




**TO:** Mayor and Council Members

**FROM:** Jorge L. Morales, P.E., CFM, Director  
Watershed Protection Department 

**DATE:** March 3, 2020

**SUBJECT:** **Resolution 20200123-108: Litter and Micromobility Devices**  
**(CIUR # 2234)**

The purpose of this memorandum is to provide an update on Resolution No. [20200123-108](#) (CIUR # 2234), which directed the City Manager to prepare a study with recommendations to address litter problems and dumping of electric micromobility devices in Austin's waterways. The Watershed Protection Department (WPD) and Austin Transportation Department (ATD) are collaborating on efforts, with WPD focusing on the study of trash in creeks and ATD focusing on micromobility devices.

### **Background**

In 2019, WPD began working on developing a work plan for a quantitative study of trash in local creeks, which is scheduled to initiate in FY2021. WPD's research team's highest priority for FY2020 is the development of a robust plan to include addressing the problem of fecal bacteria in creeks, which has serious health and safety implications for people, pets and wildlife, as well as important connections with other water quality indicators. WPD is in the process of requesting new staff to assist with the bacteria effort beginning in October 2020, and the department is prepared to redirect some of this additional support towards a focused trash study, which is anticipated to kick off this year. Additionally, staff will identify team members from other City departments to coordinate programmatic and funding sources for this effort. The attached WPD Trash in Creeks Project Work Plan, provides an overview of the objectives for this project.

Multiple City departments and stakeholders have been working together to address the increasing trash in waterways. WPD staff will provide recommendations for enhanced public-private partnerships, improved programmatic and structural solutions, and identify available funding sources to reduce trash in waterways.

In response to the micromobility devices, ATD has previously developed several measures designed to reduce the number of scooters and other shared mobility devices from being dumped in waterways. These measures include the following:

- November 2018 - ATD implemented impoundment fees for devices retrieved by the City. This methodology can be used to recover costs associated with removing mobility devices from creeks and waterways.
- February 2019 - ATD began working closely with WPD to develop and implement Standard Operating Procedures for responding to dockless devices discovered in City waterways.
- June 2019 - ATD worked with Austin 3-1-1 to implement a direct reporting of 3-1-1 Service Requests (SRs) to dockless companies. This feature has improved company response times for 3-1-1 complaints.
- July 2019 - ATD worked with the Parks and Recreation Department (PARC) to develop geofenced boundaries surrounding Austin's parks and waterways, enabling scooter companies to detect a scooter that may be near a waterway.
- July 2019 - ATD began development of geofenced "no end-ride" zones, primarily over bridges crossing City waterways. The purpose of this feature is to prevent scooter users from parking devices on a bridge over a waterway. Companies were directed to implement this feature in September 2019.
- September 2019 - ATD added locations to the "no-deploy" zones—geofenced zones where companies are prohibited from deploying dockless devices for rent. This update included parklands, bridges, and areas nearby waterways.

## **Next Steps**

WPD will initiate a roughly two-year study that would be broken down into three primary components:

1. March - October 2020, WPD staff will develop a background report that includes an inventory of current internal City and external partner efforts that address litter and trash issues in Austin watersheds. The report will also include a high-level summary of available data, trends, and maps.
2. October 2020, WPD staff will initiate a year-long data-collection phase of the quantitative study of trash (types, sources and pathways) in representative locations around Austin, with a final report anticipated in December 2021.
3. Starting in November 2020, WPD will identify a consultant to perform a comprehensive benchmarking and solution analysis study of peer cities and national programs. A final report is anticipated to be completed by June 2022 and will include the background and quantitative study findings conducted by WPD staff, along with estimated costs and time scales for implementation of Austin-specific solutions.

Additionally, ATD is leading efforts to reduce the number of scooters and other shared mobility devices from being dumped in City waterways. These efforts include the following:

1. Designing and placing Dockless Corrals, also known as Dockless Parking Boxes, at the ends of bridges that cross waterways. The purpose of this effort is to further reduce the number of devices left atop bridges, which staff has observed and are aware these devices are dumped into waterways from the bridge.

2. ATD is currently designing special signage to be placed near waterways that will inform the public that any dumping in City waterways, including dockless devices, is punishable by fines up to \$2,000.
3. ATD has developed and distributed a Peer Cities Survey to the National Association of City Transportation Officials (NACTO) partner cities. The goal of this survey is to learn what measures peer cities are taking to prevent and mitigate illegal dumping of shared mobility devices into waterways. ATD will produce a report on survey findings by April 22, 2020.
4. ATD is seeking information from current dockless providers regarding what measures they are taking in other cities where they have operations to prevent and mitigate illegal dumping of shared mobility devices in waterways. Their responses will be incorporated in the NACTO partners survey report.
5. ATD and WPD will partner to initiate an assessment, using submersible drone and sonar technologies, to quantify previously unidentified micromobility devices that remain in Lady Bird Lake, near bridges with high dockless device use. An update on the findings of this assessment will also be provided in the April 22, 2020 report.

Should you have questions related to the work plan on litter reduction to Austin's waterways, please contact Mateo Scoggins, Program Manager III within the Environmental Resource Management Division at (512) 974-1917. For questions related to micromobility devices, please contact Jacob Culberson, Division Manager of Mobility Services Division with ATD at (512) 974-1489.

cc: Spencer Cronk, City Manager  
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Susana Herrera, Acting Division Manager – WPD  
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Attachments:  
WPD Trash in Creeks Project Work Plan

# Project Work Plan

<b>Project Name</b>	Trash sources, types and pathways to creeks
<b>Section Program(s)</b>	Surface Water Health
<b>Timeline</b>	March, 2020 – June 2022
<b>Staff Involved</b>	Mateo Scoggins, Andrew Clamann, Todd Jackson

## I. Problem statement

Austin's lakes, rivers, creeks, and springs are a cherished natural resource that distinguish Austin and provide immeasurable quality of life, health, ecological, and economic benefits. The exceptional value the Austin community places on our rivers is reflected in Imagine Austin's Environment and Water priority programs. Trash and other physical contaminants are a dynamic pollutant, entering constantly into the stormwater pathway from anywhere in the watershed, and moving at unknown rates, with unknown effects on the health of the overall system. Although there are a wide variety of litter and trash related programs and policies, including Watershed Protection Department routine monitoring of trash, there has never been a comprehensive study of trash dynamics in our watersheds to understand the sources, quantities, and pathways of trash that moves from our uplands to our creeks and receiving water bodies.

## II. Task Outline

WPD will initiate a roughly 2-year study that would be broken down into 3 primary components:

**Objective 1:** Complete a background study of currently active programs and policies related to litter and trash in Austin's waterways and analyze available data related to spatial and temporal patterns.

Task	Deliverable	Start Date	Finish Date
Review and compile all currently active programs and policies related to litter and trash in Austin's waterways, including funding and resources currently or potentially available.		03/01/2020	06/01/2020
Compile and analyze all available data related to spatial and temporal patterns of litter and trash.		06/01/2020	08/31/2020
Writing a background report that includes an inventory and review of current COA and external partners efforts with respect to litter and trash in Austin watersheds and a high-level summary of available data, trends, and maps.	Background Report	03/01/2020	10/31/2020



**Objective 2:** Develop and implement a field-based empirical study of trash dynamics in Austin's watersheds that will represent the range of spatial and temporal variation that is both comprehensive and feasible.

Task	Deliverable	Start Date	Finish Date
Planning of the study. Development of appropriate sampling locations, field collection methods, and statistical analysis to use within the project.	Quality Assurance Project Plan	06/01/2020	10/01/2020
Data Collection.		10/01/2020	07/01/2021
Statistical analysis of collected data and writing the associated report which will include volume, type, source, and pathways of trash in creeks from representative locations around Austin.	Study Report	07/01/2021	10/01/2021

**Objective 3:** Benchmark trash and litter related studies, best practices, programs and policies in peer cities around the country to understand the range, scope, and reach of the problems and potential solutions that are available.

Task	Deliverable	Start Date	Finish Date
Staff to write a Scope of Services for a comprehensive benchmarking and solution analysis study of peer cities and programs around the country.	Scope of Services	10/5/2020	12/04/2021
Selection of consultant.		12/07/2020	04/02/2021
Phase 1: Consultant to perform benchmarking study of best practices, programs and policies in peer cities around the country.	Preliminary Report to WPD	04/05/2021	07/02/2021
Phase 2: Consultant to develop a list of Austin-specific trash and litter solutions based on results in Objective 1, Objective 2, and the first phase of this benchmarking study.		07/01/2021	10/01/2021
Phase 3: Consultant to benchmark and analyze costs and resources needed to implement the trash and litter solutions from the second phase of this benchmarking study.		10/01/2021	01/31/2022
Compilation of a final report that will integrate the background and quantitative COA staff studies mentioned above, into the national context, including estimated costs and time scales for implementation of Austin-specific solutions.	Final Report	01/31/2022	06/30/2022

### III. Resources

1. Background Report:
  - This will be researched, analyzed, and published using current WPD staff by re-prioritizing time and resources.
2. Study of watershed trash and litter dynamics in Austin watersheds:

- One Full-Time Equivalent (FTE) position to oversee the development and implementation of the study, including analysis and reporting, and \$150,000 in contractuels (temp staff, laboratory analysis, labor, etc).
3. Final Report:
- Selection of a consultant via a competitive bid process will be managed by the WPD staff noted above (one FTE), and will also include management of the contract and deliverables. This component of the study we estimate to cost \$250,000 in contractuels over a 1.5 year period.

## IV. Network folder

Sharepoint: [https://cityofaustin.sharepoint.com/sites/TrashInCreeks\\_CIUR\\_QAPP](https://cityofaustin.sharepoint.com/sites/TrashInCreeks_CIUR_QAPP)