Proposed Mitigation

Section 1: Mitigation Overview

Under the Preferred Development Alternative (PDA), wetland and stream mitigation measures have been identified, including off-site stream and wetland mitigation to achieve suitable mitigation targets. The same wetland and stream mitigation locations and proposal are offered for the Minimal Degradation Alternative (MDA) as with the PDA.

Wetland Mitigation

The impacted wetlands found on-site have been degraded by seepage from a number of failed individual septic systems. An improvement of overall wetland function and value on remaining wetlands found on adjacent properties is expected from the elimination of the current septic input into the watershed from failing septic systems. As a result, some of the functions and values of wetlands will be improved on-site. However, a net on-site loss of wetland acreage will occur. To mitigate the loss of on-site wetland acreage, off-site wetland mitigation is proposed at the Trumbull Creek Wetlands Mitigation Bank located along the Ashtabula-Geauga County line. The Project is located within the approved service area of this wetland bank. To fulfill the mitigation requirements for this site, a total of .68 credits are required to mitigate the 0.453 acre of Category 1 wetlands at a 1.5:1 mitigation ratio; a total of 0.978 credits are required to mitigate the 0.489 acre of Category 2 non-forested wetlands at a 2:1 mitigation ratio; and a total of 5.91 credits are required to mitigate the 2.365 acre of Category 2 forested wetland at a 2.5:1 mitigation ratio. This mitigation totals to 7.568 credits, which is rounded up to 7.6 credits for purchase at the Trumbull Creek Wetlands Mitigation Bank. As a result for this proposed mitigation, the net wetland acreage increase will be 4.26 acres of high quality, protected wetlands.

Stream Mitigation:

The stream impacts of the Project site are to ephemeral and intermittent streams that are currently degraded by septic system outflows, roadside drainage, and have been significantly channelized. The existing streams are highly disturbed, have poor, if any, natural buffers, and contribute to impacting the water quality of regulated waters of the U.S. further downstream. The proposed project will clearly result in a restoration of water quality by eliminating untreated storm water and septic flows into downstream waters of the U.S.

Off-site mitigation will be fulfilled at the Popes Home Stream Mitigation Site in the Upper Cuyahoga watershed in Geauga County, Ohio. Since the project's elimination of failing septic systems will significantly improve water quality, a 1:1 ratio is proposed for the off-site mitigation. The primary objective of the proposed stream mitigation at the Popes Home Site is to provide no net loss of stream function and value to waters of the U.S.

Section 2: Wetland Mitigation Bank

All wetlands requiring mitigation are non-isolated Category 1 and 2 wetlands. Available credits were identified within the service area of the Project's watershed at the Trumbull Creek Mitigation Bank. The 8 digit HUC for this mitigation bank is 04110003.

The appropriate mitigation credits have been determined using the mitigation ratios provided in Ohio Administrative Code §3745-1-54. As previously stated, a total of 7.6 acre credits will be purchased from Trumbull Creek bank. To fulfill the forested mitigation requirements for this site, a total of 5.996 credits are required to mitigate the 2.421 acres of Category 1 and 2 forested wetlands. To fulfill the non-forested mitigation requirements for this site, a total of 1.572 credits are required to mitigate the 0.885 acre of Category 1 and 2 non-forested wetlands. As of November 26, 2014, credits for the project are available at the Trumbull Creek Bank.

Section 3: Off-Site Permittee-Responsible Mitigation Project

The proposed stream mitigation site is owned by the Geauga County Board of Commissioners. An official agreement will be signed and provided to the Ohio EPA once the mitigation is approved.

As stated in the stream mitigation Section 1 Overview, the streams on the proposed Project site have been subjected to considerable water quality degradation. Much of the flow feeding the streams is from direct urban runoff, including parking lots, roads, and other impervious surfaces. This runoff is currently untreated, as the historic development preceded water quality requirements for treatment. Furthermore, a number of private septic systems within the sub-watersheds have been determined to be failing, and other untested systems are most likely also failing. The result is that poorly treated septic flows are clearly infiltrating groundwater feeding directly into the project streams, further impacting the water quality of the on-site streams and wetlands, even after the flow from both streams and wetlands leaves the site. This has contributed to an ongoing degradation of the water quality of the Chagrin River watershed. The proposed project will address the on-site water quality issues, and will provide water quality treatment for all of the water draining from the site.

The Applicant will also provide preservation of a high quality stream located in Geauga County at the corner of Raids Road and US Route 422. The stream is bordered by a forested riparian zone for its entire proposed preservation length.

The proposed preservation is to provide off-site mitigation in addition to on-site improvement of stream and wetland water quality implemented upon completion of project construction. Therefore, the off-site mitigation is proposed at a 1:1 preservation ratio for 1,011 feet of high quality stream.

As noted in Section 3, off-site mitigation is limited to stream preservation, thus there is no proposed planting or other stream improvements, monitoring plan, or performance standards other than what may be required for the preservation site agreement.

Mapping and any additional information can be provided upon approval of the proposed off-site mitigation.

Section 4: Protection in Perpetuity

The Applicant will follow the requirements of the Ohio EPA in the preparation of a final preservation document.