ECUA REVIEW OF PRIVATELY OWNED LIFT STATIONS

This form must be completed and submitted to ECUA for use in reviewing all lift stations intended to remain privately owned, other than single family residential. Privately owned lift stations must meet all applicable FDEP requirements. Duplex pumps are required for most establishments.

Establishments may use a simplex pump if and only if the establishment meets all of the following criteria:

1. Establishment for which the total estimated wastewater production is 500 GPD or less.
2. Establishment does not provide food service or preparation for the general public.
3. Establishment contains less than 100 seats for public assembly.
4. Establishment does not house medical facilities
5. Use of a simplex pump will not pose a significant public health or environmental hazard.
6. ECUA engineer agrees that establishment conforms to the five criteria listed above

Please provide the following information:

I. Flow Calculations

Average Daily Flow:

Peak Hour Flow:

Basis for Daily/Peak Flow Criteria (eg number of employees/customers, fixture count, etc)
_____

Force Main Size:_____

Minimum Flow needed to meet Minimum Velocity of 2.5 FPS=_____GPM

Design/Controlling Flow:_____GPM

II. Total Dynamic Head Calculations

Does the proposed force main connect to another force main? Yes No
If yes, provide Manifold Pressure_____
(Indicate Source of Manifold Pressure Information and provide any calculations used to determine manifold pressure)

For System Curve provide 3 points

Flow	Static	+Hf	Manifold Pressure	Total

Provide a graph showing the performance curve for the selected pump with the system curve plotted over it.

Identify operating point (Intersection of pump curve and system curve):
_____gpm @ _____ ft.
Velocity at operating point: _____ fps.
Is Operating Point > Design Point? _____

III. Wet Well Calculations

a. Cycle Volume Calculation

Calculate required cycle volume by the following equation: $V = \frac{TP}{4}$

V – the volume in the wet well between pumps off and the first pump on
P – Pump Rate, gpm (operating point)
T – Cycle Time, Cycle time (T) should not be less than 10 minutes.

Cycle volume = _____

b. Required Height between pump on and pumps off in wet well

Wet well diameter _____ feet

Gallons per vertical foot of wet well _____ gallons

Cycle Depth required = $\frac{\text{Cycle Volume Required (gallons)}}{\text{Gallon per vertical foot}}$ =

IV. Emergency Storage Calculations

A minimum of 30 minutes storage volume between high level alarm and influent invert is required at average daily flow.

Required Emergency Volume = (Average Daily Flow) (30 minutes) = _____

Emergency Depth required = $\frac{\text{Emergency Volume}}{\text{Gallons per vertical foot}}$ = _____

V. Buoyancy Calculations

Provide soil boring to substantiate ground water depth shown in calculations.
Or assume ground is saturated and provide calculations to show that the total weight is greater than the buoyancy force.

VI. Are the following items provided?

Emergency Pump Out	Yes	No
Emergency Generator Receptacle	Yes	No
High Water Alarm (Audio & Visual w/battery backup)	Yes	No
Site Security (Minimum requirement of locking control panel, wet well, and valve box) Describe how security will be provided:	Yes	No
Lightning Arrestor and Surge Protection	Yes	No
Wet Well Ventilation	Yes	No
Run Time Meter	Yes	No
Phase Protection for 3-Phase	Yes	No

Provide explanations if any of the above items are not provided.

VII. Flood

What is the 100-year flood elevation at the lift station site?_____

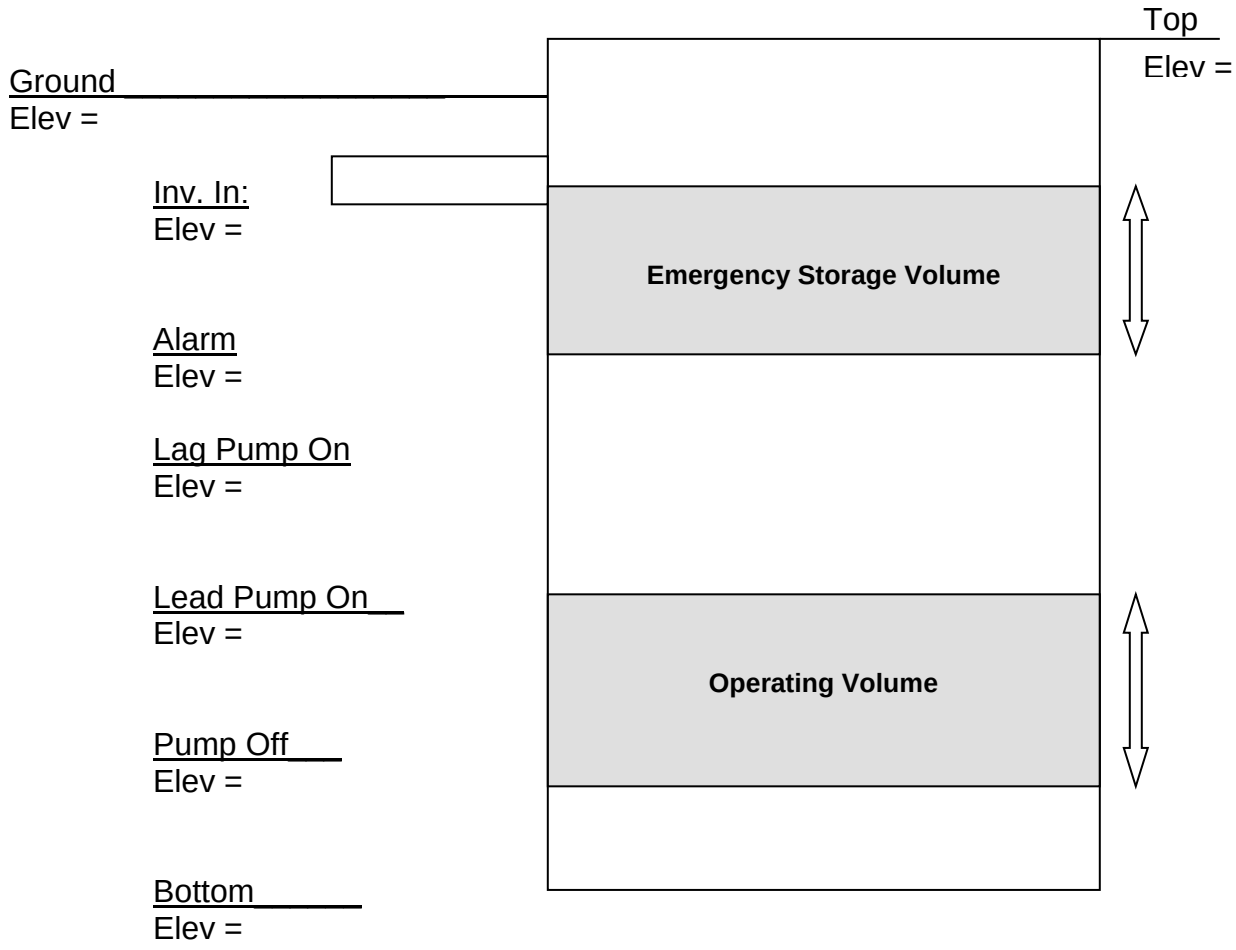
What is elevation of the bottom of the electrical controls/panel s? _____

What is the 25-year flood (storm) elevation at the lift station site?_____

What is the top of the wet well elevation? _____

Is station designed to remain fully operational and accessible during a 25-year storm?

Diameter of Wet well _____



Provide elevations for each of the points above.

Note: Elevation for Lag Pump On and Alarm may be the same.