



Above: The first-place team took home this Hampton Roads Datathon Championship Belt and bragging rights until next year, when the belt will be awarded to the next team that places first.

City of Norfolk Hosts Inaugural Hampton Roads Datathon

By Natasha Singh-Miller; PhD

Overview

The City of Norfolk’s CivicLab hosted the inaugural Hampton Roads Datathon on September 16, 2022, with the theme “Analyzing, Promoting, and Protecting Biodiversity in Hampton Roads.” Hampton Roads is a tidewater region of southeastern Virginia and home to more than 1.5 million people. The goal of the datathon was three-fold: bringing together data minded individuals, city staff and other community members;

demonstrating the value of the large amount of data available to us; and facilitating data sharing in the region. While the datathon only lasted one week, CivicLab staff were astonished by the level of participation, enthusiasm for the theme, and the potential impact of the projects demonstrated by the 16 teams that participated.

The success of this datathon was due in large part to overlap in scope with the operations of Norfolk’s CivicLab, whose mission

is to increase transparency and use of data citywide in decision making. Because leadership support was already in place for promoting the use of data and improving our natural environment, we were able to host this event with minimal additional investment. Our team brought together an extensive listing of public data from cities in our region, state and federal agencies, private organizations, and historical documents. The participating teams used these and other sources to create a

surprisingly diverse assortment of projects. The projects were judged by Biophilic Cities Founder Tim Beatley, Virginia’s Chief Data Officer Ken Pfiel, and City of Norfolk Resilience Officer Kyle Spencer. Projects were evaluated based on their use of data, adherence to the theme, and usefulness to the community.

The Projects

Participating teams were comprised of students from regional colleges and universities, local governments employees, concerned citizens, data enthusiasts, and even students from a local middle school.

First place went to the Hampton Roads Planning District Commission who studied [the impact of sea-level rise on](#)

[conserved lands in our low-lying coastal region](#). Based on anticipated levels of sea-level rise, they were able to predict the impact on the amount of land, tree canopy, and public water access sites that currently support diverse habitats for local wildlife. They demonstrated their work through interactive maps and other data visualizations.

The second-place winners were from the City of Virginia Beach’s “Collaborators for Canopies and Pollinators” team. They created [a dashboard to compute and display key performance indicators for biodiversity in their city including tree canopy and species counts](#). They organized the information by different voting districts in the city to help focus conservation efforts.

The third-place winners were

from Old Dominion University (ODU) and studied [the wetlands in Hampton Roads to understand how many were in protected lands](#). They conducted an analysis to identify areas where conservation and restoration efforts may be most beneficial. They built a story map detailing their work.

Another ODU team mapped Norfolk’s tree planting and significant tree data, using datasets in our Open Data Portal, to analyze tree distributions throughout the city and ran simulations to understand how much shade Norfolk’s current tree canopy provides to pedestrians. A team from Virginia Wesleyan University created a site to analyze and display data regarding invasive ant species in the region. Other projects looked at fish health

Below: The team representing the Hampton Roads Planning District Commission won first place with their project “Drowning Nature,” an analysis of the impact of sea level rise on biodiversity in Hampton Roads.



in local waterways, changes in native bird populations, patterns in animal strandings, methods for attracting pollinators, and analysis of sales listings of species considered invasive to Virginia on large websites like Amazon, among many others.

Future Plans

CivicLab plans to make the Hampton Roads Datathon an annual event with the topic changing from year to year. Biodiversity was a moving and motivating topic that helped us get fantastic participation in this first ever regional effort. Some of our participants plan to continue research on their projects as well, with local agencies leveraging some of the work.

Dr. Natasha Singh-Miller is a data scientist with the city of Norfolk, VA.

Opposite: Dr. Tim Beatley, Founder and Executive Director of Biophilic Cities, delivered the keynote address and served as a judge at the Datathon.

Below: Old Dominion University was represented by multiple teams at the Datathon. The University's Wetlands team won second place with their project called Wetlands and Protected Areas in Hampton Roads that analyzed wetland conservation.



Resources:

Hampton Roads Datathon Story: <https://data.norfolk.gov/stories/s/wk4d-6jxs>.

Hampton Roads Datathon Dataset Listing: <https://data.norfolk.gov/stories/s/9ri5-nws2>.

City of Norfolk's Biophilic Cities Profile: <https://www.biophiliccities.org/norfolk>.

KC Filippino and Sara Kidd. 2022. "Team HRPDC Places First in the Inaugural Hampton Roads Datathon". *Hampton Roads Planning District Commission*. <https://www.hrpdcva.gov/news/article/october/11/2022/team-hrpdc-places-first-in-the-inaugural-hampton-roads-datathon>.

City of Virginia Beach. 2022. "City Earns Second Place During First Hampton Roads Datathon". <https://www.vbgov.com/government/departments/city-manager/Documents/cmu/01.20220923UpdateAtt.pdf>.

Joe Garvey. 2022. "ODU Students Place Third at Inaugural Hampton Roads Datathon". Old Dominion University. <https://www.odu.edu/article/odu-grad-students-place-third-at-inaugural-hampton-roads-datathon>.

Sara Kidd, John Harbin, Ben McFarlane, Jill Sunderland, Grace Hansen, and KC Filippino. 2022. "Drowning Nature: How Sea-level Rise Will Impact Hampton Roads Biodiversity. ARC GIS Project. <https://experience.arcgis.com>.