

City of Nampa Wastewater Upgrade Options

Upgrade the Treatment Plant

Nampa's wastewater treatment plant currently treats 10 million gallons of wastewater a day, which totals to about 3.65 billion gallons of wastewater a year. Currently, Nampa discharges its treated wastewater into Indian Creek. Disposing treated wastewater into United States waterways such as Indian Creek is regulated by the federal Clean Water Act.

The City of Nampa needs to make extensive upgrades to how it treats and disposes this wastewater in order to meet anticipated stricter federal regulations.

In response to these anticipated stricter regulations, the City of Nampa is analyzing current processes and considering several options for treating and disposing its wastewater. Each option has benefits and risks, which are being thoroughly evaluated by the City and an engineering management team.

This fact sheet explains how the new regulations could be met by **upgrading Nampa's wastewater treatment plant**.

What is this option?

Nampa currently treats its wastewater with biological processes at the City's wastewater treatment plant. After undergoing these processes, the treated wastewater is discharged from the plant into Indian Creek.

Meeting new phosphorus treatment requirements at Nampa's plant would entail modifying the current biological processes. Chemical treatment processes and wastewater filtration improvements would also need to be added to reduce phosphorus to very low levels. The treated wastewater would then continue to be discharged into Indian Creek.

Why is Nampa considering only upgrading the wastewater treatment plant?

Most cities across the country are meeting the new, more stringent phosphorus requirements by upgrading their wastewater treatment plants. This option is the method most commonly used for meeting new regulations.

There is known technology that could remove phosphorus to the new required low levels. However, treating to these very low levels at the plant would take significant operational effort.

Upgrading the treatment plant is how Nampa has historically responded to new permit regulations. A benefit of this option is that the regulatory framework is more certain than unconventional options, such as infiltration or treat and offset.

With this option, Nampa would still be discharging its treated wastewater into Indian Creek, so the City would still be subject to changing federal permit requirements. The City would also be disposing its treated wastewater instead of using it as a resource.

The process to reduce phosphorus to low levels would require adding a very large amount of chemicals to the water and significantly increase operational costs. This could be a drawback because using chemicals to meet the very low levels of phosphorus is costly and can be

operationally challenging. The chemical processes could also increase waste production and sludge production.

If Nampa treated for phosphorus only at the plant, what upgrades would be made?

Currently, the plant uses trickling filters and nitrification basins to treat the wastewater. While trickling filters have been a reliable technology for many years, they are not capable of removing phosphorus.

The existing trickling filters may be replaced by a biological treatment process, which would use microorganisms to remove the phosphorus from the water. Biological treatment processes have been used for years, and are currently employed at many of the wastewater treatment plants in the Treasure Valley.

In conjunction with the biological treatment process, phosphorus would be reduced to even lower levels through chemical treatment and filtration processes. A chemical would be added to the water to bind with the remaining phosphorus from the biological process. The phosphorus and the chemical would then be removed from the water using filters. This type of chemical treatment process has been used around the country to reduce the amount of phosphorus discharged from wastewater treatment plants.

For more information

To give comments or learn more about upgrading Nampa's wastewater treatment plant:

- Visit www.cityofnampa.us/wastewater
- Contact Karla Nelson at the Nampa Public Works Department, (208) 468-5523, nelsonk@cityofnampa.us