SUSTAINABILITY OPPORTUNITY

Stanford uses non-potable water to meet irrigate its golf course, agricultural leaseholds, athletic fields, and campus landscaping. By using non-potable water, Stanford conserves about 1 million gallons a day of its limited, high-quality potable water supply, which is used for domestic, research, academic, and academic support facility use. Non-potable irrigation water is only plumbed to outside fixtures for irrigating landscaped areas, and it is separate from drinking or domestic water. Stanford’s non-potable water system is an important element of the long-term sustainable water supply for the campus. The primary source of our irrigation water is untreated surface water runoff from the local streams that is conveyed to and stored in Searsville and Felt lakes. Lake Lagunita is not part of the non-potable irrigation water system.

FREQUENTLY ASKED QUESTIONS

1. What is in non-potable water?
Non-potable water contains the same substances that are found in local creeks and the local environment. Like water in creeks, lakes, and reservoirs used for recreation, lake water for irrigation is non-potable, meaning it is not suitable for drinking. Lake water quality is also similar to rain water that puddles on the ground, and includes minerals from soils and naturally occurring bacteria commonly present in soils and the environment.

2. Is non-potable water treated?
Non-potable water is not chemically treated. Once the non-potable water enters the piped distribution system on campus, it is filtered to reduce sediment and some naturally occurring organic material. Otherwise, it is left in its natural state, which includes some remaining organic matter, such as algae and bacteria. All irrigation system water is non-potable and should never be used for purposes such as drinking, bathing, washing dishes, or any other domestic use.

3. Does non-potable water smell?
Non-potable water temperature, density, and organic composition varies seasonally, and these natural changes affect the water quality. Non-potable water contains naturally occurring organic matter, such as algae and bacteria, which can sometimes lead to odors. This organic matter is recycled naturally, decomposing and adding nutrients to the water and bottom sediments. Warm summer weather accelerates the process of decomposition, and the higher nutrient levels can cause algal blooms. Wind stirs up the non-potable water, creates circulation and mixing, and can “redistribute” and “turn over” the lower water that is rich in decomposing organic material, causing the pungent material to be exposed to the air and sometimes resulting in noticeable odors.

4. How long will the smell last?
Typically, once the organic material is exposed to air it oxidizes naturally and the smell dissipates. However, the duration of the process is dependent on and aggravated by warm weather, so periodic odors are to be expected during the summer and fall months.

5. What is Stanford Utilities doing about the smell?
Stanford Utilities staff maintain the non-potable water supply, distribution pipes, and lakes. Since the non-potable water sources are from local streams and rainwater, Stanford’s management of the non-potable water system mainly involves maintaining Felt and Searsville lakes and the piping distribution system that contains the non-potable water. Weeds are cut in the spring to reduce organic matter. Stanford uses groundwater from wells to supplement the non-potable supply, which can also reduce odors.

6. What is the benefit of using non-potable water for irrigation?
Use of non-potable water conserves the limited potable water supply for domestic, research, academic, and academic support facility use. Stanford conserves about 1 million gallons of potable water a day by using non-potable water for campus irrigation.

MORE INFORMATION
WATER RESOURCES
https://suwater.stanford.edu/

CONTACTS
Water Quality, Efficiency, & Stewardship: Julia Nussbaum, Manager, 650.723.9747, juliann@stanford.edu
For more resources and to take action, sign in to My Cardinal Green