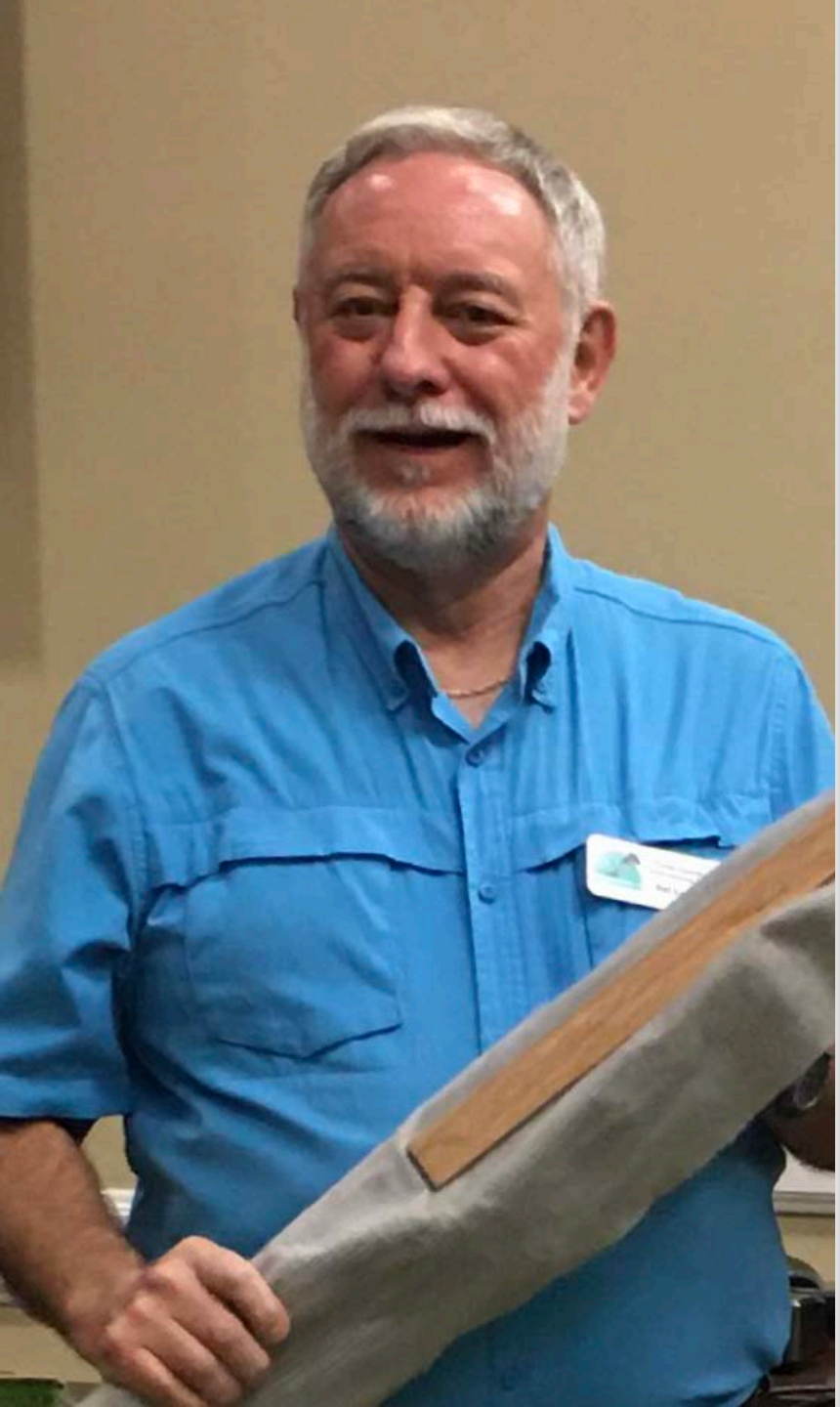


THE IMPORTANCE OF STORMWATER EDUCATION IN FLORIDA

PRESENTED BY HAL LUNSFORD

LUNSFORD ENVIRONMENTAL, LLC

AND THE NORTH WEST FLORIDA STATE COLLEGE, CONSTRUCTON TRADES PROGRAM, LOCATED AT DEFUNIAK SPRINGS CAMPUS, FLORIDA, AND THE INTERNATIONAL EROSION CONTROL ASSOCIATION (IECA)

DATE: OCTOBER 16, 2020

"DEDICATED TO THE FUTURE OF STORM WATER EDUCATION THROUGHOUT FLORIDA AND THE WORLD." HAL LUNSFORD

WHAT IS STORM WATER?

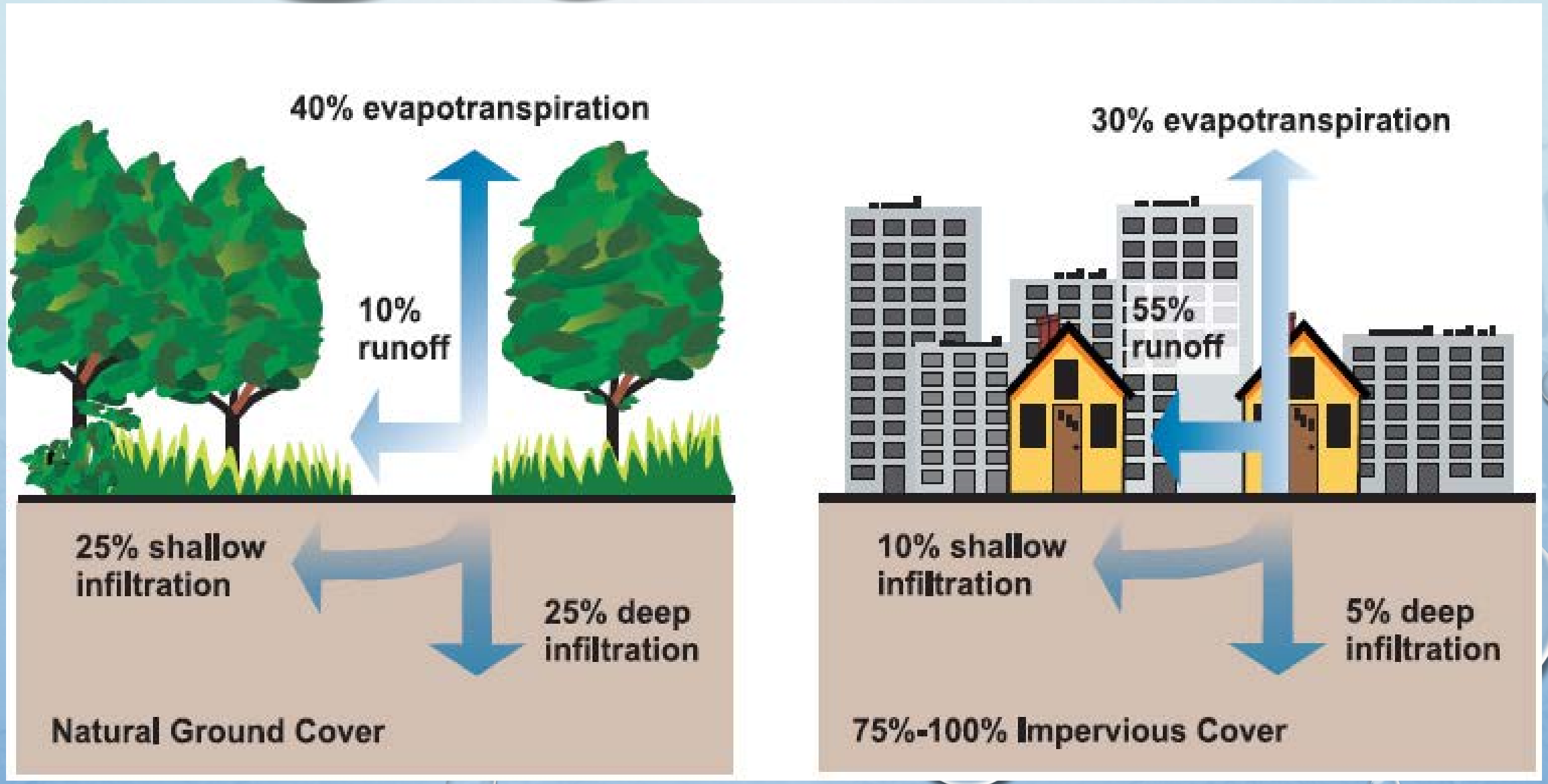
STORMWATER, also spelled storm water, is water that originates during precipitation events. WIKIPEDIA

STORMWATER CAN:

- soak into the soil (infiltrate)
- be held on the surface and evaporate
- runoff and end up in nearby streams, rivers or other water bodies (surface water)

- WIKIPEDIA

THE BIG MESSY PROBLEM IN FLORIDA?



WHAT DOES POPULATION HAVE TO DO WITH STORMWATER IN FLORIDA?

FLORIDA POPULATION GROWTH *BEBR 2020			
1990	2000	2010	2020
12,938,071	15,982,824	18,801,332	21,517,600

BY 2030 24,340,500
BY 2040 26,373,600

OUR POPULATION WILL HAVE MORE THAN DOUBLED IN 50 YEARS FROM 1990 TO 2040

*Data from the Bureau of Economic & Business Research, 2020

*Photo by Tiffany Tompkins, Bradenton Herald

MORE STATISTICS

A NEW STUDY INDICATES JUST FOR ONE COUNTY SUCH AS MANATEE COUNTY

POPULATION WILL INCREASE BY 50% OVER THE NEXT 25 YEARS

REQUIRING MAJOR INFRASTRUCTURAL AND DRAINAGE IMPROVEMENTS;

SUCH AS; BRIDGES, NEW ROADS AND LANES, AND STORMWATER MANAGEMENT SYSTEMS.

YEP, WELCOME TO FLORIDA!

WHAT ARE THE NEXT 100 YEARS FOR FLORIDA AND GLOBAL WARMING EFFECTS?

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CLIMATIC CHANGES:

- MORE HUGE RAINFALL EVENTS & HURRICANES
- SEA LEVEL RISE
- GULF STREAM FLOW CHANGES
- KING TIDES

WHAT ARE THE SOURCES OF STORMWATER POLLUTION IN FLORIDA?

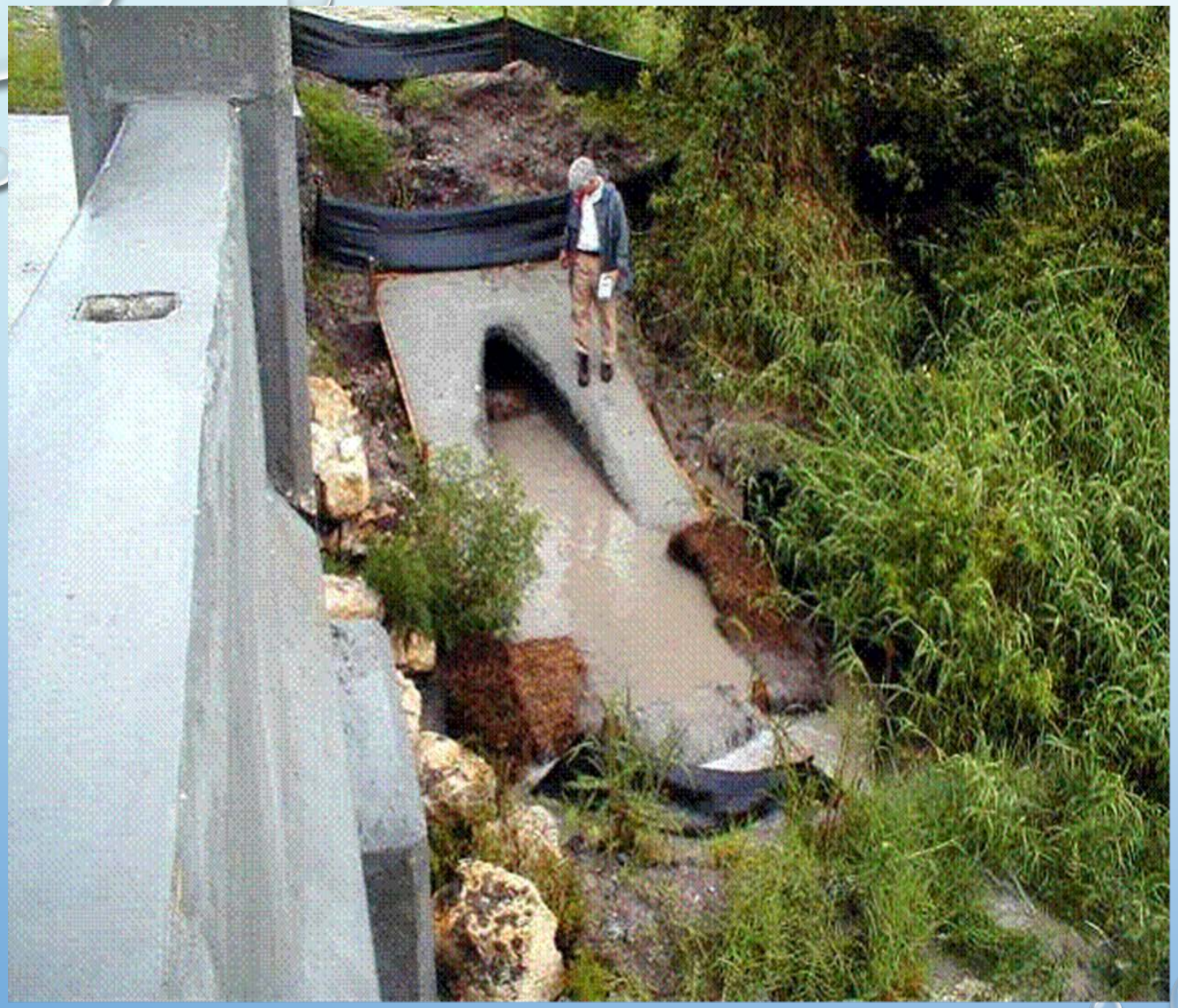
CONSTRUCTION ACTIVITIES

CAUSE STORMWATER POLLUTION FROM:

- UNCONTROLLED SEDIMENT RUNOFF
- TURBIDITY AND ILLICIT CHEMICAL AND PETROLEUM DISCHARGES TO LAKES, STREAMS, RIVERS, AND OCEANS

Water pollution is the leading worldwide cause of death and disease, e.g. due to water-borne diseases. (World Health Organization)

- **CONSTRUCTION RUNOFF IMPACTS**
- **ILLICIT DISCHARGES**
- **IMPAIRMENT OF OUR SURFACE WATERS**



ILLICIT DISCHARGES OF:

- DISSOLVED CHEMICALS AND PETROLEUM PRODUCTS
- SANDY AND SILTY SEDIMENTS
- TURBIDITY
- EXCESSIVE pH

LESSONS LEARNED

- FROM INADEQUATE EROSION & SEDIMENT CONTROL BMPS ON CONSTRUCTION SITES
- COSTS - REQUIRING TREMENDOUS CLEAN UP EFFORTS AND A LOT OF MONEY!

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Another Lesson Learned the Hard Way!

LESSON LEARNED:

A DEP INSPECTION FOUND -

- NO ERP PERMIT FOR THIS POND
- NO ENGINEERING PLANS
- FOUND OVERFLOWING THE BANKS
- ILLICIT AND UNTREATED DISCHARGES TO SURFACE WATERS OF THE STATE
- VERY NEAR TO BLOWING OUT!

LESSONS LEARNED

INADEQUATE BMP CONTROLS FOR STORMWATER FROM CONSTRUCTION SITE

SUCH AS;

TEMPORARY TRAPS AND BASINS NEEDED TO HANDLE VOLUME AND SETTLE OUT SEDIMENTS & TURBIDITY

ILLICIT DISCHARGES

THIS VIOLATION –

LIKE DRAINING YOUR CHLORINATED SWIMMING POOL WATER INTO A NEARBY SURFACE WATER BODY, CURB OR DROP INLET

ILLICIT DISCHARGES

LIKE THIS VIOLATION –

ILLEGALLY DUMPING WASTE OILS, PAINTS, SOLVENTS WILL ALWAYS WORK ITS WAY TO OUR SURFACE WATERS

PLEASE PROPERLY DISPOSE TO A RECYCLING FACILITY

LESSONS LEARNED

WE NEED TO STOP ILLICIT DISCHARGES THROUGH:

BETTER ENFORCEMENT FROM BOTH OUR STATE AND LOCAL GOVERNMENTS

FERTILIZER –

WE USE TOO MUCH AND AT THE WRONG TIME OF THE YEAR AND IT ENDS UP HERE!

FERTILIZER

CITIES AND

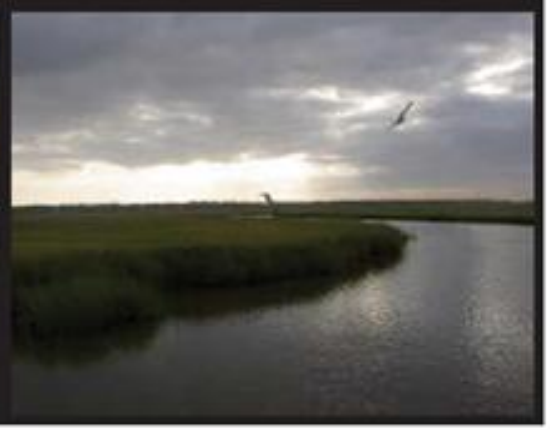
COUNTIES NEED TO ESTABLISH FERTILIZER ORDINANCES AND IMPROVE ENFORCEMENT

DON’T FORGET, PUBLIC EDUCATION TOO!

Green Industries
Best Management Practices
GI-BMP
Certification Training Program
http://gibmp.ifas.ufl.edu

What to do about Pet Waste?

Fido can leave a mess on the ground. Though picking up after your pet may not be something you like to do, it is something you **should** do. After all, the bacteria in your pet's waste runs down from the yard to the street and drainage ditch and out to the waterways that we use for drinking, fishing, and swimming. This run-off is known as **stormwater**, and it does not get treated before flowing into your local waterbodies. This bacteria that becomes part of stormwater can create hazardous conditions in the waterways that we love and enjoy.



SEPTIC TANKS

OR PUBLIC SEWER SYSTEM

CAUSING ILLICIT DISCHARGES FROM SEPAGE OR OVERFLOWS INTO

OUR SURFACE WATERBODIES

SEPTIC TANK AND PUBLIC SEWER SYSTEMS

THIS CONTINUES TO CAUSE MAJOR SURFACE WATER POLLUTION

THE PROBLEM -

LACK OF OR THE WILLINGNESS TO HAVE ENOUGH PUBLIC FUNDING SOURCES TO MEET TO THE INCREASING DEMANDS FROM ALL FLORIDA CITIES AND COUNTIES

YEP, FLORIDA'S HEAD IN THE MUD AGAIN!

WHAT IS THE COST TO FLORIDA NOW?

MORE IMPAIRED WATER BODIES:

LAKES – OKEECHOBEE

RIVERS – ST. JOHN'S RIVER SYSTEM

BAYS – APALACHICOLA BAY

SPRINGS – SILVER SPRINGS

LAGOONS – INDIAN RIVER LAGOON

GULF OF MEXICO & ATLANTIC OCEAN

AND MANY MORE WE CAN LIST…..

LESSONS CURRENTLY WE HAVE NOT LEARNED YET -

- MORE IMPAIRED WATER BODIES
- MORE IMPACTS ON THE ENVIRONMENT
- GROWING POLLUTION ISSUES
- LACK OF POLITICAL WILL

IS THIS OUR FUTURE FLORIDA?

OKAY ENOUGH ABOUT THE PROBLEM

WHERE DO WE NEED TO BEGIN? – EDUCATION!!!!

- HOME
- SCHOOLS
- COLLEGES
- ON THE JOB SITES
- CORPORATE OFFICES
- FEDERAL, STATE, AND LOCAL POLITICAL REPRESENTATIVES

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EDUCATION!

- PRE-SCHOOL
- ELEMENTARY SCHOOLS
- MIDDLE SCHOOLS
- HIGH SCHOOLS
- COLLEGES
- UNIVERSITIES

EDUCATION ON THE JOB!

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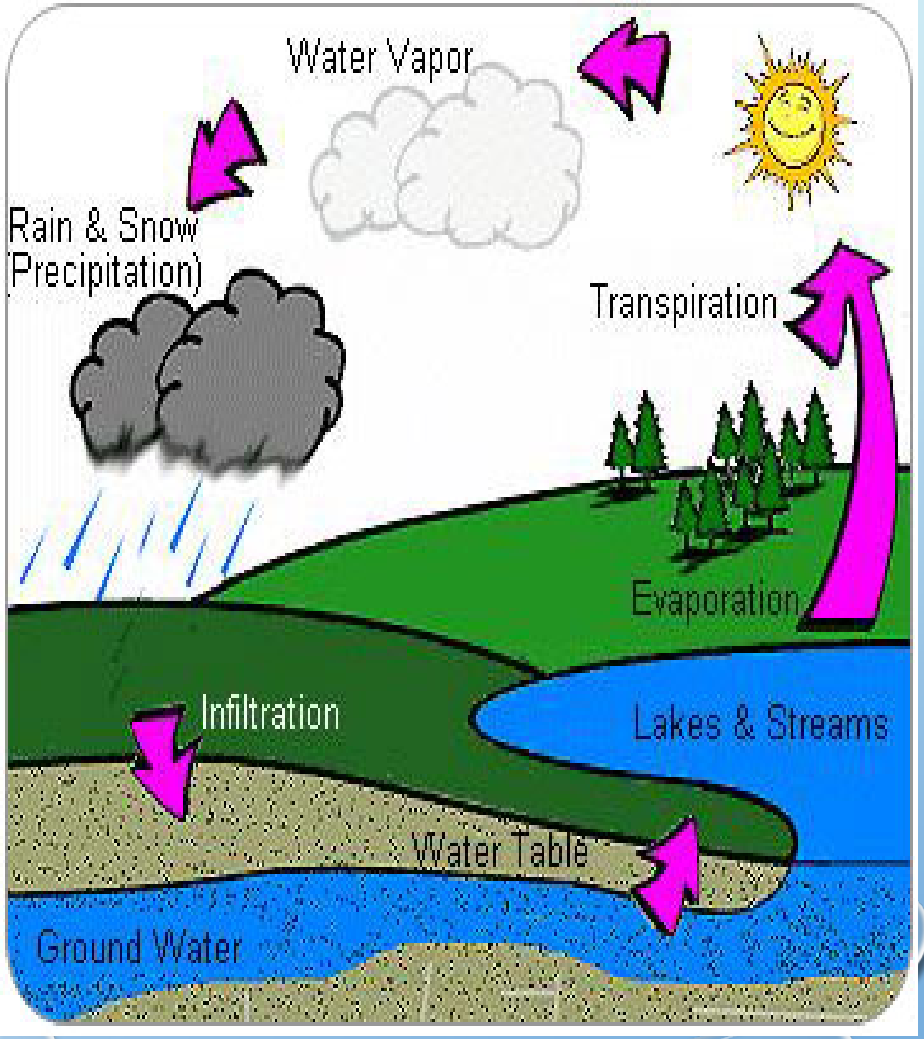
EDUCATE AT HOME!



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EDUCATION OPPORTUNITIES IN FLORIDA

Florida Stormwater Erosion and Sedimentation Control Inspector's Class (FSESCI) – DEP

www.FSESCI.com

→

Green Industries BMP's - best management practices (fertilizers/pesticides)

(GI-bmp) – IFAS/UF

http://gibmp.ifas.ufl.edu

DEP'S QUALIFICATION CERTIFICATED COURSE

FL STORMWATER EROSION AND SEDIMENTATION CONTROL INSPECTOR'S COURSE (FSESCI)

DEP'S PROGRAM GOALS ARE:

Educate	Educate installers and inspectors
Teach	Teach proper selection of controls (BMPs), installation, layering, and maintenance
Train and Qualify	Train and qualify inspectors to meet construction generic permit requirements
Reduce	Reduce impacts from construction related activities

REVISED TRAINING PROGRAM AND MANUAL IN 2018

- Revised the training manual into a two-tiered manual
- Added a new workbook and syllabus
- Revised and updated PowerPoint presentation
- Automated class exam system

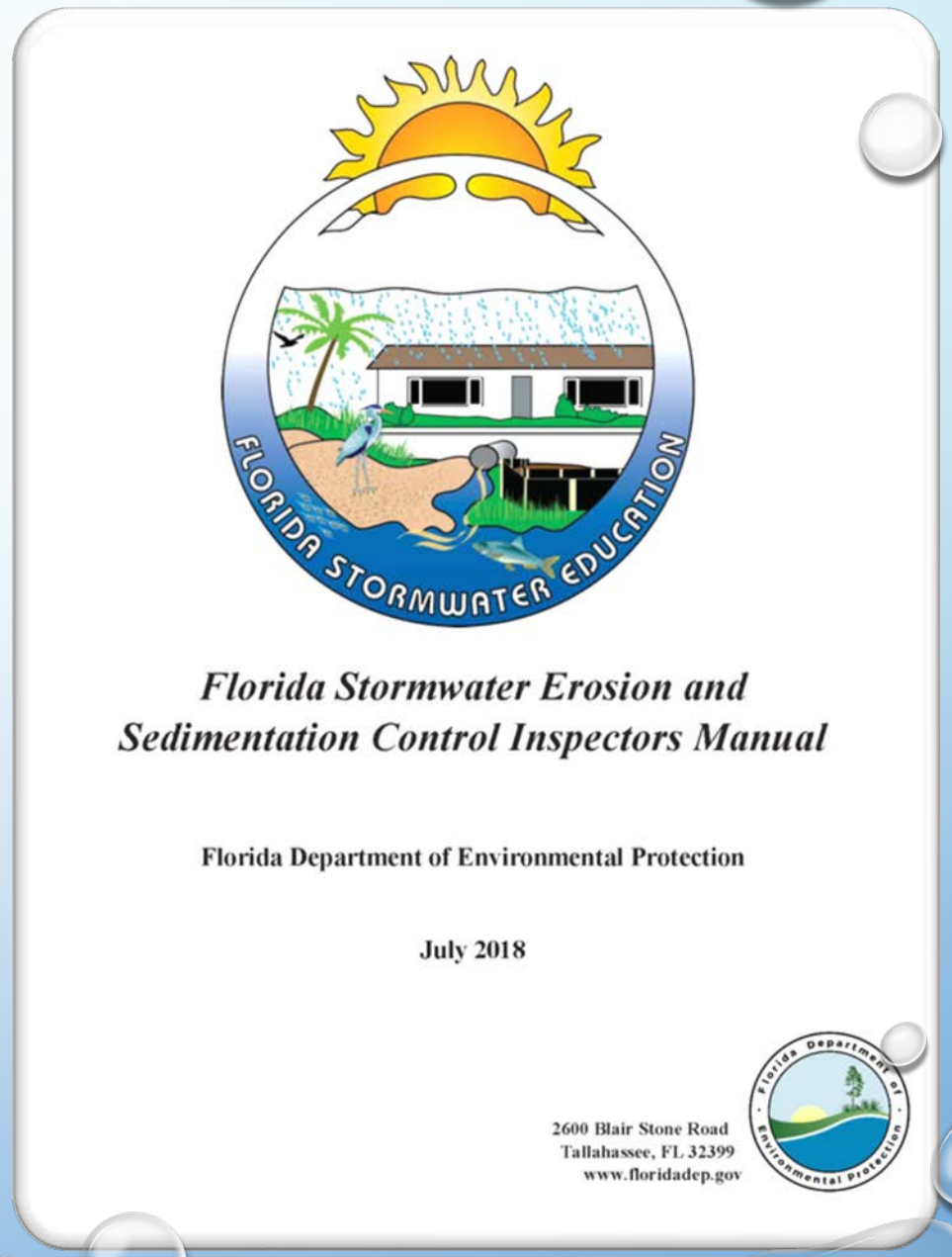
REVISED MANUAL

TIER I -

- QUALIFIED BMP INSTALLER (QBI)
- CHAPTERS 1 THROUGH 5
- BASIC DEWATERING

TIER II -

- QUALIFIED COMPLIANCE INSPECTOR (QCI)
- CHAPTERS 6 THROUGH 9



Chapter 1 Erosion and Sediment Control

Chapter 2 Soil

Chapter 3

Temporary BMPs for Erosion and Sedimentation Control

Chapter 4

Vegetative BMPs for Erosion and Sedimentation Control during Construction

Chapter 5

Best Management Practices for Dewatering

Tier II Manual

Qualified Compliance Inspector (QCI)

Chapter 6 - Regulatory and Statutory Requirements
Chapter 7 - The Stormwater Pollution Prevention Plan
Chapter 8 - Best Management Practice for Stormwater Management
Chapter 9 - Inspection and Enforcement

Chapter 6
Regulatory and Statutory Requirements

Chapter 7
The Stormwater Pollution Prevention Plan (SWPPP)

Chapter 8
Best Management Practices for Stormwater Management

Chapter 9
Inspection and Enforcement

FLORIDA MUDDY WATER BLUES

IT IS AN OUTDOOR BEST MANAGEMENT PRACTICES (BMP) TECHNOLOGIES TRANSFER WORKSHOP:

- QUEST SPEAKERS ON EDUCATIONAL TOPICS
- SUPPLIER AND VENDOR DEMOSTRATIONS AND INFORMATION ON MANY BMPS AVAILABLE IN FLORIDA
- A FREE LUNCH AND GREAT TIME TOO!
- NEXT MUDDY WATER BLUES IS OCTOBER 29TH, 2020
- AT NORTH WEST FL STATE COLLEGE (NWFSC) AT DEFUNIAK SPRINGS, NORHTWEST FL AREA or BETTER KNOWN AS THE (PANHANDLE)!

FLORIDA
MUDDY WATER BLUES

October 29 | 9 am to 4 pm

Location - NWFSC Construction Trades Program
908 US-90 W | DeFuniak Springs, FL 32433

NORTHWEST FLORIDA STATE COLLEGE

FREE TECHNOLOGY TRANSFER WORKSHOP FOR EROSION AND SEDIMENT CONTROL BMPS

The ***Florida Muddy Water Blues Workshop*** is an outdoor technology transfer ***program*** hosted by Northwest Florida State College, Construction Trades Program, in partnership with the State of Florida DEP, the International Erosion Control Association (IECA), The 2020 Clear Water Alabama, and the erosion and sediment control industry-wide range of BMP suppliers and vendors from the Southeastern region of U.S.

This workshop is primarily designed to help construction contractors, inspectors, planners, designers, developers, and citizens interested in learning more about erosion and sediment control practices and BMP products to help improve water quality during and after construction activities.

THE LATEST IN EROSION AND SEDIMENT CONTROL – **FREE TO ALL ATTENDEES!**

Come enjoy **FREE** food from Chef Dan's Fuel and entertainment while hearing from professional guest speakers and talk with experts in erosion & sediment control for Florida, Alabama, & Georgia.

Best free environmental workshop for the Panhandle of Florida!

MUST REGISTER TO ATTEND Register Here!

IECA

FUEL

Northwest Florida State College is committed to equal access and equal opportunity in its programs, activities, and employment. For additional information, visit www.nwfsc.edu

SCAN & REGISTER!

LOOKING TO THE FUTURE……..

DEP IS CURRENTLY IN 2020:

UPDATING THE MANUAL

UPDATE THE POWERPOINT PRESENTATIONS

UPDATE THE CLASS INSTRUCTOR MATERIALS

FSESCI Curriculum Advisory Group Meetings Starting

in November 2020

Revise best management practices, add new rule changes, and improved inspection methodology

Questions?

PRESENTED BY:

HAL LUNSFORD

LUNSFORD ENVIRONMENTAL, LLC
24092 LANIER STREET
TALLAHASSEE, FL 32310-9449

LUNSFORDENVIRONMENTAL@GMAIL.COM

OFFICE: 850/765-3228

THANK YOU!