Purple Bags Pilot Project Summary Report

June 28, 2021
City of Tacoma, Environmental Services

Results from the 2020-2021 effort to limit the harmful impacts of improperly-disposed waste to human health and our environment in one City-managed natural area during the Covid-19 pandemic.

What was the Purple Bags Pilot Project?

Background

The City of Tacoma Environmental Services (ES) Department launched a Purple Bags Pilot Project (the project) to establish regular waste pickup service at one homeless encampment located in a City-managed natural area during the Covid-19 pandemic. The project ran for 16 weeks, from December 2020 through March 2021, and was intended to limit the harmful impacts of improperly disposed waste to human health and our environment. The project entailed weekly distribution of purple-colored trash bags, weekly waste pickup by a third-party cleanup contractor, and increased homeless outreach in partnership with the Neighborhood and Community Services (NCS) Department Homeless Outreach Team (HOT). The concept is similar to efforts implemented by other municipalities, including City of Seattle, City of Austin, Oregon Metro, and County of San Luis Obispo (see References section). The ES department is grateful for the individuals and reference materials shared by these organizations, which helped to guide the project.

Project goals

- Test the efficacy of regular waste pickup service at homeless encampments in Tacoma
- Reduce the harmful environmental impacts of improperly disposed waste in natural areas
- Improve sanitation at homeless encampments during the COVID-19 pandemic
- Connect more unsheltered persons with housing and other social services

Services provided

- Weekly distribution of purple bags plus sharps containers and Covid-19 personal protective equipment (PPE) as requested
- Weekly waste pickup by a third-party cleanup contractor
- Increased outreach by the NCS HOT team

Why were the bags purple?

The unique purple color distinguished project bags from those intended for other cleanup programs or general use. Purple-colored bags have been used in other cities, including Seattle. In conversation with Seattle, it was recommended that Tacoma use the same color to promote regional consistency and signal intended use for unsheltered persons potentially moving throughout the Puget Sound area.

Photo 1. Purple bags with disposal instructions in English and Spanish

How was the site selected?

The project took place in one natural area located in east Tacoma. The site is designated Passive Open Space and managed by the Environmental Services Department for stormwater and habitat benefits (City of Tacoma 2021). Significant sanitation and environmental impacts at this site were identified by City staff due to the large population of unsheltered persons and the presence of environmentally sensitive features such as steep slopes, disturbed soils, and damaged vegetation. In addition, the site was prioritized due to its location in a low opportunity neighborhood in alignment with City equity goals.

Why was the Purple Bags Project Needed?

Encampments in City-managed Natural Areas

City staff observed a marked increase in the number of encampments and degree of associated waste accumulating in natural areas during the 3-4 years preceding and throughout the Covid-19 pandemic. This increase aligns with upward trends in homelessness across the Puget Sound region. ES is tasked with management and restoration of natural areas designated as Passive Open Space, which are typically undeveloped urban forests and wetlands. Most Passive Open Space areas are regulated under the Critical Areas Protection Ordinance (TMC 13.11) given their ecological importance. Encampments on Passive Open Space make management and restoration difficult and sometimes impossible due to safety concerns, blocked access, pollution, and direct disturbance to vegetation, soils, and hydrology.

Photos 2 and 3. Pollution and disturbance to steep slopes and drainages at the Schuster Slope Passive Open Space north of downtown Tacoma.

Covid-19, Environmental Impacts, and Risks to the Community

The Centers for Disease Control (CDC) interim guidance for homeless service providers (CDC 2020) recommended authorities allow unsheltered persons to remain in place during the course of the Covid-19 pandemic. The CDC intent was to ensure service providers knew where to locate vulnerable persons as services became available and reduce the risk of spreading Covid-19 through the community. In addition, the CDC recommended service providers improve sanitation at homeless encampments. In general, City staff have observed poor sanitation in encampments as a result of accumulated litter and human waste, which can be transported by stormwater through the watershed and ultimately to the Puget Sound. Pollutants may increase nutrient and bacteria loads in waterbodies and impact ecological function. Moreover, diseases other than Covid-19 may spread readily through unsanitary encampments and to the larger community, including Shigella bacteria, Hepatitus A, and Typhus (Gorman & Kaiser Health News, 2019).

Steps to Implementation

	Step	Notes
1.	Initial outreach to encampment residents	ES and NCS staff talked with unsheltered persons living on site to gauge interest in the project. Their perspectives were used to determine specific needs and frequency of waste pickup.
2	Coordination with TacomaFIRST 311 Customer Support Center to set up communication system	The 311 Customer Support Center was briefed on the project and agreed to route community inquiries to appropriate ES staff. Community members were also instructed to report any purple bags found outside the project site to 311 for pickup.
3	Coordination with the NCS Department to provide additional homeless outreach	NCS HOT staff provided outreach to unsheltered persons at least bi-weekly during purple bags distribution events.
4	Coordination with Cleanup Contractor to establish pickup and data collection expectations	The cleanup contractor was instructed where to pick up purple bags and how to report relevant data to ES staff.
5	Coordination with City Emergency Management to procure Covid-19 PPE	City Emergency Management staff provided Covid-19 PPE, including masks and hand sanitizer acquired through the CARES Act, to limit the spread of Covid-19 and improve sanitation at the site.
6	Outreach to housed neighbors, City Council, and community groups	A postcard-style informational mailer was sent to approximately 300 residential homes located near the site. A more detailed FAQ-style document was sent to City Council. ES staff presented a project overview to a community network group: the Pierce County Coalition to End Homelessness. A website was also created to further increase access to information about the project.
7	Design and purchase of purple bags	The purple bags feature icons indicating the intended use for bagging litter and not sharps, directions to call 311 for pickup in English and Spanish, and the informational website address. The design was similar to that used by Seattle and Oregon Metro.
8	Weekly purple bags distribution, pickup, and outreach	Purple bags were distributed on a weekly basis by at least two ES staff. Distribution took place every Thursday followed by weekly pickups every Friday. Sharps containers and PPE were distributed as requested by unsheltered persons. NCS staff joined to provide outreach at least bi-weekly.
9	Weekly data collection	The cleanup contractor collected and shared data, including the number of bags picked up and total weight of litter picked up. ES staff tracked the number of bags distributed. All data was recorded in a spreadsheet, which was used to calculate the rate of bags utilized by encampment residents.
10	Sharing information following end of project	Project results were shared with internal ES and NCS staff and presented to the Pierce County Coalition to End Homelessness. This report is intended to further share project information with interested parties.

Results

Purple Bags Utilization by Unsheltered Persons
At the end of the 16 week period, 475 purple bags had been distributed and 315 had been picked up for a 66% return rate. Some unsheltered persons had other non-purple-colored trash bags on hand and used these to collect litter in addition to the purple bags. The weight of all bags plus additional unbagged bulky items picked up by the end of the project totaled 21,520 pounds.

Encampment Vacation
The project came to an end by week 16 when all unsheltered persons had left the site or were about to leave. Several individuals were connected with housing opportunities through NCS HOT staff. Several others left the site of their own choosing.

Photo 4. Large collection of purple bags and other debris left by encampment residents for pickup.

Cost Comparison

The status quo for many land managers in Tacoma is reactive cleanups following the vacation of encampment sites. Reactive cleanups are expensive because litter and environmental impacts compound over time. Reactive cleanups are especially time-consuming and hazardous in natural areas such as steep slopes and wetlands where access is limited. In contrast, purple bags were distributed proactively (i.e. before substantial debris buildup) and contractors were able to pick them up from the site and drop off to the landfill in about two hours. Cost comparison between these approaches is complicated by factors that are difficult to predict and/or quantify such as total duration of purple bags distribution, dynamic encampment populations, and dynamic environmental conditions (e.g. degree of precipitation causing stormwater to transport pollutants downstream). However, both types of cleanups occurred at the project site during fairly stable encampment and environmental conditions. Ultimately, the the 16-week proactive purple bags method was cost effective when compared to a recent, reactive cleanup at the same site that spanned multiple days (see costs below).

Reactive Cleanup		*Proactive Purple Bags Cleanup*	
Single contractor cleanup	$8750	Weekly contractor pickup	$4224
Staff coordination	$350	Staff coordination	$840
		405 purple bags	$135
TOTAL	$9100	**TOTAL**	$5199

Policy and Regulatory Considerations

Policy or Regulation	*Relevance*
City of Tacoma Equity Goals	The project aligns with at least 3 out of 5 City equity goals. Partnering with unsheltered persons to facilitate environmental cleanup and providing regular waste pickup services supports (1) equitable service delivery and (2) purposeful engagement. In addition, the project (3) supports human rights by promoting basic sanitary living conditions.
City of Tacoma Community Survey	Homelessness was the issue most cited by respondents to the 2020 Community Survey question "what major issue do you think Tacoma will face in the next 10 years?" Homelessness was mentioned twice as many times as any other issue across every council district. The project addresses a need the community is broadly concerned about.
Stormwater Management and the NPDES Phase I Permit	The City is required to address illicit stormwater discharge according to the Washington State Department of Ecology NPDES Phase I Stormwater Permit. There are no specific total maximum daily loads (TMDLs) for encampment-associated waste in Washington state at present, however this is being considered for the next version of the permit and there are several elements of the existing permit that relate. Engaging with unsheltered persons to clean up is one method of encouraging public participation to implement stormwater management program goals. Other municipalities, including the City of Austin, have developed TMDLs for litter carried in surface water (City of Austin 2020). In addition, the California Water Control Board has developed the "Human Fecal Material Discharge Prohibition" (California Water Code 13267) that specifically address human waste from encampments (California Central Coast Regional Water Board 2009).
Critical Areas Preservation Ordinance	The Critical Areas Preservation Ordinance (CAPO) is intended to protect ecologically important areas such as steep slopes and wetlands per Tacoma Municipal Code (TMC) Chapter 13.11. ES staff have observed substantial environmental degradation within Critical Areas associated with encampments. This degradation impedes environmental function and progress towards achieving ecological restoration. Hand removal of litter is an allowed activity under the CAPO.

Challenges

Torn Bags
Bags were occasionally torn open by transient individuals looking for resources and sharps, as reported by encampment residents. It was determined through conversations between ES staff and encampment residents that bags might be less prone to being torn if left outside individual encampments rather than gathered together into one centralized collection area. Bags were not found torn open after shifting to this practice.

Sharps
Unsheltered persons were asked if they could use sharps containers during weekly bag distribution events and nearly all replied no. However, sharps were still found in bags and scattered around the site. It may be that unsheltered persons did not want to identify with potentially illicit activities. A stationary sharps container station installed for general community use may be tested as an alternative for sharps disposal at other sites.

Photo 5. Sharps spilling out from torn purple bag.

Next Steps and Additional Opportunities for Consideration

Expand bag distribution through new ES-dedicated Homeless Outreach Team Coordinator
Given the success of the project, the purple bags model is being expanded to additional ES-managed natural areas as well as regional stormwater facilities in 2021. A new HOT coordinator assigned to the ES Department was hired in 2021 to coordinate this expansion. In addition, other City departments are considering implementing a purple bags collection service at homeless encampments located on other properties such as downtown Right-of-Ways (e.g. planting strips and alleys).

Explore opportunities for green jobs training for unsheltered community members
Unsheltered persons may benefit from the opportunity to perform habitat stewardship activities in the natural areas where they reside or near their temporary structures (such as tiny homes). Limited education and job training is commonly identified as a barrier to employment and economic security by unsheltered persons. There is a potential opportunity to facilitate in-demand job training and needed ecological restoration by unsheltered persons as demonstrated through the Weed Warriors Nature Stewards Program based in King County. This non-profit organization was granted funding to provide training to residents of a tiny house encampment managed by Low Income Housing Institute (LIHI) in Seattle. Participants from the encampment receive stipends, learn weed identification and ecological restoration skills, and gain on-the-ground work experience (Weed Warriors 2021). A similar model could be explored for a pilot project in Tacoma through partnerships with the Passive Open Space program, EarthCorps, and other partner organizations.

Pursue opportunities for regional collaboration

Following a joint presentation on purple bags and encampment waste programs by City of Tacoma and City of Seattle at the 2021 Municon Stormwater Permit Conference, an open invitation was issued for other municipal stormwater staff to create a community of practice around encampment waste response. ES has organized a team of City staff that have been involved in various community-driven campaigns, projects, and programs that address the effects of "waste out of place" (eg. illegal dumping, litter) in Tacoma's neighborhoods and Puget Sound. Initial ideas are being shared about current projects, priorities, and programming opportunities. Potential regional partnerships and collaboration with Department of Ecology's Litter Prevention Coordinator, Zero Waste Washington, and a regional summit with municipal stormwater managers and WSDOT are being explored.

Additional cleanup, ecological restoration, and habitat monitoring at the pilot site

Litter and significant erosion persisted following vacation of encampments at the pilot site even after residents utilized purple bags. Additional cleanup and ecological restoration was required to repair steep slopes and damaged vegetation that was left behind after years of encampment activity. Vegetation monitoring and site maintenance activities are currently underway.

Photos 6 and 7. One steep slope before and after encampment vacation and ecological restoration at the project site. Erosion control blanket and native trees, shrubs, and ground covers were installed to improve stormwater and habitat benefits over time.

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