



**CITY OF LACEY**  
Community & Economic Development Department  
420 College Street SE  
Lacey, WA 98503  
(360) 491-5642

**OFFICIAL USE ONLY**

Case Number: \_\_\_\_\_

Date Received: \_\_\_\_\_

By: \_\_\_\_\_

Related Case Numbers:

\_\_\_\_\_

\_\_\_\_\_

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**WAC 197-11-960**  
**ENVIRONMENTAL CHECKLIST**

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**SEPA ENVIRONMENTAL CHECKLIST**

***Purpose of checklist:***

Governmental agencies use this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

***Instructions for applicants:***

This environmental checklist asks you to describe some basic information about your proposal. Please answer each question accurately and carefully, to the best of your knowledge. You may need to consult with an agency specialist or private consultant for some questions. You may use "not applicable" or "does not apply" only when you can explain why it does not apply and not when the answer is unknown. You may also attach or incorporate by reference additional studies reports. Complete and accurate answers to these questions often avoid delays with the SEPA process as well as later in the decision-making process.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

***Instructions for Lead Agencies:***

Additional information may be necessary to evaluate the existing environment, all interrelated aspects of the proposal and an analysis of adverse impacts. The checklist is considered the first but not necessarily the only source of information needed to make an adequate threshold determination. Once a threshold determination is made, the lead agency is responsible for the completeness and accuracy of the checklist and other supporting documents.

***Use of checklist for nonproject proposals:***

For nonproject proposals (such as ordinances, regulations, plans and programs), complete the applicable parts of sections A and B plus the [SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS \(part D\)](#). Please completely answer all questions that apply and note that the words "project," "applicant," and "property or site" should be read as "proposal," "proponent," and "affected geographic area," respectively. The lead agency may exclude (for non-projects) questions in Part B - Environmental Elements –that do not contribute meaningfully to the analysis of the proposal.

A. BACKGROUND

1. Name of proposed project, if applicable:

Intercity Transit – Martin Way Park & Ride – Flyer Stop/Direct Access

2. Name of applicant:

Intercity Transit - Eric Phillips, Development Director

3. Address and phone number of applicant and contact person:

P.O. Box 659, Olympia, WA 98507,

Contact: Eric Phillips, 360-705-5885

4. Date checklist prepared:

July 2022

5. Agency requesting checklist:

City of Lacey

6. Proposed timing or schedule (including phasing, if applicable):

November 2022 to August 2023

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

No

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

SEPA Checklist, Martin Way IJR, WSDOT Level 2 Environmental Documentation

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

None known.

10. List any government approvals or permits that will be needed for your proposal, if known.

City of Lacey Building permits, site development permit, and Department of Ecology General Permit coverage, off-site work will be permitted through WSDOT.

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)

The project will construct a new transit flyer stop at the beginning of the northbound SR 5/Martin Way on-ramp and a transit-only direct access exit into the Martin Way Park & Ride. A new building is proposed to house driver restrooms and security infrastructure.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

The Martin Way Park and Ride at the northeast quadrant of the Martin Way interchange. West of Martin Village.

Site plan, vicinity map, and topographic map are included in the submittal.

## B. ENVIRONMENTAL ELEMENTS

### 1. Earth

a. General description of the site

(circle one): Flat, rolling, hilly, steep slopes, mountainous, other: Flat.

b. What is the steepest slope on the site (approximate percent slope)?

The site is flat; the steepest slope is approximately 10%.

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.

The USDA Natural Resources Conservation Service Web Soil Survey (<https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>) shows Everett very gravelly sandy loam at the project site.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

There are no known surface indications or history of unstable soils in the immediate vicinity.

e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill.

The project will cut approximately 1,150 CY and fill approximately 1,000 CY. Any fill needing to be brought to the project site will be from an approved source.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

It is possible that erosion could occur because of clearing, and construction. However, the project will comply with the City of Lacey's engineering requirements and best management practices will be applied to prevent erosion from occurring.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

The existing site has approximately 3.45 acres of impervious surface. The majority of the existing project site is impervious surface and the proposed revisions will maintain the same

ratio of pervious and impervious surfaces. The percent of coverage is approximately 80%

- h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

The project will meet or exceed the Engineering Design and Development Standards for erosion control and shall apply best management practices throughout the construction of the project such as silt fencing.

## 2. Air

- a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.

Types of emissions to the air would be from construction equipment and dust from construction. The project will improve transit efficiency and offer more parking spots for the park and ride so the overall project should reduce air emissions related to congestion.

- b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

None known.

- c. Proposed measures to reduce or control emissions or other impacts to air, if any:

Idling equipment will be turned off. Water trucks will be used to mitigate dust and will be used as necessary.

## 3. Water

- a. Surface Water:

- 1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

According to the Thurston County's Geodata site, there are no waterbodies, streams, or wetlands located on or in the immediate vicinity of the site. The project site is located in a developed area.

- 2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

No

- 3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

There will be no fill and dredge material as part of this project.

- 4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

The project will not require surface water withdrawals or diversions.

- 5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

According to the FEMA website (<https://msc.fema.gov/portal/search>), this project is not located within the 100-year floodplain and is listed as being located in an "Areas determined to be outside the 0.2% annual chance floodplain" (map 53067C0187E effective 10/16/2012).

- 6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

This proposal does not involve discharges of waste materials into surface waters.

b. Ground Water:

- 1) Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.

Groundwater will not be withdrawn from a well for drinking water or other purposes.

- 2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals. . . ; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

Project will be served by a septic holding tank. It is anticipated that the use will require approximately 7,000 gallons of capacity and will be installed as (two) 3,500 gallon concrete septic tanks. This system will serve the Intercity Transit driver restroom facility.

c. Water runoff (including stormwater):

- 1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

The source of stormwater runoff will be from impervious surfaces from the rooftops, driveways and parking areas. Stormwater will be infiltrated on-site to the existing system. Off-site drainage will flow to the existing WSDOT system.

- 2) Could waste materials enter ground or surface waters? If so, generally describe.

None anticipated.

- 3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.

No.

d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any:

The project will use standard accepted methods of controlling surface storm water such as below surface infiltration trenches control/reduce surface water runoff.

#### 4. Plants

- a. Check the types of vegetation found on the site:

deciduous tree: alder, maple, aspen, other

evergreen tree: fir, cedar, pine, other

shrubs

grass

pasture

crop or grain

Orchards, vineyards or other permanent crops.

wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other

water plants: water lily, eelgrass, milfoil, other

other types of vegetation

- b. What kind and amount of vegetation will be removed or altered?

Trees, grasses and shrubs to accommodate new construction.

- c. List threatened and endangered species known to be on or near the site.

According to Washington Department of Fish and Wildlife

(<https://geodataservices.wdfw.wa.gov/hp/phs/>) there are no endangered species known to be on or near the site.

- d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

Landscaping proposed for this project will match the existing landscaping on site.

- e. List all noxious weeds and invasive species known to be on or near the site.

The site is currently paved and landscaped. There are no known noxious weeds or invasive species on site.

#### 5. Animals

- a. List any birds and other animals which have been observed on or near the site or are known to be on or near the site. Examples include:

*birds: hawk, heron, eagle, songbirds, other:*

*mammals: deer, bear, elk, beaver, other:*

*fish: bass, salmon, trout, herring, shellfish, other*

birds, songbirds, deer

- b. List any threatened and endangered species known to be on or near the site.

According to Washington Department of Fish and Wildlife

(<https://geodataservices.wdfw.wa.gov/hp/phs/>) there are no endangered species known to be on or near the site.

- c. Is the site part of a migration route? If so, explain.

Migration routes exist near the site, Washington is within the Pacific Flyway route.

- d. Proposed measures to preserve or enhance wildlife, if any:

Stormwater will be treated and detained in the existing stormwater system. Landscaping will be provided using native plants as much as possible.

- e. List any invasive animal species known to be on or near the site.

The site is currently paved and landscaped. There are no known invasive animal species on site.

## 6. Energy and natural resources

- a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

Energy will be electric, uses will include lighting, heating, and other typical commercial uses.

- b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

No.

- c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

The buildings will use energy efficient strategies where possible including energy efficient lighting, heating sources. etc.

## 7. Environmental health

- a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

No

- 1) Describe any known or possible contamination at the site from present or past uses.

Review of the Department of Ecology Neighborhood Cleanup resources (<https://apps.ecology.wa.gov/neighborhood/>) shows there are no known possible contaminations at the site.

- 2) Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.

There are no existing hazardous chemicals/conditions that might affect the project development and design.

- 3) Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.

During construction non-toxic chemicals will be used to the extent feasible. Should the use of toxic or hazardous chemicals such as coatings or adhesives be required as part of

construction, product directions and instructions will be followed. Such chemicals will be stored in a secured storage area suitable for the specific chemicals used. Once completed, the only chemicals expected on site would be for cleaning purposes and will be stored according to state and federal regulations.

- 4) Describe special emergency services that might be required.

Fire and medical emergency services may be required typical to other commercial buildings in the area.

- 5) Proposed measures to reduce or control environmental health hazards, if any:

Environmental health hazards are not anticipated as a part of this project. Any hazards encountered will be addressed in accordance with applicable standards.

## **b. Noise**

- 1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

Noise is currently produced from traffic along Martin Way and Interstate 5 which border the project site. Other business in the area may generate noises during typical business hours.

- 2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

The project will create construction noise during City of Lacey allowed work hours. Once construction is completed the project will create noises from transit and users of the park and ride. This noise will be negligible from the existing noise on site.

- 3) Proposed measures to reduce or control noise impacts, if any:

Construction will be limited to normal working hours as prescribed by the City of Lacey Ordinance so nearby residences and businesses should not experience long-lasting adverse noise impacts.

## **8. Land and shoreline use**

- a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.

The site is currently a park and ride. The proposed use is the same and should not impact any adjacent properties.

- b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use?

No

- 1) Will the proposal affect or be affected by surrounding working farm or forest land

normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how:

No

- c. Describe any structures on the site.

None.

- d. Will any structures be demolished? If so, what?

No

- e. What is the current zoning classification of the site?

Central Business District 6 (CBD6)

- f. What is the current comprehensive plan designation of the site?

Listed within the Central Planning Area

- g. If applicable, what is the current shoreline master program designation of the site?

Not applicable.

- h. Has any part of the site been classified as a critical area by the city or county? If so, specify.

No

- i. Approximately how many people would reside or work in the completed project?

Intercity Buses operate at the park and ride on a daily basis but no employees will reside at the site.

- j. Approximately how many people would the completed project displace?

None. The site is not residential.

- k. Proposed measures to avoid or reduce displacement impacts, if any:

None.

- l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

The proposal maintains the existing use.

- m. Proposed measures to ensure the proposal is compatible with nearby agricultural and forest lands of long-term commercial significance, if any:

This proposal is within an existing, developed area within Lacey city limits.

## 9. Housing

- a. Approximately how many units would be provided, if any? Indicate whether high,

middle, or low-income housing.

None.

- b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

None.

- c. Proposed measures to reduce or control housing impacts, if any:

None are proposed at this time as the site is commercial use.

## 10. Aesthetics

- a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

15'+/- tall. Principal exterior building materials consist of concrete masonry units.

- b. What views in the immediate vicinity would be altered or obstructed?

The proposed project will not alter or obstruct any views.

- c. Proposed measures to reduce or control aesthetic impacts, if any:

Landscaping is proposed to match the existing landscaping. The project will comply with the City of Lacey's design review; the proposed structures will comply with the City's regulations.

## 11. Light and glare

- a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

Light and glare from the existing parking lot lighting will not demonstrably change. It currently occurs at night.

- b. Could light or glare from the finished project be a safety hazard or interfere with views?

Light or glare is not expected to be a safety hazard or interfere with views.

- c. What existing off-site sources of light or glare may affect your proposal?

Light from nearby businesses and roadway lights may be present but are not expected to affect the proposal.

- d. Proposed measures to reduce or control light and glare impacts, if any: [help]

Cutoff fixtures and lighting design to avoid spill over beyond the property will be completed.

## 12. Recreation

- a. What designated and informal recreational opportunities are in the immediate vicinity?

The project is nearby the Saint Martins Campus which provides trails and sports fields typically for student use but also accessible by the public.

- b. Would the proposed project displace any existing recreational uses? If so, describe.

The project will not displace any existing recreational uses.

- c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

None needed.

### 13. Historic and cultural preservation

- a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers located on or near the site? If so, specifically describe.

According to the Washington Information System for Architectural and Archaeological Records Data (WISSARD) (<https://wisaard.dahp.wa.gov/Map>) there are no structures or sites listed on the national or state registers nor determined to be eligible for listing on the national, state, or local preservation registers.

- b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.

The site has operated as a park and ride for approximately 39 years. No material evidence, artifacts, or areas of cultural importance have been identified on or near the site.

- c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.

Washington Information System for Architectural and Archaeological Records Data (WISSARD) was accessed in September 2022 to identify cultural and historic resources on or near the site. Thurston County Deodata was also reviewed.

- d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.

During construction all work will comply with the City of Lacey code regarding inadvertent discoveries of cultural resources. In the event that cultural resources are unearthed, construction will stop until an assessment and determination can be made.

### 14. Transportation

- a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if

any.

The site is accessed by Martin Way. The proposed project will provide a new access for Transit Only from the northbound I-5 on ramp into the park and ride. This is shown on the site plan.

- b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?

Intercity Transit operates the site as a park and ride. The improvements to the site will enhance transit operations and use.

- c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate?

The park and ride currently has 318 parking stalls. The proposed project will add 11 stalls for a total of 329 parking stalls.

- d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).

The project will construct a new transit flyer stop at the beginning of the northbound SR 5/Martin Way on-ramp and a transit-only direct access exit into the Martin Way Park & Ride.

- e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

No

- f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates?

The vehicular trips generated per day to the lot will be similar to existing. The park and ride and transit improvements will decrease regional single occupancy vehicle trips. A Traffic Generation Worksheet has been submitted to the City with the application

- g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.

No

- h. Proposed measures to reduce or control transportation impacts, if any:

None proposed.

## 15. Public services

- a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so,

generally describe.

There isn't expected to be a significant increase in the need for public services.

- b. Proposed measures to reduce or control direct impacts on public services, if any.

None are proposed at this time.

**16. Utilities**

- a. Circle utilities currently available at the site:

electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other \_\_\_\_\_

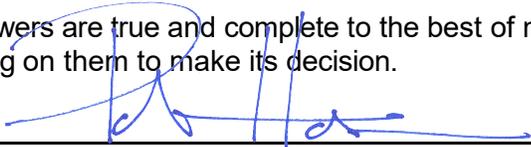
- b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

Sewer, water, electrical, and communications are proposed for this project. Water is provided by the city. Electric will be provided by PSE. A septic holding tank will be installed to service sewer.

General construction activities consist of trenching for service lines and structure installations.

**C. SIGNATURE**

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature:  \_\_\_\_\_

Name of signee: Patrick Holm, PE \_\_\_\_\_

Position and Agency/Organization: Project Manager – SCJ Alliance \_\_\_\_\_

Date Submitted: 7/12/22



## MEMORANDUM

**FROM:** Nick Mayfield, PE  
**DATE:** June 13th, 2022  
**PROJECT #:** 0768.AC  
**SUBJECT:** Holding Tank Sizing – Martin Way Park & Ride

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**Analysis:** Using the Department of Ecology Design Manual, appendix-1, the design flows for employees, students, and volunteers was determined:

Facility	Unit	Flow, Gallons/unit/day	
		Range	Typical
Visitor Center	Visitor	4-8	5

**FIGURE 1 - WASTEWATER FLOW RATES**

The typical flows from the EPA manual and the design capacity for The Farm are then quantified (fig 2).

Unit	No. of People	Gallons/unit/day	Gallons/day
Bus Driver	40	5	200

**FIGURE 2 – WASTEWATER VOLUME**



### HOLDING TANK SIZING (USING 30 DAY PUMPING FREQUENCY)

3.3.3. Holding Tank Sizing Criteria - Tank sizing consists of two portions, called “normal operating volume”(NOV), and “reserve storage volume” (RSV):

3.3.3.1. The normal operating volume (NOV) is the liquid storage below the "time-to-pump" alarm level. The required normal operating volume is calculated by multiplying the estimated daily sewage flow by the number of days between pumping service visits as shown by the following formula:

$$\text{NOV} = (\text{DSF}) (\text{PSF}) = 200 \times 30$$

Where:

$$\text{NOV Normal operating volume} = 6,000 \text{ GAL.}$$

$$\text{DSF} = \text{Daily sewage flow} = 200 \text{ GPD}$$

PSF = Pumping service frequency (Number of days between pumping, not to exceed 7 even if service is “on-call”)

3.3.3.2. The reserve storage volume (RSV) is the liquid storage capacity above the "time-to-pump" alarm level, and below the invert of the inlet pipe. The reserve storage capacity must be at least 3 times greater than the anticipated daily design flow for the facility. There may be special cases where three-day reserve storage is insufficient, in which case additional reserve storage should be addressed by the design. The calculation for determining reserve storage is shown in the following formula:

$$\text{RS} = (\text{DSF}) (3) = 200 \times 3$$

Where:

$$\text{RS} = \text{Reserve storage volume} = 600 \text{ GAL.}$$

3.3.3.3. The “total liquid volume capacity” (TLVC) must consist of the normal operating volume (NOV) plus reserve storage volume (RSV). Total liquid volume capacity is calculated as shown by the following formula:

$$\text{TLVC} = (\text{NOV}) + (\text{RSV}) = 6,000 + 600$$

Where:

$$\text{TLVC} = \text{Total liquid volume capacity} = 6,600 \text{ GAL.}$$

$$\text{NOV} = \text{Normal operating capacity} = 6,000 \text{ GAL.}$$

$$\text{RSV} = \text{Reserve storage volume} = 600 \text{ GAL.}$$

3.3.3.4. The Total Liquid Volume Capacity can be met with multiple holding tanks.



**Table 3-6. Typical wastewater flow rates from recreational facilities<sup>a</sup>**

Facility	Unit	Flow, gallons/unit/day		Flow, liters/unit/day	
		Range	Typical	Range	Typical
Apartment, resort	Person	50–70	60	190–260	230
Bowling alley	Alley	150–250	200	570–950	760
Cabin, resort	Person	8–50	40	30–190	150
Cafeteria	Customer	1–3	2	4–11	8
	Employee	8–12	10	30–45	38
Camps:					
Pioneer type	Person	15–30	25	57–110	95
Children's, with central toilet/bath	Person	35–50	45	130–190	170
Day, with meals	Person	10–20	15	38–76	57
Day, without meals	Person	10–15	13	38–57	49
Luxury, private bath	Person	75–100	90	280–380	340
Trailer camp	Trailer	75–150	125	280–570	470
Campground-developed	Person	20–40	30	76–150	110
Cocktail lounge	Seat	12–25	20	45–95	76
Coffee Shop	Customer	4–8	6	15–30	23
	Employee	8–12	10	30–45	38
Country club	Guests onsite	60–130	100	230–490	380
	Employee	10–15	13	38–57	49
Dining hall	Meal served	4–10	7	15–38	26
Dormitory/bunkhouse	Person	20–50	40	76–190	150
Fairground	Visitor	1–2	2	4–8	8
Hotel, resort	Person	40–60	50	150–230	190
Picnic park, flush toilets	Visitor	5–10	8	19–38	30
Store, resort	Customer	1–4	3	4–15	11
	Employee	8–12	10	30–45	38
Swimming pool	Customer	5–12	10	19–45	38
	Employee	8–12	10	30–45	38
Theater	Seat	2–4	3	8–15	11
Visitor center	Visitor	4–8	5	15–30	19