

The background is a solid green color with several large, stylized, overlapping leaf shapes in a lighter shade of green. The leaves are arranged in a fan-like pattern, pointing towards the right side of the frame.

DEPARTMENT OF THE **ENVIRONMENT**

OVERVIEW

Origin

- Stormwater credits – planting v. preservation (2016)
- Flood complaints and forest retention (2019)

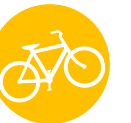
Three questions

- What are our strategies for planting and conserving trees?
- What are the outcomes?
- Considering the impact of climate change, do we need to change strategies?



CAVEATS

- I am not a forest professional.
- I drive a Prius, not a Forester.



THE STORMWATER QUESTION...

- Prince George's County is obliged to restore 6,105 acres of impervious surface pursuant to its NPDES MS4 permit
- Trees filter nutrients from polluted stormwater runoff
- Plant 100 trees, 50% at 4.5 feet off the ground, anywhere, in return for one-acre credit to meet
 - ✓ Where to plant (private or public land), costs and staff resources

OR, instead

- Reduce the number of trees uprooted by development? In 2016, 51,000 trees scheduled for removal, assuming 100 trees/acre.



TREE PROGRAMS

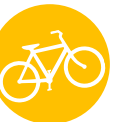
What, how and why, and with what outcomes?

Programs

- ✓ Tree ReLEAF
- ✓ Arbor Day Every Day
- ✓ Right Tree Right Place

Laws

Forest Conservation Act



TREE PLANTING PROGRAMS



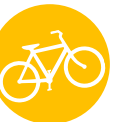
TREE PLANTINGS - TOTAL

| Year | Tree ReLEAF | Arbor Day Every Day | Total |
|------|-------------|---------------------|-------|
| 2018 | 250 | 120 | 370 |
| 2017 | 137 | 123 | 260 |
| 2016 | 323 | 400 | 723 |



TREE PLANTING - RIGHT TREE, RIGHT PLACE

- Replace hazardous street trees (Bradford Pear) or other inappropriate species
- Increase urban tree canopy, improving the air temperature and quality, mitigating storm water runoff, and increasing communities' beauty
- Since 2011, the RTRP Program has worked with 170 communities and has removed 12,000 trees and has planted 33,600 trees – a net increase of **3,000 trees/year**



FOREST CONSERVATION ACT

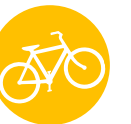
The 1991 Maryland Forest Conservation Act (FCA) does **NOT** achieve “no net loss of forests.” FCA slows the rate of forest loss through:

- Retention
- Afforestation/reforestation
- Off-site planting
- Mitigation banking
- Credits
- New plantings in banks
- Fee-in-lieu



FOREST CONSERVATION ACT

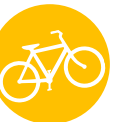
- In 2004, a DNR study found that since its inception in 1991, FCA had resulted in the retention of 79,174 acres, planting of 13,611 acres, and the clearing of 42,906 acres of forest land – slowing the rate of forest loss by 54%.
- In 2013, the Maryland General Assembly stated that it is policy of the State to achieve “no net loss of forest,” meaning 40% of all land in Maryland is covered by tree “canopy.”
- Prince George’s County has 52% tree canopy.



FOREST CONSERVATION ACT

FCA does **NOT** *require* protection of any natural resource; instead, it lists priorities for reasonable accommodation:

- “Trees, shrubs, plants, and specific areas shall be considered priority for retention and protection . . . unless . . . reasonable efforts have been made to protect them and the plan cannot reasonably be altered: . . .
- Examples: “trees, shrubs, and plants located in sensitive areas including 100-year floodplains, intermittent and perennial streams and their buffers, coastal bays and their buffers. . . “
- In Prince George’s County, the program is Woodland Conservation.



FOREST CONSERVATION ACT

Prince George's County Woodland Conservation Requirements for Type 2 Plans. (Some Plans may have been partly implemented).

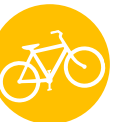
| Year | Acres to Be Cleared | Acres to Be Planted | Net Acres to Be Cleared | Floodplain Acres to Be Cleared |
|-------|---------------------|---------------------|-------------------------|--------------------------------|
| 2018 | 919.25 | 142.50 | 776.75 | 17.79 |
| 2017 | 1626.31 | 293.79 | 1383.52 | 19.81 |
| 2016 | 727.45 | 211.26 | 516.19 | 16.09 |
| Total | | | 2676.46 | 53.69 |



STRATEGIES

Over the past three years:

- Approximately 10,353 or 35 acres of trees planted through County programs
- Approvals granted for net removal of 267,600 or 2,676 acres of trees for development, assuming Plans executed as approved (part of this work may have already been done)
 - ✓ Includes removal of 53.69 acres of trees in the floodplain
- **Does the impact of climate change require another strategy?**



CONSIDER **CLIMATE** CHANGE

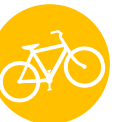
The impact of severe, torrential storms

Department of the Environment Sustainability Division

- Engineering Services
 - ✓ Addresses residential drainage and flood complaints

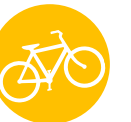
Department of Public Works

- Highway Division
 - ✓ Addresses roadway drainage and flood complaints



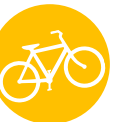
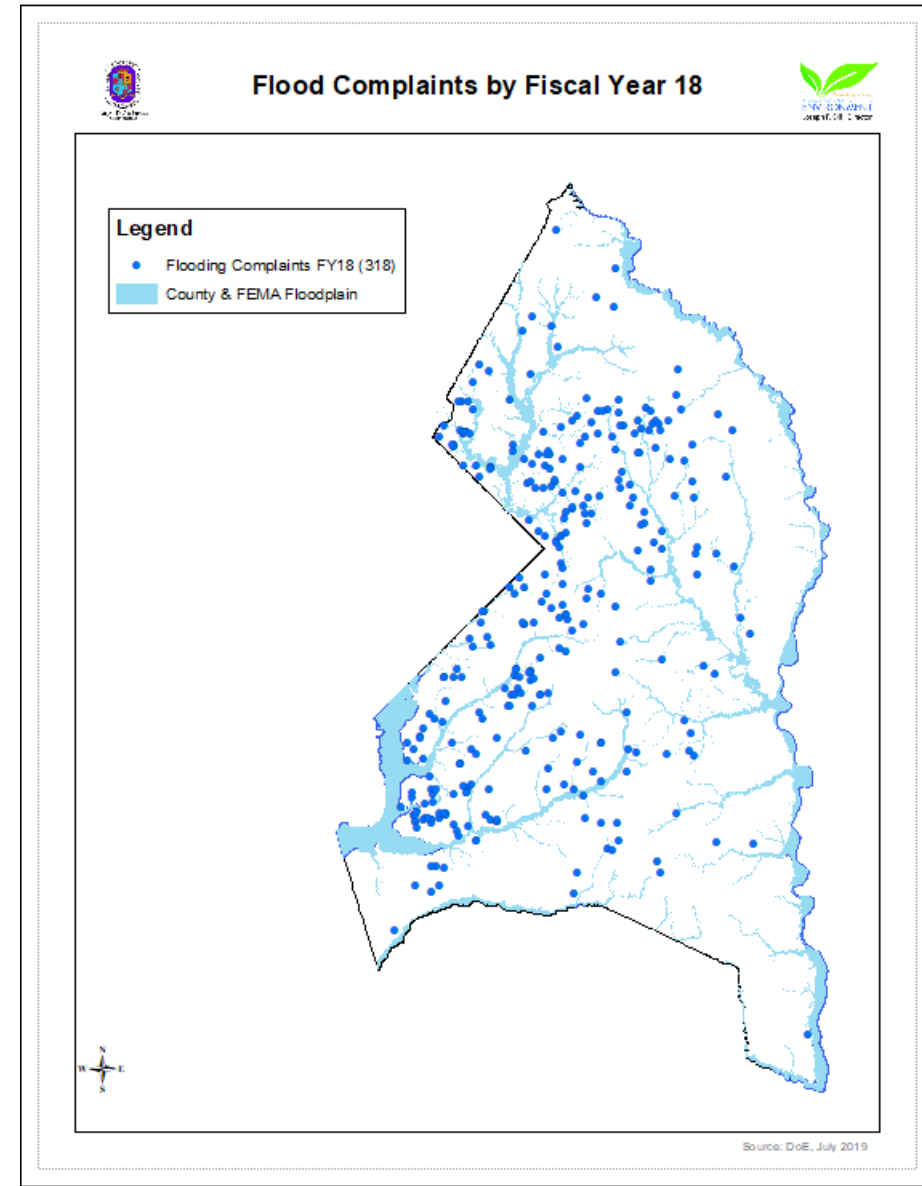
FLOOD AND DRAINAGE COMPLAINTS

| Type of Complaint | FY 18 | FY 19 | Grand Total |
|--|------------|-------------|-------------|
| Flooding (Yard/Private Property) | 159 | 540 | 699 |
| Flooding and Drainage Issues (Public Right-of-Way) | 159 | 480 | 639 |
| Grand Total | 318 | 1020 | 1338 |



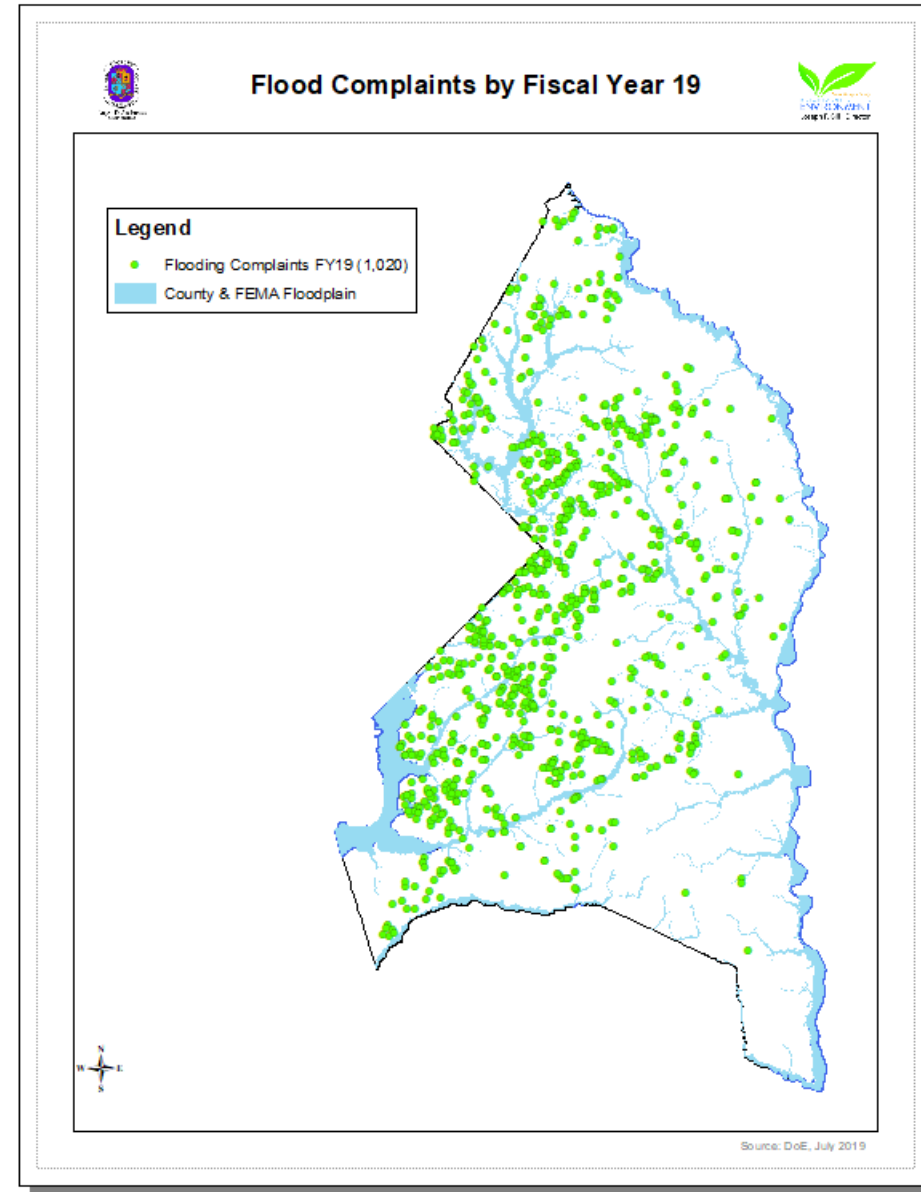
COUNTY FLOOD COMPLAINTS - FISCAL YEAR 2018

318 countywide



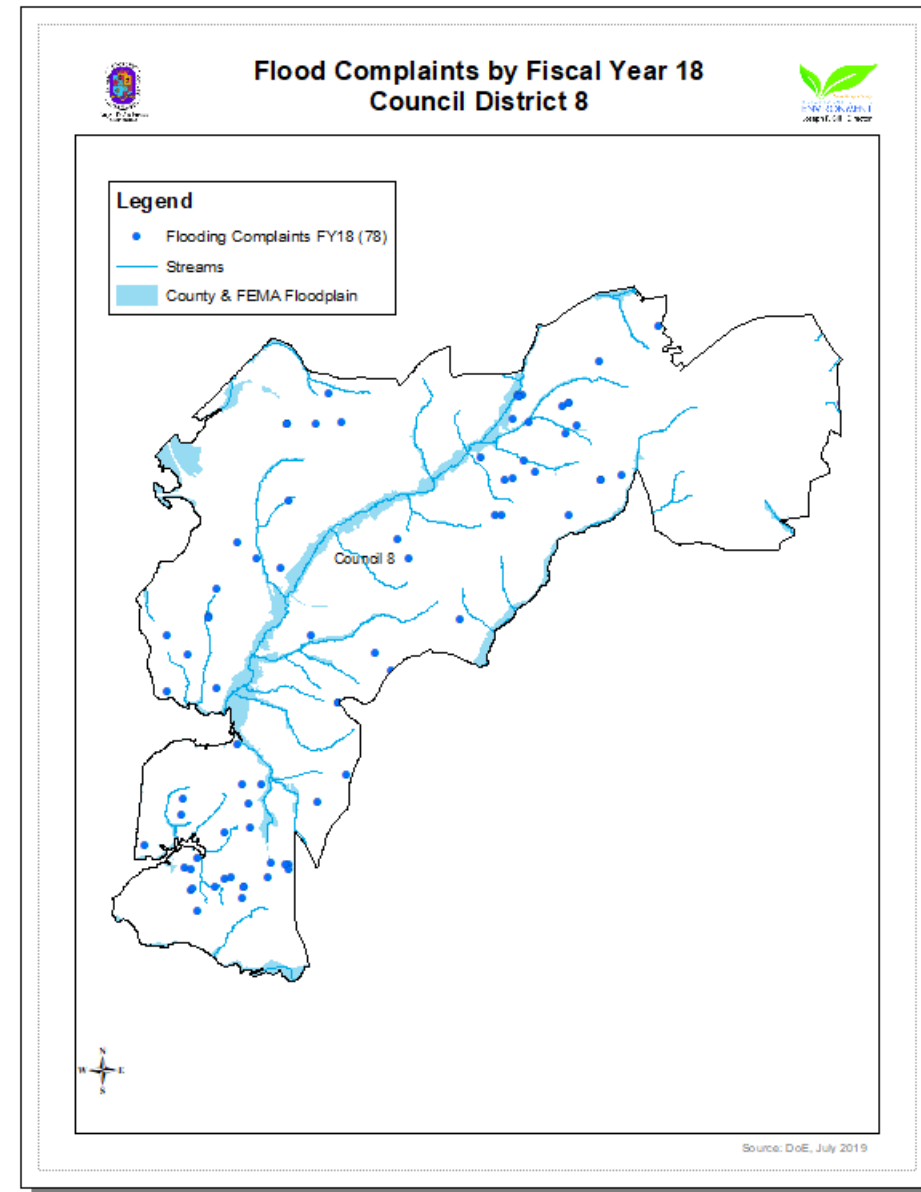
COUNTY FLOOD COMPLAINTS - FISCAL YEAR 2019

1020 countywide



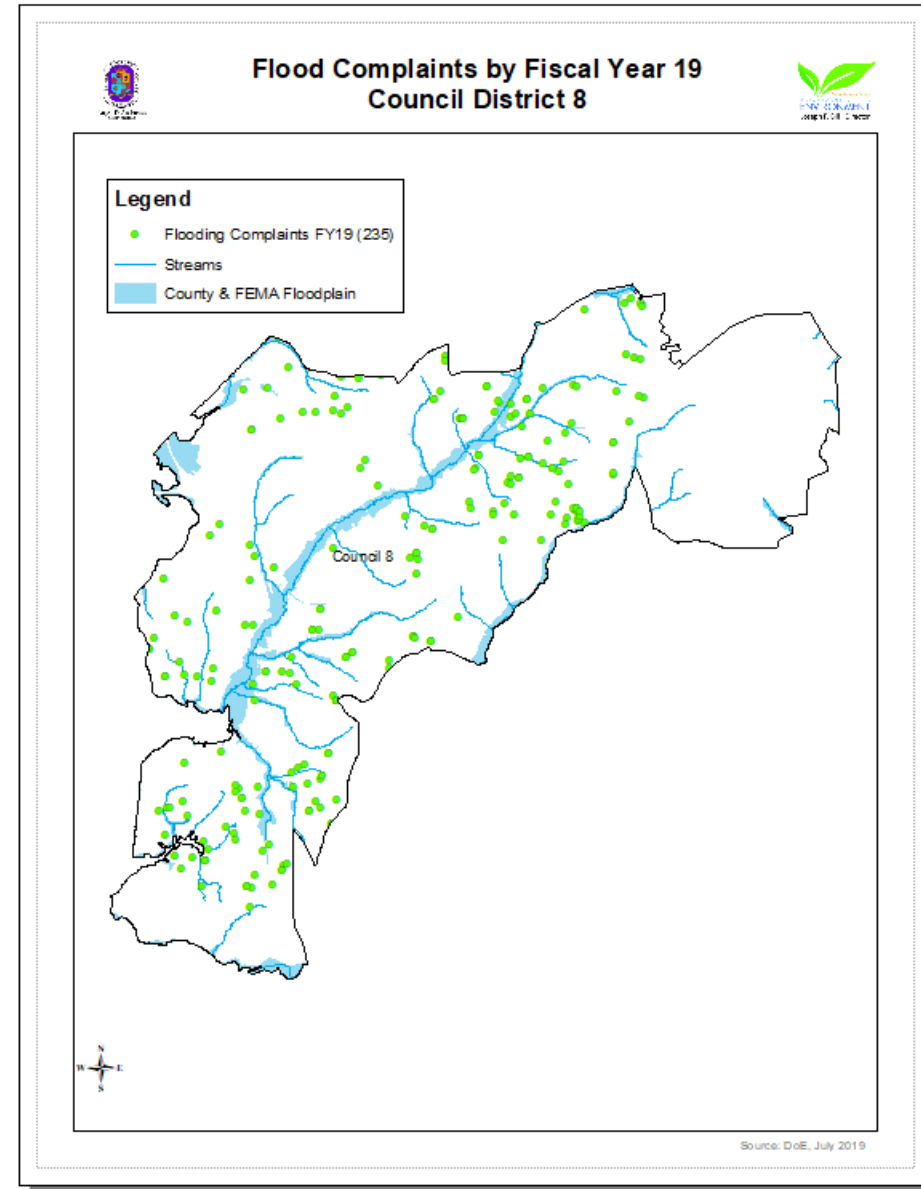
DISTRICT 8 FLOOD COMPLAINTS BY FISCAL YEAR 2018

78



DISTRICT 8 FLOOD COMPLAINTS BY FISCAL YEAR 2019

235



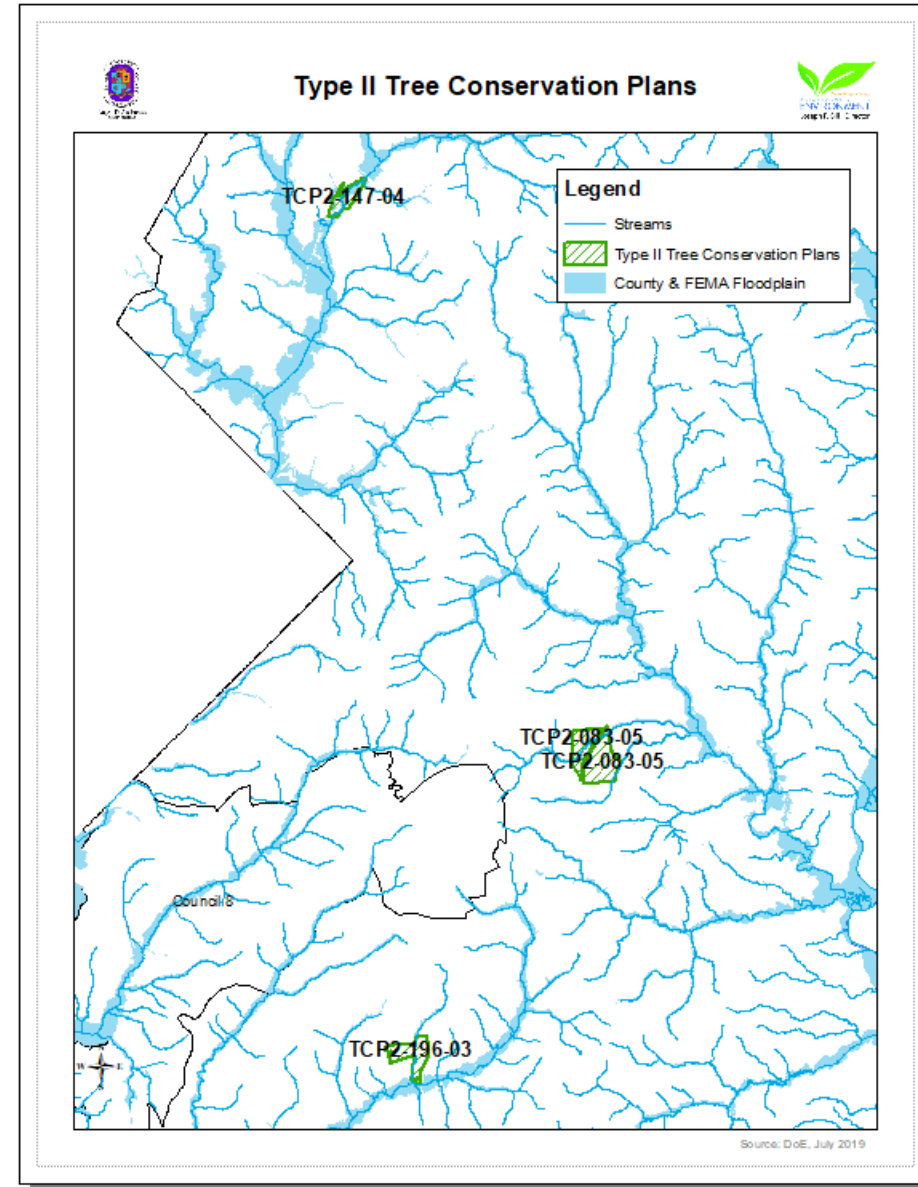
“The Odds of a Major Flood in Washington, D.C. Will Quadruple by 2050”

- Extreme rainfalls are becoming more frequent as global temperatures rise.
- On July 8, 2019, nearly four inches of rain—a month's worth—fell in just one hour on the immediate area surrounding Washington, D.C.
- D.C. Area Rainfall in 2017 = 35.6 inches; in 2018 = 66.28 inches
- With climate change in effect, a one-in-100-year storm in D.C. is expected to become a one-in-25-year event by mid-century—four times more likely.
- As development continues



TYPE II TREE CONSERVATION PLANS

3 future
development
projects, randomly
selected

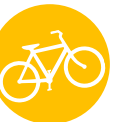
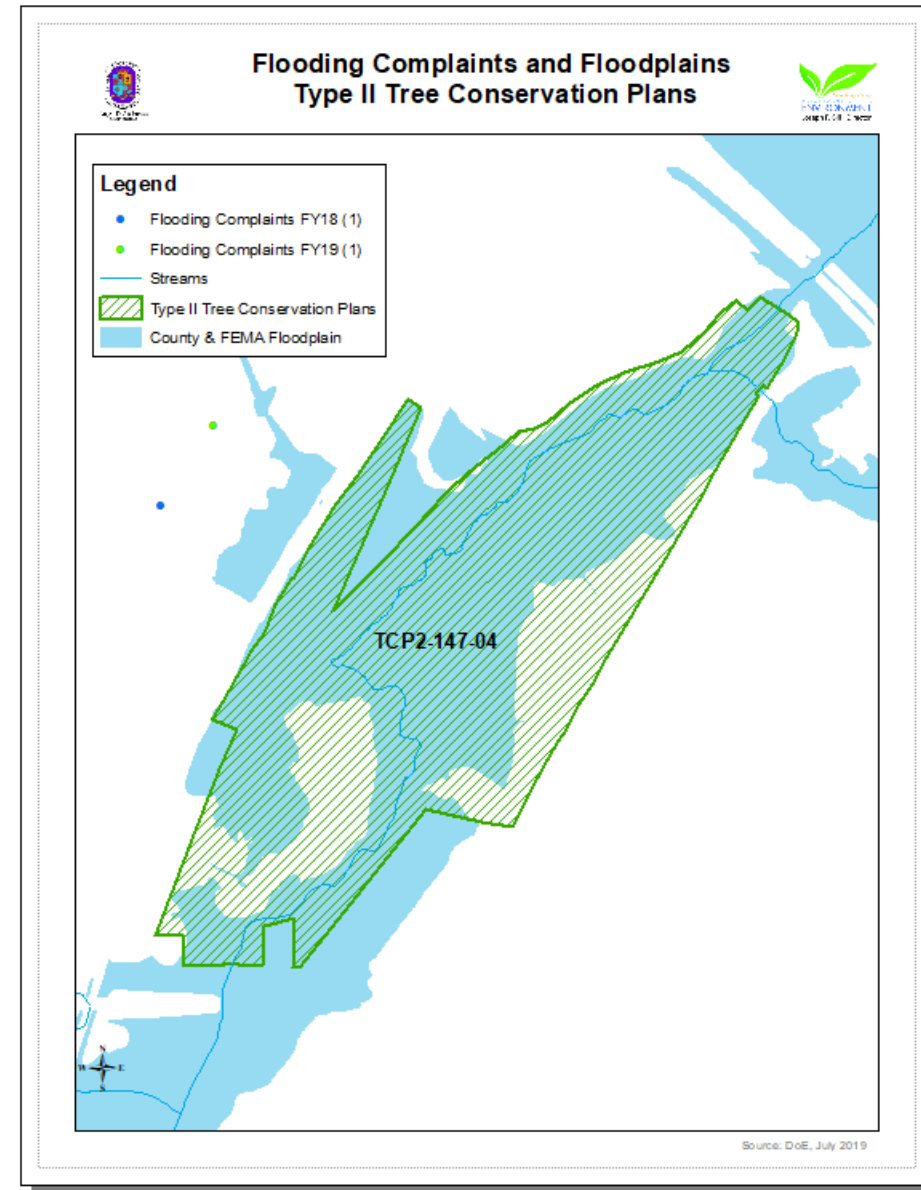


TYPE II TREE CONSERVATION PLANS

3.02 acres planned to be
removed from the floodplain

Greenbelt Station, Phase III, in
north county

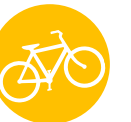
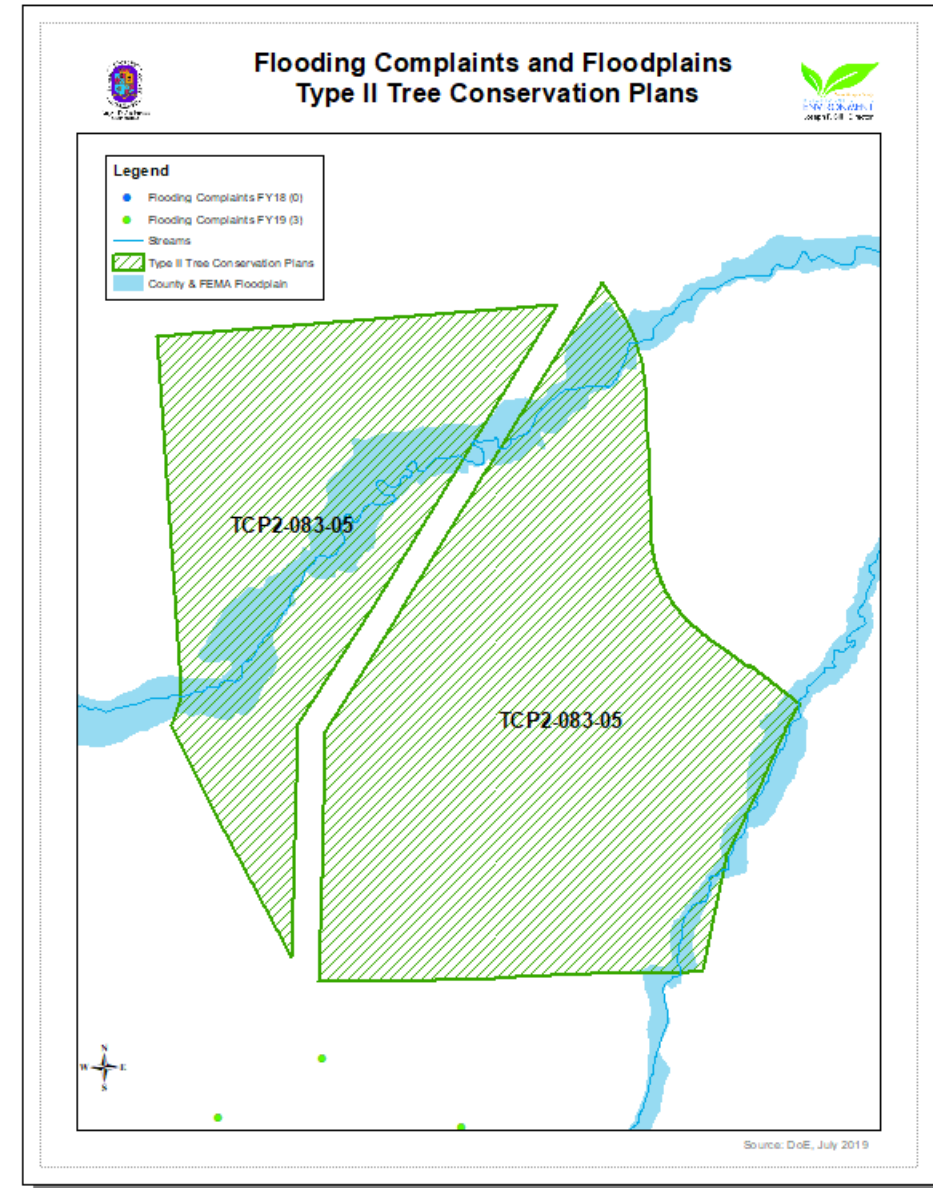
Development v. redevelopment



TYPE II TREE CONSERVATION PLANS

5.17 Acres planned to be
removed from the floodplain

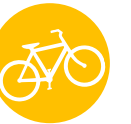
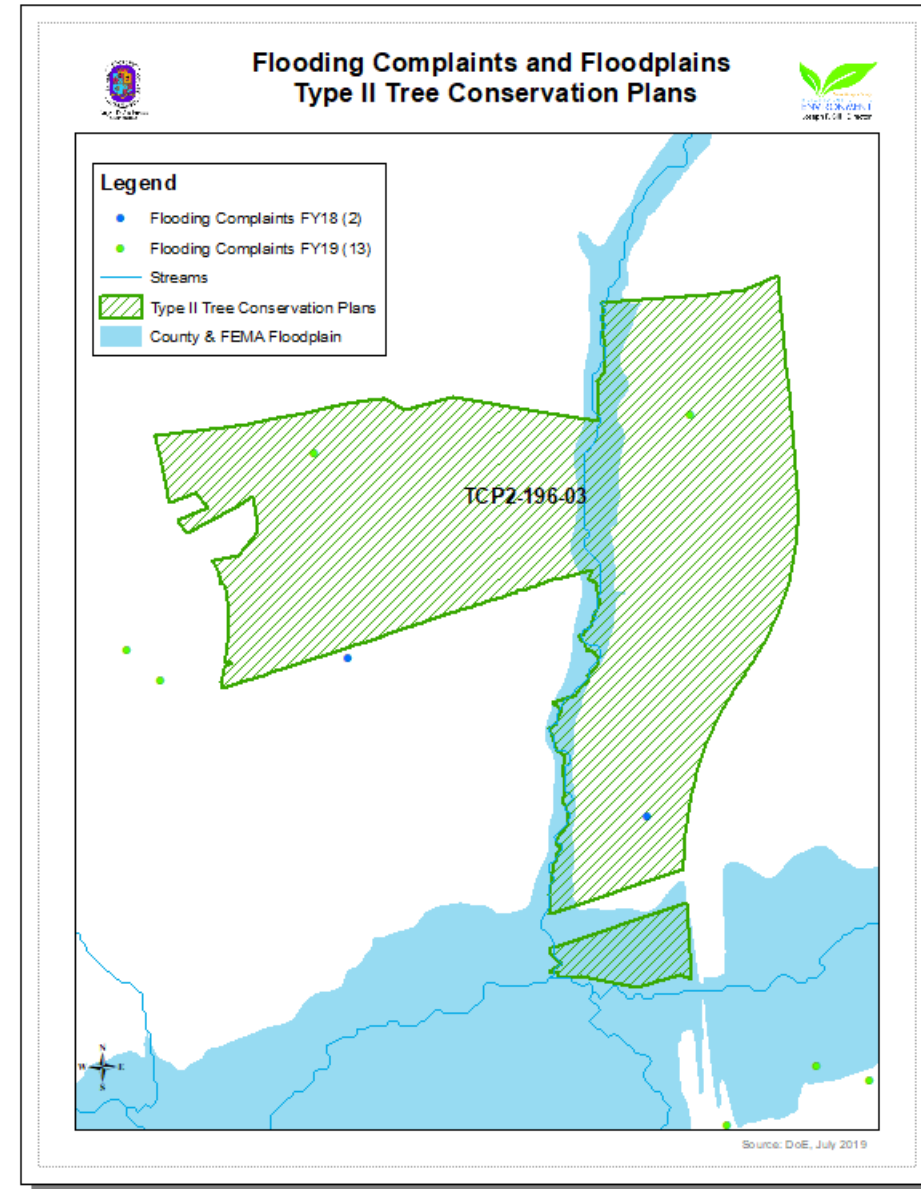
Marlboro Ridge, Phase V, in
central county



TYPE II TREE CONSERVATION PLANS

1.07 acres to be removed
from the floodplain

Timber Ridge in south county



QUESTIONS

- Are trees and forests helpful in mitigating flood impacts?
- Is flood protection part of forest conservation? Should it be? If so, how?
- Require additional forest retention for future development to offset the impact of increased rainfall and intense storm events?
- Prohibit removal of trees in the floodplain for new development? For redevelopment?
- MS4 permit restoration – should it credit forest retention? How?

