


**CMGT 235 – Electrical and Mechanical Systems**Department of Construction Management  California State University, Chico**Homework #11 – Plumbing Systems**

Points: 20

Due: 9/29/2022

Name: \_\_\_\_\_

1. The local municipal water service has a MDSSPA of 80 psi. For the house plan used in homework #10 the highest fixture is a showerhead that is 14 ft above the source of the supply. Assume a water meter pressure loss of 5 psi and a water softener pressure loss of 9 psi. Calculate the Available Water Pressure.

2. Complete the table below for the home plan used for homework #10. There are four  $\frac{3}{4}$ " hose bibbs outside around the perimeter of the home and one laundry machine.

See: [https://www.engineeringtoolbox.com/fixture-water-capacity-d\\_755.html](https://www.engineeringtoolbox.com/fixture-water-capacity-d_755.html)

| Fixture                   | Minimum Supply Pressure (psi) |
|---------------------------|-------------------------------|
| Water Closet              |                               |
| LAV                       |                               |
| Tub/Shower                |                               |
| Tub                       |                               |
| Shower                    |                               |
| Kitchen Sink              |                               |
| Dishwasher                |                               |
| Laundry Machine           |                               |
| Laundry Sink              |                               |
| $\frac{3}{4}$ " Hose Bibb |                               |

3. If every fixture in the home was used simultaneously what would be the total pressure demand?

| Fixture                   | Number of Fixtures | Total Pressure (psi) |
|---------------------------|--------------------|----------------------|
| Water Closet              |                    |                      |
| LAV                       |                    |                      |
| Tub/Shower                |                    |                      |
| Tub                       |                    |                      |
| Shower                    |                    |                      |
| Kitchen Sink              |                    |                      |
| Dishwasher                |                    |                      |
| Laundry Machine           |                    |                      |
| Laundry Sink              |                    |                      |
| $\frac{3}{4}$ " Hose Bibb |                    |                      |
| Total Pressure Demand     |                    |                      |