

# Public Outreach Activities on Wetlands and Estuaries

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## SUMMARY

We have developed demonstrations to engage people of all ages and teach the value of wetland habitats. An interactive Plexiglas tank is used to show the role that wetlands play, as a flood attenuators by demonstrating what happens when they are developed. Interactive posters with post-it animal figures have encouraged kids to be more engaged about the animals and why wetlands and estuaries are important. Both activities are easily transported to be used at community events or classrooms. When possible, partnerships with youth organizations are formed, so kids can learn outside and immerse themselves in local estuarine ecosystems. Outdoor programs are developed which encourage kids to ask questions and preform basic scientific techniques. The content disseminated from our lab forces the general public to think twice about how their actions effect the environment around them.

## URBANIZATION & FLOODING

The wetland demonstration shows the effect of wetlands when it rains. First picture below has sponges acting as a health wetland habitat that absorbs, slows, and filters water. The wetlands can be replaced with impermeable surfaces to show the effect downstream after a rain in the second picture.



## URBANIZATION & DIVERSITY

The "Who Lives Where?" poster shows the importance of wetlands as a habitat. Children have to place the local animals in the appropriate habitat.



## INTRODUCTION

According to Conrad (2016), United States has become largely urban society last century. Changes in land uses from urban development such as removing vegetation and soil, grading the land surface, and constructing drainage networks increase runoff to streams from rainfall and snowmelt and increase frequency and intensity of flooding. As stated by Conrad (2016), construction of roads and buildings results in removal of vegetation, soil, and depressions from the land surface. Impermeable surfaces such as roads, roofs, parking lots, and sidewalks that store little water, reduce infiltration of water into the ground, and accelerate runoff to ditches and streams" replaced permeable soils results in frequent flooding in urban areas. Similar to increasing flooding events from urbanization, Hardman (2011) stated that "in the United States urbanization has been found to be directly responsible for the endangerment of 275 species, only invasion by non-native species had a greater impact causing 305 species to become endangered." Hardman (2011) also stated for food, pets or for aesthetic reasons, urban growth is often responsible for the introduction of non-native species, either accidentally or deliberately as such non-native plants are often planted in urban and suburban gardens and subsequently escape into the wild.

## OUTDOOR OUTREACH EDUCATION

We developed programs for K-12 kids to learn more about nature and science. Kids are taught basic skills to examine the estuarine habitats and question the world around them.

## CAMP ARROWHEAD, LEWES DELAWARE !



## REFERENCES

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