

## SEWER CONNECTION PERMIT (SCP)

Applicants shall submit a completed form with all required attachments

### I. PROJECT INFORMATION

Project Number (Aqua): \_\_\_\_\_  
*(Aqua Project Number Format: 00-111-AAA)*

### II. WASTEWATER INFORMATION

**Service Connections:**

Total Number of: \_\_\_\_\_ Reduced/Removed: \_\_\_\_\_

**Flow Information (GPD):** *(Provide calculations in attached sewer flow calculation format)*

Design Average: \_\_\_\_\_ Est. Reduction Avg. Daily: \_\_\_\_\_

Design Maximum Daily: \_\_\_\_\_ Est. Reduction Max. Daily: \_\_\_\_\_

Design Peak Wet Weather: \_\_\_\_\_ Est. Reduction Peak WW: \_\_\_\_\_

Grease trap required?  YES  NO  
*If YES, a Grease Trap Permit shall be submitted for each proposed unit.*

Oil Water Separator required?  YES  NO  
*If YES, an Oil Water Separator Permit shall be submitted for each proposed unit.*

Wastewater Pumping Stations required?  YES  NO

General Description of proposed New Facilities: \_\_\_\_\_  
\_\_\_\_\_

*Attach any available schematic maps, construction drawings, and construction schedule or summary of anticipated schedule*

Location of new service connection(s) indicate proposed connection point(s) *(attach maps)*: \_\_\_\_\_  
\_\_\_\_\_

Type of sewer plug, if required: \_\_\_\_\_  
*Attach sewer plug specifications*

Required upgrades to existing wastewater system (if known): \_\_\_\_\_  
\_\_\_\_\_

*(Please refer to the City and County of Honolulu Design Standards of the Department of Wastewater Management Volumes 1 and 2 for additional submittal requirements)*

### III. CONDITIONS OF APPROVAL

1. The Contractor shall ensure compliance with the requirements of the "Manual for Army Project Services Related to Wastewater."
2. The design of this project shall comply with the Aqua Engineers "Collection System Design and Construction Protocol," the City and County of Honolulu's Wastewater Design Standards Volumes 1 (1993), and all applicable engineering/building/plumbing code standards.
3. The Contractor shall schedule sewer inspections with Aqua Engineers by submitting an Inspection Request (IR) form via email to [projectservices@aquaengineers.com](mailto:projectservices@aquaengineers.com).

4. For connection of new developments to the existing sewer system, where it will be placed online at a later date after construction of the new development is complete, and systems that are not intended to be placed in operation shortly after connection, a sewer plug must temporarily be installed to prevent inflow of wastewater or stormwater into the existing system prior to the new development being complete. Plugs must be specifically designed and manufactured for use in sewer lines. Pneumatic plugs shall include a poly-lift line with inflation hoses and pressure gauges attached to an eye bolt near the top of the manhole, allowing for visual inspection. An Aqua inspector must be present to observe the installation of all sewer plugs.
5. The Contractor shall notify Aqua Engineers a minimum of 3 working days prior to scheduling, or changing, any requested inspections or testing activities.
6. No discharge shall be made into any existing manhole, or existing collection system, until a written approval, by Aqua Engineers, is received.
7. The Contractor shall bear costs associated with all work related to the sewer connection (plug installation, bypass, applicable tests, and repairs to any damages incurred), as approved by Aqua Engineers.
8. The Contractor shall notify Aqua Engineers whenever a sewer facility is damaged.
9. The Contractor shall be responsible to restore to the original condition, or better, the areas disturbed by the sewer connection.
10. By signing below, the Applicant agrees to the all the above conditions, acknowledges that Aqua Engineers has not made any representations or warranties of any kind regarding the existing collection system, including the physical condition, and is accepting the system on an "as is" basis.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Date

FOR AQUA ENGINEERS USE ONLY	
SCP No.: _____ <i>(Format: 00-111-AAA-B-CCCC-222)</i>	
SCP Approved? <input type="checkbox"/> YES <input type="checkbox"/> NO	
Plug Required for Connection? <input type="checkbox"/> YES <input type="checkbox"/> NO	
Comments:	
_____ Signature	_____ Title
_____ Print Name	_____ Date

## SEWER FLOW CALCULATIONS

### Design Flow Calculations

Sewer systems shall be designed based on an Average Daily per Capita Flow based on the following references:

1. Design Standards of the Department of Wastewater Management, Volume 1, CCH (July 1993)
2. US Army Technical Instructions Wastewater Collection, TI 814-10 (August 1998)
3. Unified Facilities Criteria, UFC 3-240-01 (Change 1, 1 November 2014)

For non-residential or short term/temporary buildings (office, plants, etc.), assume 8-hour shift per day, use Average Daily per Capita Flow = 30 GPCD (Gallons per Capita per Day). For residential/permanent buildings, use Average Daily per Capita Flow = 80 GPCD.

#### Flow Calculation Process

#### Example Calculation for Non-Residential Building (with Expected Population of 20 Persons)

**1) Average Daily Flow (Qa)**

$$Qa = [\text{Average Daily per Capita Flow}] \times [\text{Population}]$$

**Example:**  $Qa = 30 \text{ GPCD} \times 20 \text{ PN}$

$$Qa = \underline{600 \text{ GPD}}$$

**2) Maximum Wastewater Flow (Qm)**

$$Qm = Qa \times [\text{Flow Factor from CCH Wastewater Design Standards 1993, Figure 22.2.4; pg. 30}]$$

**Example:**  $Qm = Qa \times [5]$

$$Qm = 600 \text{ GPD} \times 5$$

$$Qm = \underline{3,000 \text{ GPD}}$$

**3) Dry Weather Infiltration/Inflow (I/I Dry)**

$$I/I \text{ Dry} = [I/I \text{ Dry Rate}] \times [\text{Population}]$$

**Example:**  $I/I \text{ Dry} = 5 \text{ GPCD} \times 20 \text{ PN}$

$$I/I \text{ Dry} = \underline{100 \text{ GPD}}$$

Note: For I/I Dry Rate, use 5 GPCD for sewers laid above ground water table, if below use 35 GPCD.

**4) Design Average Flow (Qda)**

$$Qda = Qa + I/I \text{ Dry}$$

**Example:**  $Qda = 600 \text{ GPD} + 100 \text{ GPD}$

$$Qda = \underline{700 \text{ GPD}}$$

**5) Design Maximum Flow (Qdm)**

$$Qdm = Qm + I/I \text{ Dry}$$

**Example:**  $Qdm = 3,000 \text{ GPD} + 100 \text{ GPD}$

$$Qdm = \underline{3,100 \text{ GPD}}$$

**6) Wet Weather Infiltration/Inflow (I/I Wet)**

$$I/I \text{ Wet} = [I/I \text{ Wet Rate}] \times [\text{Acreage}]$$

**Example:**  $I/I \text{ Wet} = 1,250 \text{ GAD} \times 0.5 \text{ Acres}$

$$I/I \text{ Wet} = \underline{625 \text{ GPD}}$$

Note: For I/I Wet Rate, use 1,250 GAD (Gallon per Acre per Day) for sewers laid above normal ground water table, if below use 2,750 GAD.

**7) Design Peak Flow (Qp)**

$$Qp = Qdm + I/I \text{ wet}$$

**Example:**  $Qp = 3,100 \text{ GPD} + 625 \text{ GPD}$

$$Qp = \underline{3,725 \text{ GPD}}$$