



Clarifiers & Influent Clarifier Splitter Box



This fact sheet addresses common questions about the **secondary clarifiers and the associated clarifier influent splitter box** that is being incorporated in the proposed project.

Purpose and Benefits of Process

The clarifier influent splitter box (or distribution box), is a small tank with several sets of weirs that allow even splitting of the influent water between the six clarifiers. The benefit of the splitter box is to allow evenly loading the clarifiers, which optimizes their operation and effectiveness.

The secondary clarifiers are large quiescent tanks which remove biological solids that are grown in the BNR basins by settling and remove the lighter materials that floats to the water surface by skimming. The settled material is called sludge and the skimmed material is called scum. Clear water leaves the clarifiers over weirs and then flows on to the filters. The benefits of clarifiers include:

- A large percentage of the pollutants in the raw sewage is removed by the biological material in the BNR basin, and a large percentage of the biological material is removed in the clarifiers. The result in a clear, much cleaner water that is ready for filtration and disinfection.
- Capturing of the sludge by settling allow seeding of the sewage flowing into the BNR basins with biologically active solids to maintain the biological treatment process. A portion of the sludge is also sent to be dewatered and trucked offsite.

What Process Modifications will be made?

While no modifications will be made to the clarifiers themselves as part of the WRF Expansion project, hydraulic improvements will be made to allow for a more even distribution of flow to each of the 6 clarifiers. These improvements include modifying the existing influent clarifier splitter box to increase the height of the box and alter the weirs allowing flow to be split more evenly between the clarifiers. Additionally, some of the existing piping will be replaced with larger diameter piping to allow treatment of higher peak flows during wet weather events.

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

By the time the water reaches the clarifiers the odor potential is greatly

reduced. It is very unusual for a clarifier or a clarifier influent distribution box to be an area of odor concern.

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

No. The clarifier influent distribution box has no mechanical equipment other than gates, which will be rarely moved. The clarifier itself has a small drive motor that causes the clarifier

scraper mechanism to rotate, but it is almost silent. The clarifiers do have pumps to return sludge to the front of the BNR basins and pumps to send sludge to dewatering. However, all of the pumps are located in buildings between the clarifiers and would not be heard at the property lines.

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

No. The modification made to the influent splitter box will utilize the

existing box and raise the roof by 2 feet. This will not be noticeable from outside the plant property. There will be no modifications to the clarifiers themselves.

Will the process modification change the safety of the site?

No. The safety of the clarifiers and influent splitter box will not change compared to the existing site. The clarifiers currently present no offsite safety issues and will not pose any offsite safety issues in the future.