Wetland Buffers

Storm Resiliency & Infrastructure Development Review Committee

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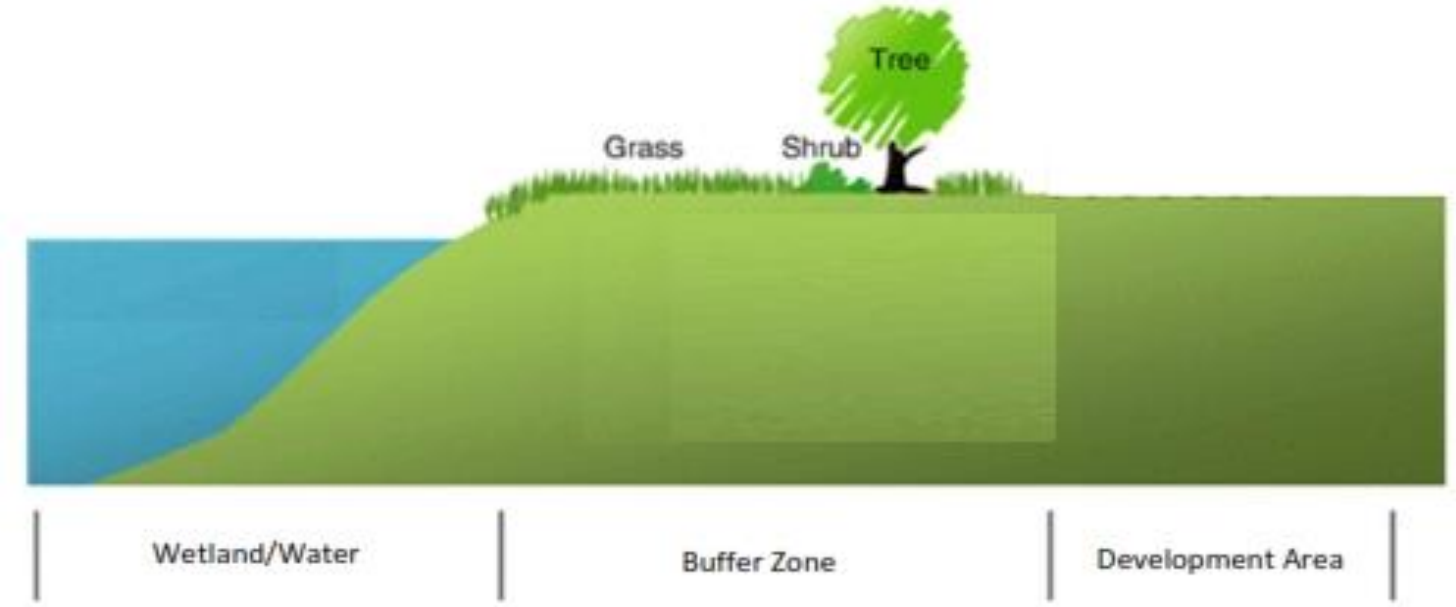
Jacksonville Waterways Commission

May 24, 2019

Wetland Buffer



Wetland Buffer - Basics

- Buffers Generally Applied to:
  - Riverine Wetlands
  - Isolated Wetlands
  - Waterfront areas
- Located in critical transition areas between uplands and wetlands
- Typical Width:
  - In Florida, generally 25’ – 50’ width
  - >50’ depending on jurisdiction and sensitivity of wetland/waterbody
  - Smaller buffer is generally allowed if average width meets code
- Typical Code Requirements:
  - Maintained in Natural Condition
  - Limited Clearing of vegetation usually allowed
  - Minimal Improvements allowed to access to water/dock
  - No turf or fertilizer application
  - If buffer precludes all economically viable, alteration may be allowed

Examples of Buffers

Examples of Buffers

Primary Benefits of Wetland Buffers

- Physical protection from waves
- Erosion control
- Buffer for floodwaters
- Ecological function
- Ground water
- Water quality

Alachua County Wetland Protection Ordinance

- Implemented over primarily concerns regarding reduction in water quality and loss of habitat
- "No development activity shall occur in, on or over a surface water or wetland area or buffer… …sustain wetland structure and function equivalent to predevelopment levels."
- Development activities include "dredging, filling, excavation, construction of new structures, expansion of existing structures, installation of utilities, roads, personal wireless service facilities, stormwater management systems, septic tanks, bulkheading, land clearing…"
- Buffer Requirements:

Protected Resource	Buffer Distance (feet)*
Surface waters and wetlands less than or equal to 0.5 acre that do not include Outstanding Florida Waters or listed animal species as described elsewhere in this table.	50 average, 35 minimum
Surface waters and wetlands greater than 0.5 acre that do not include Outstanding Florida Waters or listed animal species as described elsewhere in this table.	75 average, 50 minimum
Areas where federally and/or state regulated vertebrate wetland/aquatic dependent animal species have been documented within 300 feet of a surface water or wetland.	100 average, 75 minimum
Outstanding Florida Waters (OFW)	150 average, 100 minimum

- The buffer shall retain the existing undisturbed vegetation.
- If the buffer precludes all economically viable use of a particular property, development activities may be allowed in the buffer

St. Johns County Buffer Requirements

- Tidal Waters
  - 50’ width
  - Averaging of widths are allowed w/ 25’ min. width
- Non-Tidal Waters
  - 25’ width
  - Averaging of widths are allowed w/ 10’ min. width
- Must be maintained in natural vegetated condition
- Generally, 25’ Setback Required from the buffer for development
- Buffers not required for existing platted lots if vesting has been determined or variance obtained
- Where the Buffer will be comprised of fill material with permits by state and federal agencies, the area shall be reestablished as a Buffer
- Buffer waived to Lots where a bulkhead, revetment or rip-rap is used for stabilization prior to ordinance amendment and constructed pursuant to a state/federal permit

State & Federal Buffer Requirements

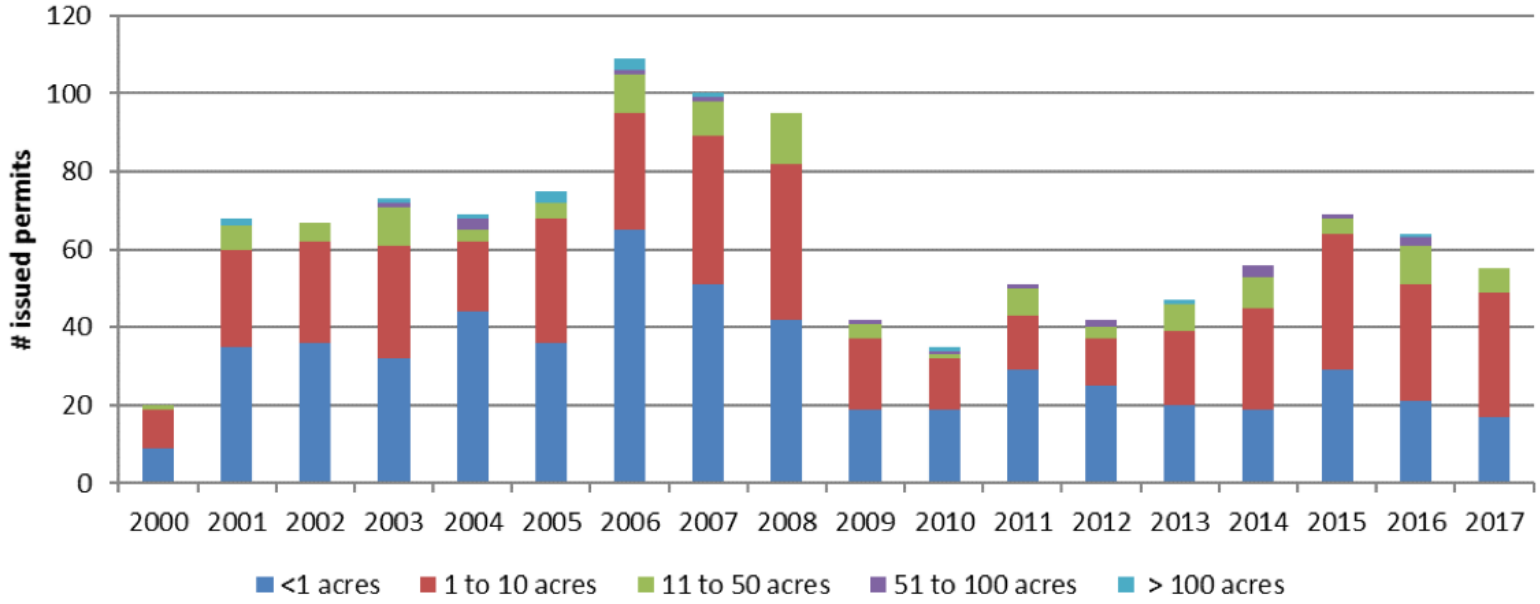
- Dredge & Fill permits require buffers to mitigate for secondary impacts – Avg. of 25', Min. of 15')
- Secondary impacts include impacts to water quality, habitat, etc. of wetland areas not directly impacted
- No direct wetland impacts & No Permit = No Buffer
- Development project w/ no direct wetland impacts but requiring a stormwater permit – if 25' Buffer is provided, secondary impacts are not assessed

COJ Buffer Requirements

- Comp Plan - Conservation/Coastal Management Element, Sec 4.1.9
  - 15’ Min. buffer between Category I (salt marsh) & Category II (Riverine/Estuarine)
  - Does not require that buffer be left in natural state
- Comp Plan - Conservation/Coastal Management Element, Sec 4.1.3
  - Requires No Net Loss to the Wetland Function including:
    - Habitat
    - Diversity of Wildlife
    - Food Sources for Wildlife
    - Water Quality
    - Flood Storage & Conveyance
- Comp Plan speaks to value of Wetland Buffers with respect to:
  - Water Quality
  - Flood Protection
  - Ecological Protection
- No specific requirement in current code or development manual
- Closest thing to buffers are in fertilizer ordinance Sec. 366
  - BMPs required
  - Commercial Applicators - Record-Keeping Requirement & Duty to Education Customers
  - No fertilizer application within 10’ of a surface water or wetland
  - Low Maintenance Zone – min. of 6’ from surface water or wetland

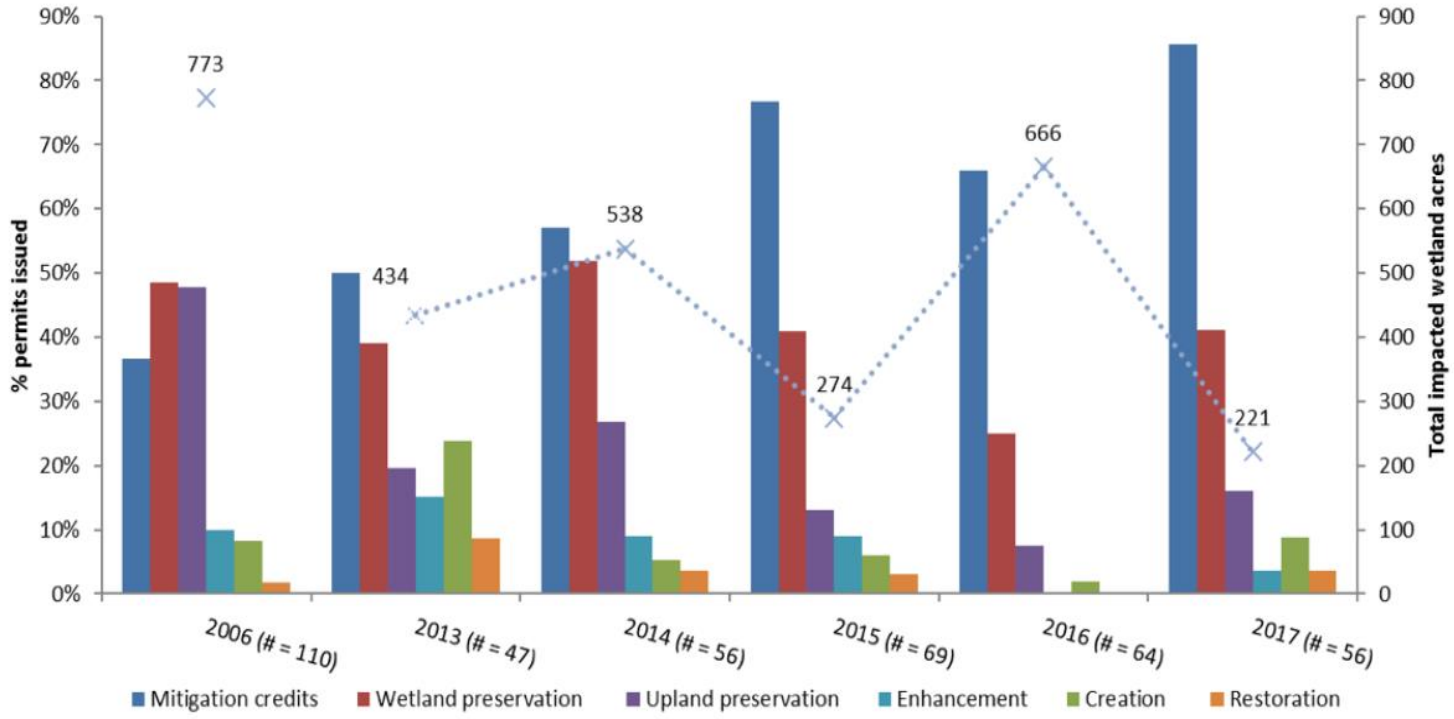
Lower SJR Wetland Impacts

*Number of SJRWMD permits per project impacted wetland acreage from 2000 to 2017 (**SJRWMD 2017**).*



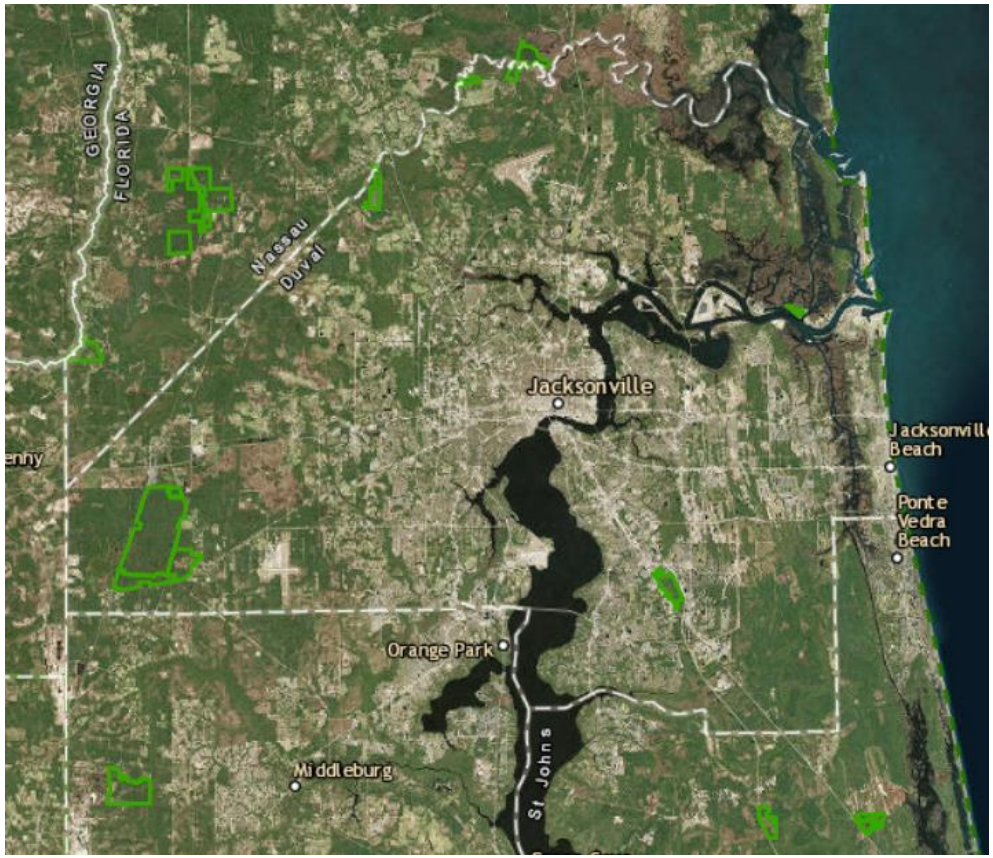
2018 State of the River Report

Wetland Mitigation Trends



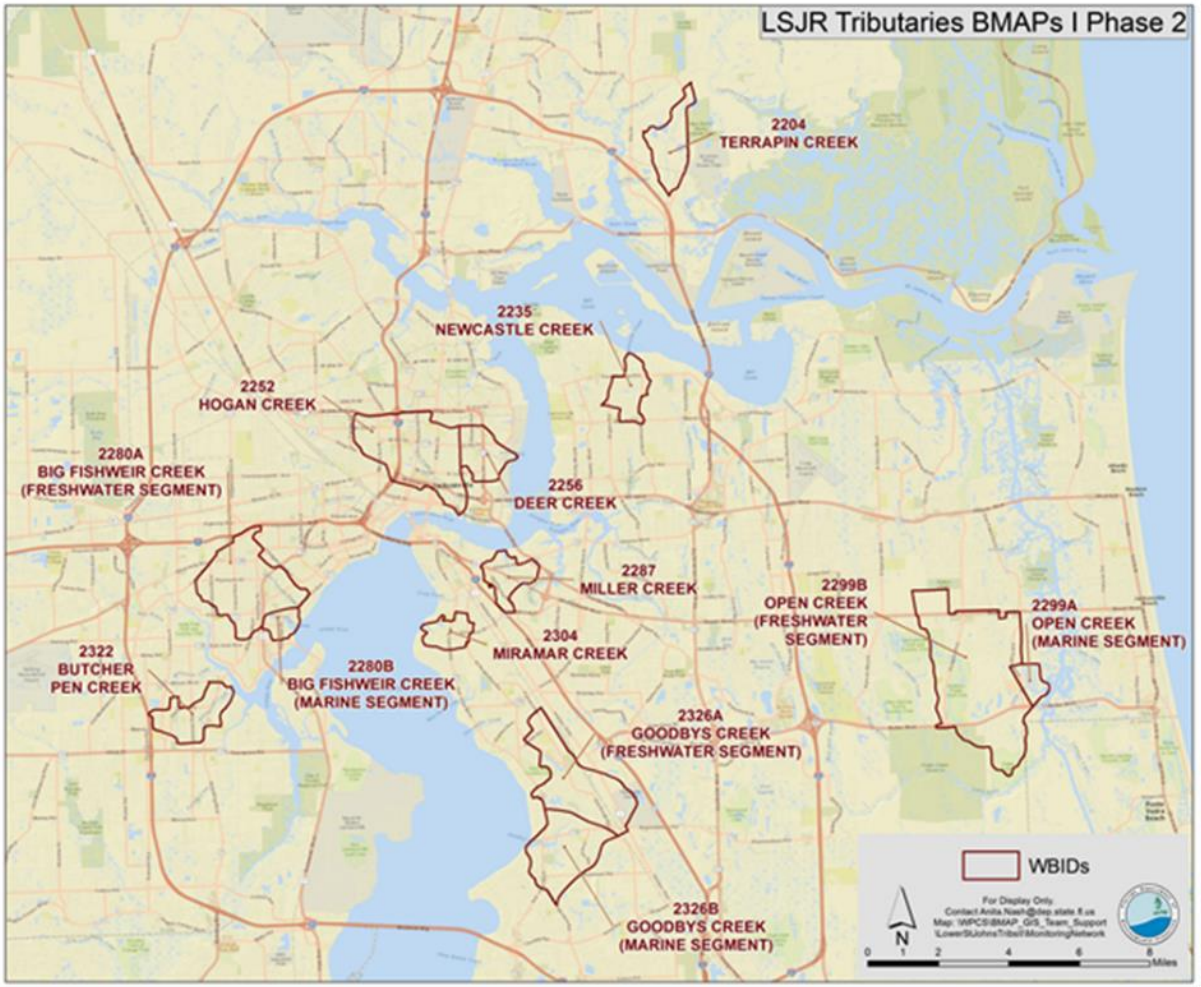
2018 State of the River Report

Wetland Mitigation Banks



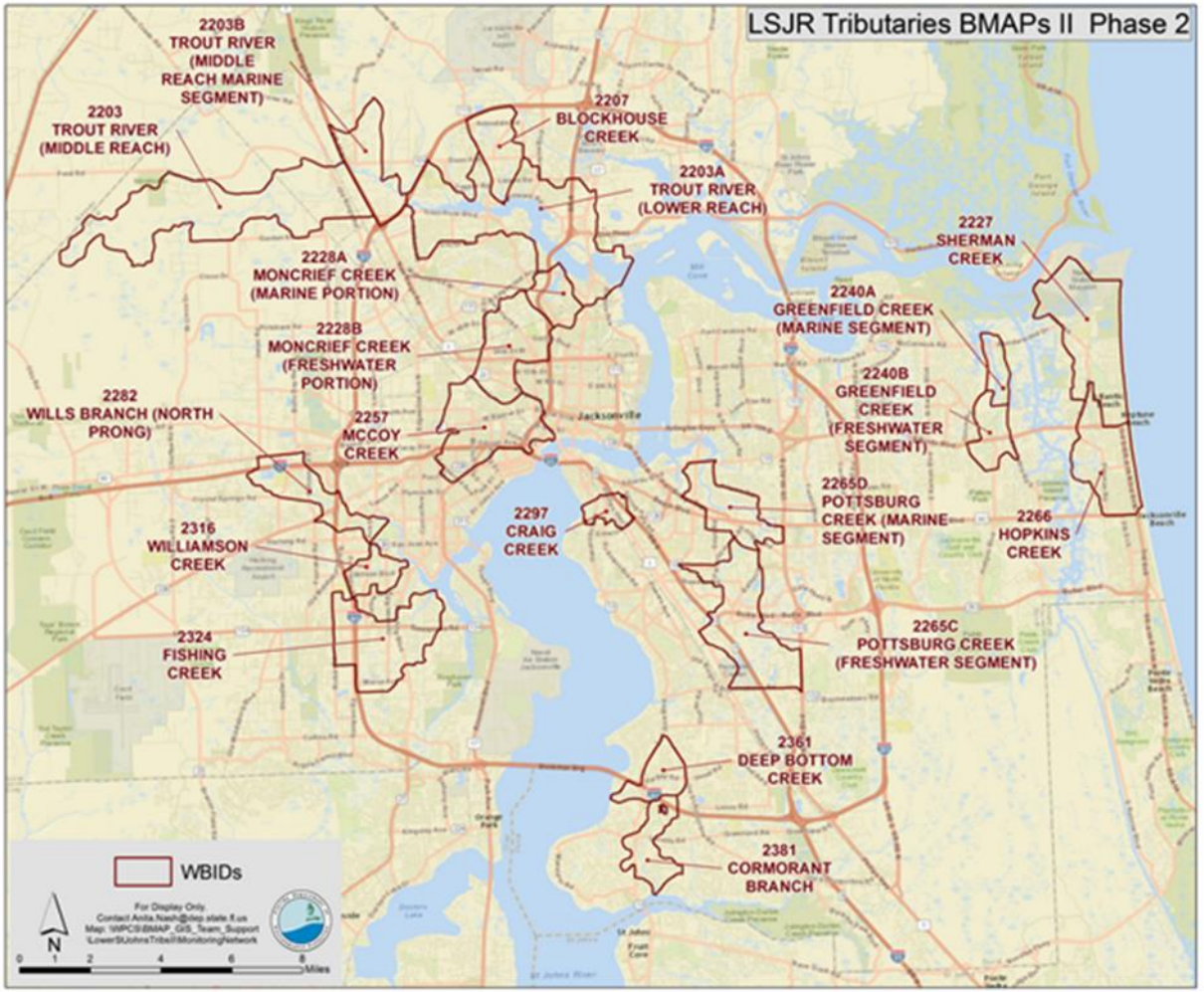
- Loss of local wetland habitat and ecological function
- No local water quality benefits (somewhat offset by buffers)

Tributary Water Quality



Top 10 Impaired Tributaries – Fecal Indicator Bacteria

Tributary Water Quality



Next 15 Impaired Tributaries – Fecal Indicator Bacteria

Tributary Water Quality Trends
Fecal Indicator Bacteria

- Latest Basin Management Action Plan Report Data

↑	12	Continuous Improvement
–	4	No Change
–	5	Slight Decrease
↓	4	Moderate Decrease
↓	2	Significant Decrease
↓	4	Continuous Decrease

- Number of impaired tributaries not substantially improving despite years of efforts by multiple agencies
- Out of watershed mitigation does not provide local Water Quality benefits

Water Quality Benefits of Buffers

- Local buffer requirements are prevalent in Florida to provide water quality and habitat protection
- EPA, SWFWMD, UF and others conclude buffers can:
  - Substantially Decrease in N & P in runoff & ground water
  - Reduce soil erosion and sedimentation
  - Remove Fecal Coliforms & E. Coli (40% - 70% reduction)
- Consensus is that buffers have a significant impact with respect to water quality

Discussion

- Not all Development projects currently require Buffers
- Tributary WQ not substantially improving
- Local Buffer Options:
  - Adopt SJRWMD minimum – 25' Average
  - 50' buffer in Cat I Wetlands & 25' in Cat II Wetlands
  - Larger buffers for impaired waters
- Enforce existing "Low Maintenance Zones"
- Where does the buffer go when there is a permit to fill wetlands?