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[3] Waste (WS)

[3.17] Waste Disposal (WS.6)

<p>Wastewater Treatment from Retention Ponds</p>	<p>Wastewater Management from Dormitories</p>
<p>Wastewater Treatment from Retention Ponds</p>	<p>Wastewater Treatment from the Dining Room</p>
<p>Wastewater Management (Road Transportation Safety Polytechnic, Indonesia)</p>	

The Road Transportation Safety Polytechnic (PKTJ) implements a Water Waste Management program as part of the campus' commitment to realizing a sustainable environment and supporting the concept of...*green campus*. This program is implemented through various efforts to reduce waste, reuse resources, and manage wastewater.

The Road Transportation Safety Polytechnic (PKTJ) is committed to creating a clean, healthy, and sustainable campus environment through the implementation of an integrated wastewater management system. Wastewater generated from various campus activities, such as activities in dormitories, dining halls, offices, and other supporting facilities, has the potential to cause environmental pollution if not managed properly. Therefore, PKTJ implements wastewater management as part of an effort to maintain the quality of the campus environment



while supporting the Green Campus concept and UI GreenMetric indicators. Wastewater management is carried out by paying attention to the collection, storage, and treatment processes before the water is discharged into the environment. This system aims to reduce the negative impact of liquid waste on the soil, drainage channels, and water quality around the campus. In addition, good management also demonstrates the institution's responsibility to maintain public health and environmental sustainability. Through this program, PKTJ strives to ensure that all wastewater generated from campus activities is properly handled so as not to cause environmental disturbances. With planned and sustainable management, the campus can create a more comfortable, clean environment that supports both academic and non-academic activities. At PKTJ, we implement several programs, namely:

1. Wastewater Treatment from Retention Ponds

PKTJ provides a holding pond as a temporary storage facility for wastewater from various campus activities. The holding pond serves to control the flow of wastewater before further treatment. This facility prevents wastewater from being directly discharged into the environment, thereby reducing the risk of pollution in waterways and the surrounding campus area. In the holding pond, wastewater undergoes a natural sedimentation process. Solid materials carried along with the water settle at the bottom of the pond, while the water at the top is more easily managed in subsequent stages. This system helps reduce pollutant content before the water is channeled to further treatment. The holding pond also serves as a means of monitoring wastewater quality. With a centralized holding pond, managers can monitor water conditions more effectively, ensuring that the management process runs smoothly and aligns with environmental protection goals.

2. Wastewater Management from Dormitories

Dormitories are a major source of wastewater on campus, as they are used by male and female cadets for various daily activities, such as bathing, washing clothes, washing personal items, and using sanitation facilities. Wastewater generated from these activities is collected through a dedicated drainage system and transported to a designated treatment facility. Dormitories' wastewater management ensures that the resulting liquid waste does not directly pollute the surrounding environment. This system helps reduce the amount of pollutants from soap, detergent, and other household waste before the water is discharged into the sewer. In addition to maintaining a clean campus environment, dormitory wastewater management also supports a healthy living environment for all dormitory residents. With a sound management system, the potential for pollution and health problems caused by liquid waste can be minimized.

3. Wastewater Treatment from the Dining Room

The dining room generates wastewater from washing tableware, cooking, and cleaning the kitchen area. This wastewater typically contains food scraps, oil, grease, and other organic materials that require special treatment before being released into the environment. PKTJ implements a dining room wastewater management system that channels liquid waste through a drainage system to an available treatment facility. This liquid waste is processed through three interconnected treatment tanks.

- The first tank functions as an initial storage area for waste water that still contains food scraps, oil and other dirt.
- The second tank functions as a filtering and sedimentation area, where food waste and organic materials are retained so that solid waste is separated from the water.
- The third tank is the final stage of processing, where the water that has gone through the filtering process becomes clearer before being discharged into the drain.

This process aims to reduce the amount of pollutants that can clog drains and pollute water bodies if discharged directly. Through proper management, liquid waste from the dining hall can be handled more effectively, thereby



promoting campus cleanliness and maintaining the quality of the existing drainage system. This program also forms part of the campus's efforts to promote environmental sustainability.

The wastewater management program implemented at PKTJ provides numerous benefits to the campus environment. By managing wastewater from the holding pond, dormitories, and dining halls, liquid waste flow can be better controlled, reducing the potential for contamination of the soil, drainage channels, and water sources around campus.

The wastewater management system also helps maintain a clean and healthy campus environment. Wastewater that previously had the potential to cause odors, puddles, and pollution can now be handled in a more structured manner, creating a more comfortable environment for the academic community.

Furthermore, this program raises awareness among all campus residents about the importance of responsible waste management. By implementing a sustainable system, PKTJ demonstrates its commitment to supporting environmental conservation and realizing an environmentally friendly campus in accordance with Green Campus principles.

Overall, wastewater management at PKTJ contributes to maintaining environmental quality, improving the health and comfort of the campus area, reducing the impact of pollution, and supporting the achievement of sustainable development goals (SDGs) and UI GreenMetric assessment indicators.

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