

Ft. Bragg Municipal Improvement District No. 1
Headworks Improvement Projects
Fort Bragg, California

Nute Engineering designed several headworks improvement projects for the Fort Bragg wastewater treatment plant designed to remove rags and grit from the incoming sewage. Many sewer lines in Ft. Bragg are old vitrified clay pipe and take on sand which is detrimental to equipment at the treatment plant. Also the treatment plant was plagued with rags and debris which needed to be removed from the sewage to protect equipment and reduce the volume of inert material which otherwise takes up space in the sludge digesters.

Headworks Screen and Rag Compactor Project: The Headworks Screen and Rag Compactor Project designed by Nute Engineering consisted of the specification and installation of a stainless steel automatic “step” type screen to remove rags and debris from the incoming sewage flow. The objective of this project was to remove rags which been plugging of pumps and piping. The headworks screen project also included installation of a washer - compactor which washed out the fecal material and compacted the rags prior to discharging them into a debris bin. Compaction of the rags reduces the volume that needed to be disposed of.



Pista Grit Chamber and Grit Separator Project: In an earlier project Nute Engineering designed a Pista grit chamber together with a cyclone separator and grit washer. The older sewers in Fort Bragg are in poor condition and during rains large volumes of sand entered the sewer system. The sand would get into the clarifier and plug the sludge drawoff lines making it impossible to pump sludge. This would usually occur during storms and require a great deal of effort on the part of the plant staff to clear the sand from the sludge lines. The Pista grit chamber was able to separate most of the grit such as coffee grounds and egg shells as well as the sand. The grit slurry is pumped to a cyclonic grit separator which concentrates the grit and discharges it to a grit classifier to remove any residual fecal material. Sludge from the cyclonic grit separator is discharged to the sludge thickener where it is thickened prior to being pumped to the sludge digester.



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