

# USER'S MANUAL

## City of Tacoma Watershed Planning Project

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### Introduction

This manual describes how to use the Tacoma Watershed Insights web application. This application lets users track stormwater infrastructure, assess performance, and make informed decisions regarding stormwater and water quality in Tacoma.

### Purpose

TODO

Remember to bring milk

## Key Concepts

Facility IDs

Subbasins

Scenarios

Climate Epochs

Facility Types

Facility Modeling Parameters

Simple vs. Detailed Facilities

Pollutants

## Definitions

**Term 1** Definition 1

**Term 2** Definition 2a  
Definition 2b

## Editing Facility Data

### Editing Water Quality Parameters

You can edit the parameters used to model facilities in the **Facility Details** view. There are several ways to navigate to this view:

- From the Map Explorer map, click on a facility to open the Facility Overview panel. Then, click on **View Facility Details** to be taken to the detail page.
- From the **Water Quality Results Viewer**, click on a BMP name in the table.

### Updating from Simple to Detailed Facility

By default, most facilities are modeled as simple facilities, meaning only two parameters are used: Captured Percentage, and Retained Percentage.

See the Introduction.

Table 1: Treatment Facility Parameters

Parameter	Description
altid	
area_sqft	
captured_pct	

Parameter	Description
commonname	
depth_ft	
design_storm_depth_inches	
facility_type	
facilitydetail	
facilitytype	
flowcontrol	
flowcontrolype	
hsg	
inf_rate_inhr	
infiltrated	
media_filtration_rate_inhr	
minimum_retention_pct_override	
node_id	
retained_pct	
retention_volume_cuft	
total_volume_cuft	
treatment_rate_cfs	
tributary_area_tc_min	
waterquality	
waterqualitytype	

Parameter	Description
capital_cost	None
capital_cost_basis_year: int	None
om_cost_per_yr: float	None
om_cost_basis_year: int	float
install_year: int	float
replacement_cost: float	None
lifespan_yrs: float	int

## cost attr globals

```

discount_rate: float | None = None
inflation_rate: float | None = None
planning_horizon_yrs: float | int | None = None
cost_basis_year: float | int | None = None

# cost results
present_value_capital_cost: float | None
present_value_om_cost: float | None

```

```

present_value_total_cost: float | None
present_value_cost_table: list[dict] | None = None
present_value_chart_table: list[dict] | None = None

# cost effectiveness
TCu_total_cost_dollars_per_load_lbs_removed: float | None
TN_total_cost_dollars_per_load_lbs_removed: float | None
TP_total_cost_dollars_per_load_lbs_removed: float | None
TSS_total_cost_dollars_per_load_lbs_removed: float | None
TZn_total_cost_dollars_per_load_lbs_removed: float | None
PHE_total_cost_dollars_per_load_lbs_removed: float | None
PYR_total_cost_dollars_per_load_lbs_removed: float | None
DEHP_total_cost_dollars_per_load_lbs_removed: float | None

"node_id",
"epoch",
"node_type",
"ntype",
"facility_type",
"valid_model",
"subbasin",
"basinname",

```

## Shared properties

```

class TMNTFacilityAttrBase(BaseModel): # modeling attrs facility_type: None
| str = None hsg: None | str = None design_storm_depth_inches: None | float
= None tributary_area_tc_min: None | float = None total_volume_cuft: None
| float = None area_sqft: None | float = None inf_rate_inhr: None | float =
None retention_volume_cuft: None | float = None media_filtration_rate_inhr:
None | float = None minimum_retention_pct_override: None | float = None
treatment_rate_cfs: None | float = None depth_ft: None | float = None

# simplified attrs
captured_pct: None | float = None
retained_pct: None | float = None

```