

WORCESTER CONSERVATION COMMISSION

# Fitzgerald Brook

Conservation Property Baseline Assessment

July 2024



# Table of Contents

<b>Table of Contents</b>	<b>1</b>
<b>Section One: Introduction</b>	<b>2</b>
<i>Property Information</i>	2
<i>Property Background</i>	2
<i>Statement of Purpose</i>	3
<i>Equipment Used for Data Collection</i>	3
<i>Acknowledgements</i>	3
<b>Section Two: Findings</b>	<b>4</b>
Forest Structure and Health	4
<i>Field Observations</i>	4
<i>Potential Impacts of Climate Change</i>	5
<i>Key Results</i>	6
UTC Results	7
<i>Canopy Cover</i>	7
<i>Canopy Health</i>	7
<i>Benefits</i>	8
<b>Section Three: Management Recommendations</b>	<b>9</b>
<i>Recommendations in Priority Order</i>	9
<b>Appendix A: Maps</b>	<b>10</b>
<b>Appendix B: Photographs</b>	<b>15</b>
 <b>TABLES</b>	
Table 1: Expected response of common Fitzgerald Brook species to climate change	5
Table 2: Canopy cover at Fitzgerald Brook	7
Table 3: Canopy health at Fitzgerald Brook	7
Table 4: Canopy benefits at Fitzgerald Brook	8
Table 5: Summary of field observations by photo and/or polygon ID	15
 <b>MAPS</b>	
Map 1: Site location map	10
Map 2: Existing resources summary map	11
Map 3: Existing trails summary map	12
Map 4: Existing tree health rank summary map	13
Map 5: Representative photo locations summary map	14

# Section One: Introduction

## Property Information

**Property Name:** Fitzgerald Brook

**Address:** 100 Nonquit St, Worcester, MA 01604

**MBL:** 17-022-00013, 41-017-00001, 41-017-00240, 41-026-00007

**Date of Visits:** 5/5/2024 & 5/7/2024

**Visits conducted by:** Elise LeBlanc, Inventory Arborist Senior; Lori Carlos, Inventory Arborist Technician; Patti Burns, Wetland Scientist

## Property Background and Setting

The approximately 31-acre Fitzgerald Brook property is a conservation parcel owned by the City of Worcester Conservation Commission. Property records list the parcel as 00 Nonquit Street. For this study the southern portion was accessed from a utility easement at the Alvarado Avenue cul-de-sac and the northern portion was accessed from the dead end of Anna Street. The property's dominant features are the intermittent streams, one that enters from the west through pipes under a railroad berm and then flows along the southern boundary of the parcel and another smaller stream that originates from wetlands near the northern portion of the parcel and drains to the larger stream. Regional maps do not label either as the Fitzgerald Brook. The site is generally flat at 440 feet above mean sea level (AMSL), but site-wide there is evidence of historic land disturbance that has left behind berms and pits. A steep-sided railroad berm along the western portion reaches to 490 feet AMSL.

Aging pipes at the base of the railroad berm convey intermittent stream water from the abutting west side of the railroad berm to the Fitzgerald Brook tract. USGS maps show that this intermittent stream originates much further to the west at Crow Hill Conservation Area and then flows through neighborhoods and ponds on an undeveloped parcel that is uphill from the base of the railroad berm. The stream is channeled from the ponded area through the pipe at the base of the railroad berm to the Fitzgerald Brook property. The Fitzgerald Brook property features another, smaller intermittent stream that originates from wetlands between property and abutting properties near Anna Street, then flows south through the Fitzgerald Brook tract and merges with the larger intermittent stream, previously mentioned. The combined streams then flow from the property through neighborhoods and discharge to Quinsigamond Lake about 1,800 feet east of the property.

At the southern portion of the property, best accessed from Alvarado Avenue, there is a periodically mowed utility easement with elevated manholes. To the south of the easement there is a large wetland that transitions from forested deciduous to a shrub/scrub, an emergent and back to a forested deciduous wetlands. The intermittent stream flows through it along the property boundary that abuts residential developments. On the north side of the utility easement there are two scoured areas that suggest historical and possibly on-going land disturbances and a relatively undisturbed wood lot that features an intermittent stream and a pond that may contain vernal habitat.

The parcel has utilitarian purposes including drainage areas, the utility easement and railroad easements. Invasive plants have taken a foothold throughout the property, especially along boundaries with abutting residential properties. However, the diversity of edge habitat including upland forest, a variety of wetlands, pond, and drainage channels, in an otherwise highly developed neighborhood, provides wildlife habitat for mammals, birds, insects, amphibians and reptiles. There are no known mapped trails and no signage suggesting recreational use.

### Statement of Purpose

The purpose of this baseline report is to provide useful information for park planning and management; identify areas of conservation value, areas impacted by non-native plants, encroachments from abutting properties, public accessibility, and regulated areas such as wetlands, perennial rivers, certified vernal pools, and rare habitat. The observations and management recommendations provided in this report will aid the Worcester Conservation Commission in maintaining and improving their conservation properties, tracking changes in the properties over time, and securing funding to support necessary park management activities.

### Equipment Used for Data Collection

- Apple Iphone 11 MHCA3LL/A phone (photos)
- Panasonic FZ-G1 Toughpad (polygons and notes)
- Notepad (notes)
- Google Pixel 8 phone (photos)

### Acknowledgements

This project was funded in part by the USDA Forest Service through the Massachusetts Department of Conservation and Recreation Urban and Community Forestry Program. All elements of the project were completed by Davey Resource Group, Inc. with support from the Worcester Conservation Commission. Both institutions are equal opportunity employers.



# Section Two: Findings

## Forest Structure & Health

### Field Observations

The Fitzgerald Brook property is surrounded by development (primarily residential) and is partially accessible from Alvarado Avenue. Along the utility easement leading from the Alvarado Avenue cul-de-sac there are raised manholes with cement posts labeled SM located at about 30-foot intervals. Between DRG's first and second site inspection, the easement path was mowed and the cement markers had been spray-painted orange.

Along the utility easement there is a non-wetlands forest on the north side and a wetlands forest that transitions to an open canopy wetlands on the south side. The non-wetlands forest canopy is dominated by red oak, white ash (*Fraxinus americana*), and red maple with a midstory of white ash, hickory, and Norway maple (*Acer platanoides*). The shrub understory layer includes native species such as spicebush (*Lindera benzoin*) mixed with invasive burning bush (*Euonymus alatus*). Grape vines (*Vitis* spp.) were observed near the easement. The thick ground cover consisted of cinnamon fern (*Osmunda cinnamomea*), sensitive fern (*Onoclea sensibilis*), royal fern (*Osmunda regalis*), wild geranium (*Geranium maculatum*), and meadow rue (*Thalictrum* spp.). The forested wetlands on the south side extends for the first 300 feet from Alvarado Avenue. The Massmapper describes this area as a deciduous wooded swamp based. There are some dead standing trees near the entrance to the utility easement and along the easement as it traverses the property, accounting for the areas of poor/dead canopy from the urban tree canopy (UTC) assessment. Possible causes may be saturated soils, damaging insect outbreaks, or a combination of these and other factors.

Near the western property boundary, an intermittent stream crosses under the railroad berm and crosses the trail before flowing into the streambed at the southern property boundary. At this point the trail is no longer suitable for hiking at least during the wet seasons. The trail continues and the vegetation transitions again to forest cover, dominated by red maples in the overstory and black cherry (*Prunus serotina*) and American elm (*Ulmus americana*) in the midstory. A cluster of sassafras was observed. Near the abutting Dallas Street properties the vegetation transitions to a shallow marsh surrounded by deciduous shrubs, such as staghorn sumac (*Rhus typhina*), poplar (*Populus* spp.), willow (*Salix* spp.) and red maple saplings. The dominant shallow marsh plants consisted of meadowsweet (*Spiraea alba*), skunk cabbage (*Symplocarpus foetidus*), spotted water hemlock (*Cicuta maculata*), blue eyed grass (*Sisyrinchium* spp.), and common cinquefoil (*Potentilla simplex*). A few dead or dying trees were observed, possibly a consequence of saturated soils.

DRG observed multiple areas of encroachment behind homes on Dallas Street along with the presence of invasive species, which could contribute to the poor canopy health ratings. There is a gravel path, a cinder block structure, and a fire pit behind 24 Dallas Street as well as a large patch of Japanese knotweed that may be encroachments onto the Fitzgerald Brook property.

The utility easement appears to end near the marsh boundary, but a small path continues southward. As the path continues south of Touraine Street the open-canopy marshy area transitions to a closed-canopy forest canopy dominated by red maple and northern red oak with sumac and gray birch (*Betulus populifolia*) in the midstory. Some of the larger red oaks are in poor condition, possibly due to saturated soils, drought, spongy moth (*Lymantria dispar*), or a combination of these and other factors. As the trail continues toward the southern end of the property there is a

large open area filled with invasive plants including Japanese knotweed and garlic mustard, and escaped ornamental plants such as daylily (*Hemerocallis* spp.).

Near the railroad berm, an unmapped trail heads north along the railroad berm and continues to the northeast to a forest dominated by mature northern red oaks. The midstory includes black cherry, gray birch, and poplars, with American chestnut and oaks regenerating on the forest floor. In canopy gaps, young birch and oaks have emerged in dense clusters, with an understory of lowbush blueberry (*Vaccinium angustifolium*), winged sumac (*Rhus copallinum*), sweet fern (*Comptonia peregrina*), and yellow whorled loosestrife (*Lysimachia quadrifolia*).

Several small clusters of invasive and dead plants were observed along the steep-sided railroad berm, suggesting that herbicides may be used to manage vegetation close to the railroad tracks. The berm substrate contains coal- and fly-ash that contribute to an inhospitable plant environment. Further to the northeast there is a bowl-like depression that holds water and may be a vernal pool. It is not clear if the depression is a natural feature or if soil was historically removed from this area. This unmapped trail loops around depression and back to the utility easement.

## Potential Impacts of Climate Change

Table 2 includes a summary of the USFS Climate Change Atlas information for tree species commonly found in Perkin's Farm.

**Table 1: Expected response of common Fitzgerald Brook species to climate change.**

Species		Model Reliability	Abundance	Habitat Area Change		Capability to Cope with Climate Change	
Common	Scientific			RCP 4.5	RCP 8.5	RCP 4.5	RCP 8.5
Norway maple	Acer platanoides	Due to nonnative status, Norway maple suitability under climate change is not adequately modeled by the USFS Climate Change Atlas.					
Red maple	Acer rubrum	High	Abundant	Small decrease	Small decrease	Good	Good
Gray birch	Betula populifolia	Low	Common	No change	Small increase	Fair	Good
Pignut hickory	Carya glabra	Medium	Common	No change	Small increase	Fair	Good
Shagbark hickory	Carya ovata	Medium	Rare	Small decrease	No change	Very Poor	Poor
White ash	Fraxinus americana	Medium	Common	Small increase	No change	Fair	Poor
Bigtooth aspen	Populus grandidentata	Medium	Common	Small decrease	Small decrease	Poor	Poor

Species		Model Reliability	Abundance	Habitat Area Change		Capability to Cope with Climate Change	
Common	Scientific			RCP 4.5	RCP 8.5	RCP 4.5	RCP 8.5
Quaking aspen	Populus tremuloides	High	Rare	Small decrease	Small decrease	Very Poor	Very Poor
Black cherry	Prunus serotina	Medium	Common	Large increase	Large increase	Good	Good
White oak	Quercus alba	Medium	Common	Small increase	Small increase	Very Good	Very Good
Red oak	Quercus rubra	Medium	Abundant	No change	Small decrease	Very Good	Good
Black oak	Quercus velutina	High	Abundant	Small increase	Small increase	Very Good	Very Good
Black willow	Salix nigra	Low	Rare	Small decrease	Small decrease	Very Poor	Very Poor
American elm	Ulmus americana	Medium	Common	Small decrease	No change	Poor	Fair

Within the more upland portion of Fitzgerald Brook, oaks are generally the most common dominant overstory species. Oaks in general are predicted to handle climate change well. However, oaks are vulnerable to frequent and prolonged flooding. As a conservation property that is situated at lower elevations than much of the highly developed surrounding land, Fitzgerald Brook provides a natural flood storage area in the event of extreme flooding and is likely to be wet for large periods of time which may harm overstory oaks and predispose them to pests, disease, and damage from other weather events. Many of the less common but still notable species present at Fitzgerald Brook are predicted to struggle under climate change, including many of the early successional species such as poplars and willow. Other species predicted to do poorly include hickories and American elm.

## Key Results

- The Fitzgerald Brook's dominant features are its small size, the surrounding residential properties, the variety of transitional (edge) habitats, the two intermittent streams, the railroad berm, and the subsurface utility easement.
- Fitzgerald Brook is a relatively small conservation tract without mapped trails, signage or boundary signage.
- From a conservation perspective, it plays a natural role in stormwater collection and it may help to minimize and even mitigate downstream flooding. A variety of transitional habitats provide ecosystem value to local wildlife.
- Given their active use, it is expected that there will be periodic inspection and maintenance of the subsurface utility line and manholes, the aging pipes/culvert below the railroad berm, and the railroad easement itself.

- Invasive plant incursions and encroachment are common issues throughout the property, particularly along the back of residential lots, notably along Dallas Street at the south and Anna street at the north.
- Along the railroad berm the combination of substrate (potentially fly- or coal-ash) and the likely use of herbicide for railroad easement management probably hamper both native and invasive plant growth.
- A potential vernal pool to the east of the railroad berm would need additional study for certification.
- There are several types of wetlands at Fitzgerald Brook, including deciduous forest and shrub-scrub wetlands, and open-canopy emergent wetlands (marshy meadows). Biodiversity is often highest in the transition areas between the different types of wetlands and the undeveloped uplands.
- The dominant tree species are northern red oak within the uplands and red maple within the wetlands.
- Regeneration by native species appears sufficient to maintain forested landscape at the property, particularly where canopy gaps have been created due to declining overstory trees.
- Although red oak and red maple are expected to tolerate climate change, other species on the property such as hickory and poplars are less resilient to the threats of climate changes.
- Future forest health monitoring should focus on identifying diseases or pests of oak, as this is a key component of most of the property's overstory.
- The Fitzgerald Brook is vulnerable to changes in hydrology from off-site factors such as an increase in runoff or discharge onto the property or reduced contributory flow if the water flow through the pipes under the railroad berm were interrupted or rechanneled.

## UTC Results

### Canopy Cover

Table 2. Canopy cover at Fitzgerald Brook.

	Number of Parcels	Total Property Acres	Acres of Canopy Cover	% Canopy Cover
Fitzgerald Brook	4	20.79	17.83	85.78

### Canopy Health

Table 3. Canopy Health at Fitzgerald Brook.

	Very Good		Good		Fair		Poor		Dead/Dying		Not Classified	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
Fitzgerald Brook	0.06	0.34	5.22	29.28	5.13	28.77	6.68	37.45	0.62	3.49	0.09	0.53

Overall, canopy health in Fitzgerald Brook is fair or better (~58%). However, a large portion of the property is rated in poor or worse health (~42%). Areas with poor or worse canopy health ratings were generally those within and around wetland areas where a combination of sparser tree canopy and poorer tree canopy condition, likely due to saturated soils, seem to have contributed to the lower canopy health ratings. Other possible causes of poor canopy health ratings throughout the property include emerald ash borer (*Agrilus planipennis*) damage to overstory ash trees and stress to canopy oaks potentially caused by fluctuating soils moisture levels, from very dry during period of drought to very wet after heavy rainfall, and defoliation from spongy moth.

## Benefits

**Table 4. Canopy Benefits at Fitzgerald Brook.**

Air Pollution Removal (Annual)		Avoided Stormwater Runoff (Annual)		Carbon Sequestration (Annual)		Carbon Storage (Lifetime)	
Pounds	\$	Gallons	\$	Tons	\$	Tons	\$
1,282.54	290.25	24,024.64	214.68	20.20	3,444.92	611.12	104,226.15

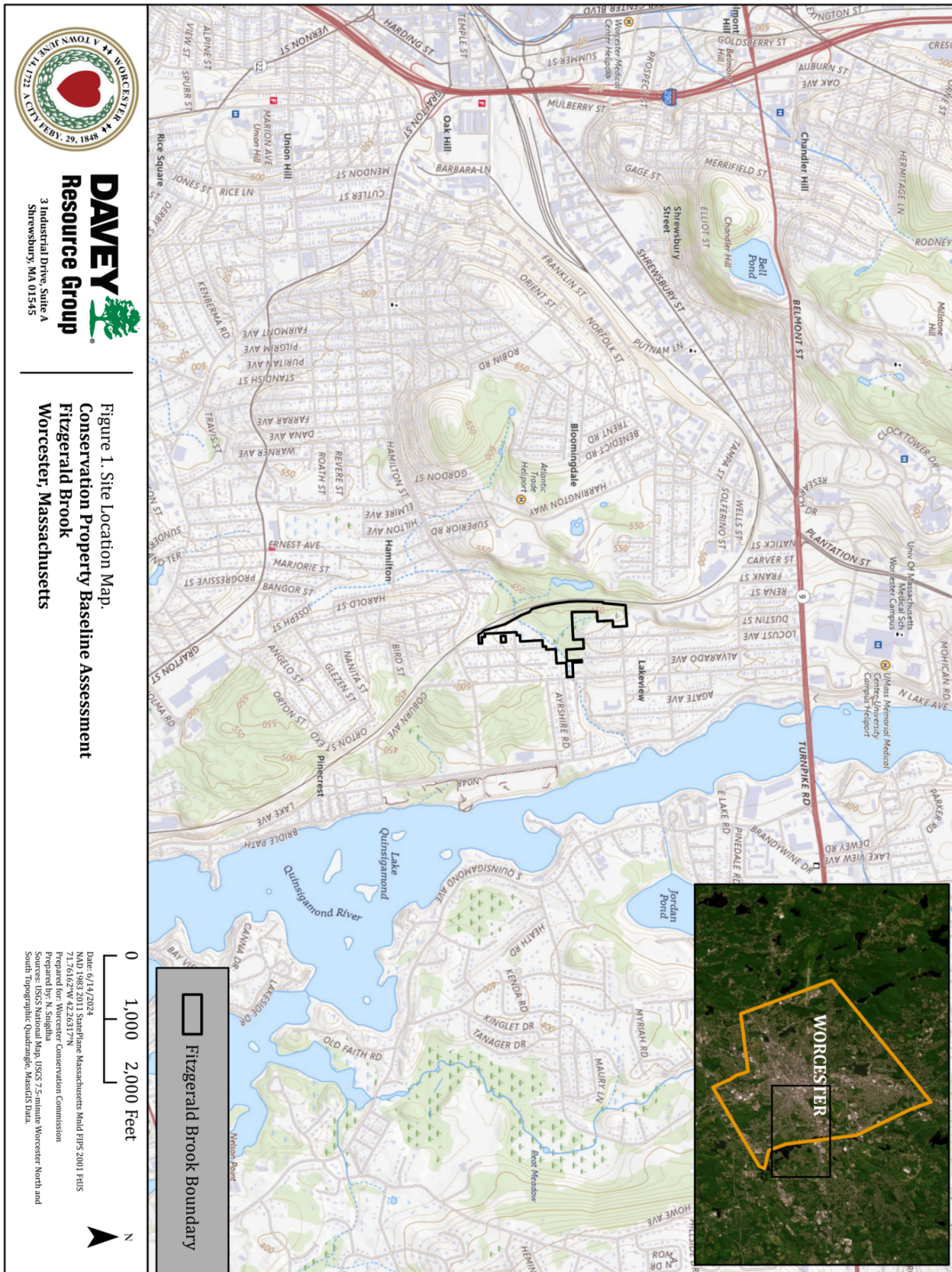
Please note that the trees at Fitzgerald Brook provide many additional benefits not calculated here. Only benefits for which there are well-supported algorithms were estimated for this project.

# Section Three: Management Recommendations

## Recommendations in Priority Order

1. Implement a management strategy for invasive species including Japanese knotweed, burning bush, tree-of-heaven, and multiflora rose.
  - a. Use a variety of management methods including herbicide treatment, manual and mechanical cutting/removal, and cultural practices (ex. Reseeding areas cleared of invasive species) to minimize the existing infested areas.
  - b. Small patches of invasives or individual plants may be fully eradicated from the property, while larger infested areas may need to be managed to prevent further spread of the invasive without full eradication.
  - c. Monitor treated areas long-term to look for regrowth of invasive species from root or seed.
  - d. Spread awareness among abutting homeowners of how yard waste can introduce invasive plant material to the conservation property.
  - e. Work with utility owner to reduce impact of any utility projects and reduce possibility of introduction of invasive species during utility work.
2. Work with the utility owner to determine what type of utility runs through the property and ensure that no contamination of the property is occurring due to faults in the utility.
  - a. Determine what type of utilities run through the property and who owns/maintains them.
  - b. Develop a good working relationship with the utility owner.
  - c. Remain informed of repairs or projects happening within the easement and provide guidance on how the utility can best avoid damage to the surrounding conservation property while servicing the utility.
3. Pursue options to mitigate current encroachment and prevent further encroachment around boundaries with 80, 88, 90, 94, and 111 Locust Street, 56 Nonquit Street, 24 Dallas Street, and Touraine Street.
  - a. Cease and desist and other legal measures to stop imminent and ongoing encroachment.
  - b. Consider more collaborative and outreach-based efforts to develop better relationships with abutters and educate about the harm that encroachment can cause to conservation property.
  - c. Post clear boundary signage along property boundaries to mark where the conservation property begins. Observations at the time of the property assessment did not reveal any clear boundary markers.
  - d. Post signage which specifically prohibits dumping at key locations where dumping appears to be an issue.
4. Monitor forest stands on a regular basis, ideally annually.
  - a. Consider whether regeneration is occurring to replace canopy trees as they fall.
  - b. Look for new or worsening invasive infestations.
  - c. Look for signs and symptoms of tree pests or diseases.
5. Consider evaluating aquatic habitat behind in the northwestern portion of the property to confirm if it meets the criteria to be classified as a certified vernal pool.
  - a. Conduct necessary field work and assessments to prove whether or not it qualifies for certification. These initial evaluations can be conducted by citizen scientists.

# APPENDIX A: MAPS

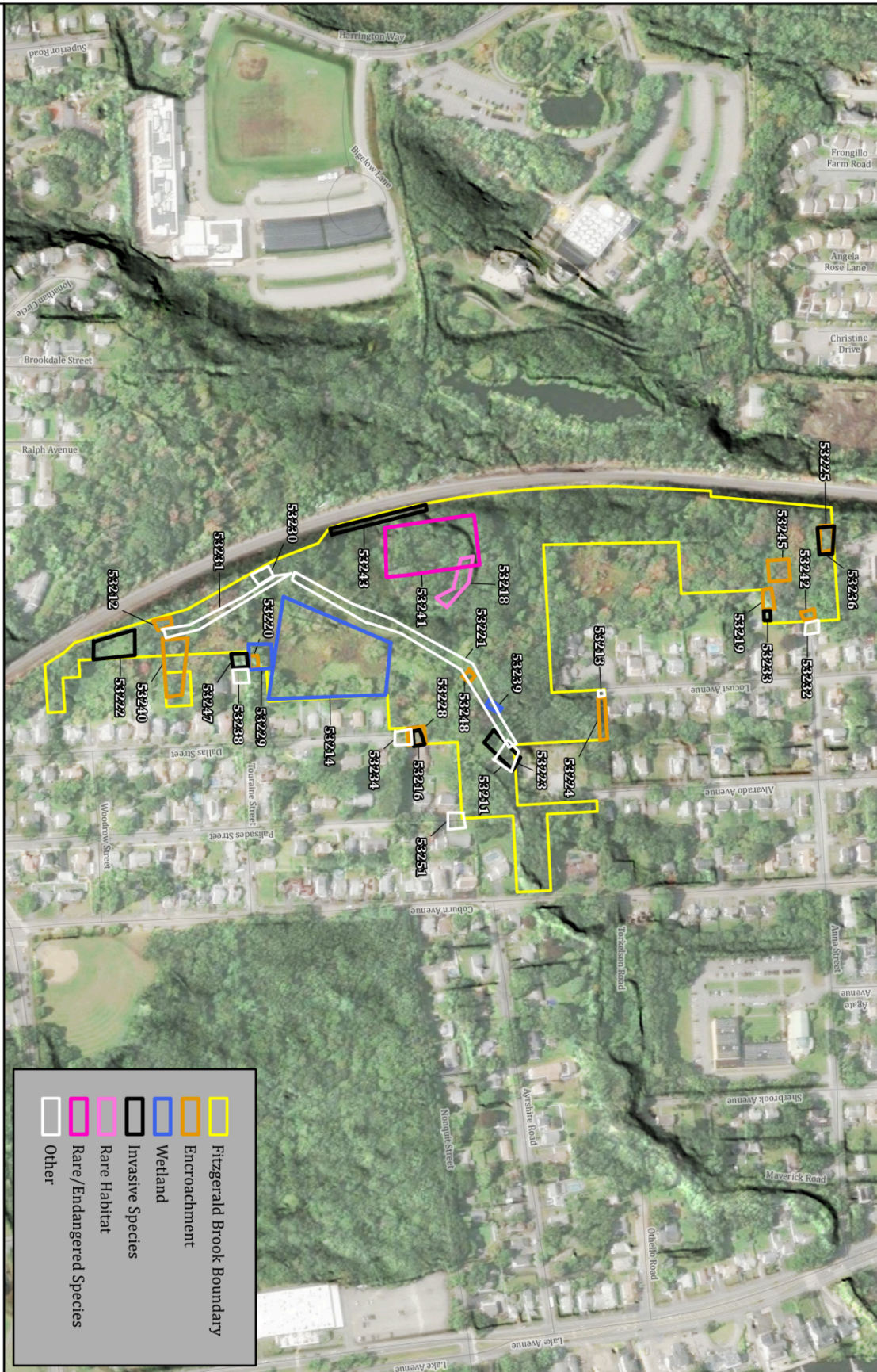


**Map 1:** Site location map.



**DAVEY**  
Resource Group  
3 Industrial Drive, Suite A  
Shrewsbury, MA 01545

Figure 2. Existing Resources Summary Map.  
Conservation Property Baseline Assessment  
Fitzgerald Brook  
Worcester, Massachusetts

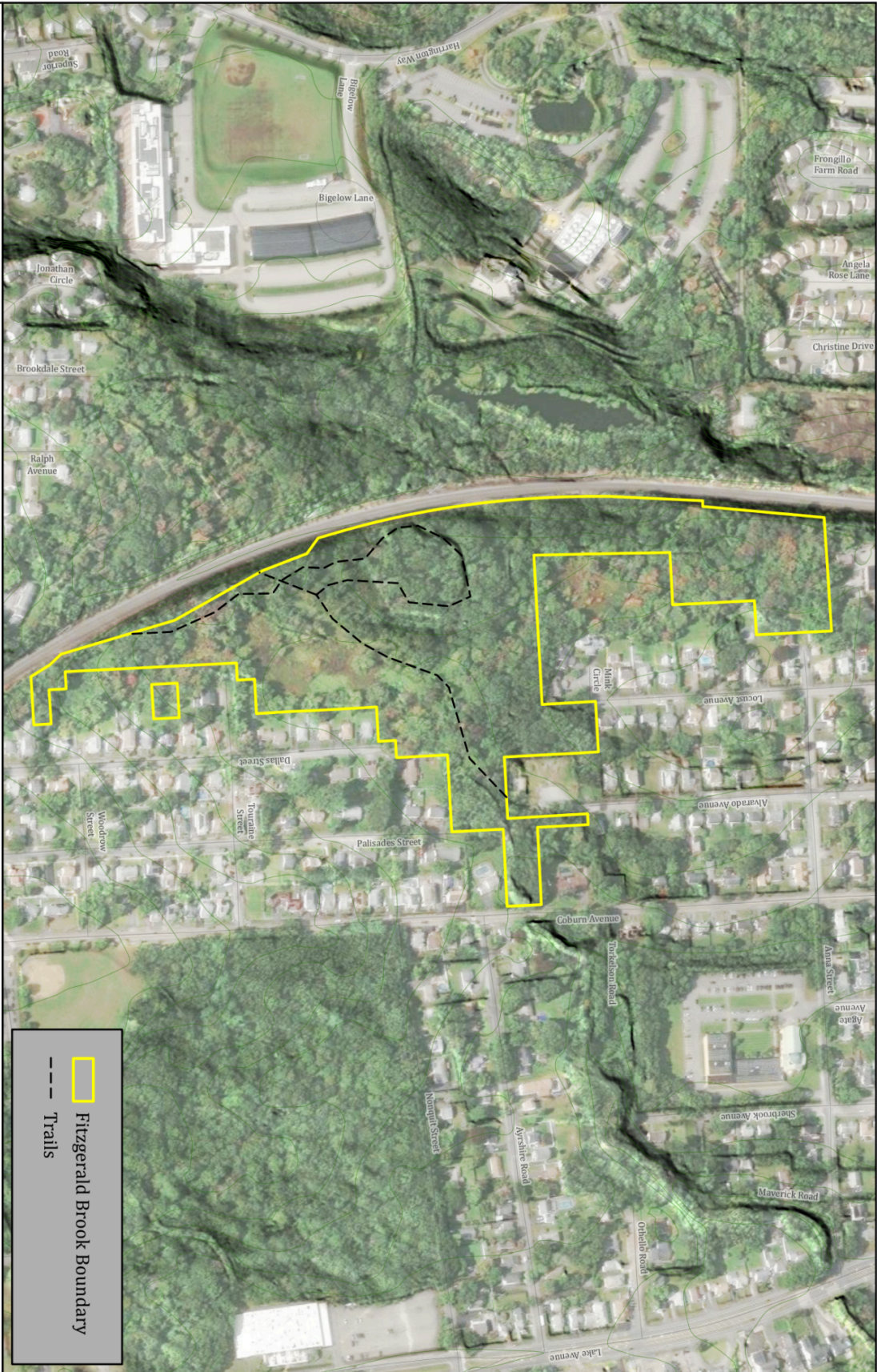


**Map 2:** Existing resources summary map.



**DAVEY**  
Resource Group  
3 Industrial Drive, Suite A  
Shrewsbury, MA 01545

Figure 3. Existing Trails Summary Map.  
Conservation Property Baseline Assessment  
Fitzgerald Brook  
Worcester, Massachusetts

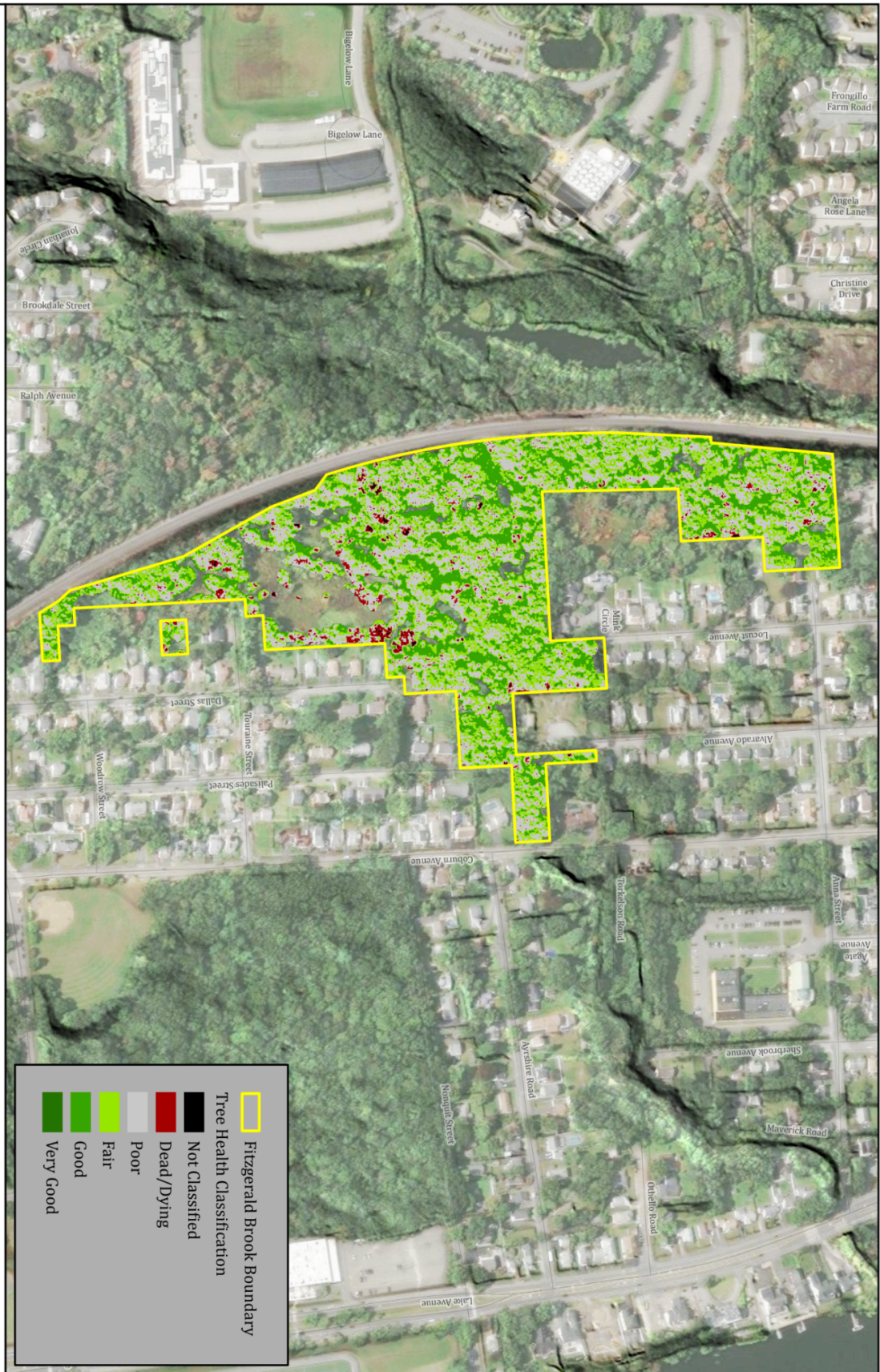


**Map 3:** Existing trails summary map.



**DAVEY**  
Resource Group  
3 Industrial Drive, Suite A  
Shrewsbury, MA 01545

Figure 4. Existing Tree Health Rank Summary Map.  
Conservation Property Baseline Assessment  
Fitzgerald Brook  
Worcester, Massachusetts



Date: 6/14/2024  
Map: 1983.2011 Statewide Massachusetts Map EPS 2001 FRTS  
71.76106°W 42.26319°N  
Prepared for: Worcester Conservation Commission  
Prepared by: N. Singh  
Sources: ESRI World Imagery, MassGIS Data, DRC Raster Analysis, DRC  
Site Visit 6/7/2024.

Map 4: Existing tree health rank summary map.

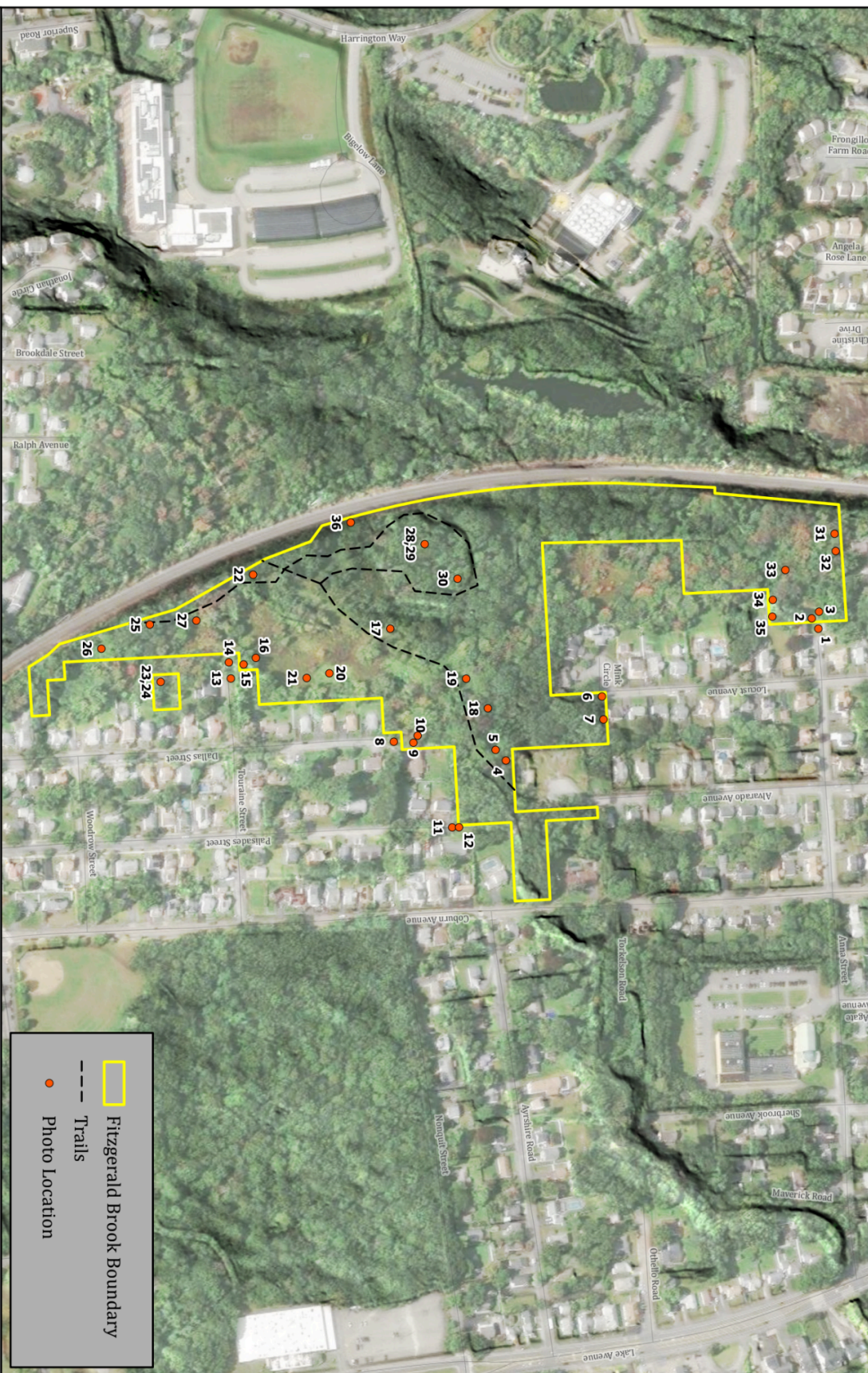


0 300 600 Feet

↑

N

Date: 7/31/2024  
NAD 1983 2011 StatePlane Massachusetts Mifl FIPS 2001 FUS  
71.76162W 42.26317N  
Prepared for: Worcester Conservation Commission  
Prepared by: N. Snigdhya  
Source: ESRI World Imagery, MassGIS Data, DRC Site Visits 6/7/2024.



Davey Resource Group, Inc.  
Fitzgerald Brook Baseline Assessment  
Page 14

# APPENDIX B: FINDINGS BY PHOTO & POLYGON

**Table 5. Summary of Field observations by photo and/or polygon ID.**

Photo ID	Polygon ID	Type	Comments
1	53232	Other	Anna Street meets the Fitzgerald Brook property at a dead end by 88 and 90 Locust Street. There is no signage indicating a conservation property boundary and no access to the property.
2, 3	53242	Encroachment	(Photo 2) Garden and yard waste dumping on conservation property behind 88 and 90 Locust Street. (Photo 3) Additional view of garden on conservation property behind 88 and 90 Locust Street.
4	53211	Other	A utility easement extends through the Fitzgerald Brook property from the Alvarado Avenue cul-de-sac to a railroad berm at the western property boundary. The easement is covered with low growth vegetation, with a series of raised manholes
5	53223	Invasive Species	Invasive plants growing along the utility easement, including Japanese knotweed ( <i>Reynoutria japonica</i> ), tree-of-heaven ( <i>Ailanthus altissima</i> ), multiflora rose ( <i>Rosa multiflora</i> ), and burning bush ( <i>Euonymus alatus</i> ).
6	53213	Other	Locust Street dead ends Fitzgerald Brook parcel. There is no signage to indicate a conservation property boundary and no access to the property.
7	53224	Encroachment	Possible encroachment along the southern boundary of 111 Locust Street where the abutting yard extends onto conservation property. There is a shed potentially within the boundary of the Fitzgerald Brook property.
8	53234	Other	Dallas Street dead ends at the Fitzgerald Brook parcel. There is no signage to indicate a conservation property boundary and no property access.
9	53216	Invasive Species	A patch of Japanese knotweed at the end of Dallas Street.
10	53228	Encroachment	A portion of conservation property adjacent to 56 Nonquit Street's driveway off the end of Dallas Street has been mowed and landscaped.
11, 12	53251	Other	(Photo 11) Palisade Street dead ends at the Fitzgerald Brook parcel. There is no signage to indicate a conservation property boundary and no clear access to the property. (Photo 12) Possibly a narrow drainage path from the end of Palisade Street.

Photo ID	Polygon ID	Type	Comments
13	53238	Other	Touraine Street dead ends at the Fitzgerald Brook property. There is no signage to indicate a conservation property boundary and no clear access to the property.
14	53247	Invasive Species	Yard waste dumping and Japanese knotweed at the end of Touraine Street.
15	53220	Encroachment	Tires and plastic waste dumped in a wetland area near Touraine Street.
16	53229	Wetland	Wetland area near the end of Touraine Street.
17	53221	Other	Recently raised manhole and cement posts labeled SM on a subsurface utility easement and wide, overgrown path extending from Alvarado Avenue to the railroad berm on the western boundary.
18	53239	Waterway	A small stream crosses the faint path along the underground utility line that leads from Alvarado Avenue..
19	53248	Encroachment	Faint tire tracks may indicate occasional use by ATVs along the underground utility line.
20, 21	53214	Wetland	(Photos 20 & 21) Open meadow area which appears to be periodically wet. Wetland species such as shrub willows ( <i>Salix</i> spp.), rushes ( <i>Juncus</i> spp.), and skunk cabbage ( <i>Symplocarpus foetidus</i> ) are present.
22	53230	Other	A cement culvert goes under the railroad.
23, 24	53240	Encroachment	(Photo 23) Gravel path on conservation property behind 24 Dallas Street. (Photo 24) Stacked cinder blocks on conservation property behind 24 Dallas Street.
25	53212	Encroachment	Cinder block fire pit along rough path behind Dallas Street.
26	53222	Invasive Species	A large area of open canopy behind Dallas Street is filled with Japanese knotweed.
27	53231	Other	The path that started at the end of Alvarado Avenue along a utility easement continues behind Dallas Street homes. It is smaller but more frequently traveled here.
28, 29	53241	Rare/Endangered Species	(Photos 28 & 29) An area of more open forest with many small American chestnut ( <i>Castanea dentata</i> ) saplings.
30	53218	Rare Habitat	Periodically wet area that could potentially be a vernal pool.

Photo ID	Polygon ID	Type	Comments
31	53225	Encroachment	Yard waste dumping and Japanese knotweed behind the apartment complex at 80 Locust Street.
32	53236	Invasive Species	Japanese knotweed behind the apartment complex at 80 Locust Street.
33	53245	Encroachment	Tires and a car engine dumped behind 88-94 Locust Street.
34	53219	Encroachment	Dumping of yard waste, scrap metal, wood, and plastic along the boundary with 94 Locust Street.
35	53233	Invasive Species	Japanese knotweed along the boundary with 94 Locust Avenue. A shed may be partially on conservation property.
36	53243	Invasive Species	A variety of invasive species are present in the open area along the railroad. Their scope appears limited, possibly due to ROW maintenance and herbicide spraying along the railroad property.



**Photo 1**

**Polygon ID:** 53232

**Type:** Other

**Comments:** Anna Street meets the Fitzgerald Brook property at a dead end by 88 and 90 Locust Street. There is no signage indicating a conservation property boundary and no access to the property.



**Photo 2**

**Polygon ID:** 53242

**Type:** Encroachment

**Comments:** Garden and yard waste dumping on conservation property behind 88 and 90 Locust Street.



**Photo 3**

**Polygon ID:** 53242

**Type:** Encroachment

**Comments:** Additional view of garden on conservation property behind 88 and 90 Locust Street.



**Photo 4**

**Polygon ID:** 53211

**Type:** Other

**Comments:** A utility easement extends through the Fitzgerald Brook property from the Alvarado Avenue cul-de-sac to a railroad berm at the western property boundary. The easement is covered with low growth vegetation, with a series of raised manholes



**Photo 5**

**Polygon ID:** 53223

**Type:** Invasive Species

**Comments:** Invasive plants growing along the utility easement, including Japanese knotweed (*Reynoutria japonica*), tree-of-heaven (*Ailanthus altissima*), multiflora rose (*Rosa multiflora*), and burning bush (*Euonymus alatus*).



**Photo 6**

**Polygon ID:** 53213

**Type:** Other

**Comments:** Locust Street dead ends Fitzgerald Brook parcel. There is no signage to indicate a conservation property boundary and no access to the property.



**Photo 7**

**Polygon ID:** 53224

**Type:** Encroachment

**Comments:** Possible encroachment along the southern boundary of 111 Locust Street where the abutting yard extends onto conservation property. There is a shed potentially within the boundary of the Fitzgerald Brook property.



**Photo 8**

**Polygon ID:** 53234

**Type:** Other

**Comments:** Dallas Street dead ends at the Fitzgerald Brook parcel. There is no signage to indicate a conservation property boundary and no property access.



**Photo 9**

**Polygon ID:** 53216

**Type:** Invasive Species

**Comments:** A patch of Japanese knotweed at the end of Dallas Street.



**Photo 10**

**Polygon ID:** 53228

**Type:** Encroachment

**Comments:** A portion of conservation property adjacent to 56 Nonquit Street's driveway off the end of Dallas Street has been mowed and landscaped.



**Photo 11**

**Polygon ID:** 53251

**Type:** Other

**Comments:** Palisade Street dead ends at the Fitzgerald Brook parcel. There is no signage to indicate a conservation property boundary and no clear access to the property.



**Photo 12**

**Polygon ID:** 53521

**Type:** Other

**Comments:** Possibly a narrow drainage path from the end of Palisade Street.



**Photo 13**

**Polygon ID:** 53238

**Type:** Other

**Comments:** Touraine Street dead ends at the Fitzgerald Brook property. There is no signage to indicate a conservation property boundary and no clear access to the property.



**Photo 14**

**Polygon ID:** 53247

**Type:** Invasive Species

**Comments:** Yard waste dumping and Japanese knotweed at the end of Touraine Street.



**Photo 15**

**Polygon ID:** 53220

**Type:** Encroachment

**Comments:** Tires and plastic waste dumped in a wetland area near Touraine Street.



**Photo 16**

**Polygon ID:** 53229

**Type:** Wetland

**Comments:** Wetland area near the end of Touraine Street.



**Photo 17**

**Polygon ID:** 53221

**Type:** Other

**Comments:** Recently raised manhole and cement posts labeled SM on a subsurface utility easement and wide, overgrown path extending from Alvarado Avenue to the railroad berm on the western boundary.



**Photo 18**

**Polygon ID:** 53239

**Type:** Waterway

**Comments:** A small stream crosses the faint path along the underground utility line that leads from Alvarado Avenue.



**Photo 19**

**Polygon ID:** 53248

**Type:** Encroachment

**Comments:** Faint tire tracks may indicate occasional use by ATVs along the underground utility line.



**Photo 20**

**Polygon ID:** 53214

**Type:** Wetland

**Comments:** Open meadow area which appears to be periodically wet. Wetland species such as shrub willows (*Salix* spp.), rushes (*Juncus* spp.), and skunk cabbage (*Symplocarpus foetidus*) are present.



**Photo 21**

**Polygon ID:** 53214

**Type:** Wetland

**Comments:** Open meadow area which appears to be periodically wet. Wetland species such as shrub willows (*Salix* spp.), rushes (*Juncus* spp.), and skunk cabbage (*Symplocarpus foetidus*) are present.



**Photo 22**

**Polygon ID:** 53230

**Type:** Other

**Comments:** A cement culvert goes under the railroad.



**Photo 23**

**Polygon ID:** 53240

**Type:** Encroachment

**Comments:** Gravel path on conservation property behind 24 Dallas Street.



**Photo 24**

**Polygon ID:** 53240

**Type:** Encroachment

**Comments:** Stacked cinder blocks on conservation property behind 24 Dallas Street.



**Photo 25**

**Polygon ID:** 53212

**Type:** Encroachment

**Comments:** Cinder block fire pit along rough path behind Dallas Street.

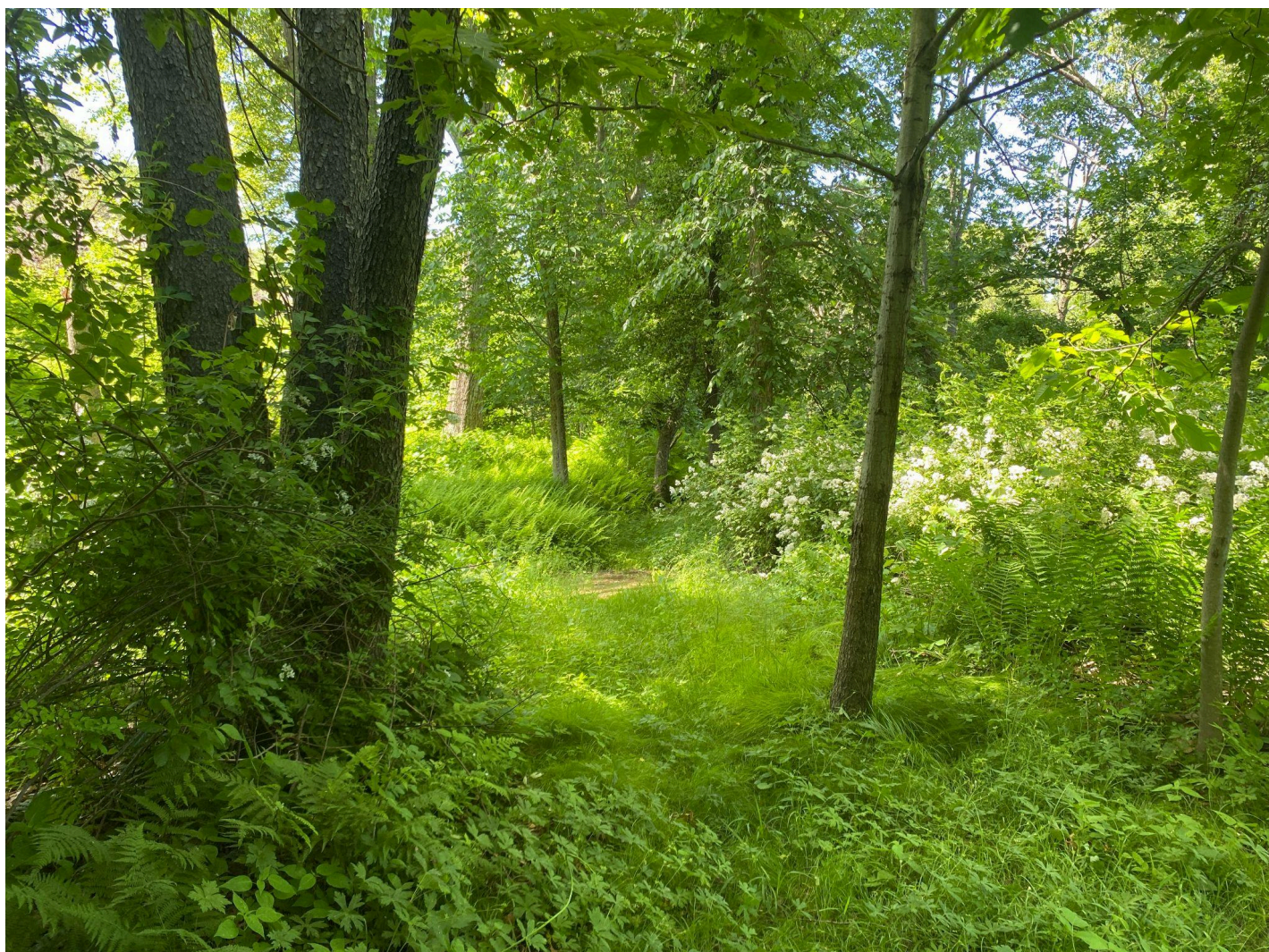


**Photo 26**

**Polygon ID:** 53222

**Type:** Invasive Species

**Comments:** A large area of open canopy behind Dallas Street is filled with Japanese knotweed.



**Photo 27**

**Polygon ID:** 53231

**Type:** Other

**Comments:** The path that started at the end of Alvarado Avenue along a utility easement continues behind Dallas Street homes. It is smaller but more frequently traveled here.



**Photo 28**

**Polygon ID:** 53241

**Type:** Rare/Endangered Species

**Comments:** An area of more open forest with many small American chestnut (*Castanea dentata*) saplings.



**Photo 29**

**Polygon ID:** 53241

**Type:** Rare/Endangered Species

**Comments:** An area of more open forest with many small American chestnut (*Castanea dentata*) saplings.



**Photo 30**

**Polygon ID:** 53218

**Type:** Rare Habitat

**Comments:** Periodically wet area that could potentially be a vernal pool.



**Photo 31**

**Polygon ID:** 53225

**Type:** Encroachment

**Comments:** Yard waste dumping and Japanese knotweed behind the apartment complex at 80 Locust Street.



**Photo 32**

**Polygon ID:** 53236

**Type:** Invasive Species

**Comments:** Japanese knotweed behind the apartment complex at 80 Locust Street.



**Photo 33**

**Polygon ID:** 53245

**Type:** Encroachment

**Comments:** Tires and a car engine dumped behind 88-94 Locust Street.



**Photo 34**

**Polygon ID:** 53219

**Type:** Encroachment

**Comments:** Dumping of yard waste, scrap metal, wood, and plastic along the boundary with 94 Locust Street.



**Photo 35**

**Polygon ID:** 53233

**Type:** Invasive Species

**Comments:** Japanese knotweed along the boundary with 94 Locust Avenue. A shed may be partially on conservation property.



**Photo 36**

**Polygon ID:** 53243

**Type:** Invasive Species

**Comments:** A variety of invasive species are present in the open area along the railroad. Their scope appears limited, possibly due to ROW maintenance and herbicide spraying along the railroad property.