



This fact sheet has been created to provide information on and address common questions about the new storage tank for **waste activated sludge (WAS)** that is being incorporated into the proposed upgrades to the Franklin WRF biosolids facility.

Purpose and Benefits of Process

The Franklin WRF’s biological treatment process produces solids that must be treated before they can be disposed. These solids are removed by the final clarifiers and are known as waste activated sludge, or WAS. Regular removal of solids from the clarifiers is essential to maintaining a healthy biological process, and the pre-dewatering process needs a steady supply of WAS for continuous operation. The WAS Storage Tank achieves both of these goals by providing a “wide spot” in the treatment train.

Description of Process

The WAS Storage Tank is a 45-foot-diameter, circular concrete tank that will be located adjacent to the new Solids Processing Building. It will

receive screened WAS discharged from the sludge screens inside the Solids Processing Building, and it will discharge the WAS to the Pre-Dewatering Centrifuges, which are also located in the Solids Processing Building.

The tank will be equipped with a mixing system that will keep the contents of the tank in suspension. A solid concrete domed cover will be permanently attached to the top of the tank, and air inside the tank will be withdrawn and sent to the nearby solids process odor control system.

What process modifications will be made?

The WAS Storage Tank will be an addition to the site rather than a modification of existing structure or systems. However, construction of this tank will allow demolition of

three existing tanks. The entire existing biosolids system at the Franklin WRF is past its useful life and is being replaced with the proposed new biosolids process, which includes the WAS Storage Tank. The new process is needed because the WRF’s existing system is past its useful life. Instead of being thickened, dewatered, and hauled offsite for disposal at a landfill – as is the current practice – the WAS will pass through this storage tank before being processed in the new biosolids treatment facilities.

Is the process a potential odor source? Is the process odor controlled?

The WAS contained in the storage tank is a potential source of odor. However the tank is totally enclosed and will be odor controlled.

Does the process include equipment that has the potential to create noise? If so, is there any noise control provided?

The mixing system for the WAS Storage Tank includes two 25-HP pumps. One pump is designed to be a standby pump, so only one pump will operate at a given time. The specifications limit the allowable noise level from the pumps to 85 decibels, which is about the level of sound you would hear inside of a car in city traffic. The pump motors are actually likely to be much quieter than 85 decibels. At 200 feet from the Scum Holding Tanks the sound level would be about 45 decibels, which is about the sound level produced by a computer.

Will the process modification change the look and feel of the site?

The new biosolids facility includes new buildings and tanks, all of which have been designed to match the existing look and feel of the site.

The WAS Storage Tank will have a diameter of 45 feet. At its highest point, the tank will have a height of 17 feet above the ground. The tank is comparable in diameter to, but will be less than half as tall as the new anaerobic digesters that are part of this project. As previously indicated, construction of this tank will allow demolition of three existing tanks on the site.

Will the process modification change the safety of the site?

The WAS Storage tank does not have any chemical, biological, thermal, high voltage, or high pressure hazards associated with it,

because it does not require any chemicals, does not operate at high temperatures or high voltages, and does not offer the potential for physical contact with the sludge. The sludge in the sludge storage tank does have the potential to generate methane, however this hazard will be mitigated by the treatment of the air above the liquid surface by the odor control system and its continuous replacement with fresh outside air. In addition, the design of the WAS Storage Tank follows the latest National Fire Protection Association (NFPA) 820 standards for fire protection at wastewater treatment plants. Any electrical equipment inside the tank and within a specified radius of the tank's air intake vents will be explosion proof rated.