

Cubist Pharmaceuticals - Laboratory Expansion 2009 APSDUP

Environmental Impact Analysis

Date: October 1, 2009

This Environmental Impact Analysis (EIS) outlines potential environmental impacts resulting from the expansion of the existing Cubist Pharmaceuticals laboratory facility at 65 Hayden Avenue in Lexington, Massachusetts. The development proposal consists of the construction of a 110,000 sf building addition to the existing laboratory facility, a 156,000 sf five and a half-level structured parking garage, and associated site and utility infrastructure improvements.

The site is one of two parcels of land that reside within the CD-9 zoning district and include existing buildings at 45 Hayden Avenue, 55 Hayden Avenue, and 65 Hayden Avenue. The CD-9 zoning district was amended in 1997 through a Preliminary Site Development and Use Plan (PSDUP) application to allow the construction and expansion of 45 Hayden Avenue. Since the date of that zoning amendment, Cubist Pharmaceuticals leased 65 Hayden Avenue and over time has gradually leased space in 45 and 55 Hayden Avenue as well. Cubist is now the primary tenant occupying all three buildings, and their continued success in the life sciences/pharmaceutical industry has driven their rapid growth and needs for additional laboratory space.

The 110,000 sf building addition includes the construction of two floors of laboratory space on top of an existing one-story building wing, together with a three-story building addition combined with the two additional floors. The roof of the addition will include an enclosed penthouse to provide a visual and acoustical screen for rooftop mounted mechanical equipment.

The 156,000 sf structured parking garage will be constructed generally within the limits of an existing surface parking lot located north of the existing building. To support the laboratory occupancy, up to five levels of structured parking will be constructed. To support the potential conversion of the building from laboratory to office, the parking garage's foundation/structural design will be designed and constructed to support up to seven levels of parking. An elevated pedestrian footbridge will connect the parking garage to the expanded laboratory space.

The laboratory and parking garage development will be supported by site modifications including reconfigured vehicular driveway, pedestrian pathways, landscaping and visual buffers, and stormwater/utility infrastructure improvements.

The site is located adjacent to the Hayden Woods Conservation Area and includes bordering vegetated wetlands that are contiguous to both the site and the Conservation Area. In addition a Conservation Easement encumbers the north and east side of the CD-9 district, which was placed as part of mitigation commitments made under the 1997 PSDUP. While the development plan is located primarily

within the previously developed site, there will be an increase of approximately 10,500sf of impervious area due to elimination of existing parking lot landscape islands and driveway expansion along the natural wooded areas on the fringe of the existing parking lot.

Stormwater and Groundwater

Existing Conditions

The CD-9 district contains approximately 37.4 acres of land in two parcels, which includes approximately 438,200 sf of bordering vegetated wetlands contiguous to the Hayden Woods Conservation Area. Based upon the USDA – Soil Conservation Service Maps for Lexington, the underlying soils within the proposed development area for 65 Hayden Avenue include the following:

- Udorthents–Urban Land Complex (Hydrologic Soil Group (HSG)–D)
- Charlton-Hollis Rock Outcrop Complex (HSG – C/D).
- Whitman Fine Sandy Loam (HSG-D)

Groundwater is generally estimated to be 12”-48” below grade in the Charlton-Hollis and Whitman soil groups. The close proximity of the adjacent wetland areas confirms that groundwater depths are likely in this range.

The 1997 Amended PSDUP and subsequent DSDUP development plan for 45/55 Hayden Avenue incorporated a stormwater mitigation plan that included pocket wetlands to improve water quality and mitigate peak runoff rates prior to discharge to resource areas on that property.

For 65 Hayden Avenue the stormwater is collected by a variety of methods:

- Closed drainage system on the east and northeast side of the building, discharging to the north on the property at the edge of the parking lot.
- Closed drainage system on the west side of the building discharging to a stormwater detention basin for water quality treatment/peak flow attenuation with discharge on locus up-gradient of the adjacent wetland.
- Surface runoff from the existing parking lot on the north side of the building discharging overland to the adjacent wooded area on locus.

Based upon the MassGIS database, the westerly side of the CD-9 district is tributary to the Hobbs Brook and Stony Brook Watersheds which serve the Hobbs Brook Reservoir, the public water supply for the City of Cambridge. The reservoir is protected as a Class A water body and is considered an Outstanding Resource Water.

Proposed Conditions

The development within the proposed APSDUP includes the construction and expansion of a 110,000 sf building/laboratory addition, 156,000 sf structured parking garage, and related site and infrastructure improvements.

The project's strategic positioning within the site minimizes impacts to land and wetland resources by substantially developing the project within previously disturbed areas. While construction work is proposed within the buffer zone of bordering vegetated wetlands, no work is proposed within the resource areas as defined and regulated under the Massachusetts Wetlands Protection Act.

Appropriate pre- and post construction erosion control measures will be incorporated into the definitive design, and a Notice of Intent will be filed with the Lexington Conservation Commission for approval of all work within areas regulated by the Wetlands Protection Act and Lexington Wetland By-law.

Stormwater collection and treatment will be improved with respect to what occurs today and will be designed in accordance with the Massachusetts DEP – Stormwater Management Handbook. Within the developed area a new drainage collection system will be constructed with discharge on-locus upgrading from wetland resource areas. Stormwater runoff will be mitigated using traditional structural and non-structural Best Management Practices (BMP's) outlined in the Massachusetts DEP – Stormwater Management Handbook. Groundwater recharge will be provided where groundwater elevations and permeable soil conditions allow, and water quality improvements will be designed to treat one-inch of runoff from contributing surfaces as the site falls within the Hobbs Brook Reservoir watershed.

The design of site specific BMP's appropriate for this development will be advanced during the definitive design phase. A final stormwater management design and Hydrologic Analysis Report will be submitted to the Special Permit Granting Authority (SPGA) and the Lexington Conservation Commission through the submission of a Notice of Intent.

Wildlife and Vegetation

Based upon the publication entitled "Massachusetts Natural Heritage Atlas – 12th Edition" dated October 1, 2006 prepared by the Natural Heritage & Endangered Species Program, the site falls outside of any known Estimated Habitat of Rare Wildlife or Priority Habitat of Rare Species.

With the exception of the stormwater management facility, the development is located mostly within previously developed areas. Mature tree loss will be concentrated at the traffic islands and fringe wooded areas adjacent to the existing parking lot driveway. The stormwater management facility will be replanted with plant species both indigenous to the region and beneficial to water quality

enhancement and nutrient uptake. Landscaping will be installed at select locations throughout the development to maintain the “campus” aesthetic of the area, and plant screening adjacent to the parking garage will provide a visual buffer from the Hayden Woods Conservation Area.

Noise

Potential noise impacts associated with the development may be attributed to rooftop mounted mechanical equipment required for heating, cooling, ventilation, and air supply/exhaust vents for the laboratory. To mitigate these impacts the building design will include a rooftop equipment acoustic penthouse enclosure and screen walls to dampen potential increases in noise levels.

Understanding the community’s sensitivity to potential increases in noise levels, Cubist has retained Noise Control Engineering of Billerica, Mass. to conduct a survey of background noise levels. The existing conditions noise level baseline will be used for future mechanical equipment selection and acoustical damping design opportunities to ensure compliance with the requirements of the Massachusetts DEP noise regulations and the Lexington Noise Ordinance.

Air Quality

The development is not subject to MEPA jurisdiction and the procurement of air quality permits for the facility is not anticipated. Regarding potential increases in greenhouse gas emissions, Cubist is committed to implementing standard LEED design initiatives. It is Cubist’s intent to use the standard LEED design checklist as a guideline for identification and selection of building, site, and mechanical system design opportunities to achieve a non-certified LEED Silver Rating.

Air quality will directly benefit from this strategy through the use of building materials and energy-efficient mechanical systems to reduce energy consumption. Additionally, the proposed Transportation Demand Management plan to be implemented by Cubist will promote the use of public-transportation, carpooling, and alternative transportation modes thereby reducing single-occupancy commuter vehicle trips and reducing carbon emissions associated with fuel consumption.

Historical and Archaeological

A review of the 2008 MassGIS database indicates that there are no Historical or Archaeological Assets mapped within the project site. Furthermore, a review of Massachusetts Historical Commission files indicated no Historical or Archaeological Assets are located on the property.

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