



Legislation Text

File #: 1841-2022, **Version:** 1

This ordinance authorizes and directs the Director of Public Utilities to accept a National Oceanic and Atmospheric Administration (NOAA) project for the urban heat island mapping. The National Integrated Heat Health Information System (NIHHIS), in partnership with Climate Adaptation Planning and Analytics (CAPA) Strategies, is providing these projects to organizations interested in cohort of NIHHIS-CAPA Urban Heat Island mapping campaigns. The campaign areas would include the City of Columbus, Ohio as well as Opportunity Zones and Control Zones within Franklin County.

These community science field campaigns are an excellent opportunity to raise awareness about the many impacts of extreme heat and the factors that may affect the uneven distribution of heat throughout a community. It is also an opportunity to teach and educate individuals about how scientific field campaigns are conducted, consists of volunteers learning about urban heat in a training session, attaching sensors to their vehicles, and driving pre-mapped transects through their cities to collect temperature and humidity data that is linked to GPS coordinates.

The final product of the community science field campaigns is a set of high resolution air temperature and humidity data, and a report by CAPA Strategies that provides a detailed analysis of distribution of heat in the morning, afternoon and evening. Interactive, high resolution web maps of the modeled air temperature and heat index are also provided. The maps are produced using a machine learning process that combines satellite imagery and air temperature and humidity readings collected by volunteers during the campaign.

Columbus and Franklin County residents face acute challenges due to extreme heat. According to the 2014 ClimateCentral report, Columbus, OH is ranked a top 10 city with the most intense summer urban heat islands and ranked #1 city with the fastest-growing urban heat island (0.84°F per decade increase since 1970). Since then the city grew by an additional 100,000 residents. Due to this rapid growth, we lost even more green space and canopy coverage (currently 22%), contributing toward the City's creation of an equity-focused Climate Action Plan and Urban Forestry Master Plan each adopted in 2021.

Heat remains one of the greatest weather-related causes of death in the US and in Columbus and Franklin County. Almost 20% of Columbus residents (176,620) are in poverty and 17.5% are over 65 or under 5 making up a vulnerable population according to the U.S. Census website. According to the Asthma and Allergy Foundation of America's 2021 report, Columbus ranks 13th in 100 cities in higher than average emergency room visits for asthma attacks, and higher than average scores for quick-relief and long-term controller medicine use. According to Limaye et al. (2018), Franklin County is anticipated to see between 25 and 32 additional deaths per 100,000 for those age 65+ in the year 2069 versus 2007. Those residents are more likely to live in neighborhoods that have low tree canopy and less access to public transportation.

The mapping will help prioritize which neighborhoods should be the focus for resources to continue the efforts of dismantling systemic racism and imparting environmental justice. The results of this study will bolster current efforts for home energy efficiency upgrades, tree giveaways, and access to green and outdoor spaces in low-income neighborhoods. It will guide leadership, decision-makers, and developers to choose infrastructure and plans that will help mitigate the urban heat island and provide co-benefits when future investments are made.

Fiscal Impact: \$20,000.00 is the city's portion of the project and available in-kind support including 25 staff members that will participate in the mapping and additional 80+ volunteers will be recruited to assist.

To authorize and direct the Director of Public Utilities to accept the NOAA Heat Watch community science urban heat island (UHI) mapping campaign from, and enter into a project agreement and memorandum of understanding with, the National Oceanic and Atmospheric Administration (NOAA) for the National Integrated Heat Health Information System (NIHHIS) and Climate Adaptation Planning and Analytics (CAPA) Strategies, Urban Heat Island mapping campaigns; and to authorize the expenditure of \$20,000.00 from the Electric Operating Fund. (\$20,000.00)

WHEREAS, the Department of Public Utilities was awarded a National Oceanic and Atmospheric Administration (NOAA) project for urban heat island mapping;

WHEREAS, it is necessary to authorize and direct the Director of Public Utilities to accept the project from, and enter into a project agreement and memorandum of understanding with, National Oceanic and Atmospheric Administration (NOAA); and

WHEREAS, the City will coordinate the implementation of the project and work with partners on recruiting volunteers, public engagement, developing materials and distribution, and final reporting; and

WHEREAS, it is necessary to authorize the expenditure of \$20,000.00 from the Electric Operating Fund;

WHEREAS, it has become necessary in the usual daily operation of the Department of Public Utilities to authorize the Director to accept the project from, and enter into a project agreement and memorandum of understanding with, the National Oceanic and Atmospheric Administration (NOAA) for urban heat island mapping; **NOW, THEREFORE**

BE IT ORDAINED BY THE COUNCIL OF THE CITY OF COLUMBUS:

SECTION 1. That the Director of Public Utilities is hereby authorized and directed to accept the project from the National Oceanic and Atmospheric Administration (NOAA);

SECTION 2. That the Director of Public Utilities be, and is hereby, authorized to enter into a project agreement and memorandum of understanding with National Oceanic and Atmospheric Administration (NOAA) in the amount of \$20,000.00 for urban heat island mapping upon receipt of an executed project agreement.

SECTION 3. That the expenditure of \$20,000.00 or so much thereof as may be needed, is hereby authorized in Fund 6300 Electric Operating Fund, per the accounting codes in the attachment to this ordinance.

SECTION 4. That the City Auditor is hereby authorized to transfer the unencumbered balance in a project account to the unallocated balance account within the same fund upon receipt of certification by the Director of the Department administering said project that the project has been completed and the monies are no longer required for said project; except that no transfer shall be so made from a project account funded by monies from more than one source.

SECTION 5. At the end of the project period, any repayment of unencumbered balances required by the NOAA is hereby authorized and any unused City match monies may be transferred back to the City fund from which it originated in accordance with all applicable project agreements.

SECTION 6. That the funds necessary to carry out the purpose of this ordinance are hereby deemed appropriated, and the City Auditor shall establish such accounting codes as necessary.

SECTION 7. That this ordinance shall take effect and be in force from and after the earliest period allowed by law.