

Understanding Climate Change: Building Green Infrastructure to Reduce Flooding

Louisiana Public Health Association

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OBJECTIVES

- Define Climate Change and its Impact to Public Health
- Understand Types of Flooding
- Role of Public Health Professionals



ORGANIZATION HISTORY

- Community Based Organizations established 2013
- Non-Profit Status 2018

Values:

- **RESPECT:** BEING RESPECTFUL OF THE COMMUNITY'S NEEDS AND CULTURAL NORMS
- **COLLABORATION:** WEEKLY TEAM MEETINGS WITH PROJECT PARTNERS
- **COMMUNITY:** BRINGING RESIDENTS TOGETHER AROUND A COMMON ISSUE AND SETTING GOALS/VISIONS FOR THE COMMUNITY.
- **AUTHENTICITY:** HCS IS LED BY A 7TH WARD 4TH GENERATION NATIVE



ORGANIZATION HISTORY

- Work around the values of 3 E's
 - ENGAGEMENT
 - EDUCATION
 - EMPOWERMENT



CLIMATE CHANGE EFFECTS

► Definition:

a change in global or regional climate patterns, attributed largely to the increased levels of atmospheric carbon dioxide produced by the use of fossil fuels.

CLIMATE CHANGE EFFECTS

➡ EXAMPLE:
a change in
regional climate
patterns





CLIMATE CHANGE EFFECTS

- Increased levels of atmospheric carbon dioxide produced by the use of fossil fuels.
 - More intense and frequent Natural Disasters/Rain Events
 - Agriculture Drought/Floods reduces food security
 - Poor water and air quality.



What's at Risk

- 30% US Commercial Fishing Landings
- 50% Louisiana Population Lives
- 32,000 Coastal Water Management Jobs
- \$9.3 Billion in Tourism Revenue
- > 33 Million Tons of Exports

TYPES OF FLOODING

US Water Shed

41% of Continental US
included in Mississippi
River Water Shed

31 States

West- Rocky Mtns

East – Appalachian





TYPES OF FLOODING

- Storm Water/Rain Fall
- Storm Surge
- Sea Level Rise/Land Loss

TYPES OF FLOODING

Rain Events

Poor Infrastructure



TYPES OF FLOODING

Prolonged
Rain Events



TYPES OF FLOODING

Storm Surge



TYPES OF FLOODING

Sea Level Rise

► <https://www.facebook.com/NowThisNews/videos/all-women-expert-panel-testifies-before-congress-about-climate-change/813098679035162/>

► <https://www.youtube.com/watch?v=D1v2f-HgFvY>

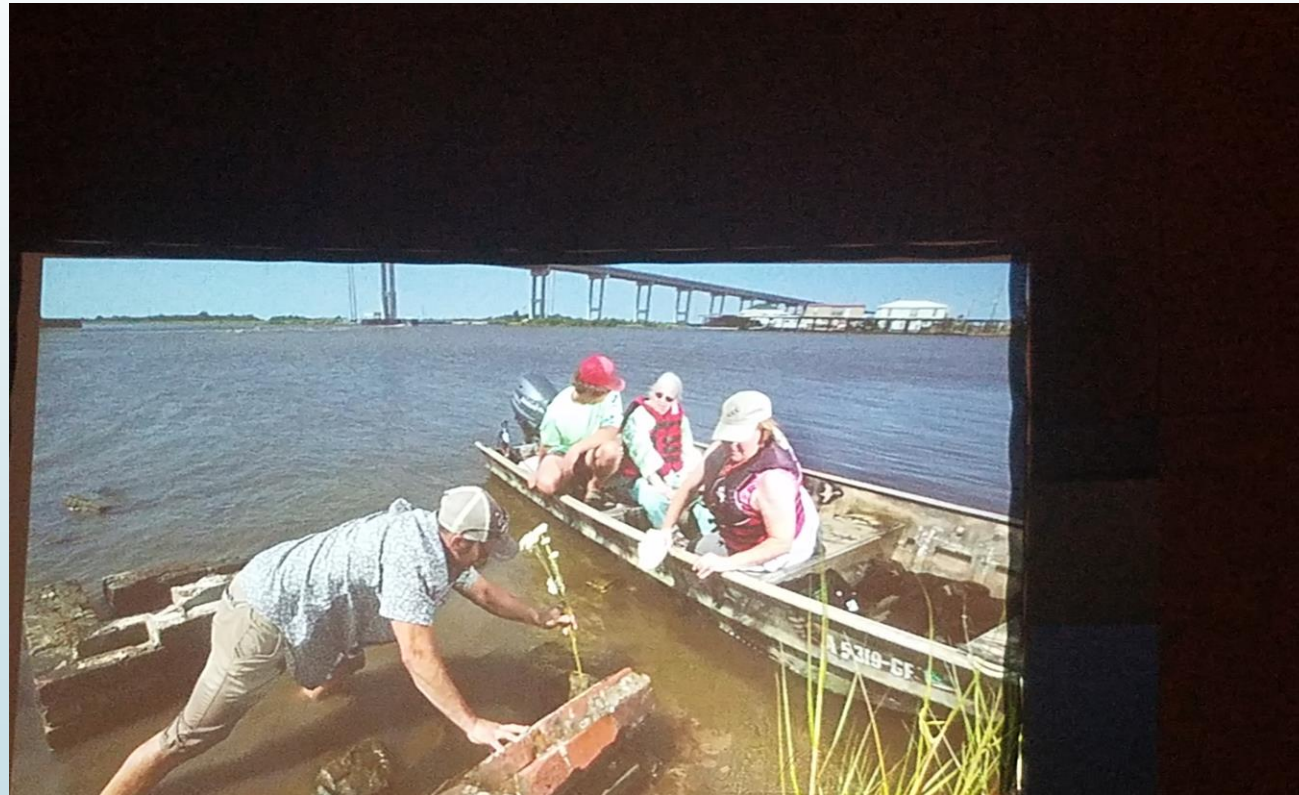
(Begin at 1:49)

The science demonstrates that coastal [Louisiana](#) has had significant land lost, in the past 50 years. (1) However, the science doesn't demonstrate the value of the communities that have literally been swallowed by the Gulf of Mexico. As I write this testimony, I know that the residents of [Isle de Jean Charles, LA](#), despite restoration efforts, will have to relocate to higher ground, more inland. The cause sea level rise. (4) This is not an isolated event.

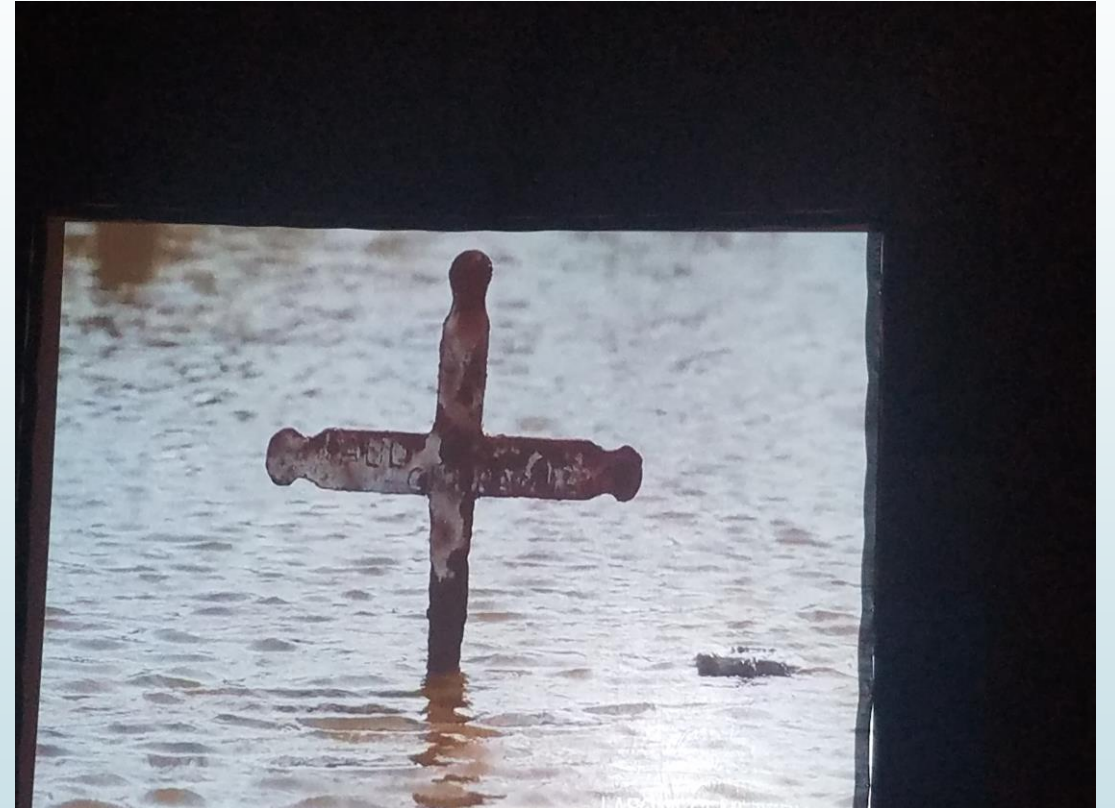
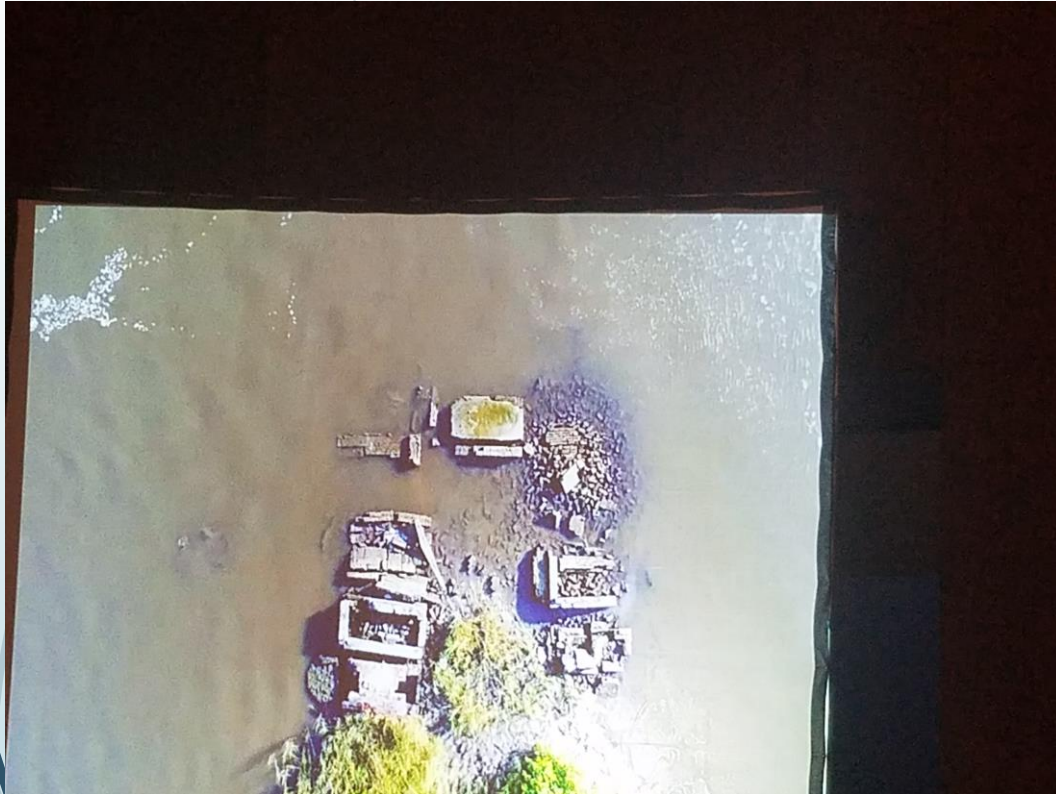
St. James Church, originally known as St. Jacques de Cabahanoce Church dates to 1764 and is the "First Acadian Coast". This is the first church of the first Acadian exiles. Cabahanoce is its Indigenous name, meaning "where the wild ducks roost". (5)

The ancestral burial space at St. James Cemetery is completely submerged in the Mississippi River. If one thinks, that is awful, visualize an [oil/gas line](#) that is directly above this sacred space. (6) Can anyone begin to imagine not being able to visit the final resting place of relatives?

TYPES OF FLOODING



TYPES OF FLOODING





Best Practices

- Green Infrastructure Implementation
- Community Engagement & Education
 - Citizen Science to recognize & understand environmental changes
 - Health Plan (adequate medications, supplies and equipment, EMR's,)



Best Practices

- ➡ Green Infrastructure Implementation approach to stormwater management that protects, restores, or mimics the natural water cycle
 - ➡ Bioswales/Rain Gardens
 - ➡ Storm Water Planter Box
 - ➡ French Drains

Best Practices



Bioswale 2013



Bioswale 2017

Best Practices



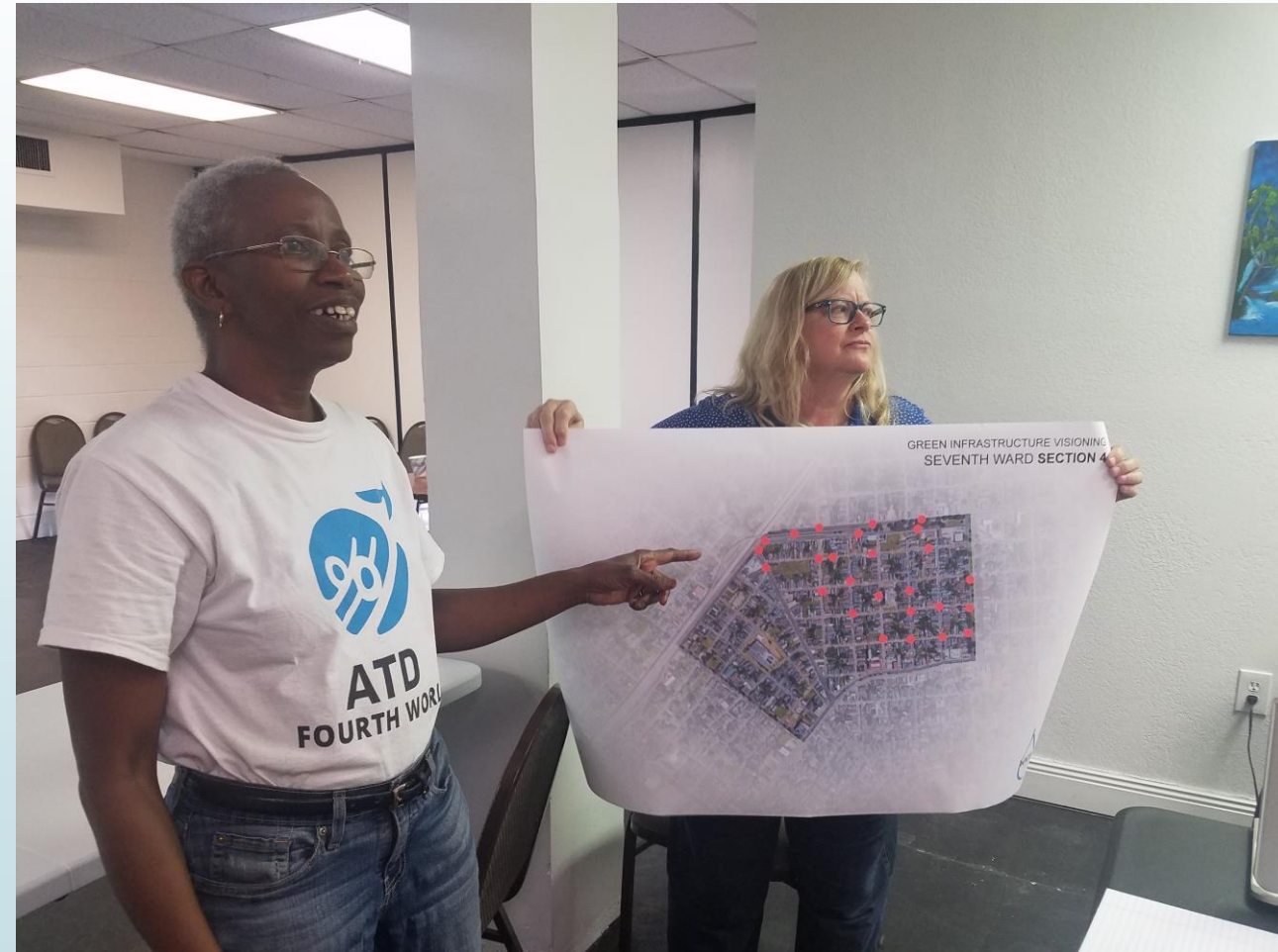
French Drain/Rain Garden



Stormwater Planter

Best Practices

- ➡ Citizen Science to recognize & understand environmental changes





Best Practices



- Written Health Plan
- Adequate Rx and supplies,
- DME's providers
- Copies of EMR's in an electronic format
- Medical Provider's contact info
- Bring with you/or have a copy outside of danger zone



ROLES OF PUBLIC HEALTH PROFESSIONALS

- Understand physical, psychological, emotional, spiritual and mental health caused by
 - shifting populations
 - environmental changes that cause physical changes.

ROLES OF PUBLIC HEALTH PROFESSIONALS

- Document changes during consultations.
- ASK the Question of any potential environmental challenges



ROLES OF PUBLIC HEALTH PROFESSIONALS

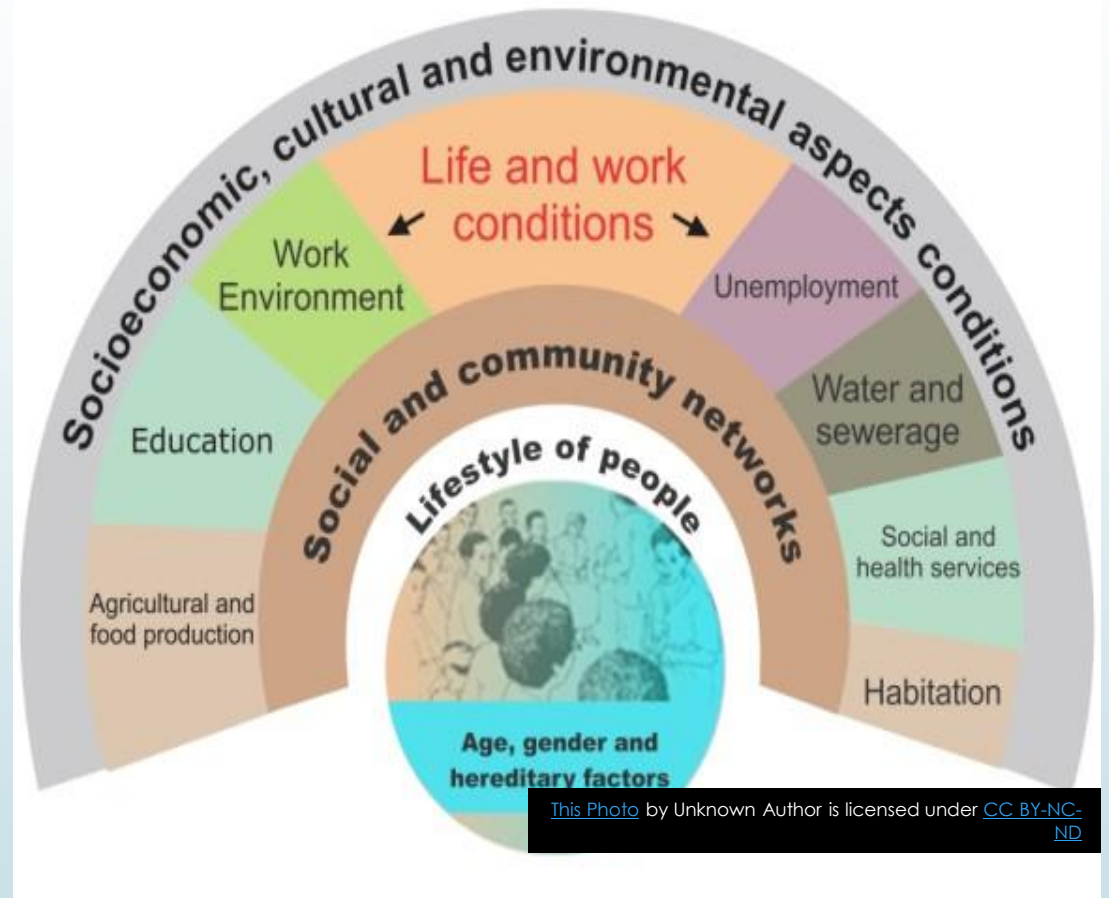
- ASK the Question of any potential environmental challenges
- Exposure Heat/Cold
- Vectors



ROLES OF PUBLIC HEALTH PROFESSIONALS

- ➡ Become acutely aware of the Social Determinants of Health
- ➡ Monitor Weather Conditions

Figure 1: The social determinants: Dahlgren and Whitehead model



ROLES OF PUBLIC HEALTH PROFESSIONALS

- Examples
 - Reforestation of Rural and Urban – Areas
 - Improves Air Quality
 - Removes Pollutants



ROLES OF PUBLIC HEALTH PROFESSIONALS

-Never doubt that a small group of thoughtful committed citizens can change the world





ROLES OF PUBLIC HEALTH PROFESSIONALS

- ➡ Will you be that change to improve the public's health?

QUESTIONS?

Contact

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