



Planning for the Future:

Reuse Assessment for the Lammers Barrel Superfund Site Beavercreek, Ohio

JULY 2010

Environmental Protection Agency Region 5
Superfund Redevelopment Initiative

prepared by
E² Inc.

Forward

The Environmental Protection Agency's (EPA) primary responsibility at Superfund sites is to ensure the protection of human health and the environment. Consideration of a site's potential future use is an important part of this responsibility under the National Contingency Plan (NCP). The Superfund Redevelopment Initiative (SRI) was created by EPA in 1999 to help communities and stakeholders in their efforts to return environmentally impaired sites to protective and productive use. Conducting a reuse assessment that engages site owners and other stakeholders in evaluating future use options for a site can help facilitate site stewardship and support the long-term effectiveness of a site's remedy.

Acknowledgements

E² Inc. would like to acknowledge the following stakeholders for their expertise and valuable contributions in guiding the reuse planning process for the Lammers Barrel Superfund Site.

Agency Representatives

Tom Bloom, EPA Region 5 Reuse Coordinator

Scott Glum, Ohio Environmental Protection Agency

Tim Fischer, EPA Region 5 Remedial Project Manager

Ginny Narsete, EPA Region 5 Community Involvement Coordinator

Kyle Rogers, EPA Region 5

Stakeholders

David Beach, City of Beavercreek

Randy Burkett, City of Beavercreek

Don Ferda, Nephew of Site Owner

Mark Goltz, Beavercreek Environmental Advisory Council

Helen Gorby, Site Owner

Ron Gorby, Son of Site Owner

Brian Jarvis, Vice-Mayor City of Beavercreek

Don Kessler, Lammers Barrel Community Advisory Group

John Koerner, Beavercreek Environmental Advisory Council

Jack Kratzmeyer, ARCADIS

Jeff Moorman, City of Beavercreek

Sandra Pereira, City of Beavercreek

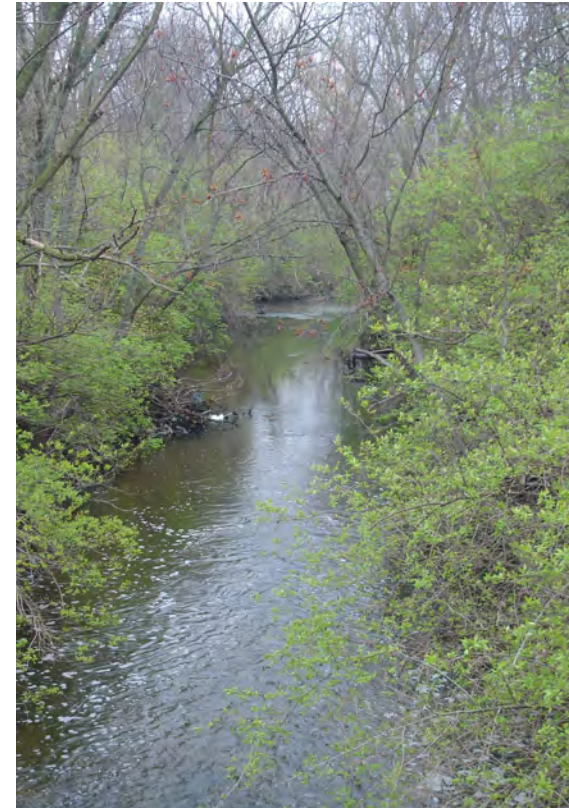
Micheal Thonnerieux, City of Beavercreek

Table of Contents

I. Introduction	Page 2
II. Remedial Status	Page 4
III. Stakeholder Considerations	Page 5
IV. Site Characterization	Page 6
V. Reuse Scenarios	Page 18
VI. Final Considerations and Next Steps	Page 26

List of Figures

Figure 1 - Site Location	Page 2
Figure 2 - Site Context	Page 7
Figure 3 - Zoning	Page 9
Figure 4 - Site Features	Page 11
Figure 5 - Investigative Features	Page 13
Figure 6 - Potential Remedial Features	Page 15
Figure 7 - Yard Definitions for a Corner Lot	Page 16
Figure 8 - Development Zones and Setbacks	Page 17
Figure 9 - Planned Unit Development Rezoning	Page 19
Figure 10 - Commercial Development	Page 21
Figure 11 - Industrial Development	Page 23
Figure 12 - Pocket Park	Page 25



Little Beaver Creek, April 2009. Source: EPA

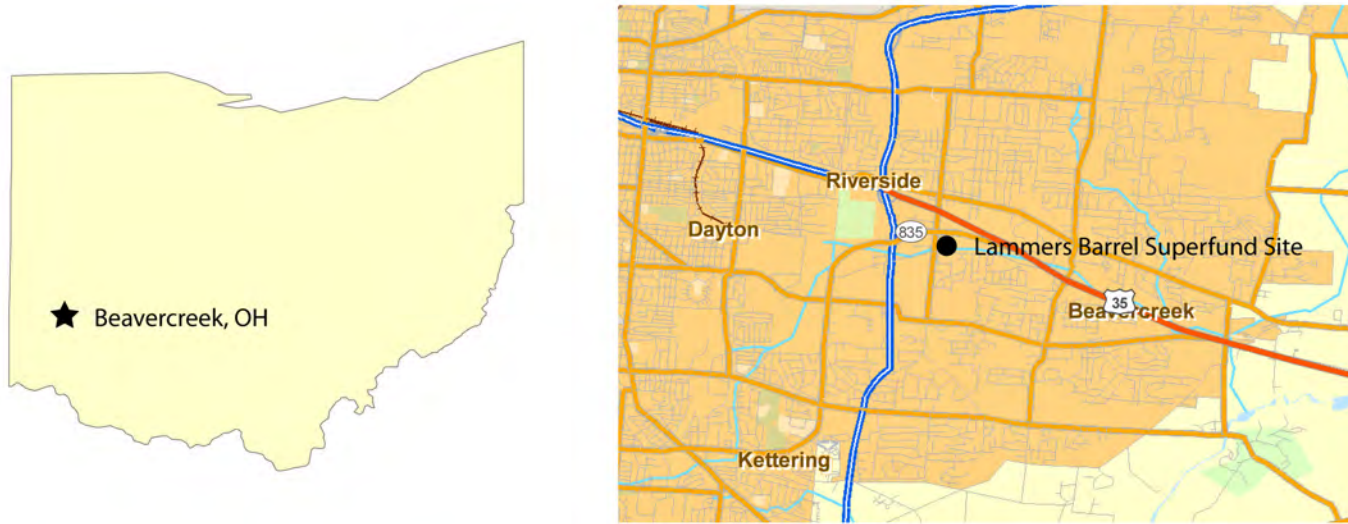


Figure 1: Site Location

I. INTRODUCTION

Background

The Lammers Barrel Superfund Site (Site) occupies 2.45 acres at the intersection of Grange Hall and East Patterson Roads in the City of Beavercreek, Ohio. The site is bordered to the north by an abandoned rail right-of-way and is bisected by Little Beaver Creek flowing west to east across the site.

Operations began at the Lammers Barrel Factory in 1953 and continued until a fire in October 1969 completely destroyed the buildings. The only structures remaining are a concrete pad, a non-functional production well, and pipes that appear to run from the former facility to the creek. During operation, the facility had an above-ground storage capacity of over 500,000 gallons of chemical solvents.

In 2002, the Site was declared a Superfund Site and added to the National Priorities List (NPL). Contaminants of primary concern are volatile organic compounds (VOCs) and heavy metals, such as lead, impacting both groundwater and on-site soil.

The Site is located in a transitional area of the City of Beavercreek, between a residential area to the south and a commercial and industrial area to the north. Proximity to commercial and industrial business as well as recreation resources indicates that potential future uses on the Site could include commercial, industrial and recreational scenarios.

Project Overview and Purpose

In 2009, the United State Environmental Protection Agency (EPA) offered assistance through the Superfund Redevelopment Initiative to identify reasonably anticipated future land use to inform the remedial process at the Site. E² Inc. conducted a site visit on April 15, 2009 to gather information and assess the need for reuse planning services. During the site visit, E² Inc. met with the site owner, city staff and other stakeholders to review planning initiatives and gather preliminary reuse considerations. These considerations were summarized, along with suggested next steps, in a summary memo submitted to EPA on May 11, 2009.

After the initial site visit, E² Inc. conducted a site characterization based on available planning documents, follow up interviews with community stakeholders and city staff, and area features that could be mapped using geographic information systems (GIS). This GIS data provided a way to identify and map key characteristics of the Site, Lammers Barrel property and surrounding community that may influence reuse.

Based on the site characterization, E² Inc. developed a set of potential future use scenarios for review by EPA, the PRP contractor, the site owner and community stakeholders. The site characterization and future use scenarios were presented at a meeting held at City Hall on February 19, 2010, and participants discussed additional considerations and next steps for the reuse process. A meeting summary memo summarizing these additional considerations was submitted to EPA on March 1, 2010 and shared with meeting participants.

This report summarizes the findings of this process including stakeholder goals, site characterization and future use scenarios, remedial and reuse considerations, and next steps for the reuse planning process.

II. REMEDIAL STATUS

Remedial Timeline

In April 2002, EPA and the parties responsible for contamination at the site signed an Administrative Order on Consent (AOC) to conduct a Remedial Investigation and Feasibility Study (RI/FS) for the site. In September 2002, U.S. EPA proposed the Lammers Barrel Factory site for addition to the National Priorities List (NPL) of hazardous waste sites.

Field investigation activities, beginning in 2003, have included residential well sampling, on-site soil and groundwater sampling, surface water and sediment sampling in Little Beaver Creek, and installation and sampling of groundwater monitoring wells.

Based on the investigation thus far, EPA has divided the site into two operable units to expedite on-site remediation while investigation continues for the off-site operable unit. One operable unit will address on-site soils and groundwater; the other operable unit will address the off-site groundwater plume. A final Feasibility Study for the on-site operable unit is expected in Summer 2010 with a Proposed Plan anticipated for public comment in early Fall 2010. Remedy construction on the Lammers Barrel property will follow, pending additional negotiations and funding.

At the earliest, the Lammers Barrel property could be ready for reuse in Fall 2011. EPA anticipates cleaning the Lammers Barrel to levels acceptable for commercial, industrial or recreational reuse. An environmental covenant, a legal document attached to the deed of the property, will likely restrict the property from residential use.

The off-site operable unit Investigation Study will proceed in parallel but on a more extended timeline. Groundwater will be cleaned to drinking water standards, and installation of groundwater-related remedial features could be possible on the Lammers Barrel property, even after it is declared ready for reuse.

Remedial Alternatives

A number of remedial alternatives for both the soil and groundwater are under consideration by EPA and the parties responsible for contamination. These include¹:

Soil
Institutional Controls – deed restrictions and access restrictions
Excavation – removal of impacted soil for off-Site treatment or disposal
Surface Barriers – low permeability engineered cover system
In-Situ Treatment – reagent lancing, calcium oxide treatment

Ground Water
Institutional Controls – deed restrictions and future use restrictions
Groundwater monitoring – long-term monitoring
Ex-situ Treatment – air stripping
In-situ Treatment – monitored natural attenuation (MNA)
In-situ Treatment – enhanced reductive dechlorination (ERD)

Remedial Features

Potential long-term remedial features at the Site could include injection wells, monitoring wells, a soil cap covering consolidated contaminated soil, and a groundwater treatment facility. See Potential Remedial Features on page 12 for additional information.

¹ Lammers Barrel Site Group. 16 January 2009. Alternative Screening Process Technical Memorandum, Lammers Barrel Factory Site, Beavercreek, OH

III. STAKEHOLDER CONSIDERATIONS

Site Owner

The site owner does not currently have any specific reuse plans for the property, but would like to see the property returned to productive reuse once the contamination is addressed. Additionally, the site owner indicated interest in identifying a future use, such as commercial or industrial, that would provide an economic benefit to the site owner to offset investments made to date.

City of Beavercreek

The City would like to assist the property owner in returning the Site to productive use once the contamination is addressed; however, City representatives expressed concern that the various setbacks and stormwater requirements may pose building constraints for the relatively small property. Alternatively, the City would be willing to acquire the property for development as a pocket park if the property was donated to the City as a voluntary contribution.

Lammers Barrel Community Advisory Group (CAG)

EPA has been testing the use of molasses injections to address groundwater contamination. The CAG representative suggested that if this remedial alternative is selected as part of the Proposed Plan, the Site might receive positive publicity for having a “green” approach to cleanup

Beavercreek Environmental Advisory Committee (BEAC)

The Beavercreek Environmental Advisory Committee would like to see the Little Beaver Creek corridor remain protected, but has no other objections to potential reuse.

Local Community

According to the Community Involvement Plan released by EPA in 2010, community

members have expressed interest in a number of potential future uses at the Site. Local residents expressed strong interest in a small dog park for the area. Other community ideas included a regular park, natural area, bike or walking trails, and job creation through reuse.

IV. SITE CHARACTERIZATION

Site Context

As illustrated by Figure 2, the Site is located with proximity to both commercial and industrial businesses in the Beavercreek community. Existing commercial businesses are represented in orange, and existing industrial enterprises are represented in purple. Additionally, the Site has ready access to the transportation network; the junction of I-675 and State Road 35 just over a mile from the site.

The Site also has proximity to a number of recreational assets including the Creekside Trail and the proposed Grange Hall/National Corridor bikeway (bikeway). The Creekside Trail is a 17.8 mile paved trail that runs between Xenia Station in Green County and the Eastwood MetroPark in Montgomery County. Parking access to the Creekside Trail is located ½ mile north of the Site on East Grange Hall Road. The City of Beavercreek has planned a bikeway along East Grange Hall Road that will connect with the Creekside Trail, shown as a purple dashed line on the map. Areas of the bikeway under construction in 2009 are highlighted in yellow and areas planned for construction in 2010 are highlighted in green.

Finally the Site is located in an area with limited walking access to parkland. The concentric rings shown on the map represent ¼, ½ and 1 mile radii around the Site. Public parks, shown on the map in green, are all located at least a mile from the Site and surrounding area.



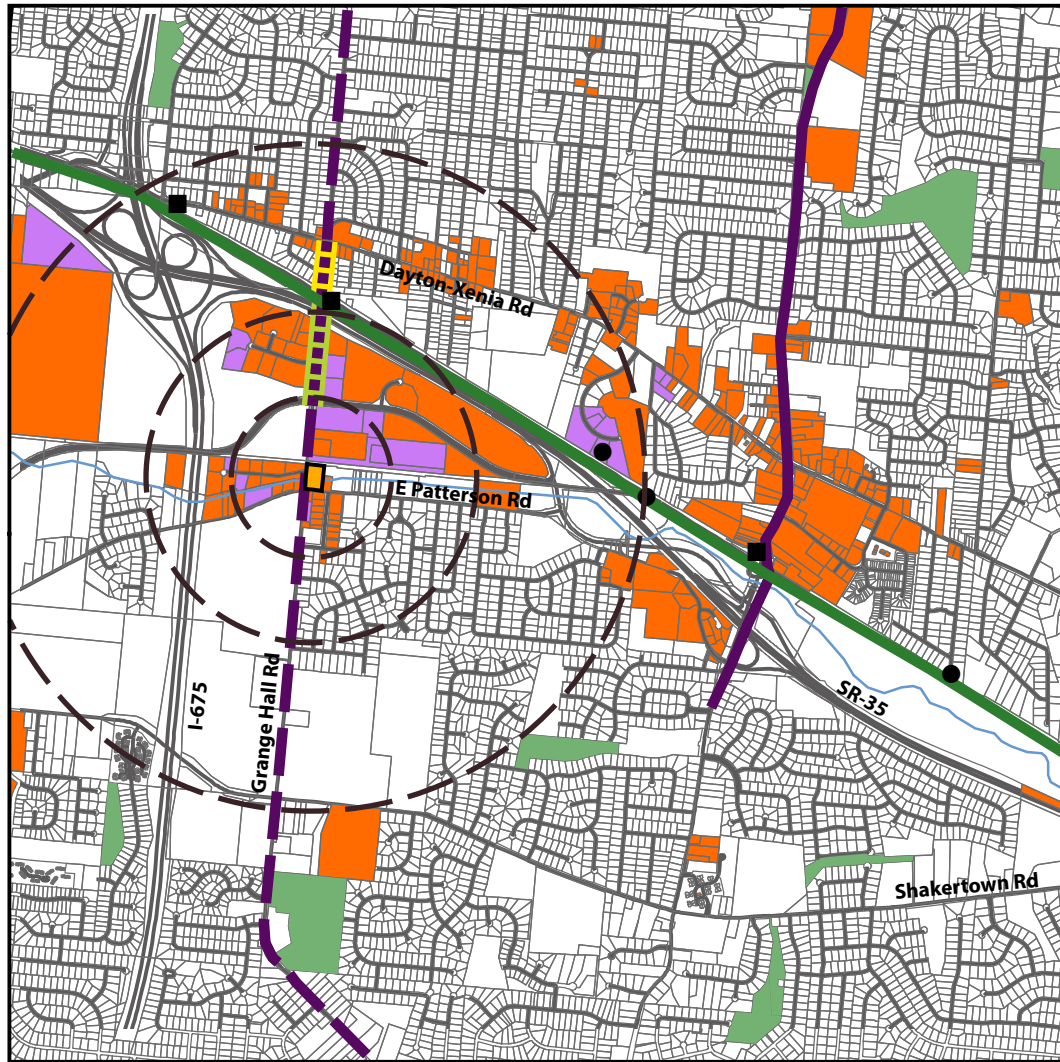
Parking access to Creekside Trail is located 1/2 mile north of the site.



Proposed Grange Hall / National Corridor bikeway would run parallel to Grange Hall Road, shown above.



Nearby properties are commercial and industrial land uses.



Key

- Lammers Barrel Superfund Site
- Recreation Features*
- Public Parks
- Creekside Recreational Trail
- Creekside Trail Access Points
- Creekside Trail Parking
- Existing In-Corridor Bikeway
- Grange Hall / National Road Corridor (proposed)
- GH/NR Corridor (under construction)
- GH/NR Corridor (construction in 2010)
- Additional Features*
- Roads
- Parcels
- Little Beaver Creek
- Properties classed as Commercial
- Properties classed as Industrial
- .25, .5 and 1 mi radii around Site

Site Context

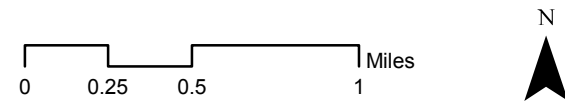


Figure 2: Site Context

Zoning

The Lammers Barrel property is currently zoned Business (B2). The City of Beavercreek's 2007 Land Use Plan designates the property as medium density residential, however the City representatives noted that the property is likely more appropriate for light commercial.

Surrounding land use includes a mix of light industrial, commercial, office, office research park and residential (Figure 3). The agricultural zoning along Patterson Road is a holdover from when the city incorporated; these properties have diverse land uses, and the City plans to update the zoning for each property as a change in use occurs.

Additionally, the Miami Valley Research Park owns the undeveloped property across the intersection from the Site (indicated by hatching on Figure 3). The non-profit Park is a university-related research park designed to attract advanced technology companies and organizations involved in original research, prototype development or the application of technology to products or services. Although the property is currently zoned residential, a zoning change is likely to occur prior to development.



A research park is proposed for the large parcel located across the street from the site.



Surrounding land uses include commercial, industrial, and residential uses.



Industrial properties are located to the north of the site.

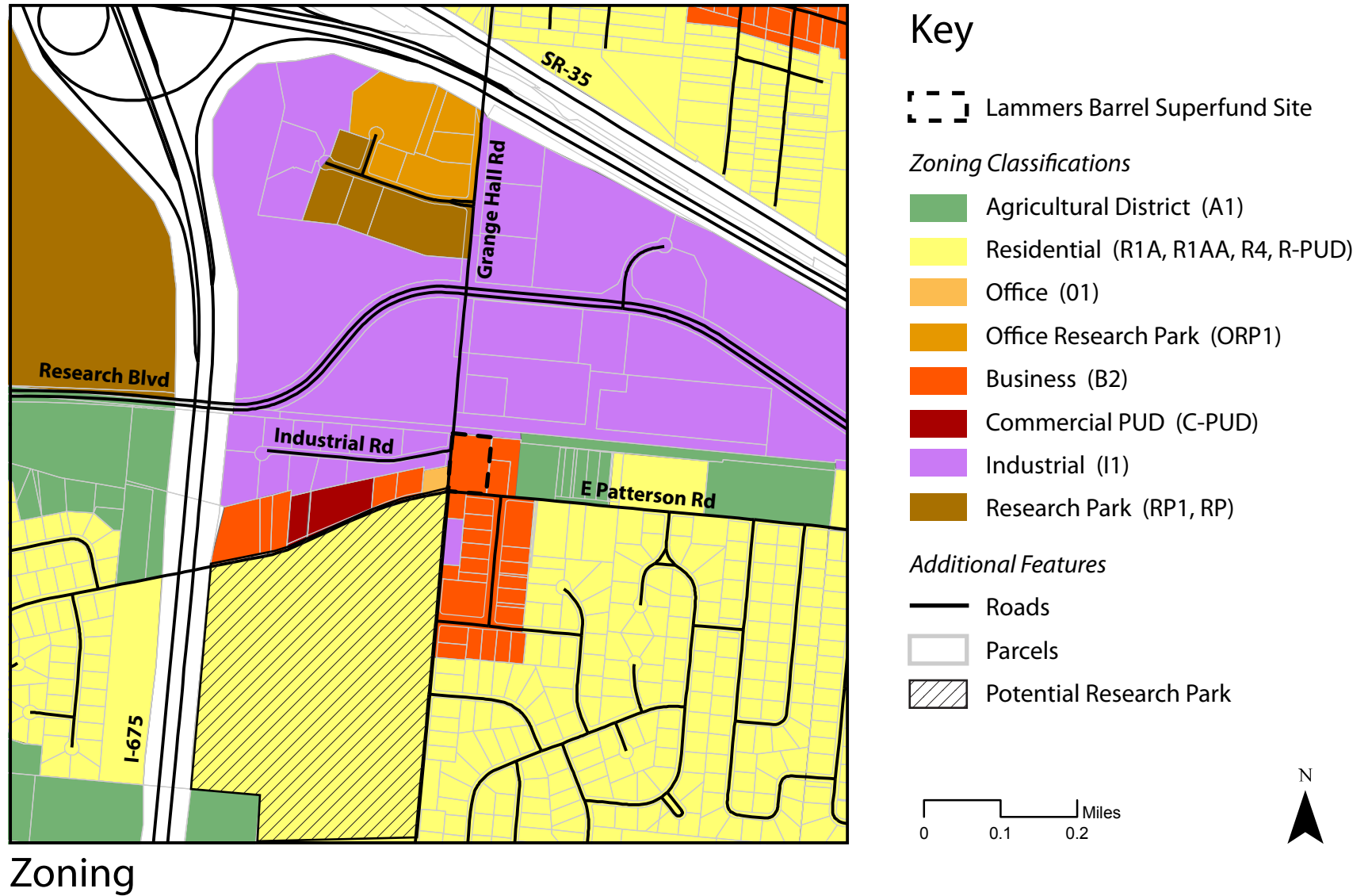


Figure 3: Zoning

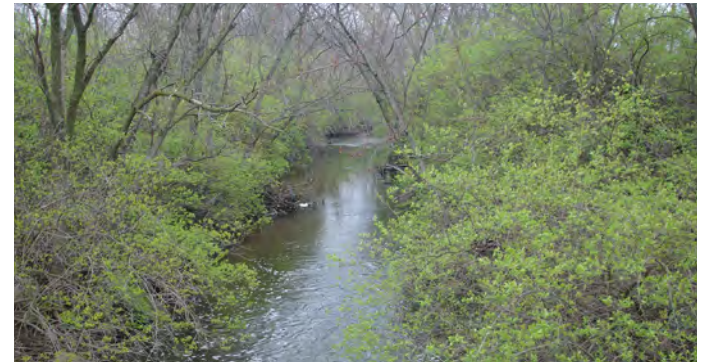
Site Features

The Lammers Barrel property includes 2.45 acres at intersection of Grange Hall and Patterson Roads (Figure 4). The only structures remaining on the property are a concrete pad, a non-functional production well, and pipes that appear to run from the former facility to the creek. Existing access is located in the southeastern corner of the property, off of Patterson Road. Potential access to the northern portion of the property could be created off of Grange Hall Road at the intersection of Industrial Lane.

The property is bisected by Little Beaver Creek and located within the floodplain. The floodplain, represented in Figure 4 by hatching and a dark blue dashed line, covers the entire northern portion of the property. The City requires buildings within the flood zone to elevate finished floor to two feet above the flood elevation. The floodway, indicated on Figure 4 by dotted light blue lines, runs along both sides of the creek. The City does not permit structures within the floodway.

There are no riparian buffer requirements that would impact reuse; however there are mature trees located along the creekway that support the stability and health of Little Beaver Creek.

Off-site, an abandoned rail right of way, shown on Figure 4 in yellow, borders the property to the north and could offer a potential trails connection in the future. Additionally, the City of Beavercreek anticipates a future expansion of Patterson and Grange Hall including additional traffic lanes and traffic lights. Such an upgrade would require expanding the existing right-of-way and impact related development set-back requirements. However, no specific street enhancement plans have been developed to date.



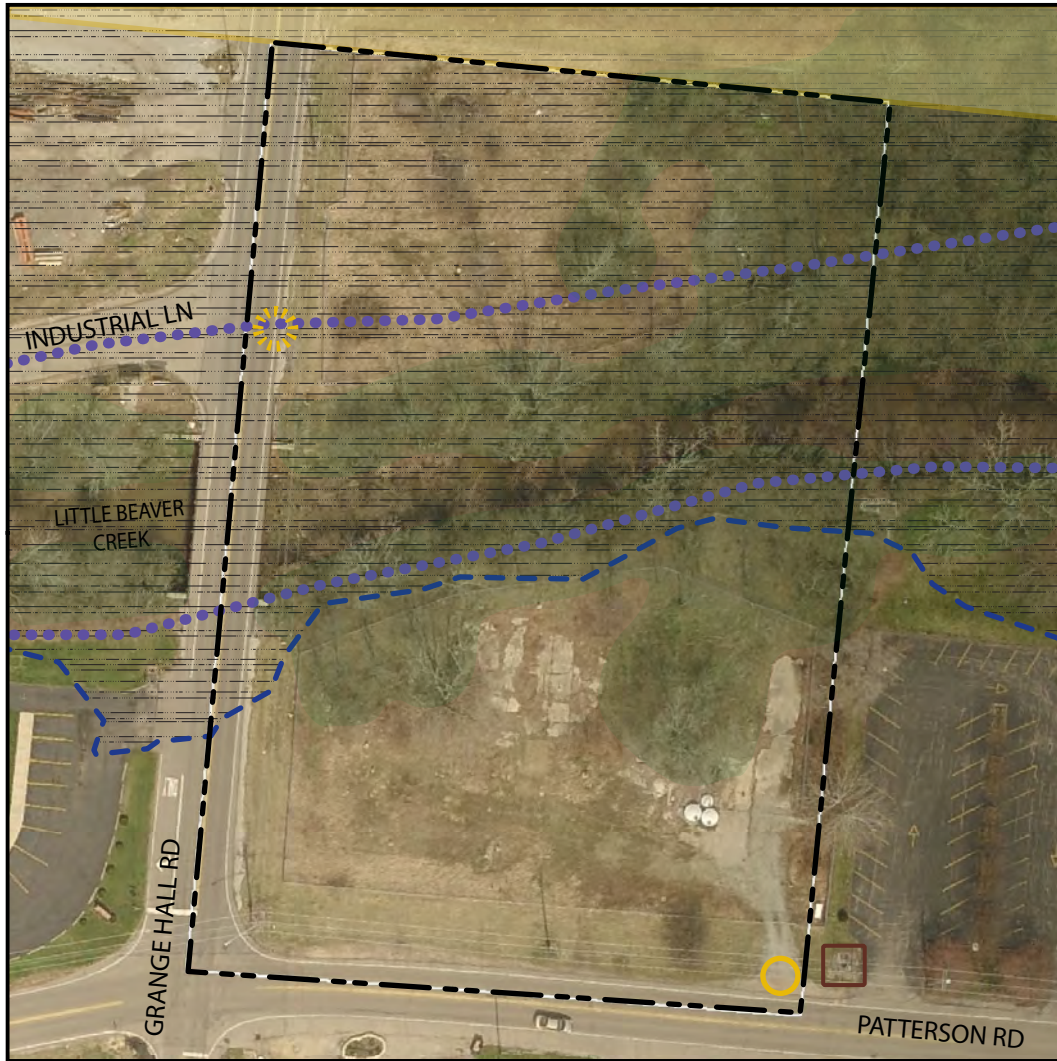
Little Beaver Creek splits the property



Existing access from Patterson Road



Potential access to northern portion of site from Grange Hall Road



Key

Lammers Barrel Superfund Site

Natural Features

Floodway

Floodplain

Tree Canopy

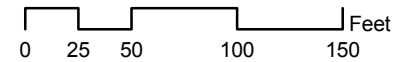
Additional Features

Existing Access

Potential Access

Gas Line

Abandoned Rail Right of Way



Site Features

Figure 4: Site Features

Investigative Features

Field investigation activities have included residential well sampling, on-site soil and groundwater sampling, surface water and sediment sampling in Little Beaver Creek, and installation and sampling of wells. During the course of these activities, a number of investigatory features were added to the Lammers Barrel property (Figure 5). Fencing restricts access on both the northern and southern portions of the property. Soil boring holes were created during the sampling process and then refilled. Monitoring, injection and observation wells were installed across the property; some of these locations may be reused during the remediation and others may be abandoned and plugged.



Site is fenced to restrict access








Existing monitoring wells

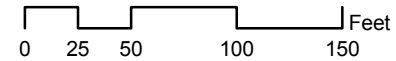


Key

 Lammers Barrel Superfund Site

Investigative Features

-  Fencing
-  Monitoring Wells
-  Soil Boring Locations
-  Injection Wells
-  Observation Wells



Investigative Features

Figure 5: Investigative Features

Potential Remedial Features

Remedial features will be selected, sized and located as part of the remedial design process. Figure 6 is intended to show a hypothetical arrangement of remedial features on the property. Potential remedial features could include:

- Monitoring wells, used for monitoring groundwater contamination
- Injection wells, for injecting remedial material such as molasses
- Soil cap, used for covering consolidated areas of contaminated soil
- Groundwater treatment system, used for treating contaminated groundwater that is pumped to the surface

If a soil cap is chosen, it is likely to be located on the southern portion of the property, as shown by the hatched area identified on Figure 6. The cap would not necessarily cover the entire identified area.

The flexibility of the location of wells on the property varies by well type. Monitoring wells could likely be installed near the property edge. Injection wells would need to be installed near the source area. Locations shown on Figure 6 are based on the locations of features already installed on the property during the investigatory process. These features could be reused to avoid the added expense of installing new wells.

Remedial Feature Examples



Diagram of a flush-mounted well



Soil cap with a monitoring well installed




Groundwater treatment system



Potential Remedial Features

Key

 Lammers Barrel Superfund Site

Potential Remedial Features¹

 Area with potential for soil cap

 Monitoring Wells

 Injection Wells

 Groundwater Treatment Facility²

¹ Specific remedial features to be selected, sized and located during the remedial decision process.

² Size and location to be determined if selected during the remedial decision process.

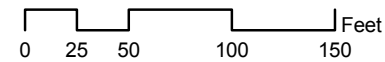


Figure 6: Potential Remedial Features

Reuse Constraints

In addition to the placement of remedial features on Site, a number of city regulations may create reuse constraints. City regulations regarding setbacks and parking and may have a significant impact on the amount of land available for redevelopment, given the small size of the Lammers Barrel property.

Setbacks

Setbacks are requirements in the zoning code which define the minimum distance that buildings and structures on a property must be from the road centerline or right of way. These setbacks vary by zoning district and have special requirements on corner lots, such as the Lammers Barrel property. As shown in Figure 7, corner lots are considered to have two front yard areas, two side yard areas and a rear yard area in the corner furthest from the street. Additionally, because the property is located on two major roads, larger setbacks are required. Setbacks required for commercial and industrial zoned properties in Beaver Creek are detailed in the table below:

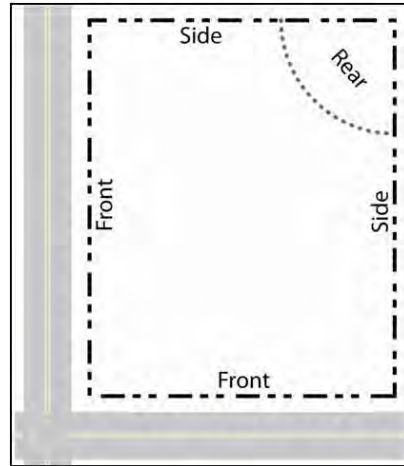


Figure 7. Yard Definitions for a Corner Lot

	Front Yard	Side Yard	Rear Yard
Commercial (B1, B2, B3, O1)	70' from right of way	15'	30'
Industrial (I1)	50' from road centerline	20'	50''

These requirements are reflected in Figure 8 as orange and purple setback lines, which indicate the areas within which buildings and structures may be located on the site. It is likely that these setbacks would apply to any groundwater treatment system installed on Site.

Parking

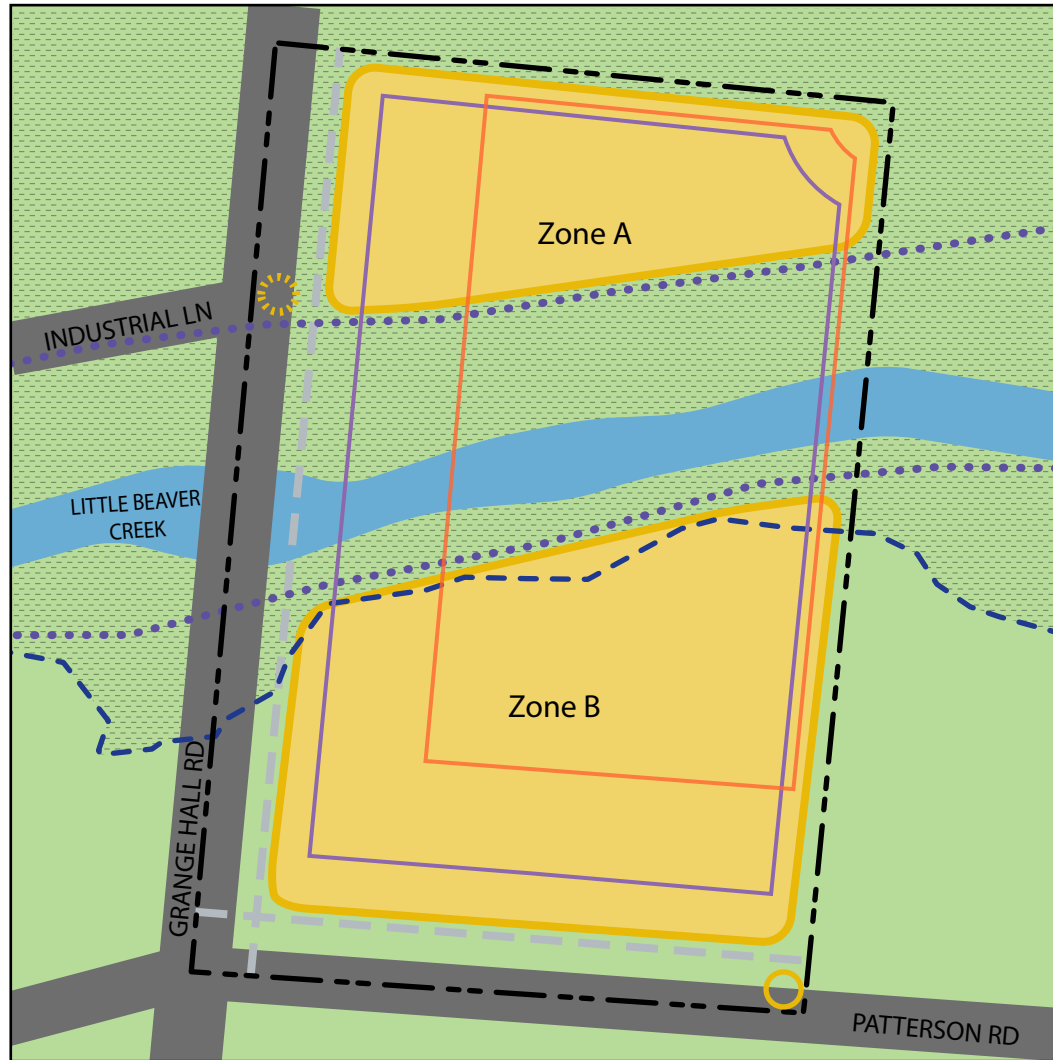
Parking requirements, also found in the zoning code, define the relationship between a building and the required number of parking spaces. Parking requirements for commercial properties in Beaver Creek vary based on the type of use. For instance, a car wash business would be required to maintain one parking space for each employee on the largest shift. A funeral parlor, on the other hand, would require a significantly larger number of spaces – one space for each 50 square feet of floor area in slumber rooms, parlors or service areas and an additional space for each vehicle used in the business and kept on the premises.

Parking requirements for industrial properties in Beaver Creek are directly tied to the number of employees per shift. Industrial businesses are required to maintain two spaces for every three employees on the largest shift for which the building is designed as well as an additional space for each vehicle used in the business and kept on the premises. Given the variance in parking requirements, sample parking lot sizes are shown in the scenarios that follow but are not represented on Figure 8.

Development Zones

Two development zones were identified for the Lammers Barrel property based on the need to develop outside of the right of way areas, shown as grey dashed lines on Figure 8, and outside of the floodway, outlined in blue dotted lines. Although siting buildings or structures on the property is limited to areas within the required setbacks, areas outside of the setbacks may be still used for development needs such as parking, access or landscaping.

Zone A, identified in yellow on the northern portion of the property, is approximately .32 acres in size. It is located in the floodplain and currently does not have street access. Zone B, identified in yellow on the southern portion of the property, is approximately .86 acres in size. It is largely located outside of the floodplain and has existing access from Patterson Road.



Key

Lammers Barrel Superfund Site

Development Features

- Development Zones
- Commercial Setback (B1, B2, B3, O1)
- Industrial Setback (I1)
- Existing Access
- Potential Access

Additional Features

- Streets
- Right of Way
- Creek
- Floodway
- Floodplain

Development Zones and Setbacks

Figure 8: Development Zones and Setbacks

V. Reuse Scenarios

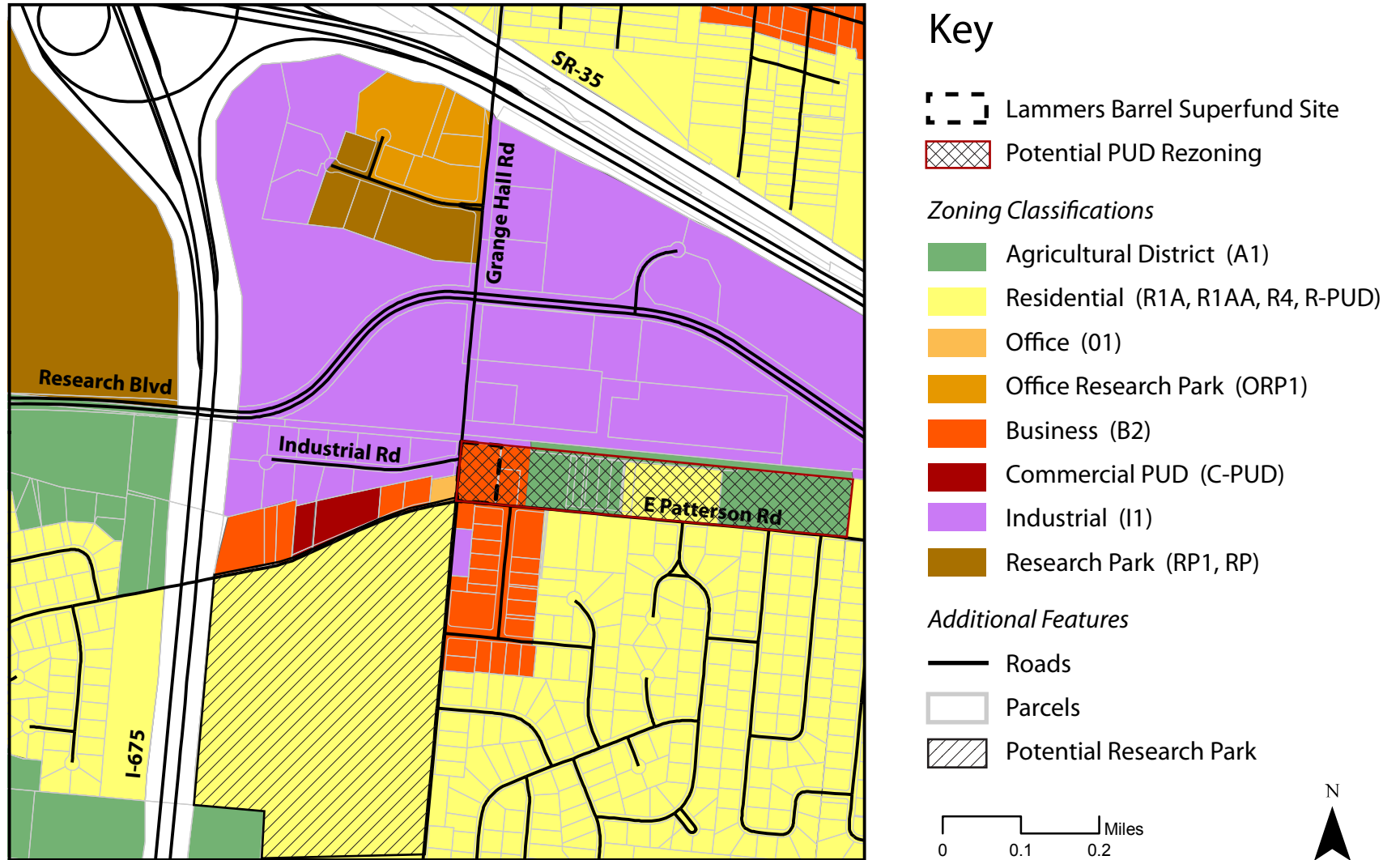
A number of reuse scenarios were developed based on the development zones identified during the site characterization. These scenarios explore the various configurations development might take on the site for a Planned Unit Development, a commercial or industrial development, and a recreational development.

Planned Unit Development

Planned Unit Development, or PUD, is a type of development that allows for modification of zoning requirements such as setbacks or parking in exchange for a closer review of the development proposal by city staff. A PUD may be submitted for either an individual parcel or for a group of parcels that will be developed as a single unit.

The scenario in Figure 9 assumes a multi-parcel PUD that includes twelve parcels along Patterson Road. The City of Beavercreek would like to see a medium-density residential development in this area to act as a buffer between the industrial and commercial uses to the north and the residential neighborhood to the south. A multi-parcel PUD could accomplish this goal and could use the Lammers Barrel property as open space or a parking area; environmental restrictions would likely disallow residential uses on this part of the PUD.

Given that ten landowners have property involved in this hypothetical scenario, a multi-parcel PUD may not be the most likely scenario for the Lammers Barrel property. However, there is precedent for one-acre PUDs in Beavercreek, and a PUD application could be used as a negotiating tool between the City and a developer to modify some of the requirements for the commercial and industrial scenarios that follow.



Planned Unit Development (PUD) Rezoning

Figure 9: Planned Unit Development Rezoning

Commercial

The Commercial Development Scenario, Figure 10, identifies two potential building footprints based on setback and parking requirements. Each footprint is approximately 10,000 square feet. Note for Building A1, the finished floor would need to be elevated to two feet above the flood elevation, as required by the City of Beavercreek.

Parking requirements are likely to limit the buildable area in Zone A. To approximate potential required parking areas, 11 spaces are shown for Zone A and 28 spaces are shown for Zone B. This indicates that any commercial business chosen for development in Zone A would need to have a parking requirement on the lower end of the spectrum, while Zone B can support uses with parking requirements on the higher end of the spectrum.

A look at properties across the City shows that there are 912 properties with commercial uses. Of these properties, 95 are comparable to the size of the northern portion of the Lammers Barrel property (.5 to .75 acres) and 44 are comparable to the southern portion (1 to 1.25 acres). Chart 1 shows the entire distribution of acreages for properties with commercial businesses.

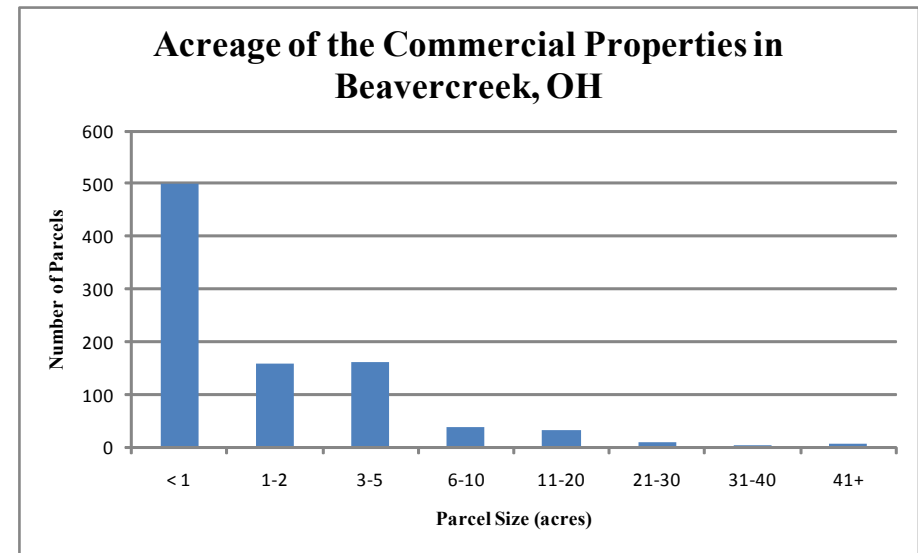
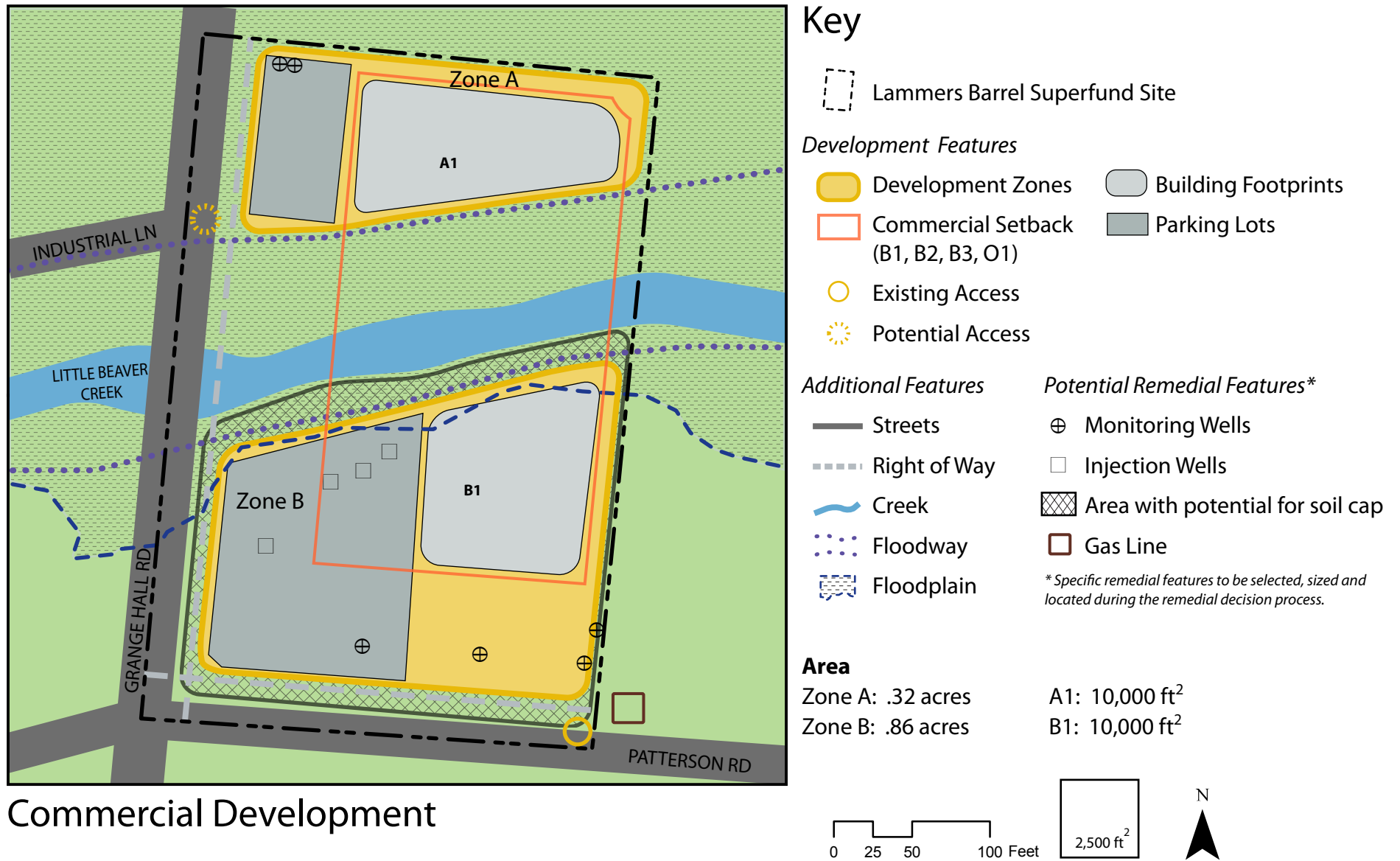


Chart 1: Acreage of Commercial Properties in Beavercreek



Commercial Development

Figure 10: Commercial Development

Industrial

The Industrial Development Scenario, Figure 11, also identifies two potential building footprints based on setback and parking requirements. The building on the northern portion of the property (A1) is approximately 8,500 square feet, and the building on the southern portion of the property (B1) is approximately 10,000 square feet. The square footage of Building A1 in this scenario is lower than that of Building A1 in the Commercial Development Scenario because of the constricted setback required for industrial properties. Additionally, the finished floor for Building A1 would need to be elevated to two feet above the flood elevation, as required by the City of Beavercreek.

Parking requirements for industrial properties are based on the number of employees per shift and the number of business vehicles maintained on site (see p. 16); the space available for parking on each portion of the property may therefore help determine potential uses. Eleven spaces are shown for Zone A and 28 spaces are shown for Zone B.

A look at properties across the City shows that there are 67 properties with industrial uses. Of these properties, five are comparable to the size of the northern portion of the Lammers Barrel property (.5 to .75 acres) and three are comparable to the southern portion (1 to 1.25 acres). Chart 2 shows the entire distribution of acreages for properties with industrial uses.

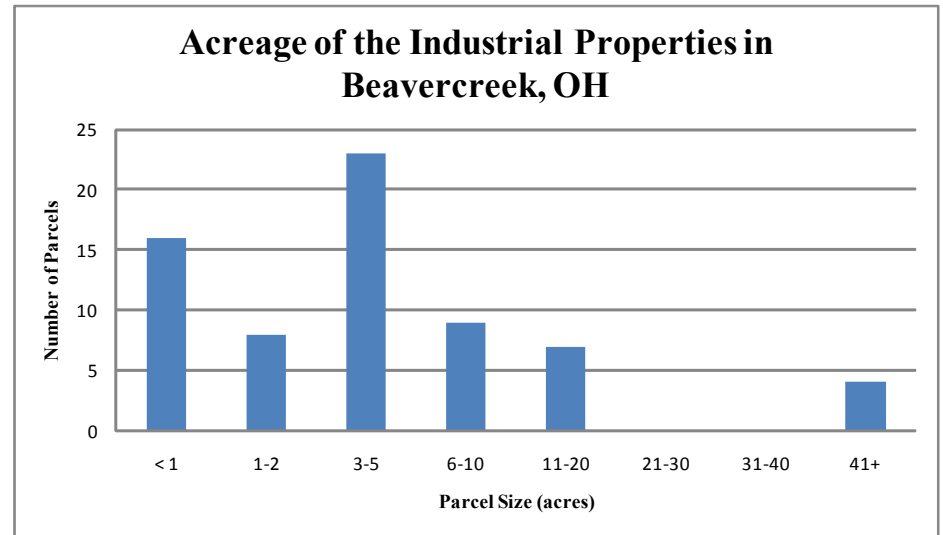
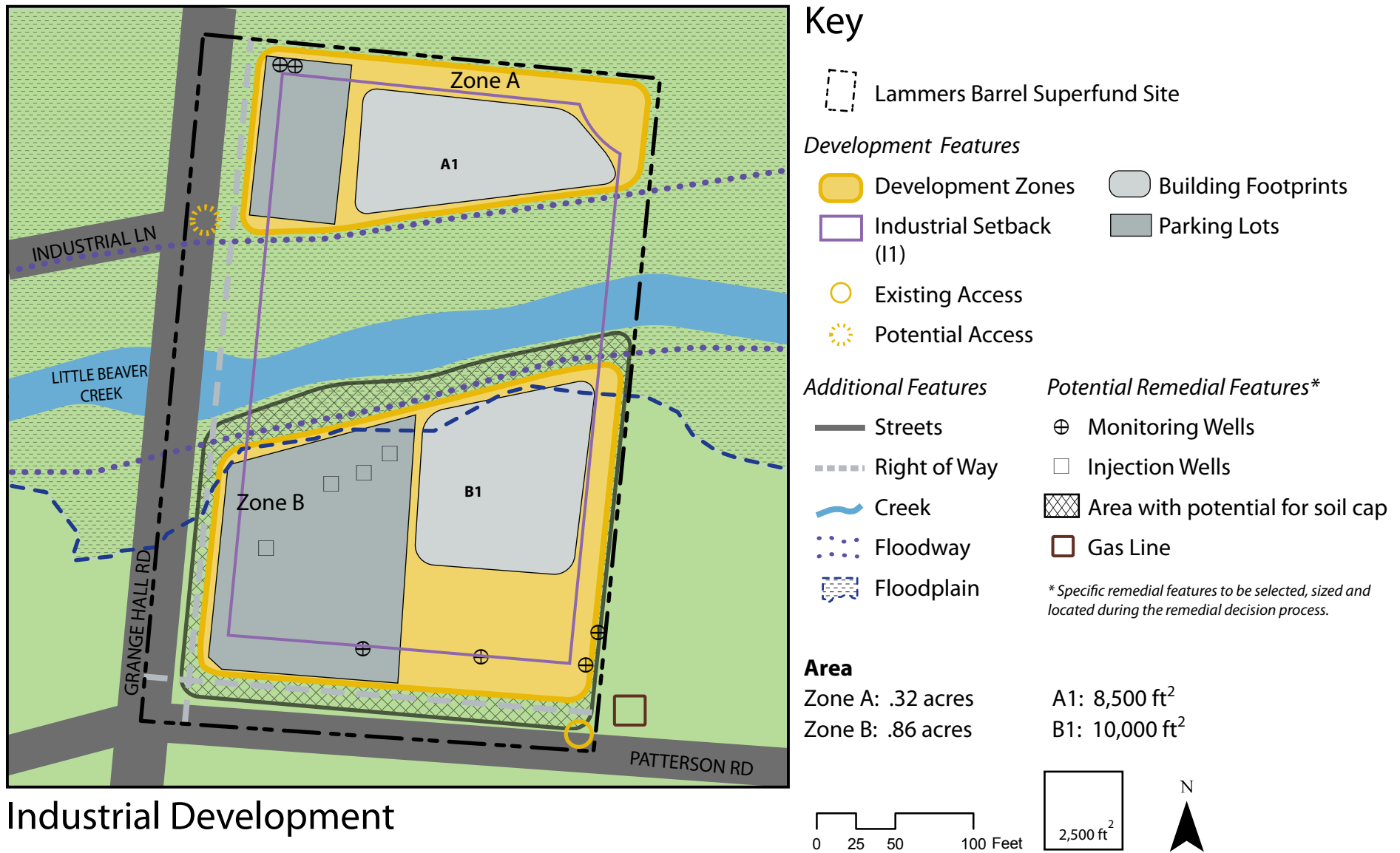


Chart 2: Acreage of Industrial Properties in Beavercreek



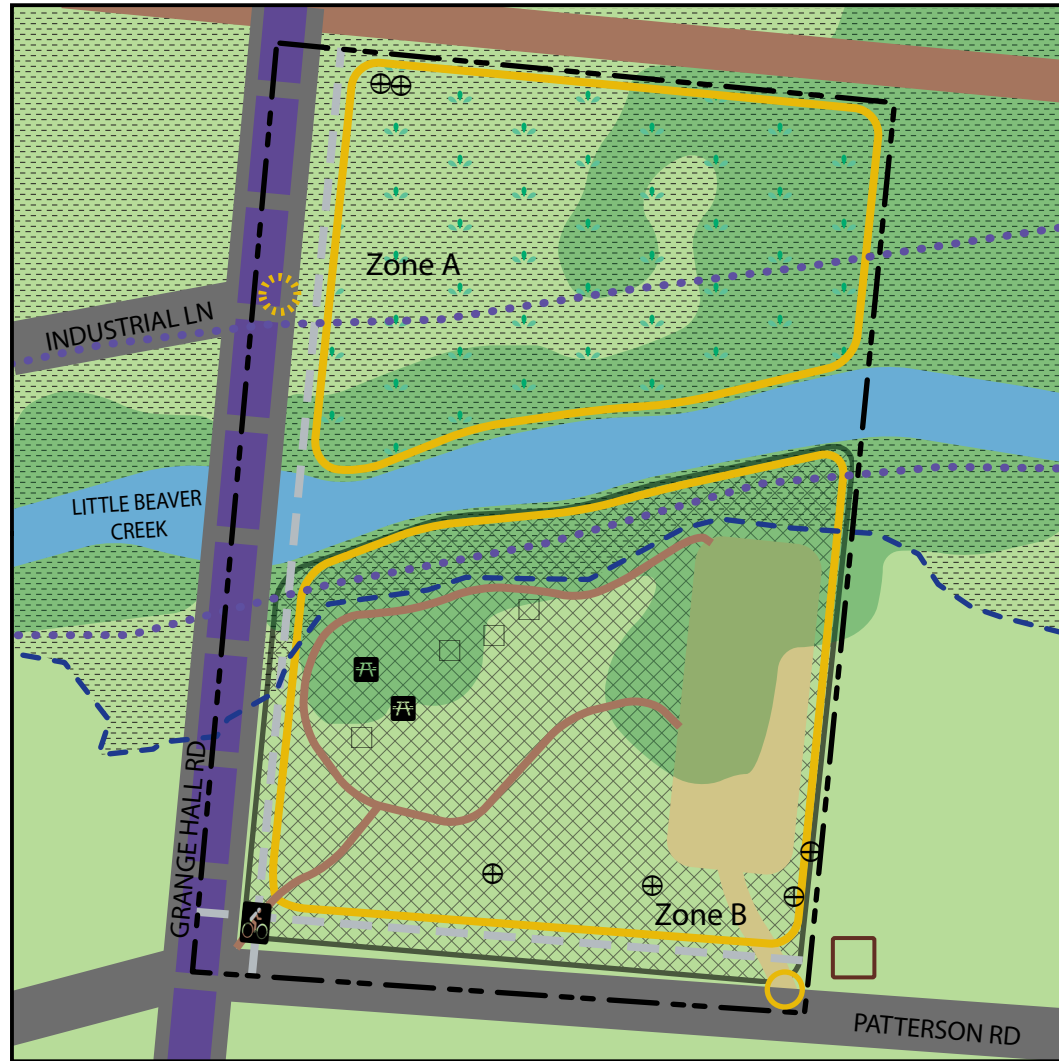
Industrial Development

Figure 11: Industrial Development

Recreation

The Recreation Scenario, Figure 12, illustrates a potential recreational configuration for the property with natural habitat occupying the floodplain area in Zone A and active uses occupying Zone B. Uses shown in this scenario include a footpath that connects to the Grange Hall/National Corridor (GH/NC) bikeway, picnic tables, and a 30-space parking lot. Alternative possibilities could include a fenced dog park area, jungle gym equipment, or expanding active uses into Zone A. Remedial design considerations for this scenario include considering fencing to restrict access to remedial components such as wells and consolidating the soil cap underneath a parking area.

Creation of a pocket park at the Lammers Barrel property could serve a range of users including GH/NC bikeway users, area employers and Woodlawn neighborhood residents. Land uses within a quarter mile of the property include 30 residential properties, 37 commercial and industrial properties and a potential research park. These potential users are all located within walking distance of the park; providing parking could expand the park's service range even further. Additionally, there may be potential for connecting the property to a rails to trails project via the abandoned rail line just north of the Site.



Key

Lammers Barrel Superfund Site

Pocket Park Features

- Natural Habitat
- Park Amenities
- Walking Trail
- Bike Trail Connection
- Parking Lot (30 spaces)
- Existing Access
- Potential Access

Additional Features

- Streets
- Right of Way
- Planned Bikeway
- Floodway
- Floodplain
- Tree Canopy
- Potential Rails to Trails

Potential Remedial Features*

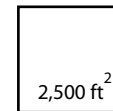
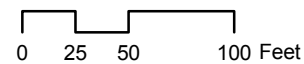
- Monitoring Wells
- Injection Wells
- Area with potential for soil cap
- Gas Line

** Specific remedial features to be selected, sized and located during the remedial decision process.*

Area

Zone A: .7 acres

Zone B: 1 acre



Pocket Park

Figure 12: Pocket Park

VI. FINAL CONSIDERATIONS AND NEXT STEPS

The reuse assessment process identified commercial, industrial or recreation reuse as the reasonably anticipated future land uses for the Site. This information can help inform EPA and the parties responsible for contamination in the evaluation and selection of the Site's remedy. It is also important to recognize that EPA's analysis of site data is ongoing and that additional information about the effectiveness of various remedial alternatives could impact the types of land uses allowed at the Site in the future.

Remedial Considerations

Given the variance between the cleanup timelines for on-site and off-site operable units, the following remedial considerations may be valuable:

- Fencing may be required to restrict access to remedial components if reuse occurs before the groundwater cleanup is complete.
- Long-term remedial components should be located towards the edge of the Lammers Barrel property, when possible, to create minimal constraints on reuse.
- If selected as a remedial component, the soil cap could be located underneath a parking area to minimize its impact on reuse.

Future Use Considerations

The scenarios developed for this reuse assessment demonstrate that a range of future uses are possible for the Site. Additional future use considerations include:

- Reuse will need to be compatible with long-term remedial components and associated fencing.
- There is no existing access to the northern portion of the Site; future uses may require construction of an access drive.
- The location and Site are suitable for a pocket park, and local stakeholders

have expressed interest in recreational use.

- Buildable land is limited by the setbacks and parking requirements; however, analysis revealed two potential footprints for both commercial and industrial buildings.
- Buildings in the floodplain will require additional floor elevation.
- A residential PUD including the Site would need to consider using this parcel for parking or open space due to a likely environmental covenant restricting residential use.
- The Site may have limited economic viability due to Superfund liability concerns and potential outcomes of a multi-party negotiation that could diminish any economic gain.
- The site owner could seek a reduction in property taxes from the county due to the remediation status of the property.
- The site owner could also qualify for a significant tax reduction for donation of the site as a charitable contribution.

Recommended Next Steps

The site owner could immediately seek a property tax reduction from the county. Additionally, the site owner could begin exploring the viability of marketing the site for commercial or industrial use and could also seek to determine tax reduction possibilities related to a charitable donation of the site. The Site owner may wish to see additional clarification from EPA on the process for obtaining potential liability protections for a prospective purchaser.

A Proposed Plan for the on-site operable unit is expected in Fall 2010. Participants in the reuse assessment process may want to reconvene in January 2011 to revisit future use options and identify considerations for supporting future use through the remedial design process.

For more information:

E² Inc.
921 2nd Street SE
Charlottesville, VA 22902

www.e2inc.com
434-975-6700

