

# TPW Mobile Application

## Quick Start Guide

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## 1. Introduction

The Tobacco Product Waste (TPW) Mobile Application was developed to translate the standardized, field-tested TPW monitoring method (<https://sfei.org/tpw-method-demo-quick-start>) created for the California Department of Public Health (CDPH) into an accessible, easy-to-use digital tool. This app enables CDPH-affiliated staff, volunteers, community scientists, researchers, and environmental advocates to conduct consistent, comparable assessments of tobacco product waste across diverse locations and time periods.

This Quick Start Guide is an abbreviated version of a lengthier, more exhaustively documented User Guide (<https://sfei.org/tpw-app-user-guide>). Please feel free to consult the more complete version of

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this guidance, particularly if you are performing administrative tasks or wishing to consult the associated dashboard which collects and visualizes all of the assessments.

## 1.1 Purpose of TPW Monitoring

Tobacco product waste—particularly cigarette butts, wrappers, filters, and components of electronic cigarettes—are among the most common forms of environmental litter. High-quality data on TPW is essential for answering management questions such as:

- How much TPW is present in a given neighborhood, school, or city?
- How do levels compare across regions or over time?
- Are particular products, types, or brands contributing disproportionately to waste?
- Are cleanup efforts or policy interventions reducing levels of TPW?

## 1.2 From Protocol to App: Modernizing Field Data Collection

The mobile app preserves the flexibility of the original protocol by allowing users to choose the level of detail appropriate for their assessment while ensuring that required fields, area measurements, and data structures remain consistent. The digital workflow guides users step-by-step through:

- Setting up an assessment area
- Recording basic site characteristics
- Counting TPW by type or brand
- Entering area measurements
- Storing structured data that can be exported, summarized, and visualized

## 1.3 Target Audience

This user guide is intended for:

- TPW monitoring practitioners trained under the protocol
  - CDPH partners and grantees
  - Municipal stormwater staff and Tribal environmental staff
  - Nonprofit organizations and volunteers conducting litter assessments
  - Community scientists and researchers
- 

## 2. Getting Started

This section outlines the minimum technical specifications and installation steps for the TPW Monitoring App.

### 2.1 System Requirements

- **Device type:** iOS or Android smartphone or tablet
- **App dependency:** Microsoft Power Apps mobile app

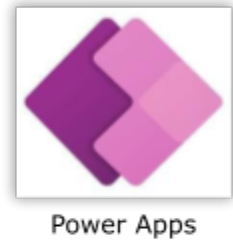
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- **Connectivity:** Internet connection required for initial setup; offline mode available for field use
- **Permissions:** Camera access and optional location services

### 2.2 Installing the TPW App

1. **Activate Account:** Accept the CDPH organization invitation to activate your Microsoft account.
2. **Access Invitation:** Open the TPW App invitation email, which includes a QR code.
3. **Download Platform:** Download **Microsoft Power Apps** from the App Store or Google Play.
4. **Sign In:** Sign in using your email associated with a CDPH guest account.

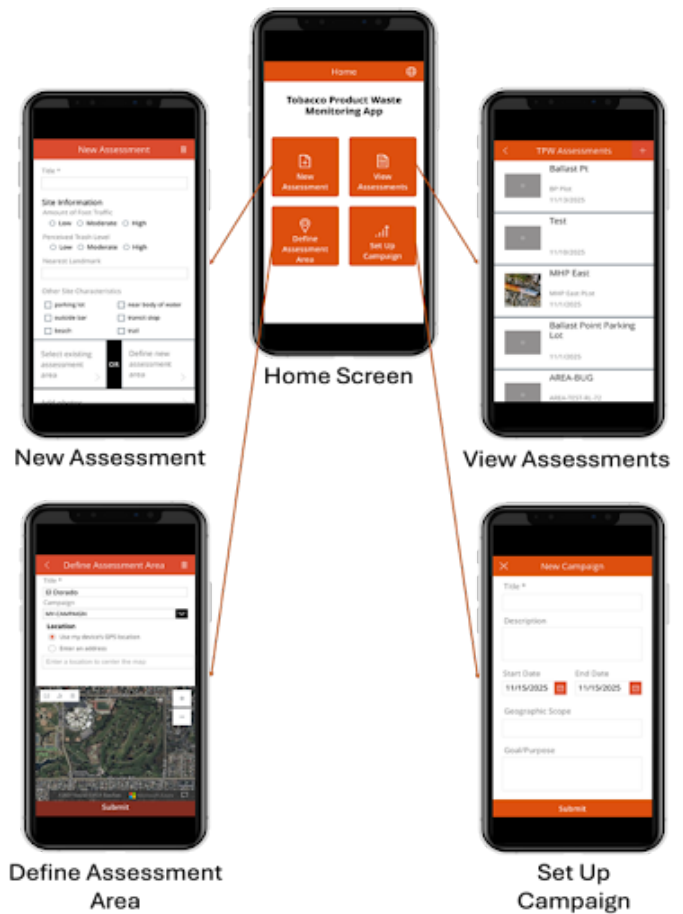
**Note:** Upon opening, the home screen will confirm that the app has loaded successfully. It will also indicate when the app is available for offline data collection.



### 3. App Layout and Navigation

The TPW mobile app opens to a simple home screen with four primary actions:

- **New Assessment:** Create the geographic boundaries of a monitoring location and record data.
- **Define Assessment Area:** Create or edit the geographic boundaries of a monitoring location (predefined areas) using map tools, GPS, or addresses.
- **Set Up Campaign:** Create a structured monitoring effort that spans multiple assessments, including start/end dates and goals.
- **View Assessments:** Browse, open, review, edit, or delete previously completed assessments.



### 4. Defining a Campaign (LLA Administrators)

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A **Campaign** groups together multiple assessments conducted for a shared purpose, timeframe, or project objective.

### Why Campaigns Are Useful

1. **Consistent Monitoring:** Allows users to conduct multiple assessments at different times under a unified tracking structure.
2. **Filtering and Comparison:** Enables analysts to compare high- vs. low-density sites, neighborhoods, or pre- vs. post-intervention conditions .
3. **Evaluation and Reporting:** Helps staff compile summary statistics and report results to funders or partners .
4. **Team Organization:** Ensures multiple staff or volunteers collect data under one umbrella, improving oversight .
5. **Spatial Planning:** Allows teams to establish standard locations (predefined assessment areas) in advance.

### How to Create a Campaign

1. **Enter Title (Required):** Type a clear, descriptive name (e.g., "2025 School Zone TPW Study") .
2. **Add Description:** Summarize the purpose (e.g., "Monitoring TPW hotspots in transit corridors").
3. **Select Dates:** Choose a **Start Date** and **End Date** using the calendar tool .
4. **Define Geographic Scope:** Enter the primary area (e.g., "Central Long Beach" or "City of Sacramento") .
5. **Enter Goal:** Describe the achievement target (e.g., "Measuring TPW levels near schools").
6. **Submit:** Tap **Submit** to make the campaign available to all authorized users .

 **New Campaign**

Title \*

Description

Start DateEnd Date

11/15/202511/15/2025

Geographic Scope

Goal/Purpose

**Submit**

## 5. Defining Assessment Areas

Assessment areas can be predefined to ensure consistency in monitoring sites across your team. *(Note that, while the app can run offline, the assessment areas can only be created when connected to the Internet via wi-fi or cellular connections.)*

### 5.1 Creating a New Predefined Assessment Area

1. Select **Define Assessment Area** on the home screen.
2. Enter a **Title** (Required) and select a **Campaign** (Optional).
3. **Center the Map:** Use the search box for an address or use the device's GPS .

#### 4. Draw Polygon (Required):

- Tap the **draw icon** (left) to trace the assessment area.
- Tap the **modify icon** (middle) to adjust dots/boundaries.
- Tap the **delete icon** (right) to remove the polygon.

5. Tap **Submit** to save.

### 5.2 Deleting an Assessment Area

Navigate to the assessment area you wish to remove and tap the **trash can icon** in the upper right corner. Confirm the action to permanently remove the area .

## 6. Conducting TPW Assessments

Users can conduct assessments at existing areas or define new ones on the fly. *(Note that, while the app can run offline, the assessment areas can only be created when connected to the Internet via wi-fi or cellular connections.)*

### 6.1 Recording an Assessment at an Existing Assessment Area

1. Tap **New Assessment** on the home screen.
2. **Enter Title and Site Characteristics:**
  - Fill in Title (Required), Foot Traffic, Perceived Trash Level, Nearest Landmark, and characteristics (e.g., parking lot, beach) .
3. **Select Area:** Choose **“Select existing assessment area”** and pick from the list.
4. **Add Photos:** Document site conditions.
5. **Assess TPW:** Open the counting screen, record items, tap **Done**, and **Submit** .

New Assessment

Title \*

Site Information

Amount of Foot Traffic

☐ Low ☐ Moderate ☐ High

Perceived Trash Level

☐ Low ☐ Moderate ☐ High

Nearest Landmark

Other Site Characteristics

☐ parking lot ☐ near body of water

☐ outside bar ☐ transit stop

☐ beach ☐ trail

Select existing assessment area OR Define new assessment area

### 6.2 Recording an Assessment and Creating a New Assessment Area

1. Tap **New Assessment** and enter the **Title** and **Site Characteristics**.
2. **Select Area:** Choose **“Define new assessment area”**.
3. **Define Area:**
  - Provide an **Assessment Area Title** and select a **Campaign**.
  - Center the map and use the **Draw Polygon** tool to outline the physical boundaries .
  - **Submit** the new area.
4. **Complete Assessment:** Add photos, record TPW items, and **Submit**.

## 6.3 Using the TPW Item Counting Screen

The counting screen ensures standardized data collection.

1. **Select Item Type:** Optional. Choose from the list (e.g., cigarette butt, cigar wrapper). Use "Other – Specify" if needed.
2. **Select Item Brand:** Optional. Select the brand name if visible. Use "Other – Specify" if needed.
3. **Record Count:** Tap **"Count Item +"** for each item observed.
4. **Review and Finalize:** Monitor the running tally, tap **Done** when finished, and then **Submit** the assessment.

## 7. Using the App in Offline Mode

The app supports data collection in areas with limited connectivity.

**Important:** Before going into the field, open the TPW app while online so your device can cache campaigns, assessment areas, and item lists. Look for the notification banner confirming the app is available for offline use.

### 7.1 Creating Assessments Offline

*The app can run offline, but the assessment areas can only be created and photos recorded only when connected to the Internet via wi-fi or cellular connections.*

- Follow the standard assessment procedures (entering info, counting items).
- When you tap **Submit**, the assessment is saved locally and marked as "pending synchronization".
- Data will upload automatically when the app is next opened with internet connectivity restored.

### 7.2 Best Practices

- Confirm the offline availability message before starting.
- Do not close the app until assessments are submitted.
- Once connectivity is restored, allow time for data to sync before logging out.


Count TPW


Toggle between options from the lists below to classify TPW items as you count

| Item Type                                            | Item Brand                            |
|------------------------------------------------------|---------------------------------------|
| <input type="radio"/> Cigarette Wrapper              | <input type="radio"/> Marlboro        |
| <input type="radio"/> Cigarette Box                  | <input type="radio"/> Parliament      |
| <input type="radio"/> Cigarette Filter               | <input type="radio"/> Kool            |
| <input type="radio"/> Cigarette (filter and tobacco) | <input type="radio"/> Newport         |
| <input type="radio"/> Cigarillo Wrapper              | <input type="radio"/> Unknown         |
| <input type="radio"/> E-Cigarette Wrapper            | <input type="radio"/> Black & Mild    |
| <input type="radio"/> E-Cigarette Pod                | <input type="radio"/> Dutch           |
| <input type="radio"/> Smokeless Tin                  | <input type="radio"/> Swisher Sweets  |
| <input type="radio"/> Cigar Tip                      | <input type="radio"/> RELX            |
| <input type="radio"/> Lighter                        | <input type="radio"/> NJOY            |
| <input type="radio"/> E-Cigarette                    | <input type="radio"/> Juul            |
| <input type="radio"/> E-Cigarette Box                | <input type="radio"/> Grizzly         |
| <input type="radio"/> Other - Specify                | <input type="radio"/> Hojo            |
|                                                      | <input type="radio"/> Other - Specify |

Press the "Count Item" button to add a TPW item to the tally.

Count Item +
0

Done

## 8. Appendices

### A. Troubleshooting Tips

- **Sign-In Issues:** Ensure you accepted the CDPH invitation email. If prompted repeatedly, clear your cache.
- **GPS Issues:** Ensure "Location Services" are enabled for Power Apps and use "High Accuracy" mode.
- **Syncing Data:** If data doesn't sync when back online, ensure a strong connection and keep the app open. You may need to manually refresh the home screen .
- **Submission Errors:** Check that all required fields (Title, Campaign) are full and that the Assessment Area polygon is successfully drawn.

### B. Definition of Key Terms

- **Assessment Area:** A geographic area where monitoring occurs; used to calculate TPW density.
- **Campaign:** A grouping of assessments around a common theme or timeframe.
- **TPW Density:** A standardized measure of TPW expressed as *items per square foot*.
- **Foot Traffic:** A qualitative indicator (Low, Moderate, High) of how many people frequent the area .
- **Polygon:** A digital shape drawn on the map to outline boundaries for density calculations.