

## Application for Conditional Use Permit

### Supporting Information for Hellbranch Meadows

#### **Project Description**

Franklin Soil and Water Conservation District (FSWCD) proposes to restore native habitats on the property using Water Resource Restoration Sponsor Program (WRRSP) funds. The Hellbranch Meadows property was purchased through the Clean Ohio Fund. It is the intent of FSWCD to restore native habitats and to provide conservation education on the property. The Hellbranch Meadows property is protected by Clean Ohio Development and Use Restrictions. The proposed restoration project area has received additional protection in perpetuity by recording an Ohio EPA Environmental Covenant on the 135-acre project area. Existing habitats on the property are low to moderate quality with the potential to be improved to high quality through the implementation of restoration and enhancement efforts. The goal of the project is to restore and preserve Hellbranch Run, its tributaries, adjacent wetlands, and surrounding uplands within the property.

The proposed ecological restoration project was planned and designed so that it resembles intact stream and wetland complexes in the region. Hydrologic and hydraulic models were developed to establish peak flows, velocities, and water surface profiles in the project reach for the existing and proposed conditions. Modeling results were used to inform design including channel sizing, rock sizing, and bank treatments.

The project will involve the construction of a new meandering stream channel just west of the existing Hellbranch Run channel, which is currently a straightened, over-widened, and deepened channel for its entire length on the property. This will include construction of flood-prone areas and floodplain wetlands in order to re-connect the stream with its floodplain within the property. The new channel will tie-in to the existing channel within the property, and the eroded stream banks downstream of the new channel will be graded to more stable slopes and replanted to reduce erosion.

Stream restoration work will also be completed on a tributary to Hellbranch Run. Tile will be removed from the upper portion of the tributary and a natural channel will be established. The existing open channel will be stabilized, and a section will be relocated to a new meandering channel that will flow to the relocated reach of Hellbranch Run within the property.

In addition to the stream restoration work, bank stabilization is proposed along a short reach of the right descending bank of Hellbranch Run just downstream of the new channel. Bank protection would be installed in the vicinity of an existing AEP tower along the currently eroded section in order to prevent further erosion and to protect the existing structure.

The project also involves wetland preservation and re-establishment. Four existing wetlands on the property will be preserved, and additional wetlands will be constructed near the existing wetlands and along existing and restored stream channels. Diverse plant communities will be established, and existing tile laterals will be eliminated to allow surface water to filter through the wetlands prior to reaching Hellbranch Run. The project includes invasive species management, and replanting and seeding with native species for long-term habitat improvement.

### **Project Impacts on adjoining property**

The majority of the property has been in recent agricultural use and is currently fallow. Surrounding properties are a mix of agricultural land, single family rural homes, and some single family residential development. The project will result in restored native habitats. No new structures or paved areas would be constructed, and no new utility services will be installed.

The proposed construction activities would likely result in temporary and localized air, water, and noise quality impacts, and a temporary increase in traffic. These impacts are expected to be minor and should abate upon completion of the construction activities at the property. Implementation of the Stormwater Pollution Prevent Plan for the site will minimize the extent of any sedimentation during and after construction. Contractors will be required to implement procedures to reduce the possibility of spills and to control dust during construction. Wastes generated by construction will be properly disposed of in accordance with state and local requirements. Construction access will be limited to two construction entrances, which will be installed on the first day of construction activities at the property, and maintained throughout the duration of the project.

All applicable environmental and health and safety regulations will be adhered to during construction of the proposed project. Contractors will be required to maintain their equipment in satisfactory condition to minimize air pollution from exhaust emissions. State and local laws regarding open burning regulations and restrictions will be followed. It is not anticipated that the proposed ecological restoration activities would introduce any excessive traffic or noise, or any new smoke, fumes, glare, odors, or vibratory effects to adjoining property.

### **Compliance with Section 563 of the Prairie Township Zoning Resolution**

The ecological restoration project will involve work within the floodway, including temporary stream crossings, erosion control, bank stabilization, and channel relocation, and therefore requires a conditional use permit. Approval from the Franklin County Floodplain Administrator is also required, and will be obtained prior to any construction. Hydrologic and hydraulic models were developed to establish peak flows, velocities, and water surface profiles in the project reach for the existing and proposed conditions. Modeling results established that the project will not cause an increase in the flooding extents and elevations in the project area, and will result in an overall reduction upon completion of construction.

Temporary stream crossings will be required to provide construction access. The crossings have been designed to ensure that flow is not obstructed; flow will be maintained at temporary crossings using four 18-inch culverts at three locations. Following completion of construction in those areas, the temporary crossings will be removed. Erosion control is proposed along Hellbranch Run and its tributary. Measures will entail grading the banks back to a more desirable slope (3:1), excavating bankfull benches, and installing rock toes to secure the slopes. The rock toes will be densely planted with native live stakes to stabilize the banks and improve aquatic habitat and cover. Due to the proximity of an existing AEP tower to Hellbranch Run, a section of streambank will be stabilized with riprap along approximately 180 linear feet. Because portions of the existing tower foundations have become exposed, it is necessary to utilize riprap at this location; the material is the minimum necessary to protect the structure based on previous erosion and expected flow velocities. To the north of this area, the reach of Hellbranch Run will be relocated. A new meandering stream channel will be

excavated to the west of the existing Hellbranch Run channel, outside of the existing AEP easement. The relocated channel length will be approximately 2,330 linear feet, and will incorporate stable slopes, floodplain benches, and the establishment of a forested riparian corridor.

The proposed ecological restoration project would not affect the rural setting or general character of the area, is compatible with the properties in the area, and is consistent with permitted uses for the property. The project is designed to result in improvements to on-site and downstream water quality, through the reduction in erosion and improvement to floodplain connection on the property. Any impacts to surrounding properties related to increased traffic or noise would be minimal and would occur during construction only; no long-term impacts are anticipated. Vehicle access to the property will not interfere with traffic flow on the surrounding roadways (Alton Road and Murnan Road).

The project will not result in the loss of any natural, scenic, or historic features. The project is designed to result in improvements to the natural habitat. A cultural resource survey was completed on the property, and it was determined that no historic properties would be affected by the project.