



Santa Rita Water Reclamation Facility

Construction is underway at the new Santa Rita Water Reclamation Facility!

Use this map to learn more about the process and the future state of the buildings.



- 1 **Headworks** – This is the entry point for the Santa Rita Water Reclamation Facility. This building uses physical processes to remove inorganic materials.
- 2 **Primary Clarifier** – This process removes the heavier organic waste from the flow stream using a low energy collection process. The solids collected at the bottom of the clarifiers, referred to as primary sludge, are pumped to the anaerobic digester for treatment. Scum is also removed from the surface and sent to digester. The remaining liquid flows to the biological process for treatment. The water flows to the Aeration Basins.
- 3 **Odor Control** – Collects the “smelly” air off of the clarifiers and purifies it.
- 4 **Aeration Basins (“Tanks”)** – In these open tanks, different groups of microorganisms work together to remove nutrients and organic matter from the water. The microorganisms are collectively referred to as “mixed liquor” or “activated sludge.” There are three different zones in the aeration basins; each zone grows a different group of microorganisms responsible for different forms of treatment that, collectively, biologically removes nutrients and organic material from the water.
- 5 **Blower/Chemical Building** – The building houses the equipment that produces the air utilized for the biological process in the aeration basins. This is one of the most energy intensive processes in the treatment process. The City made an investment to purchase blowers that are the most efficient in the industry.
- 6 **Secondary Clarifiers** – In the secondary clarifiers, the “mixed liquor” is removed from the water. Mixed liquor is collected at the bottom of the secondary clarifiers and pumped back to the aeration basins. Again, floatable scum is skimmed and pumped to digester. Some mixed liquor is thickened and pumped to digester. The clarified water flows out of the secondary clarifiers to Ultraviolet Disinfection prior to discharge to the Animas River.
- 7 **UV Disinfection** – Water is exposed to UltraViolet (UV) light that disinfects the water prior to discharge to the Animas River.
- 8 **Anaerobic digester** – In the anaerobic digester, the solids produced at SRWRF are biologically degraded in an environment with no oxygen. Biologically treating the solids with no oxygen does three things: (1) it reduces pathogens, (2) the microorganisms responsible for the degradation produce methane gas that is utilized at the WRF to produce power that offsets the power utilized by the other treatment processes and (3) it reduces the amount of solids.
- 9 **Dewatering Building** – In this building, the digested biological solids are put through a process to remove water. In this process, the solids are concentrated by a factor of almost nine. This reduces the amount of water in the solids which reduces the cost the City pays to transport the solids to their ultimate land application site where they are used as a soil amendment and recycled back into the environment.
- 10 **Side stream Treatment** – When the biosolids are dewatered, the water that is removed is very high in nutrients. This reactor biologically treats the nitrogen from the dewatering process upstream of the aeration basins.
- 11 **Vac garage** –A garage for vehicles the City Staff utilizes to clean sewer pipes. This item has been removed from the scope of the construction project and vehicles will be stored at a different City site. It is anticipated that this updated building will be part of a supplementary phase of the project.
- 12 **Raw Water Pump Station** – The building pumps Animas River water up to the City’s water treatment plant where it is treated to produce drinking water for residents.
- 13 **Administration Building** – This updated building will be part of a supplementary phase of the project.