



**FOR YOUTH DEVELOPMENT
FOR HEALTHY LIVING
FOR SOCIAL RESPONSIBILITY**

To: Wayland Zoning Board of Appeals
41 Cochituate Road
Wayland, MA 01778

Page 1 of 5

From: **West Suburban YMCA - Camp Chickami
c/o Jack Fucci, President and CEO
139 Boston Post Road, Wayland, MA**

RE: 'Cascade' Wayland development-Camp Chickami Concerns and Requests

Date: September 25, 2017

To the members of the Wayland Zoning Board of Appeals:

Please accept this letter on behalf of the West Suburban Young Men's Christian Association, Inc., the owner and operator of Camp Chickami. Camp Chickami, located at 139 Boston Post Road, has served nearly 1,000 children annually for over 60 years. Our mission is to provide the youth of Wayland and surrounding communities with character building experiences and opportunities in a natural wooded environment. We value our partnership with the Town, local businesses and residents, especially our abutters. We continue to respect the natural habitat that helps make our camp so special.

We have serious concerns with the proposed development, "Cascade Wayland" outlined in the Comprehensive Permit Application submitted to the town of Wayland, with Properties Located at 113, 115, 117 & 119 Boston Post Road Wayland Massachusetts, Assessor's Map 30 Parcel 71 and Map 30 Parcel 71 dated July 25, 2017.

We believe the proposed development and its design pose current and future risks to Camp Chickami and our related property. The applicant does not sufficiently address the issues we highlight below **concerning the FEMA Flood Zone, Wastewater and Stormwater consequences**. Much of the data provided in the application is incomplete, lacks appropriate testing results of soils, and lacks detailed or sufficient management plans for storm water and wastewater.

We have taken the time to meet and speak with the developer, community members, town officials, and local businesses. We have reviewed documents submitted to the town as well as the Comprehensive Permit and other materials submitted by the developer. We engaged a licensed independent environmental engineer on our behalf who reviewed all the information available, researched the project and assessed the potential impacts on our property, including Pine Brook, which flows through the camp. Below we list our concerns and our requests.

FEMA Flood Zone:

Impacts to the FEMA flood zone is a concern for Camp Chickami as a reduction in flood storage on the project site would transfer the impact to other properties, including those downstream.

The project plans and a review of FEMA mapping on-line identify that the site includes areas within the regulatory mapped flood zone. The proposed design includes a part of the building, and fill associated with grading for the wastewater leaching area in the flood zone. The FEMA flood zone is also considered Bordering Land Subject to Flooding (BLSF) under DEP Wetlands Regulations. Under the DEP regulations for BLSF, any fill, including building foundations, etc. are required to be compensated on an elevation basis, i.e. every square foot of filled land at a specific elevation has to be compensated for in kind. ***The plans do not offer any compensatory storage for filling in the flood zone. For this site the elevation of the 100 year flood zone has not been calculated or mapped.*** Based on the FEMA map some areas of the flood zone appear to be inconsistent with current topography on the site. It is unclear if areas were altered to create the existing gravel parking on the west side of the site and if there were changes if they were properly permitted. There are no test pits to identify if the area has been filled. It is unclear when the Mahoney Garden Center was created, but based on USGS topographic mapping it appears that it has expanded since 1982, the last USGS topographic map revision date in MassGIS. While we are not aware of the history of the garden center, we note that comments from both the Building Commissioner and DPW stated that the flood elevation would need to be determined, as the project is proposed to build in the Flood Zone.

The West Suburban YMCA-Camp Chickami requests that the ZBA require in their permit conditions, if the project is approved, that flood zone filling, if allowed at all, be compensated as required under DEP Wetlands Regulations. In addition, we respectfully request soil testing to determine if the flood zone has been filled in the past without proper permits. This issue is important as if the site was filled without proper compensatory storage or any associated Permits calculations for flood storage should be based on the pre-altered conditions. A previous violation, if it has occurred should not be used as the current basis for elevations. A decrease in flood storage within the flood zone will increase flooding elsewhere in the watershed and likely negatively affect the property.

Wastewater:

Wastewater is primarily a concern relative to water quality at the Camp Chickami property. The submittal indicates proposed wastewater leaching areas (trenches) and a schematic layout of a wastewater collection and treatment facility but ***does not include any engineering calculations.***

Some soil testing has been performed but based on the Board of Health comments, ***testing is insufficient for permitting of a system. The Board of Health comments also indicated variable soil conditions and shallow depth to groundwater.***

Under both Title 5 and DEP requirements for design of small wastewater treatment plants the design flow for this project would be 110 gallons/day/bedroom for a total flow of 10,560 gallons per day (gpd). This project would require a groundwater discharge permit as the flows are over 10,000 gpd. The requirements for a groundwater discharge permit (GWDP) include hydrogeologic studies, a wastewater treatment plant to treat the waste to specific levels and importantly, operation and maintenance (O&M) requirements that are much more stringent than Title 5 requirements. The effluent quality requirements for a groundwater discharge permit are typically 30 milligrams per liter (mg/l) Biological Oxygen Demand (BOD) 30 mg/l Total Suspended Solids (TSS) and 10 mg/l total Nitrogen (TN). A Title 5 system would require the same BOD and TSS but only 25 mg/l TN. Some GWDP's can include phosphorous limitations if discharge could impact a phosphorous sensitive area. Nitrogen and phosphorous are nutrients that can lead to increased algae growth and deterioration of water quality in water bodies. O&M requirements under a GWDP typically including daily operation and monitoring and monthly reporting that is submitted to and reviewed by DEP. A Title 5 system which could be only 561 gallons smaller in capacity than the proposed system to avoid the need to obtain a GWDP would only require quarterly monitoring. This is a significant difference as a wastewater treatment facility under a GWDP is typically operated generally 5 days a week, versus a Title 5 system that is only monitored quarterly (4 times per year). In addition, a typical groundwater discharge permit includes requirements for monitoring wells up gradient and down gradient of the leaching area which are tested monthly to confirm water quality standards are met in the groundwater around the system. Upgradient testing is done to identify if the source of contamination is other than the effluent leaching area. ***The proposed locations of the leaching areas are close to the brook. Effluent from the leaching areas will likely supplement existing groundwater flow into the brook (the brook appears to be at least partially groundwater fed)***

A groundwater discharge permit would be far more protective of the water quality in the river.

The West Suburban YMCA-Camp Chickami requests that the ZBA require in their permit conditions the following: if the project is approved with a Groundwater Discharge Permit, copies of the monthly reports must be provided to the Wayland Board of Health and be made available if requested by the West Suburban YMCA or our Agents. If the projects is approved as a Title 5 system, that a monthly monitoring of wastewater influent and effluent, installation of groundwater monitoring wells and sampling of these wells for containments on a monthly basis at least for the first 5 years of full operations. Copies of the monthly reports would be provided to the Wayland Board of Health and be made available if

requested by the West Suburban YMCA or our Agents. If there are no issues during this period than the monitoring could be adjusted.

Stormwater:

Stormwater is a concern both during construction and after project completion for Camp Chickami. Stormwater impacts could include increases in water runoff and associated erosion of the stream bank and increased flooding, deterioration in water quality due to nutrient loading and deterioration in water quality due to erosion and sedimentation from construction.

DEP has developed Stormwater Management Regulations which consist of ten standards. The standards and associated Best Management Practices (BMPs) to comply with the standards are described in the Massachusetts Stormwater Handbook. The Application on page 6 discusses a stormwater study; however, this study was not in the Application nor was it found on the Town's web page. The project will also be subject to the Environmental Protection Agency (EPA) National Pollution Discharge Elimination System (NPDES) Construction General Permit (CGP). As part of this process a Stormwater Pollution Prevention Plan (SWPPP) for construction phase work is required. The EPA Permit does not receive much if any review by the EPA. The SWPPP can be used to address Standard 8 of the DEP Regulations.

There is limited data to review for stormwater or construction phase work, therefore we site our general concerns. Our property may have the most restrictive point along the brook downstream of the project site and may be the logical study point for offsite flooding impacts if an increase in overall runoff volume is proposed. Some specific areas that submittals frequently do not meet standard engineering design practices or compliance with specific aspects of the regulations include:

- The limits of the study area for drainage designs are frequently limited to the property. Runoff does not typically follow property lines and the study should address flow onto the site from beyond the limits of the property and quantify flow at a downstream control point.
- BMP's not suitable to meet specific DEP stormwater Standards under the DEP Handbook are often utilized in hydrology models. ***Although a model has not been available for review, it appears that stormwater controls are undersized for the extent of the project.*** Bio retention areas and rain gardens are not suitable for use in controls of peak rates of runoff (Standard 2). These systems are suitable for infiltration and treatment of small storms of typically 1" or less under Standard 3 (recharge) and Standard 4 (TSS).
- For site that are proposed to be densely developed, proprietary BMP's are typically utilized as they require less site area and are often subsurface structures that parking,

landscaping, etc. can be constructed over. The DEP Handbook includes guidelines for Conservation Commission approval of these structures. DEP has prepared a design review of these types of structures in particular particle separators and found that the manufacturer's removal claims were generally exaggerated when compared to actual installed systems.

The West Suburban YMCA-Camp Chickami requests that the ZBA require strict compliance with all aspects of the DEP Regulations, including soil testing, use of specific BMPs for various standards and in particular use of those applicable for areas tributary to a cold water fishery as this will help also help maintain water quality at Camp Chickami. We request that all drainage design and calculations be reviewed by an independent Professional Engineer experienced in hydrologic calculations and DEP Stormwater Regulations to assure compliance with runoff standards, including quality of runoff. If there is proposed to be an increase in runoff volume in any storm modeled, including the 100 year storm, the model should assess impacts at the restrictive culvert on our property. We request that the ZBA require that the SWPPP be reviewed by an independent Professional Engineer experienced in stormwater runoff, construction and erosion and sedimentation and no work should commence until the SWPPP is satisfactory to the reviewer. Lastly even if a suitable system is proposed and constructed properly, if not maintained it will cease to function properly over time. Operation and Maintenance requirements should include an annual report, stamped by a Professional Engineer that the system is functioning as designed and if not list corrective measures to be implemented and include a requirement that there be monthly follow up reports until all issues are addressed.

Thank you for taking the time to review and address our concerns and for your stewardship of the natural resources of the town of Wayland. Our mailing address is the West Suburban YMCA, 276 Church Street, Newton, MA 02458. My phone number is 617-244-6050 ext. 3004 and Email is jackf@wsymca.org.

CC: Wayland Board of Health

Wayland Conservation Commission