To sum it up,

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Additionally, we also have designed for another water storage plan. In our second design, we don’t use sensor to control whether the water in the tank drain or not. We make water keep draining all the time.

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To calculated the size of orifice

In the worst condition, the pump is not working. When the tank is full, we need to know how long it can drain water to provide pure water for citizens to use. In this circumstance, the initial height is three meters and the final height is zero meters and the tank is empty finally. The area of bottom surface is sixty-six point five square meters. And our calculated discharge coefficient is 0.79.

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We can simply calculated total drain time by using total amount of water in tank divided by single citizen’s average water usage every second which gives a time of forty-seven days.

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| By substituting these variables into the equation, we get an orifice with an area of 0.1621 [square centimeters](http://www.baidu.com/link?url=Nm3pcYNuzoyi37sGROdYwV2Deo-wvwxN6LRn4JbKmIB0TwHcxyHCjlRYCWDaiqw4cVcNMqwhYS6_bVXEPtXNJsEjjWY-hFdH66cl3rnIVJ1yxbVOQAv8vzfVNAYAHNNj). And a radius of 0.23 centimeter. By making an orifice with a radius of 0.23 centimeter, water storage system can provide sufficient water for citizens to use. |
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So what about other factors in the water storage system?

As flow in rate is much bigger than people’s usage of water every second, tank can be refilled because of a bigger flow in rate compared to flow out rate. As a result, flow in rate stays the same as well as other factors in the system that we have designed.

Q&A:

Thanks for your question. + Paraphrase

I appreciate for your question. + Paraphrase

1)

2)