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To: Marek Kozikowski, City Planner
City of Middletown
245 deKoven Drive
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From: Kelly Starr, Natural Resource Specialist

Date: May 31, 2021

Re: FedEx – Proposed parking lot expansion-revised site plans, 49 FedEx Drive (Map/Lot 05/047),
Middletown, CT

The following comments are based on a cursory review of the revised site plans for the FedEx parking lot expansion (revision date May 14, 2021) and focus on the importance of incorporating low impact development (LID) into the design. These comments were prepared without the benefits of going on a site walk to the new locations where the parking lot expansion is proposed. A previous review of the February application material was completed and comments were provided in a letter dated April 20, 2021.

The proposed activities at the site include expanding the existing parking area in three locations (in the northwest the inbound trailer parking area; in the southwest the employee parking lot; and in the south the outbound trailer parking area).

In the revised site plan, there are no activities proposed within the wetlands/watercourses. There is minimal grading and filling proposed in the upland review area located in the southwest of the site adjacent to the employee lot expansion. The increase in impervious surfaces for the parking lot expansion will be connected to the existing stormwater management system, with some minor modifications.

Although there are no direct impacts to onsite wetlands/watercourses, the proposed activities will result in changes to site hydrology. There is a watercourse located to the south of the employee lot expansion that flows to the east and converges with Sawmill Brook, which flows to the north and converges with the Mattabesset River. As mentioned in the April letter, the Mattabesset River is on the state's list of impaired waters and does not meet the water quality standards for recreation and aquatic life. In more urbanized watersheds, such as the Mattabesset Watershed, nonpoint source pollution associated with changes in site hydrology and increases in stormwater run-off from development have been identified to have water quality impacts.

This site has a considerable amount of impervious cover (approximately 37.4% as referenced in the May design plans) that is connected to a stormwater management system. As recommended in the April letter, low impact development (LID) should be incorporated into the proposed site design to minimize changes to site hydrology. The 2004 Stormwater Manual defines LID as “a site design strategy intended to maintain or replicate predevelopment hydrology through the use of small-scale controls integrated throughout the site to manage run-off as close to the site as possible.” In addition, “impervious surfaces that are not connected directly to the drainage collection system contribute less run-off and smaller pollutant loads.”

Small scale controls should be incorporated into the design that will reduce the overall amount of stormwater run-off generated. These could include:

- Designing the parking islands as bioinfiltration/raingardens to reduce the amount of stormwater run-off that will ultimately end up in the existing stormwater management system.

- Removing the curbing and/or utilizing curb cuts to encourage sheet flow to vegetative areas, which will allow infiltration.
- Strategic use of pervious pavement element (modular concrete paving blocks, modular concrete, plastic lattice, cast-in-place concrete grids, and porous pavement) will also help to reduce the volume of stormwater run-off from the impervious areas.

According to the engineer, the increased stormwater from the parking lot expansion will be stored in the underground system and peak flows will be controlled, with the water being released to the wetlands. However, there will still be an increase in stormwater run-off to the wetlands that may have additional impacts due to the greater volume of stormwater and associated pollutants. Incorporating LID practices will help to reduce the amount of stormwater run-off to the stormwater system and the receiving wetlands.