

Stormwater Management Summary Report: *Whalers Village*

4/17/2020

CGC-201

Prepared By: Matthew Robinson, P.E.

Location: Lot 1, Block 45 Point Pleasant, NJ

Summary:

Improperly managed land development can have a great impact on groundwater recharge, stormwater quality and stormwater quantity both at and downstream of a development site. Minimizing the impacts of runoff from development is addressed by a number of regulations and permits, including the Stormwater Management rules at N.J.A.C. 7:8 and the New Jersey Pollutant Discharge Elimination System (NJPDES) permits, specifically the Municipal Separate Storm Sewer (MS4) permits and Combined Sewer Outfall (CSO) permits. Accordingly, when under their jurisdiction, NJDEP regulates projects considered to be Major Developments with various stormwater management requirements.

These stormwater regulations are designed to reduce flood damage, minimize (to the extent practical) any increase in stormwater runoff, reduce soil erosion, maintain groundwater recharge, & to prevent (as feasible) any increase in non-point pollution & pollutants.

Major Development as defined by NJDEP within NJAC 7:8 the Stormwater Management rule is any development that provides for disturbing one or more acres of land or increasing impervious coverage by one-quarter acre or more. The project site is presently fully developed as a motel with multiple buildings and contains 0.9 acres of land (less than one acre) which is predominantly covered with impervious material. The proposed redevelopment will result in an overall reduction in impervious coverage from 82% to 75% and is therefore not considered to be a major development or regulated under NJAC 7:8.

While exempt under NJAC 7:8 the project has been designed to address stormwater standards with appropriate site improvements which include a stormwater collection system and increased landscaping.

Water Quantity

As a redevelopment project within a sub-urban environment the proposed project has been designed to maintain existing drainage patterns which direct flows into the adjacent municipal streets and into the existing stormwater collection system via two inlets located within Curtis Ave.

The existing site is predominantly covered with impervious material including buildings, pavement, and densely compacted gravel areas. The proposed project will reduce impervious cover from 82% to 75% which will result in a decrease in peak stormwater runoff rates leaving the site for the 2,10 & 100 year storm events.

Water Quality:

Stormwater management measures shall be designed to reduce the post-construction load of total suspended solids (TSS) in stormwater runoff only where an additional one-quarter acre of impervious surface is being proposed on a development site while the project will reduce coverage. However, while not required, the water quality of runoff leaving the site will be improved as the total area of lawn and roof runoff will be increased above the existing condition.

Groundwater Recharge

The site and its stormwater management measures maintain 100 percent of the average annual pre-construction groundwater recharge volume thru a reduction in impervious coverage from 82% to 75% which will increase the pervious landscaped areas available for infiltration.

Conclusion:

The project will result in the redevelopment of an existing property within a designated growth area (PA2) upon a site that is presently fully developed and contains 15 separate structures, a pool, & various parking areas etc. There are no existing stormwater controls onsite with runoff directed too and collected within the adjacent municipal streets.

The proposed project, while not meeting the definition of Major Development, will result in a net decrease in impervious coverage and accordingly an increase in the landscaped / lawn area onsite. This reduction in coverage will result in decreased runoff quantity, improved water quality, and improved groundwater recharge onsite. In addition, a stormwater collection system is proposed with various catch basins and conveyance piping which will improve stormwater management conditions.

Prepared By:



Matthew Robinson, P.E.