Jefferson County Washington

Department of Public Works
Solid Waste Division

Solid Waste Facility Replacement Planning Project - HANDOUT #1 for Workshop # 5

INCLUDES:

A. CURRENT CONDITION ASSESSMENT REPORT CARD FOR THE EXISTING FACILITY
B. UPDATED DRAFT INITIAL FACILITY DESIGN ALTERNATIVES DEFINITION
C. UPDATED SCREENING PROCESS - FOR DRAFT INITIAL FACILITY DESIGN ALTERNATIVES

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1.0 Overview

Purpose of this Document
This document is intended to support SWFTF members' preparation for workshop #5 and facilitate collaboration for an efficient engagement.

Workshop #5 Focus
We will focus on answering the following key questions – [1] Which facility design alternatives will achieve the defined improvement objectives and therefore should be selected for more detailed assessment? and, [2] Which potential sites should be selected for more detailed assessment? **This document relates to the first question**. Handouts #3 and #4 will support activities related to the second question.

2.0 Pre-Workshop Activities

This workshop is scheduled for 2-1/4 hours including a ½ hour lunch break. To ensure achievement of workshops goals within this timeframe, participants are requested to complete the following pre-workshop activities.

- **Activity 1 -** Review the *updated* screening method for the initial facility design alternatives.
- **Activity 2 -** Review the *results from the existing facility current state condition assessment* and be prepared to consider those results when screening the initial facility design alternatives.
- **Activity 3 -** Review the *updated* initial facility design alternatives and be prepared to use the screening method to select alternative(s) for detailed assessment during the workshop.
- **Activity 4 -** Review the *results from the initial community survey* and be prepared to consider those results when screening the initial facility design alternatives.
- **Activity 5 -** Review the *potential sites, the sites screening method, the results of the initial screening activity* completed by the consultant team and be prepared to discuss and provide feedback.

Based on your review of this Guidance Document, please provide any questions through Al Cairns, ahead of the workshop support workshop preparation activities.

3.0 Changes to ZOOM Platform for Presentations

The consultant team has developed new meeting security protocol to avoid being "Zoom bombed" as occurred at our last meeting.

You will join the meeting as a member of the public, with no ability to turn your microphone or camera on. You will be promoted to be a panelist, which will then allow you to have audio and video access to the meeting. From that point on, everything else will remain the same for you. Meeting observers (community members, staff, etc.) will remain as participants with no ability to interject audio or video unless I give them permission.

4.0. Results of Existing Solid Waste Facility Current State Condition Assessment

Assessment of the Existing SWF – A high level condition assessment of the existing Solid Waste Facility at Port Townsend was completed to identify any physical condition and functional performance gaps. The results of this assessment are presented in Figure 1 below.

Figure 1 – Current State Condition Assessment Report Card

Jefferson County Washington

Department of Public Works

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JEFFERSON COUNTY SOLID WASTE FACILITY

Current State Condition Assessment Report Card

2 Tonnage and Vehicle Flow Capacity
Design capacity is 50 tons per day; facility operated at over design capacity for 12 out of the last 17 years.

2 Emergency Storage, Buffer & Expandability Capacity
152.97 - acre property with: closed landfill and wastewater lagoon, leased gun range, wetland, and Port Townsend biosolids facility. Developable area is less than 15 acres.

2 Site Access
Difficult intersections, turning radii and single lane queuing along Jacob Miller and County Landfill Road. No trailer or recycling-only customer bypass lane on approach.

2 Scales and Scalehouse
Platform vehicle scale length is suboptimal at about 25 ft ; access via right-turn lane from tipping area to scale is very tight for vehicles with trailers; no bypass lanes on scales ; scalehouse is very small with no ADA compliant accessible features, restroom or parking stalls.

2 Recyclable Collection and Processing Areas
Many material recycling options; no ADA accessible options to the bins; inadequate mixed traffic of self-haul customers to bins and commercial vehicles to large recycling processing buildings; undersized collection and processing building.

3 Transfer Building and Operations
Pr-engineered 7,500 sf structure was rebuilt in 1994; tipping floor capacity relative to vehicular demand is adequate but suboptimal; No backup tipping capacity ; compaction tampering equipment is suboptimal.

3 Waste Loading Operations
Adequate - axle (tunnel) scales and trailer parking area. Cycle time from floor clearing, tampering and trailer- parking is about 20 minutes; time to achieve adequate payload of 26 tons per trip is not optimal.

3 Employee Facilities
Administrative office last modified in 2020; recycling building built in 1983 and close to end of life; adequate parking, break and lunch/meeting room, separate restrooms, and dedicated recyclable processing buildings with lunch and rest rooms are adequate.

2 Public Facilities
Visitors parking area not paved; with non-ADA compliant access to administrative building area; no standard public telephone or restrooms or public education and information area(s).

2 Queuing and Traffic Circulation
Customers can enter and exit recycling area freely; standing outside their vehicles and unloading have accident risk exposure ; unsafe cross-traffic between recycling only and refuse customers; queuing at tipping floor is suboptimal.

3 Transfer and Recycling Building Structure
Transfer building is in fair condition externally; it is crowded in the interior; tipping building clear height to bottom of roof structure is less than optimum; ventilation is adequate; administrative building is in good condition; scale house building is in fair condition; recycling building condition is not adequate.

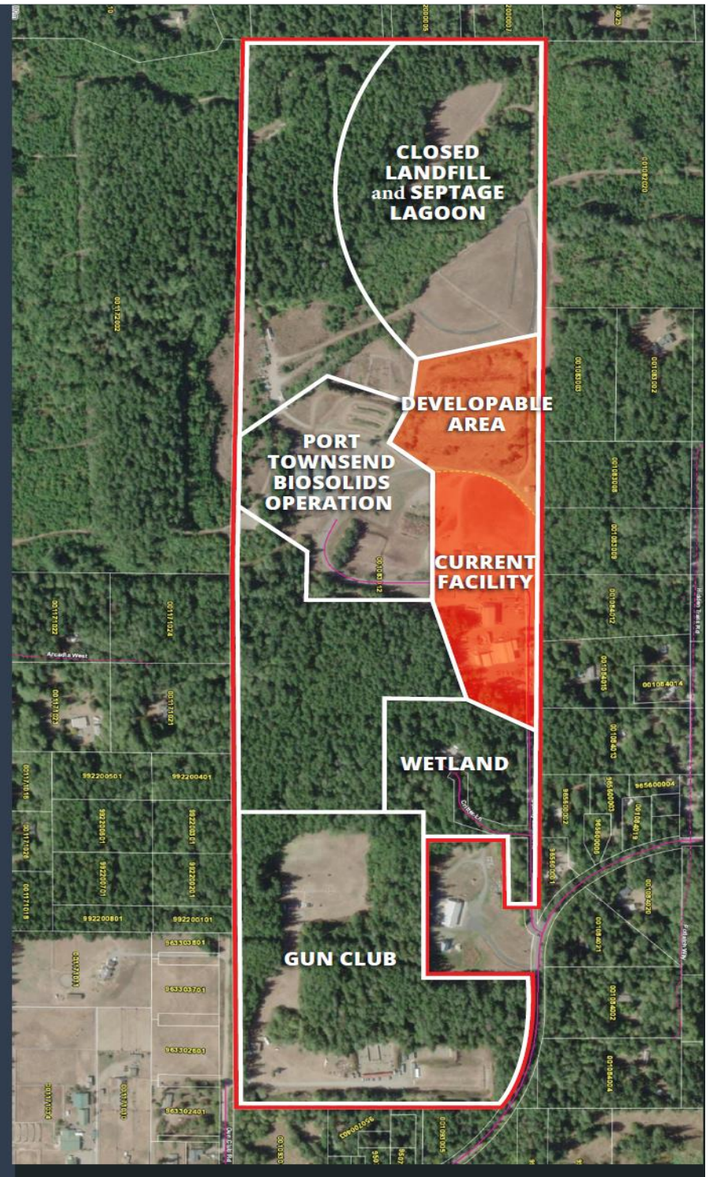
3 Operating Equipment
Key operating equipment - Knuckle boom crane, tractors, recyclable processing, pit scale, drop boxes, and platform scale are in fair to good conditions.

2 Facility Management Cost
Operations and Maintenance costs increased by 44% from 2014 to 2022. Capital spending was variable and dependent on asset renewal. Comparison of O and M to replacement cost suggest that the facility is in overall fair condition.

3 Statutory Compliance Risk
Customers standing at tipping floor to dispose waste; operator vehicles are not separated from customer vehicles; recycling and stored goods are near roof trusses; age of buildings suggests electrical systems near end of life; open –sided transfer building allow noise to exit building.

4 Facility Social Significance
The facility has significant influence on the community behavior as it relates to sustainable waste management and environmental stewardship; it is the main solid waste management facility in the county.

3 Impact of Facility on the Environment
Low risk of greenhouse gas emissions or groundwater pollution from the closed landfill as it's closed per regulatory standards; potentially high energy consuming equipment and building. Potential increase to carbon footprint due to lack of sustainable buildings on site.



Grade Scale 1 CRITICAL · 2 INADEQUATE · 3 FAIR · 4 GOOD · 5 EXCEPTIONAL

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5.0 Draft Initial Facility Design Alternatives Definition

Four (4) Initial SW Facility ('facility') design alternatives were defined based on the SW improvement objectives. These alternatives will be updated where appropriate after feedback is received from the community. The four alternatives identified are described in detail in Table 2 and defined below:

- **Alternative 1** – Basic Level of Service. The entry level of service for a new facility meeting basic needs.

- **Alternative 2** – Medium Level of Service. Meets all Alternative 1 Level of Service and adds additional service levels as indicated.

- **Alternative 3** – High Level of Service. Meets all Alterative 1 and 2 Levels of Service and adds additional service levels as indicated.

- **Alternative 4** – Current Level of Service + upgrades + operations management changes : The status quo scenario includes only those changes or upgrades to the building structure, site, equipment, and operating procedures that are necessary just to continue current operations for the entire 20-year period of the economic/SW planning period. **A status quo scenario would require administrative changes**, **for example:** limiting access to different user groups during certain operating days/hours; mandatory curbside service; eliminating drop off areas for recyclables; and demand pricing.

6.0 Initial Facility Design Alternatives Screening Process

This initial facility screening process will be used to identify 2-3 SW facility design alternatives that could meet the SW facility improvement objectives, while eliminating concepts from consideration that had a fatal flaw; that is, they were not reasonable or did not meet the SW facility improvement objectives.

SWF Improvement Objectives – are specific statements of a desired condition(s) or targets that shall be achieved in order to address Jefferson County's statutory goals, stakeholder needs and existing solid waste facility condition and functional Gaps.

Facility Alternatives Screening Criteria – are the standards or specific aspect of the effectiveness (quantitative or qualitative) of the facility improvement actions that are evaluated to assess their suitability to achieve the desired objectives. Criteria are not measurable while "Indicators" are. These criteria will be updated at each stage of the alternatives screening process to accommodate the increased level of detail and feedback received from the task force and community.

Facility Alternatives Screening Indicators – Are specific measurements (quantitative or qualitative) used to demonstrate the extent to which the proposed SW facility improvement achieves the desired outcome

During this screening process, facility design concepts will be evaluated qualitatively, primarily using the applicable criteria/indicators, and SWFTF members, guided by the judgment of consultant team members with expertise in the applicable evaluation areas and feedback from the community. To pass the initial facility design alternative screening, all facility design alternatives are evaluated using a **"three- level rating scale"** as outlined in **Table 1.**

Table 1 - Measurement Scale for Each Design Alternative

Rating	Extent to which Alternative would adequately achieve the indicators	Description
5	Good	Alternative would adequately achieve all Indicators
3	Fair	Alternative would adequately achieve some Indicators
1	Poor	Alternative would adequately achieve a very small number of Indicators or none of them

❖ Screening Process Steps

1. **Establish Decision Context**
   a. Review Facility Improvement Objectives
   b. Review Existing Facility Condition Assessment Results
   c. Review Initial Community Survey Results

2. **Review and Understand Facility Design Alternatives to be Screened**
   a. Review and address any questions

3. **Identify Screening Criteria /Indicators needed to achieve the Facility Improvement objectives**

4. Address any questions about list of Criteria /Indicators

5. Adjust Criteria as needed

6. Evaluate each alternative against each criteria/indicator

7. Rank alternatives and discuss results

8. **Decide and Agree on Which Alternative(s) to Move Forward for Detailed Evaluation**

Guided by the results of the total scores from the screening process, SWFTF should agree by modified consensus to accept the results and that the alternatives moved forward are those that best meets the project vision and goals...Key Questions to consider during screening and dialogue are;

- Which alternatives can efficiently handle the tonnage and vehicle traffic anticipated for the next 20-year planning horizon?
- Which alternatives offer the best opportunities for increased recycling and material recovery?
- Which alternatives offer the best opportunities to reduce queuing and congestion?
- Allow construction to occur with the minimum of disruption to ongoing solid waste operations?
- To the extent practical, separate commercial and self-haul vehicle traffic for safety reasons?
- Allow future expansion of the transfer, scale facility, recycling, and maintenance buildings, and non-building assets?
- Reduce the carbon footprint?

7.0 Detailed Description of Initial Facility Design Alternatives

❖ Initial Facility Design Alternatives' Level of Service

Level of service (LOS) is a key criteria that will be used to guide the evaluation of the different design facility alternatives.

Table 2 below provides a range of service levels (LOS) for recycling from High to Basic and shows the current level of service for comparison. The current level of service is considered high and Public Works staff indicate that they found it to be the same or better than King County and Seattle as measured by drive time between facilities and the types of materials accepted at facilities, as shared with the Solid Waste Advisory Committee in an LOS comparison in 2022.

Including additional materials to the ones currently diverted requires careful deliberation on the increase to the tipping fee necessary to offset both the revenue loss and the cost of additional material diversion. Balancing the tipping fee with LOS requires considering whether lower-income residents are able to access the core service (garbage disposal) at the price point. Excluding lower-income residents from the core service with a tipping fee that exceeds their financial capacity would indicate that the County has failed to deliver services equitably.

The level of service for **public facilities** associated with each alternative is provided in **Table 3,** while detailed descriptions of the four **facility design alternatives are provided in Table 4.**

Table 2 – Levels of Service for Recycling Services

High – Level Recycling	Medium - Level Recycling	Basic – Level Recycling	Current – Level Recycling	COMMENTS
CURBSIDE MIX				
Corrugated Cardboard **Mixed Paper and Newspaper**	Corrugated Cardboard Mixed Paper and Newspaper	Corrugated Cardboard Mixed Paper and Newspaper	Corrugated Cardboard Mixed Paper and Newspaper	**Note:** also collected at transfer station and 2 drop sites that are open 24/7
PET/HDPE Bottles	PET/HDPE Bottles		PET/HDPE Bottles	
Aluminum Cans	Aluminum Cans	Aluminum Cans	Aluminum Cans	
Tinned Food Cans	Tinned Food Cans	Tinned Food Cans	Tinned Food Cans	
Glass Containers, Tinned Food Cans & Glass Containers	Glass Containers, Tinned Food Cans & Glass Containers		Glass Containers, Tinned Food Cans & Glass Containers	
ORGANIC WASTE				
Yard Waste	Yard Waste	Yard Waste	Yard Waste - *City operated facility co-located at transfer station*	
Residential Food Waste & Soiled Paper	Residential Food Waste & Soiled Paper		Residential Food Waste & Soiled Paper - *Through composting classes that include bins*	
Commercial food waste (restaurant & grocery store)	Commercial food waste (restaurant & grocery store)		Commercial food waste (restaurant & grocery store) - *Current large diversion rate accomplished by private sector exchange between producers and ag sector*	
Woody Debris & disaster debris, with wood-chipping			Woody Debris & disaster debris, with wood-chipping - *Up to 8' long and 10" diameter*	
METAL				
Scrap Metal	Scrap Metal	Scrap Metal	Scrap Metal	
Appliances	Appliances		Appliances	
Metal fencing & pipe rails			Metal fencing & pipe rails	
CONSTRUCTION & DEMOLITION WASTE				
Clean Wood	(Note - 2022 ECY-funded study found little available material)			
Gypsum Wallboard				
Asphalt Shingles	Asphalt Shingles			
Carpet & Carpet Pad				
Tires	Tires	Tires	Tires – *Collected through annual collection events*	
Concrete	Concrete		Concrete - *Collected at private sector enterprise in Port Hadlock*	
Ceramic Tile				
Wood Palettes	Wood Palettes	Wood Palettes	Wood Palettes	

Table 3 – Levels of Service for Public Facilities

High	Medium	Basic	Current
Volunteers Space	Volunteers Space	Volunteer Space	Volunteer Space
Classroom	Public Restrooms	Public Telephone and Restrooms	Public Restrooms
Community Meeting Area	Visitor Parking	Visitor Parking	Artists in Residence
Artists in Residence	Public Education and Information Area (s)		
Viewing Area			
Artist Exhibit Space			
Public Telephone and Restrooms			
Public access tool check-out lockers or closet			
Visitor Parking			

Table 4 – Updated Initial Facility Design Alternatives

SW Facility Improvement Objectives	Criteria	Indicators	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Improved level of service to that enables achievement of County and Customer Requirements cost-effectively and equitably	Level of Service	• LOS for a minimum 20-year waste, recycling, and vehicle capacity	Basic	Medium	High	Current
Improve facility capacity to adequately and safely handle County's projected solid waste and recyclable materials for the present and future	Forecasted Waste, Vehicle and Recycling Service Capacities	• 20- year waste, recycling, and vehicle capacity • Expandability for additional 20-year capacity	Minimum 20 years and expandable to 30 years	Minimum 20 years and expandable to 40 years	Medium LOS + expandable for new services	Expand to the viable number of years limited by site constraints
Improve major facility buildings to extend their service life to a minimum 30 years	Design Life for major buildings	• Facility Major Buildings have service life of at least 30 years.	Minimum 30 years (new and larger buildings)	Minimum 30 years(new and larger buildings)	New buildings with minimum 40-year design (new and larger buildings) life	Rebuild/rehabilitation *only those changes or upgrades to the building structure, and operating procedures that are necessary just to continue current operations for the next* 20 years of planning period

Improve major operating equipment to extend their service life to a minimum 10 years	Design Life for major equipment	• Major Operating Equipment have service life of at least 10 years.	10 years minimum	10 years minimum	10 years minimum	Some have reached end of life, need replacement (*includes only those upgrades to equipment and operating procedures that are necessary just to continue current operations for the next 10-year capital equipment period*
Improve Site Improvements other than Buildings to extend their service life to a minimum 20 years	Design Life for Site Improvements other than Buildings	• Site Improvements Facility other than Buildings and operating equipment have service life of at least 20 years.	20 years minimum	20 years minimum	20 years minimum	20 years minimum (*includes only those upgrades to ancillary non-building or equipment assets, and operating procedures that are necessary just to continue current operations for the entire 20-year economic planning horizon*
• Improve safe and adequate access to the site • Achieve full accessibility for all customers to ensure compatibility and compliance with Americans with Disabilities Act (ADA. • Minimize customer wait time and queuing along site access road	Site Access (inbound to Scales)	• Separate entrance and exit for self-haulers • A bypass lane for County vehicles • Separate entrance and exit for WUTC Certificated haulers • Separate entrance and exit for no-charge services.	Two Site Entrances to scales (1- self haulers, 1- commercial) No Bypass Lane	Two Site Entrances to Scales (1- self haulers, 1- commercial) Bypass lanes on entrance and exits	Two Site Entrances to scales Scales (1- self haulers, 1- commercial) Bypass lanes on entrance and exits Separate entrance and exit for no-charge services.	One Site Entrance No bypass lane access Improve entrance to the extent possible for current site expansion constraints.
• Improve scale length to accommodate larger trucks	Scales and Scale House	• Inbound and Outbound	New ADA accessible Scale house -	New ADA accessible Scale house	New, ADA accessible scale house	Improve current scale house to ADA

and trailer combinations • Improve the location of scales to reduce operational delay		scales for self-haul customers • Inbound and Outbound scales for WUTC Haulers • Adequacy of scales' size to weigh all vehicles including transfer trailers. • ADA compliant scale house.	Scales - 1 in, 1 out	Scales – 1 in, 1 out Space for 2nd in, 2nd out future	Scales-2 in, 2 out	accessible, standards Upgrade existing short scale to standard scales , Scales - 1 in, 1 out within existing site constraints
• Reduce onsite queuing and traffic congestion both on and off site • Separate commercial and self-haul traffic loop	Queuing and Traffic Circulation On Site	• Separation of WUTC haulers and self-haul customers in the off-loading area of transfer building • No traffic conflict between WUTC haulers and self-haul customers • Separate exit and entrance to/from the transfer building for commercial and self-haul customers.	1-entry/ exit door from commercial building for commercial haulers 1-entry/exit door for self-haulers	1-entry/ exit door from commercial building for commercial haulers 1-entry/exit door for self-haulers	1-entry/ exit door from commercial building for commercial haulers 1-entry/exit door for self-haulers	1-entry/ exit door from transfer building for commercial & self-haulers - improvements to the extent possible under existing site constraints
• Increase tipping floor capacity to accommodate increased refuse tonnage and expanded material recovery types and volumes • Improve the roof of the tipping floor building to ensure longer life.	Waste Receiving and Waste Loading Operations	• Tipping operations enclosed within a building and modern roof • Separate tipping areas for commercial and self-haul customers. • The number of tipping stalls, especially on weekends, meets JC 20-year forecasted waste and vehicle capacity.	Increase tipping floor capacity to match basic capacity LOS New Transfer Building Roof	Increase tipping floor capacity to match medium capacity LOS New Transfer Building Roof	Increase tipping floor capacity to match high-capacity LOS New Transfer Building Roof	Upgrade tipping floor capacity to the extent possible Replace or Modify Transfer Building Roof

• Improve Waste Compaction Equipment efficiency and effectiveness • Improve Waste loading cycle time and payloads.		Transfer Technology- compaction Efficiency and density.	New knuckle-boom crane (Crane) with tracked excavator of the same capacity	New knuckle-boom crane (Crane) with tracked excavator of the same capacity	New knuckle-boom crane (Crane) with tracked excavator of the same capacity	New knuckle-boom crane (Crane) with tracked excavator of the same capacity
• Improve site capacity for site storage • Accommodate future growth		There is sufficient space for empty trailer and full trailer staging areas. Waste storage capacity meets 5 -day average capacity for 20-year JC forecast needs.	Storage for 5-full, 5-empty trailers Emergency area for 3-days full trailers	Storage for 5-full, 10-empty trailers Emergency area for 5-days full trailers	Storage for 10-full, 10-empty trailers Emergency area for 7-days full trailers	Improve storage area to accommodate at least Storage for 5-full, 5-empty trailers On-site storage for 10 empty or full trailers
• Expand material diversion and recycling capacity and services to provide reuse services – [1]a “drop and take” drop-off spot for items to be reused rather than landfilled, [2] for partner-driven efforts to support additional recycling or reuse. E.g., Styrofoam recycling operation; [3] for diversion	Drop-Off Recycling Service[1]	• Increased number of recyclables drop off stalls. • Covered No-fee and Fee- Recyclables collection area. • Easy access and avoidance of cross-traffic patterns. • ADA accessible bins.	Basic LOS ADA Accessible Bins Moderate queue times	Medium LOS ADA Accessible Bins Accessible bins and receiving Separate customers from operations Moderate queue times	High LOS Accessible bins and receiving Separate customers from operations Minimal queue times	Current LOS – Modify to enable ADA accessibility to the extent possible & but queue time improvement limited by site constraints

of edible food; [4] recycle agricultural plastics to meet the changing needs of County residents. • Expand the recycling area to accommodate the handling of increased types of materials that could be kept from going to the landfill.						
• Improve Employee Facilities (non-scale attendant)	Employee Facilities	• Convenient parking • Break and lunch/meeting room • Separate restroom facilities convenient to staging area • Adequate restrooms	• Convenient parking • Break and lunch/meeting room • Separate restroom facilities convenient to staging area • Adequate restrooms	• Convenient parking • Break and lunch/meeting room • Separate restroom facilities convenient to staging area • Adequate restrooms	• Convenient parking • Break and lunch/meeting room • Separate restroom facilities convenient to staging area • Adequate restrooms	Standard ADA compliant employee restrooms currently provided.
• Improve Quality Onsite SWF Public Facilities	Public Facilities	• Visitor Parking • Public telephone and restrooms.	Basic LOC • Visitor Parking • Public telephone and restrooms.	Medium LOS • Visitor Parking • Public telephone and restrooms. • Public Education and Information Areas(s).	High LOS • Visitor Parking • Public telephone and restrooms. • Public Education and Information Areas(s). • Community Meeting/use space.	Upgrade to a minimum Basic LOS
• Reduce the carbon footprint • Improved air quality. • Achieve statutory regulatory and permit compliance.	Environmental Quality	• Control of GHG emissions • Key facilities are Green Buildings • Water conservation in buildings • Fuel efficient operating equipment Statutory regulatory and permit Compliance	Meets state minimum standards for energy, water, and building	Enclosed Building Medium LOS for : Water conservation system Fuel efficient operating equipment Supplementary solar power and/or heat recovery systems.	Enclosed Building High LOS for : Water conservation system Fuel efficient operating equipment Supplementary solar power and/or heat recovery systems.	Upgrades to meet design energy standards

				Green building Greenhouse monitoring system	Increased stormwater quality beyond state requirements Green building Greenhouse monitoring system Target USGBC LEED Certification	