirements: None

Enforcement actions:

NTC issued 10/31/18 to BW Philips Bowden, LLC, for failure to comply with erosion and sediment control standards. Closed.

NTC issued 7/25/18 to BW Philips Bowden, LLC, for failure to comply with erosion and sediment control standards. Closed.

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Pipeline Constructors, Inc.,

Petitioner,

Respondent.

Type of alleged violation(s): Unlawful discharge to stormwater (MS4); Failure to comply with erosion and sediment control standards

Source of alleged violation(s): Construction project located at Real Estate Parcel ID 015603-0010, 9490 Sandler Road, and Real Estate Parcel ID 015603-0020, 0 Sandler Road, Jacksonville, FL

Date of alleged violation(s): On or before 3/5/19

Method of determining alleged violation(s): Field investigation and file review

Rules allegedly violated: FS § 403.161(1)(b); JEPB Rules 3.103B and D, 3.604

ND response to alleged violation(s): Cease and Desist Citation WP-19-42 issued 3/25/19 to Hart Resources, LLC and Richmond American Homes of Florida, LP, the property owners, and Pipeline Constructors, Inc., the contractor

Respondent's corrective actions: Sufficient measures installed to control site

Consent Order settlement fee: **\$6,400** [\$8,000 less 20% for good faith efforts to cooperate]

Consent Order requirements: None

Enforcement actions:

NTCs issued 3/8/19 to Hart Resources, Richmond American Homes of Florida, LP and Pipeline Constructors, Inc. for failure to comply with erosion and sediment control standards. Referred to enforcement.

Other locations for Richmond American Homes:

Citation WP-19-02 issued 1/8/19 to Richmond American Homes of Florida, LP and Jax Utilities Management, Inc. for unlawful discharge to surface water and failure to comply with erosion and sediment control standards (Duval Rd.). Pending.

Citation WP-18-50 issued 7/2/18 to Richmond American Homes of Florida, LP and Onyx Site Services, LLC for unlawful discharge to MS4 and failure to comply with erosion and sediment control standards. \$2,940 penalty paid. Closed.

NTC issued 8/17/18 to Richmond American Homes of Florida, LP for failure to comply with erosion and sediment control standards (0 Duval Road). Closed.

NTC issued 11/28/16 to Richmond American Homes of Florida, LP for failure to comply with erosion and sediment control standards (0 Russell Bridge Dr.). Closed.

Other locations for Pipeline Constructors, Inc.:

Citation WP-19-16 issued 1/28/19 to Shellie Road Investors, LLC, Dream Finders Homes, LLC and Pipeline Constructors, Inc. for unlawful discharge to wetlands and failure to comply with erosion and sediment control standards. (Shellie and Kevin Roads). Pending.

NTC issued 2/8/19 to Pipeline Constructors, Inc. for failure to comply with erosion and sediment control standards (Park Village Dr.). Open.

NTC issued 2/13/06 to Pipeline Constructors, Inc. for failure to comply with erosion and sediment control standards (Gately Rd.). Closed.

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-vs-

Petticoat-Schmitt Civil Contractors, Inc.,

Petitioner,

Respondent.

Type of alleged violation(s): Unlawful discharge to stormwater (MS4) and surface waters (Seaton Creek) by overland flow; Failure to comply with erosion and sediment control standards

Source of alleged violation(s): FDOT Pecan Park Road (SR 243) Reconstruction and Widening project from I-95 to Lexington Park Boulevard, Jacksonville, FL

Date of alleged violation(s): On or before 3/1/19

Method of determining alleged violation(s): Field investigation and file review

Rules allegedly violated: FS § 403.161(1)(b); JEPB Rules 3.103B and D, and 3.604

ND response to alleged violation(s): Cease and Desist Citation issued 3/7/19

Respondent's corrective actions: Sufficient measures established to control site

Consent Order settlement fee: \$0 due to demonstrated inability to pay

Consent Order requirements: None

Enforcement actions:

NTC issued 3/4/19 to Petticoat-Schmitt Civil Contractors, Inc. for failure to comply with erosion and sediment control standards [Pecan Park Rd. project]. Referred to Enforcement.

Other locations for Petticoat-Schmitt Civil Contractors, Inc.:

Citation WP-19-29 issued 2/9/19 to Lennar Homes, LLC and Petticoat-Schmitt Civil Contractors, Inc. for unlawful discharge to wetlands and failure to comply with erosion and sediment control standards [0 Tamaya Blvd.]. Open.

Citation WP-18-40 issued 7/22/18 to KB Home Jacksonville, LLC and Petticoat-Schmitt Civil Contractors, Inc. for unlawful discharge to surface waters and failure to comply with erosion and sediment control standards [0 Hood Rd.]. \$6,400 penalty paid. Closed.

NTCs issued 6/27/18 for failure to comply with erosion and sediment control standards [0 Hood Rd.]. Referred to enforcement.

NTC issued 1/29/18 for failure to comply with erosion and sediment control standards [1705 Pecan Park Rd.]. Closed.

NTC issued 12/7/17 for failure to comply with erosion and sediment control standards [4880 Town Center Pky.]. Closed.

NTC issued 9/21/09 for failure to comply with erosion and sediment control standards [3137 Green St.]. Closed.

Last Inspection: 3/1/19

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-vs-

The Haskell Company,

Petitioner,

Respondent.

Type of alleged violation(s): Unlawful discharge of turbid water to surface waters; Failure to comply with erosion and sediment control standards

Source of alleged violation(s): St. Vincent's Hospital project located at Real Estate Parcel ID No. 065202-0000, 1 Shircliff Way, Jacksonville, Florida

Date of alleged violation(s): On or before 1/24/19

Method of determining alleged violation(s): Field investigation and file review

Rules allegedly violated: FS § 403.161(1)(b); JEPB Rules 3.103B and 3.604

ND response to alleged violation(s): Cease and Desist Citation WP-19-31 issued 2/9/19 to St. Vincent's Hospital and The Haskell Company

Respondent's corrective actions: Improved measures installed and maintained

Consent Order settlement fee: **\$6,400** [\$8,000 less 20% for good faith efforts to cooperate]

Consent Order requirements: None

Enforcement actions:

NTCs issued 1/28/19 to St. Vincent's Hospital and The Haskell Company for failure to comply with erosion and sediment control standards. Referred to Enforcement.

Haskell Company for Water/ESC:

NTC issued 12/21/18 to The Haskell Company for failure to comply with erosion and sediment control standards (1350 Flagler Ave). Closed.

NTC issued 7/1/99 The Haskell Company for failure to comply with erosion and sediment control standards (FCCJ North). Closed.

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-vs-

IM6282, LLC,

Petitioner,

Respondent.

Type of alleged violation(s): Unlawful indirect discharge of turbid water to wetlands and sediment to stormwater (MS4); Failure to comply with erosion and sediment control standards

Source of alleged violation(s): Imeson Spec Building site located at Real Estate Parcel ID Number 003290-0050, 0 Imeson Road, Jacksonville, Florida

Date of alleged violation(s): On or before 1/9/19

Method of determining alleged violation(s): Field investigation and file review

Rules allegedly violated: FS § 403.161(1)(b); JEPB Rules 3.103B and D, and 3.604

ND response to alleged violation(s): Cease and Desist Citation WP-19-27 issued 2/9/19 to IM6282, LLC and Arco Design/Build, Inc.

Respondent's corrective actions: Enhanced measures installed and maintained

Consent Order settlement fee: **\$2,300**

Consent Order requirements: None

Enforcement actions:

Citation WP-18-36 issued 6/10/18 to IM6282, LLC [Pattillo Industrial Real Estate] and Arco Design/Build, Inc. for unlawful discharge to stormwaters and surface waters and failure to comply with erosion and sediment control measures. \$13,440 penalty paid. Closed.

NTCs issued 5/22/18 to IM6282, LLC and Arco Design/Build, Inc. for failure to comply with erosion and sediment control standards. Referred to enforcement.

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Consideration of a negotiated Consent Order settlement of:

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-vs-

Unifirst Corporation,

Petitioner,

Respondent.

Type of alleged violation(s): Unlawful discharge to streets and wetlands; Failure to comply with erosion and sediment control standards

Source of alleged violation(s): Construction project located at Real Estate Parcel ID 003528-0700, 4251 Perimeter Industrial Parkway East, Jacksonville, FL

Date of alleged violation(s): On or before 12/4/18

Method of determining alleged violation(s): Field investigation and file reviews

Rules allegedly violated: FS § 403.161(1)(b); JEPB Rules 3.103B and 3.604

ND response to alleged violation(s): Cease and Desist Citation WP-18-82 issued to Unifirst Corporation, The Prentice-Hall Corporation System, Inc., Dana B. Kenyon Corporation
12/14/18

Respondent's corrective actions: Unknown

Consent Order settlement fee: **\$6,720** [\$8,400 less 20% for good faith efforts to cooperate]

Consent Order requirements: None

Enforcement actions:

NTCs issued 12/7/18 to Unifirst Corporation and Dana B. Kenyon Company for failure to comply with erosion and sediment control standards [Perimeter Industrial Pky]. Referred to Enforcement.

Dana B. Kenyon Co.:

Citations WP-01-05 and WP-01-06 issued 3/20/01 to Dana B. Kenyon Co. and Shiloh Metropolitan Baptist Church for failure to comply with erosion and sediment control standards [Beaver St.]. \$2,560 with \$1,454 paid and \$1,106 SEP credit. Case closed.

NTC issued 2/18/01 to Dana B. Kenyon Co. for failure to comply with erosion and sediment control standards [Beaver St.]. Referred to Enforcement.

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Consideration of a negotiated Consent Order settlement of:

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-vs-

United Parcel Service, Inc.,

Petitioner,

Respondent.

Type of alleged violation(s): Unlawful discharge of sediment and turbid water to stormwaters (MS4); Failure to comply with erosion and sediment control standards

Source of alleged violation(s): UPS Jax Expansion project site located at Real Estate Parcel ID Number 003444-1110, 4420 Imeson Road, Jacksonville, Florida

Date of alleged violation(s): On or before May 17, June 20, June 26, July 5, July 17, August 1, September 5, and October 10, 2018, and January 9, 2019 (July through October for discharge from damaged private stormwater structure to MS4)

Method of determining alleged violation(s): Field investigation and file review

Rules allegedly violated: FS § 403.161(1)(b); JEPB Rules 3.103B and D, and 3.604

ND response to alleged violation(s): Amended Cease and Desist Citation WP-18-35 issued 5/30/18 to United Parcel Service, Inc, Brad Cole Construction Company, Incorporated and KBD Group, Inc.

Respondent's corrective actions: BMPs established but insufficient to deal with surges in damaged closed, private stormwater conveyance during heavy rains which carried large volume of water through damaged system, picking up sediment, creating turbidity. UPS unable to completely isolate stormwater without causing property flooding. UPS had to wait for dryer weather to isolate stormwater structure for repair.

Consent Order settlement fee: **\$8,320** [\$10,400 less 20% for good faith efforts to cooperate]

Consent Order requirements: None

Enforcement actions:

NTCs issued 5/18/18 to Respondents for failure to comply with erosion and sediment control standards. Referred to enforcement.

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Consideration of a negotiated Consent Order settlement of:

**CITY OF JACKSONVILLE
NEIGHBORHOODS DEPARTMENT,**

-vs-

Winn Dixie Stores Leasing, LLC,

Petitioner,

Respondent.

Type of alleged violation(s): Unlawful discharge of sewage or other untreated wastewater to surrounding environment and stormwater (MS4); Failure to maintain wastewater collection/transmission system to function as intended; Unlawful bypass of wastewater collection/transmission system or treatment facility

Source of alleged violation(s): Wastewater collection/transmission system with lift station located at Real Estate ID 006763-1000, 703 Chaffee Road South, Jacksonville, Florida

Date of alleged violation(s): On or before 5/18/18

Method of determining alleged violation(s): Field investigation and file review

Rules allegedly violated: FS § 403.161(1)(b); JEPB Rules 3.103B, D, F, G and I

ND response to alleged violation(s): Cease and Desist Citation issued 2/6/19

Respondent's corrective actions: Engineer report in progress completed and lift station repairs completed

Consent Order settlement fee: \$16,000 assessed; SEP approved mitigation credit of \$1,360 for autodialer
Remaining penalty \$14,640

Consent Order requirements: SEP photos and invoices due to EQD by 6/30/19 by previous order
First monthly status report by 7/1/19
DEP permit application by 9/30/19 with work completed and DEP Request for Approval by 3/15/20
If independent connections can be made, modification request by 11/30/19
\$14,640 penalty paid or SEP proposals by 6/30/20

Enforcement actions:

Amended Citation WP-15-18 issued 6/18/15 to Esrog Realty, Inc. and Winn Dixie Stores, Inc. Store #199 for unlawful discharge (WWCTS discharge line) to ground and failure to maintain collection system lines [703 Chaffee Rd. S.]. Closed – Final Citation issued to Winn Dixie Stores Leasing, LLC.

Air Odor Noise Committee

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**Water Committee**

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EPB ADMINISTRATOR REPORT – June 2019

- ✓ The nomination period for the annual Environmental Excellence Awards is now open. Please share the information with family, friends and others in the community. Deadline for submission is July 19th.
- ✓ The Professional Engineer and Conservation positions on the JEPB will be open for membership in the coming months. If you are aware of anyone that may have an interest in serving, please have them to contact me.
- ✓ The committees working on resiliency are wrapping up their work. The Stormwater Resiliency and Infrastructure Development Committee has concluded their work. They have introduced legislation to address update the floodplain management ordinance, zoning code, the Land Development Procedures Manual, wetland buffers and issued an RFP to secure services to conduct a resiliency analysis associated with an updated Master Stormwater Management Plan. They will present their work to City Council at their meeting on June 25th. A draft of their presentation is attached. One item of discussion pertained directly to the JEPB. In discussion of wetlands, there was a desire to have a quantitative analysis, of some sort, to be included in future State of the River Reports. A copy of something along those lines that was provided to the committee by the Riverkeeper is also attached.

The AAA Working Group is proceeding with their work as well. They are beginning to form their recommendations which will be presented to the City Council for adoption or modification. Their work, originally expected to be concluded in July, will likely wrap up around October.

- ✓ Plans for the symposium are proceeding. The breakout session topics have all been finalized and are being publicized. Registration will open in July.



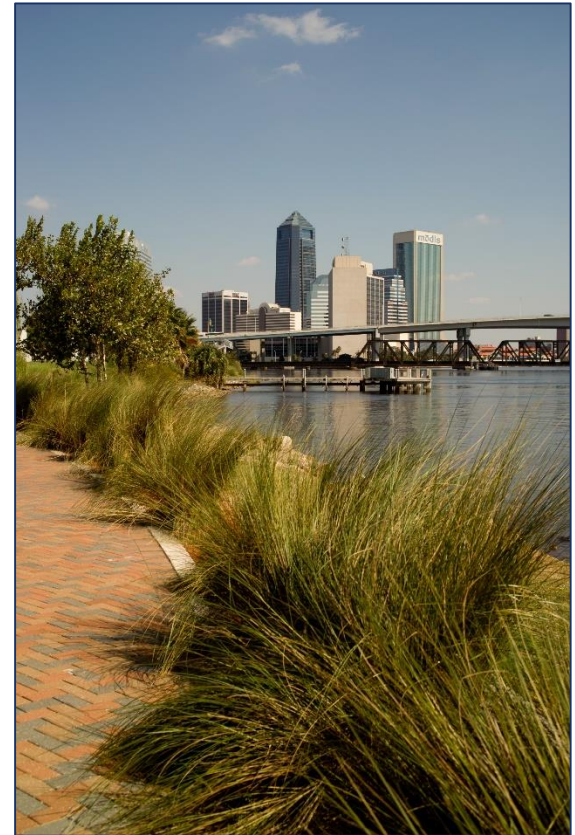
City of Jacksonville Storm Resiliency and Infrastructure Development Review Committee



June 2019

AGENDA

- Intent
- Process
- Presentation Highlights and Summaries
- Identified Challenges
- Committee's Response



INTENT

- Jacksonville Waterways Commission, August 2018
- “to evaluate drainage and flood control; tidal impacts and water levels in the St. Johns River; the effects of failing or deficient drainage infrastructure and improvements, the loss of wetlands and natural habitats; and development activities within the floodplain and to offer recommendations as to opportunities for maintenance and preservation of wetlands and floodplains and various drainage and stormwater system improvements, which would contribute to the resiliency of the St. Johns River and Northeast Florida.”

PROCESS

Schedule

- Bi-weekly meetings from February 15, 2019 – June 6, 2019
- Meetings held in the Sunshine



Membership

- Chair: Sam Mousa, Chief Administrative Officer
- Vice-chair: Lori Boyer, Council Member
- City of Jacksonville, Public Works Director - John Pappas
- City of Jacksonville - Jim Love, Council Member
- Federal Emergency Management Agency – Marc May
- JEA – Deryle Calhoun
- United States Navy – Eric Denfeld

HIGHLIGHTS

SEA LEVEL RISE CONCERNS IN NE FL, USACE

- Direct impacts of sea level rise and coastal storms on communities, businesses, and Mayport NAS
- Increase in flood risks due to flood frequency and drainage issues
- Impacts on water supply and storage related to saltwater intrusion and rising groundwater levels
- Impacts to natural systems



HIGHLIGHTS: RESILIENT FLORIDA COASTLINES, FDEP

- Looking at coastal resilience planning from the State perspective
 - Comprehensive Plans for coastal communities require a Coastal Management Element
 - Requirements within Florida Statutes: Peril of Flood and Adaptation Action Areas
- Florida Resilient Coastlines Program
 - Resources, funding, and coordination
- Living shorelines
 - Restoration techniques that use natural materials to stabilize shorelines and prevent erosion.



HIGHLIGHTS: JEA'S RESILIENCY PROGRAM

Goals

- Understand current & future severe weather & climate risks
- Identify JEA system vulnerabilities to identified risks
- Update design & construction standards
- Develop adaptation strategies
- Develop resiliency plan
- Benchmarking and using best practices from leading utilities

Activities

- Establish future extreme weather scenarios
- Perform vulnerability assessment & risk analysis of select JEA facilities
- Develop mitigation & adaptation strategies
- Perform economic cost-benefit analysis
- Prioritize strategies
- Update design & construction standards
- Develop resiliency plan and implementation roadmap

CHALLENGES

NEW DEVELOPMENT - INFRASTRUCTURE

- Extent of survey data on adjacent properties is insufficient to evaluate off-site impacts and contributions.
- Re-routing or by-passing of off-site flow around new development
- Timeframe for installation and completion of development's drainage system
- Quality and permeability of fill material
- Rear lot swales (vs. pipes) may hinder City access and may be exacerbated by the actions of subsequent lot owners
- Impact of eliminating the existing tree canopy
- Design standards for impervious surface area vs. lot coverage
- Timeframe of validity for a 10-set review
- Alternative to bulkheads

CHALLENGES EXISTING SYSTEMS - INFRASTRUCTURE

- Siltation and maintenance issues for existing stormwater facilities – older systems may not have permits (or cannot be located) and access may be restricted
- Outfall elevations and designs impacted by higher tide levels in River
- Bulkhead heights inadequate for storm surge and higher tidal impacts
- Long-term strategy for infrastructure resiliency and hardening



COMMITTEE RESPONSE DEVELOPMENT & INFRASTRUCTURE

- Ordinance 2019-331 amends Chapter 652, Floodplain Management Ordinance
 - Requires A-3 soil or permeability analysis for fill material
 - Adds definition for “floodway setback” - establishes 25 ft. setback adjacent to designated floodways
 - When BFE and floodway data is not available or deemed to not reasonably reflect flooding conditions, the BFE has been increased from one to two feet at the location of development
 - Responsibility for hearing and deciding on requests for appeals and requests for variances from Ch. 652 shifts from the Subdivision Standards Policy and Advisory Committee (SSPAC) to the Director of the Planning and Development Department
 - Requires that floodway setbacks be shown on preliminary subdivision plats
 - Adds floodway setbacks to the locations where no development shall be allowed, unless a floodway encroachment analysis demonstrates no increase in BFE
 - Adds new section that requires the finished floor elevation in special flood hazard areas to be two feet above the base flood elevation.

COMMITTEE RESPONSE

DEVELOPMENT & INFRASTRUCTURE

- Ordinance 2019-375 amends Chapter 656, Zoning Code, and Chapter 654, Code of Subdivision Regulations
 - Requires that all subdivisions be designed using Impervious Surface Ratios (ISR) – table added to Chapter 654
 - Requires ISRs in addition to maximum lot coverage within Chapter 656, per each Zoning District

<u>(b) All subdivisions shall be designed using the following impervious surface ratios:</u>	
<u>ZONING DISTRICT</u>	<u>IMPERVIOUS SURFACE RATIO</u>
<u>RR-Acre</u>	<u>30%</u>
<u>RLD-120</u>	<u>35%</u>
<u>RLD-100A</u>	<u>45%</u>

COMMITTEE RESPONSE DEVELOPMENT & INFRASTRUCTURE

- Updates/revisions to Land Development Procedures Manual through Subdivision Standards and Policy Advisory Committee (SSPAC)
 - Soil permeability on filled lots – Require A-3 Soil for fill or allow for a Pre vs Post analysis to ensure that the fill material will not adversely impact groundwater levels.
 - Maintenance of drainage plans – Plans submitted for review shall include a proposed “Maintenance of Drainage” (MOD) plan which identifies the site-specific method to maintain stormwater drainage patterns during the construction of a project.
 - Backyard drainage swales – All rear-lot drainage systems shall be included as a part of the ongoing development’s stormwater management certification requirements. A public access easement shall be recorded to allow City and/or State official’s access to the systems for inspection.
 - 6-month site development inspection – Once a project begins, a 6-month inspection report will be required. Formal inspection reports will be required to be submitted every 6-months until construction is complete.
 - Required topography to include 100 feet off site.

COMMITTEE RESPONSE INTERAGENCY COORDINATION

- The goal is to mitigate and resolve poor stormwater system performance that cause adverse impacts to citizens and the environment by improving current processes and looking for proactive solutions.
- Documents stormwater jurisdiction and processes
- Interagency database and GIS resource training (COJ, DEP, SJRWMD)
- Discuss long-term efforts for stormwater improvements
- Post-storm season interagency stormwater followup



COMMITTEE RESPONSE LONG-TERM STRATEGY

- RFP to be released to provide the City with professional services related to Master Stormwater Management Plan modeling and resiliency analysis and design implementation services.



- Identify specific critical infrastructure based on the updated MSMP
 - Stormwater
 - Roadways
 - Seawalls/Bulkheads
 - City Emergency Facilities
- Determine “critical” infrastructure improvements
- Prioritize Infrastructure Improvements
- Develop CIP (5yr – 10yr – 25yr – 50yr)



QUESTIONS

ST. JOHNS RIVER WETLANDS

Prepared for City of Jacksonville
Storm Resiliency Infrastructure Development Review Committee
June 2019



Wetlands in the St. Johns River watershed remove 79,873 MT of Nitrogen and 2,423 MT of Phosphorus each year from burial/accumulation in soil.¹ This figure represents removal total for ~ 1,537,737 acres of wetlands within our watershed and is specific to Nitrogen and Phosphorus removal only, and does NOT include the benefits of wetland functions such as flood control, biological productivity, and biodiversity in addition to their ability to retain nutrients. *The replacement cost for removing a similar amount of nitrogen by a wastewater treatment plant would cost between \$240 million and \$150 billion per year. For phosphorus, the cost is \$17 to \$497 million.*²

WETLAND LOSS IN THE LOWER ST. JOHNS

Development pressures that result in wetland loss and function indicate a WORSENING trend in total wetland acreage within the LSJRB.³ Data to show total wetland loss by county from 2000 to 2018 says that in Duval County, 6,246 total wetland acres have been lost, nearly double any other county in the St. Johns River Water Management District.⁴ Only 4,754 acres have been preserved, enhanced or created in the same time frame, fewer than many counties with similar acreage.⁵

NUTRIENT POLLUTION TRENDS

Trending for Total Nitrogen, Total Phosphorus, nitrate, ammonia and phosphate are UNSATISFACTORY.⁶ Elevated levels of nitrogen have been observed in several tributaries as well as specific locations in the mainstem of the LSJR, such as the Main St. Bridge. Downtown Jacksonville receives a substantial upstream contribution, city storm drainage inputs and power plant effluent, as well as many other nutrient inputs making it difficult to identify a predominant source.⁷ There are wide fluctuations in these and other nutrients loads. Hurricane activity has increased flooding into the LSJR over the past two years, which affects nutrient loading.⁸

WETLAND BENEFITS FOR NUTRIENT REDUCTION

The loss of wetlands in parts of the U.S. and Canada has resulted in an increase of 5 million to 150 million tons per year of sediment entering surface waters. The loss decreased the carbon sequestered by the wetlands by about 1 million to

Cumulative Wetland Impacts, Restoration, and Preservation
St. Johns River Water Management District
Report through December 31, 2018

County ¹	Wetlands Permanently Impacted (Acres) ²	Wetlands Created, Enhanced or Restored (Acres) ⁴	Wetlands Preserved (Acres) ⁵
Alachua	384	565	10,324
Baker	37	7	2,350
Bradford ²	0	0	0
Brevard	2,458	19,208	109,015
Clay	1,576	1,609	14,014
Duval	6,246	4,754	30,989
Flagler	851	861	8,719
Indian River	906	12,793	31,713
Lake	584	4,211	22,149
Marion	96	7,972	412
Nassau	650	1,155	6,319
Okeechobee ²	27	28	28
Orange	2,033	4,444	27,493
Osceola	59	57	212
Putnam	273	179	19,961
Seminole	1,021	375	31,403
St. Johns	2,824	2,875	40,247
Volusia	3,258	2,868	53,107
Grand Total	23,281	63,961	408,455

Net Wetland Restoration Gained Within the District	40,680
Total Wetland Restoration and Preservation Gained Within the District	449,135

- 1 Mitigation requirements, per rule, are based on regulatory drainage basins, not county boundaries; therefore, impact acreages in one county may be offset in another county, due to basin boundary limits crossing county boundaries.
- 2 SJRWMD District Boundary includes a very small area of Bradford and Okeechobee counties.
- 3 Data for wetland impacts is from October 2000 for ERP and from 1996 for FDOT Mitigation Program.
- 4 Data for wetlands created, enhanced or restored is from October 2000 for ERP, from 1996 for FDOT Mitigation Program and from 1992 for District restoration efforts.
- 5 Data for wetlands preserved is from October 2000 for ERP, from 1996 for FDOT Mitigation Program and from 1989 for District acquisition efforts.

Attachment: Cumulative Wetland Impacts Activities Table (Revision 1) (Annual Wetland Activities Report)

¹ Widney, S., Kanabrocki Klein, A., Ehman, J. et al. *The value of wetlands for water quality improvement: an example from the St. Johns River watershed, Florida*. Wetlands Ecology & Management (2018) 26: 265. <https://doi.org/10.1007/s11273-017-9569-4>

² Ibid

³ St. Johns River Report Card, Sec 4.9, Wetlands. 2018. www.sjrreport.com

⁴ SJRWMD, Governing Board Meeting Agenda, Staff Report, April 9, 2019

⁵ Ibid

⁶ St. Johns River Report Card, Sec. 2.3, Nutrients. 2018. www.sjrreport.com

⁷ Total Nitrogen (TN) status in the mainstem and the tributaries is unsatisfactory, but the TREND is improving. However, due to no new data being added for TN in 2017, the STATUS and TREND cannot be determined in the 2018 report. The STATUS of phosphorus in the mainstem is satisfactory, and the TREND is unchanged in the freshwater portion of the LSJR and improving in the marine/estuarine areas of the LSJR. The STATUS of phosphorus in the tributaries is unsatisfactory, and the TREND in the tributaries is unchanged. St. Johns River Report Card, Sec. 2.3, Nutrients. 2018. www.sjrreport.com

⁸ St. Johns River Report Card, 2018. www.sjrreport.com

14 million tons per year. Ten percent phosphorus retention was realized with up to 70% retention in wetlands during summer storm events.⁹

While the amount of nitrogen and phosphorus removed by wetlands can be measured and quantified, it is difficult to estimate the economic value of nutrient removal. Nutrient overload, or eutrophication, from too much nitrogen and phosphorus is one of the most serious water quality problems facing the St. Johns River and its tributaries. Excessive nutrients can cause Harmful Algae Blooms (HABs) that threaten the health of wildlife, pets, and people.

Studies that have attempted to calculate sediment and nutrient loading in waterways where wetlands have been lost show increases by 251% (N), 260% (P), and 890% (sediment). The same study also modelled loading when wetlands had been restored. Unfortunately, productivity decreased by 34.5%, 28.3%, and 37.0% respectively. *Modelling results also show that as riparian wetland loss increases, the corresponding environmental degradation worsens at accelerated rates. In contrast, as riparian wetland restoration increases, the environmental benefits improve, but at decelerated rates.*¹⁰

WETLAND BENEFITS FOR FLOOD RISK REDUCTION

Wetlands and coastal ecosystems reduce inland flooding during storm surge events by creating resistance to the flow of water and storage capacity. In addition, a study looking at the aftermath of Hurricane Sandy along properties protected by wetlands vs. those exposed showed:

- Wetlands are estimated to reduce flood damages between 20-30%.¹¹
- Wetlands reduced flood heights across 1,242 miles of highways and roads by 2.36 in., on average.¹²
- Properties behind a marsh, on average, save 16% in flood losses every year compared to properties where marshes have been lost.¹³

ADDITIONAL WETLAND BENEFITS

- Wetlands absorb and sequester carbon. Drainage and degradation of coastal wetlands emit significant amounts of carbon dioxide directly to the atmosphere.¹⁴
- Wetlands sequester and remove nitrogen and phosphorus through plant uptake and burial in soil organic matter. Phosphorus is removed by wetlands through geochemical adsorption, precipitation and sedimentation.
- Wetlands and submerged aquatic vegetation serve as fish nurseries, create habitat for blue crab, mussels, plankton, and serve as the foraging grounds for manatee.

NEXT STEPS

Preventing impacts to wetlands is critical in order to protect against rising waters and future storms. It is also an important component of water quality and pollution prevention. This committee should:

- Reduce the impact to wetlands by enacting stronger buffer requirements, like those in St. Johns or Alachua County (see Wetland Buffers presentation, Steve Swann, pgs. 7-8 from SIRDRC, May 24, 2019).
- Recommend that the Jacksonville Environmental Protection Board request the St. Johns River Report Card authors to include a quantitative analysis on wetland loss and water quality impacts in Duval County for the Lower St. Johns River and its tributaries.
- Prioritize preservation, creation, enhancement, and restoration of wetlands as mitigation for wetland loss as close to the wetland impact as possible.

⁹ St. Johns River Report Card, Sec. 2.3, Nutrients. 2018. www.sjrreport.com

¹⁰ Yang W., Liu Y., Ou C., Gabor S. *Examining water quality effects of riparian wetland loss and restoration scenarios in a southern ontario watershed.* J Environ Manage (2016) 174:26-34.

¹¹ Narayan, S., et. al. *The Value of Coastal Wetlands for Flood Damage Reduction in the Northeastern USA.* Scientific Reports (2017) <https://doi.org/10.1038/s41598-017-09269-z>

¹² Ibid

¹³ Ibid

¹⁴ <https://www.iucn.org/content/degraded-coastal-wetlands-contribute-climate-change>