

WORCESTER CONSERVATION COMMISSION

Crow Hill

Conservation Property Baseline Assessment

July 2024



Table of Contents

Table of Contents	1
Section One: Introduction	2
<i>Property Information</i>	2
<i>Property Background and Setting</i>	2
<i>Statement of Purpose</i>	3
<i>Equipment Used for Data Collection</i>	3
<i>Acknowledgements</i>	3
Section Two: Findings	4
Forest Structure and Health	4
<i>Field Observations</i>	4
<i>Potential Impacts of Climate Change</i>	5
<i>EEA LAND Report (2014) vs. Crow Hill Baseline Report (2024)</i>	5
<i>Key Results</i>	6
UTC Results	6
<i>Canopy Cover</i>	6
<i>Canopy Health</i>	6
<i>Benefits</i>	7
Section Three: Management Recommendations	8
<i>Recommendations in Priority Order</i>	8
References	10
Appendix A: Maps	11
Appendix B: Findings By Photo and Polygon	17
 TABLES	
Table 1: Expected response of common Crow Hill species to climate change	5
Table 2: Canopy cover at Crow Hill	6
Table 3: Canopy health at Crow Hill	6
Table 4: Canopy benefits at Crow Hill	7
Table 5: Summary of field observations by photo and/or polygon ID	17
 MAPS	
Map 1: Site location map	11
Map 2: Existing resources summary map	12
Map 3: Existing trails summary map	13
Map 4: Existing tree health rank summary map	14
Map 5: Representative photo locations summary map	15
Map 6: GWLT trail map	16

Section One: Introduction

Property Information

Property Name: Crow Hill

Address: 145 Harrington Way

MBL: 18-026-6+972; 18-030-00010; 18-036-00019; 18-037-00002; 18-037-003+5; 18-037-01+04; 18-044-15-19; 18-044-20-29; 18-044-30-32; 19-026-018-2. Two additional parcels associated with Crow Hill are listed as Crow Hill North, 19-29A-0000A; and Crow Hill Savannah, 19-29A-01B-2.

Date of Visit: 5/17/2024 and 5/29/2024

Visit conducted by: Elise LeBlanc, Inventory Arborist Senior; Lori Carlos, Inventory Arborist Technician and Patti Burns, PWS, CERP - DRG

Property Background and Setting

The first portion of the Crow Hill property was transferred to city ownership in 1999. The Crow Hill area had previously hosted the Worcester Clay Brick Company between the 1850s and 1940s as well as a dump which appears to have received ashes from the municipal incinerator during the early and mid-1900s. Additional parcels were added to the property in 2009 and 2014. Crow Hill is notable today for the views it offers over the city as well as rare black oak savannah habitat. Neighboring the EcoTarium, an indoor-outdoor children's science museum, the property offers opportunities for education, hiking, bird watching, and other passive recreational uses.

Crow Hill Savannah was the focal point of this study area. This approximately 17.6-acre tract is accessed through the abutting and approximately 15-acre Crow Hill North Conservation Area (CA), where an accessible parking area is located just to the north of the EcoTarium (across Harrington Way). Hikers can access Crow Hill Savannah from the approximately 715-foot long Evelyn Silver Trail that extends to the south through Crow Hill North CA and opens up into a meadow-wetlands-woodland complex, which along with the black oak savannah define the tract's ecology. The transitions between unique ecosystems and habitats are called ecotones and they are noted in the science of ecology as important areas of biodiversity. The biodiversity at Crows Hill Savannah was confirmed during our relatively brief visit, as noted below in the Forest Structure and Health section.

The Crow Hill Savannah tract is near a high elevation point at 650 feet above mean sea level (AMSL). It slopes to the northeast to about 540 feet AMSL and to the southeast to an elevation of about 625 feet AMSL. As noted herein the Silver Trail extends along the northern boundary of the Crow Hill Savannah to two adjacent undeveloped parcels, both of which are owned by the City of Worcester (0000 Clarendon and 45 Clarendon Street). These Clarendon Street parcels encompass approximately 17 and 11 acres, respectively, adding another 28 acres of contiguous undeveloped land to Crow Hill conservation lands and they support an additional network of mapped trails. A large wetlands complex (4.3 acres) that is possibly spring-fed extends through the northern portion of the 0000 Clarendon parcel into Crow Hill Savannah. Approximately 0.6 acres of that wetland are situated on the Crow Hill Savannah tract and are the

apparent source of an intermittent stream that flows across the Crow Hill Savannah and then off the site in a circuitous pattern (south to east to north to east) for 1.5 miles through developed neighborhoods and one undeveloped tract (0000 Dallas Street) until it drains to the Quinsigamond River. Potential vernal pools are situated along parts of the intermittent stream.

Given the proximity of the Crow Hill parcels to the Ecotarium and the abundance of ecotones and diversity of habitats, opportunities for conservation education at the Crow Hill cannot be understated. The absence of marked trails through the Crow Hill Savannah property may even benefit this conservation area by shielding it from human encroachment and disturbance.

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 and Health

Field Observations

Crow Hill has multiple types of habitat, the most notable of which is the black oak savannah, a rare habitat characterized by sparse black oak (*Quercus velutina*) tree cover interspersed with grasses and other herbaceous meadow or prairie vegetation. Black oak savannah is a fire-adapted habitat and benefits from regular, low-severity ground fires to maintain sparse canopy cover and prairie species. Other types of forest structure observed in Crow Hill include young upland hardwood forests made up of sweet birch (*Betula lenta*), grey birch (*Betula populifolia*), red maple (*Acer rubrum*), red oak (*Quercus rubra*), and white oak (*Quercus alba*) with a variety of shrubby invasives such as autumn olive in the shrub layer; and wet lowland forests dominated by red maple, American elm (*Ulmus americana*), and speckled alder (*Alnus incana*).

When first entering Crow Hill via the Silver Trailhead located across from the EcoTarium there is an open meadow populated by various grasses and herbaceous plants that appears to be maintained in this state to provide habitat for meadow species. Wild turkey (*Meleagus gallopavo*) chicks were observed taking cover among the tall grasses. Heading onto the main trail the overstory is dominated by gray and sweet birch, oaks, and red maple with a shrub layer of invasive species such as Japanese knotweed, multiflora rose, glossy buckthorn, autumn olive, and Oriental bittersweet.

Further into the property along the Yellow Rectangle Trail black oak savannah becomes the dominant forest type. The overstory trees are large black oaks ranging from around 10 to 30 inches diameter-at-breast-height (DBH) with black oak present in the midstory and regenerating cohorts as well. The shrub and herbaceous layers consist of scrub oak (*Quercus ilicifolia*), blueberries (*Vaccinium* spp.), bayberry (*Myrica* spp.), and yellow whorled loosestrife (*Lysimachia quadrifolia*). Where evidence of recent burning is present, young gray birch seem to dominate. Based on queries posed to the Worcester Conservation Commission and the Greater Worcester Land Trust, no prescribed burns are currently done at the property, but brush fires are common. Based on field observations, ignition sources for unintentional fires could come from lightning, cigarette butts, ATV use, and campfires, among other sources.

Behind 127 Harrington Way multiple invasive species are making their way deeper into the forested habitat and are beginning to encroach on the black oak savannah. The most notable of these invasives is wisteria, which can vine around trees and suffocate them, but Japanese knotweed, autumn olive, and Oriental bittersweet are also present and may threaten the rare habitat. Phragmites is present in pond and wetland areas along the old Red Trail along with Japanese knotweed, honeysuckle, multiflora rose, and garlic mustard.

An abundance of wildlife were observed throughout the property, from large mammals including deer (*Odocoileus virginianus*) and coyotes (*Canis latrans*); to birds including wood thrush (*Hylocichla mustelina*), ovenbirds (*Seiurus aurocapilla*), wild turkey, mallard ducks (*Anas platyrhynchos*), and tufted titmice (*Baeolophus bicolor*); to amphibians including toads and bullfrogs (*Lithobates catesbeianus*); and insects and arachnids such as jumping spiders and skippers (*Lepidoptera* spp.).

Potential Impacts of Climate Change

Table 2 includes a summary of the USFS Climate Change Atlas information for tree species commonly found in Crow Hill.

Table 2: Expected response of common Crow Hill 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
Red maple	Acer rubrum	High	Abundant	Small decrease	Small decrease	Good	Good
Black birch	Betula lenta	High	Common	No change	Small decrease	Poor	Poor
Gray birch	Betula populifolia	Low	Common	No change	Small increase	Fair	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
American elm	Ulmus americana	Medium	Common	Small decrease	No change	Poor	Fair

Most species commonly found in Crow Hill have fair or better ability to adapt to climate change with the exception of black birch and American elm. Black oak, the primary component of the rare black oak savannah habitat found at Crow Hill, is expected to benefit from climate change in Massachusetts. Although they are not considered in the climate change atlas, many invasive species are also likely to adapt well to changing climate, which has the potential to worsen invasive species issues within the property.

EEA LAND Report (2014) vs. Crow Hill Baseline Report (2024)

Minimal change appears to have occurred in Crow Hill between the 2014 and 2024 baseline inspections and reports. The 2014 report, written by the City of Worcester and the Greater Worcester Land Trust (GWLT) and provided to the Massachusetts Executive Office of Energy and Environmental Affairs (EEA) Local Acquisitions for Natural Diversity (LAND) Grant Program, details similar existing conditions on the site to those observed in 2024, including the presence of black oak savannah, encroachment along the backside of residences on neighboring streets, and misuse of trails by ATVs. Differences in conditions included the apparent removal of an education space which had included picnic tables, trash barrels, and a birch teepee, as these features were present in 2014 but not in 2024, and overgrowth of the former scenic view at the peak of Crow Hill. Many of the management recommendations made in the 2014 would still be

beneficial to implement, including prescribed burning to maintain the black oak savannah and limit invasive species, adding gates or other preventative measure to keep ATVs off the trails, selectively clearing brush and trees to open a view from the peak of Crow Hill, and working with abutters to end encroachment on the property.

Key Results

- Crow Hill spans multiple types of habitat including rare black oak savannah, upland mixed hardwood, open meadow, and pond/wetland which provide resources for a wide range of wildlife in the urban center of Worcester.
- Many invasive species are present throughout the property including phragmites, Japanese knotweed, Oriental bittersweet, glossy buckthorn, garlic mustard, multiflora rose, and wisteria. These species have the potential to degrade habitat and threaten the rare black oak savannah.
- The black oak savannah appears to be maintaining itself via regeneration fairly well. This is a fire-adapted ecosystem that benefits from occasional low-severity fires.
- Most tree species common to Crow Hill are projected to persist under climate change, particularly black oak, which bodes well for the future of the black oak savannah.
- Most conditions present in 2014 remain in 2024, including invasive species, ATV use, encroachment, and the black oak savannah.
- Future forest health monitoring should focus on identifying disease and pest threats to oaks as well as monitoring any invasive species mitigation projects.

UTC Results

Canopy Cover

Table 3. Canopy cover

	Number of Parcels	Total Property Acres	Acres of Canopy Cover	% Canopy Cover
Crow Hill	10	27.99	25.78	92.11
Crow Hill North	1	13.75	13.28	96.52
Crow Hill Savannah	1	8.42	7.75	92.06
TOTAL OR AVERAGE	12	50.16	46.81	93.56

Canopy Health

Table 4. Canopy Health

	Very Good		Good		Fair		Poor		Dead/Dying		Not Classified	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
Crow Hill	0.13	<0.01	7.82	0.28	9.46	0.34	7.51	0.27	0.72	0.03	0.13	<0.01
Crow Hill North	0.03	0.21	3.11	23.39	4.50	33.89	4.87	36.71	0.65	4.91	0.11	0.79

	Very Good		Good		Fair		Poor		Dead/Dying		Not Classified	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
Crow Hill Savannah	0.03	0.33	2.41	31.06	2.77	35.78	2.35	30.30	0.16	2.05	0.03	0.33
TOTAL OR AVERAGE	0.19	0.18	13.34	18.24	16.73	23.34	14.73	22.43	1.53	2.33	0.27	0.37

Overall, canopy health in Crow Hill is fair or better. The areas of poor health shown on the canopy health map are consistent with the areas that are heavily impacted by invasives. Other areas seem to align with the location of wetlands and the black oak savannah, both of which are characterized by less dense tree canopy cover which may have read as “poor canopy health” on the UTC assessment.

Benefits

Table 5. Benefits (Crow Hill)

	Air Pollution Removal (Annual)		Avoided Stormwater Runoff (Annual)		Carbon Sequestration (Annual)		Carbon Storage (Lifetime)	
	Pounds	\$	Gallons	\$	Tons	\$	Tons	\$
Crow Hill	1,854.35	\$419.66	34,735.65	\$310.39	29.20	\$4,980.78	883.57	\$150,693.72
Crow Hill North	954.90	\$216.10	17,887.12	\$159.84	15.04	2,564.85	454.99	77,599.73
Crow Hill Savannah	557.77	\$126.23	10,448.17	\$93.36	8.78	\$1,498.17	265.77	\$45,327.33
TOTAL	3,367.02	\$761.99	63,070.94	\$563.59	53.02	\$9,043.80	1,604.33	\$273,620.78

Please note that the trees at Crow Hill 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. Protect and maintain black oak savannah habitat.
 - a. Explore options for prescribed burning to reinstate a routine fire regime. The 2014 EEA LAND report also recommended this activity.
 - b. Consider selective tree and brush cutting to maintain the open, sparse canopy structure which characterizes black oak savannah, particularly as an alternative if prescribed burning is not possible.
 - c. Mitigate invasive species which are encroaching on the black oak savannah habitat.
 - d. Monitor black oak regeneration within the black oak savannah. If regeneration becomes insufficient to maintain the habitat over time, consider assisted planting efforts to restock black oak.
2. Manage invasive species throughout the property.
 - a. Explore options for prescribed burning within the black oak savannah to reduce the invasive understory.
 - b. Address the wisteria infestation behind 123 and 127 Harrington Way. Cutting of the vines followed by a cut-stump herbicide treatment is recommended. This infestation is well-established and will likely require long-term management for success.
 - c. Work with the Worcester DPW and/or Highway Department to address the Japanese knotweed infestation along Harrington Way. This infestation is well-established and will likely require long-term management for success.
 - d. Consider management options for the phragmites which are invading the wetland habitat.
 - e. Remove and/or treat invasive species along the Silver Trail. This area is highly visible to visitors and may be a good location for volunteer work days and/or education on invasive species management.
 - f. Post education signage which explains why the dumping of yard waste can be harmful to natural areas due to the potential for introduction of invasive species.
 - g. Most infestations in Crow Hill are well-established, and complete removal or control of the invasive species may not be feasible. Elimination of further spread and progressive reduction of the area impacted by the invasive species should instead be the goal.
 - h. Long-term management and monitoring will be necessary to manage invasive species at Crow Hill.
3. Pursue options to mitigate current encroachment and prevent further encroachment around boundaries with surrounding residential properties.
 - a. The 2014 EEA LAND report identified encroachment along Ebenezer Street. Residents were supposedly requested to cease and desist via letter after that report was created. Follow up with Ebenezer Street residents to remind and reinforce their understanding of the property boundaries.
 - b. Cease and desist and other legal measures to stop imminent and ongoing encroachment.
 - c. 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.
 - d. 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.
 - e. Post signage which specifically prohibits dumping at key locations where dumping appears to be an issue.

- f. Remove dumped materials and yard waste, or work with abutters to remove dumped materials and yard waste from the property. Existing dump piles may encourage further dumping.
- 4. Explore measures to limit or prevent ATV use of trails, particularly in the southern segments of the property.
 - a. Determine where ATVs are finding easy access to the trail system and install barriers to motorized vehicles, such as gates or posts.
 - b. Ensure that all trail entrances have signage indicating what uses are allowed and prohibited.
 - c. Work with the Worcester Police Department to increase patrols and presence in the area and levy fines and fees to those who violate the property use restrictions.
- 5. Ensure trails are clearly marked and that retired trails are clearly blocked.
 - a. Reblaze active trails.
 - b. Paint over blazes on discontinued trails - brown or gray paint can help camouflage the old markings and prevent confusion for hikers.
 - c. Pile fallen branches and logs across entries to the discontinued trails to provide a secondary visual marker that the trail is no longer in use.
 - d. Update trail maps to reflect the location of new active trails and remove discontinued trails.
- 6. Implement a plan to restore the scenic view at the top of Crow Hill
 - a. The 2014 EEA LAND report recommended this activity. Since the 2014 report, the scenic area has become significantly dense and overgrown.
 - b. Identify an area to become the new scenic overlook and selectively clear brush and trees to open a view over the city.
 - c. Routinely clear brush and trees from the scenic overlook location. This will likely need to be done every 3-5 years to maintain a clear view.
 - d. Consider installing a raised viewing platform if removal of trees or brush is not preferable or feasible.
- 7. 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.
- 8. Consider adding bird nesting boxes throughout the property.
 - a. DRG staff observed a wide variety of bird species during the field inspection of Crow Hill. The diversity of habitats and presence of open meadow and low-density tree canopy habitats is ideal for many species of bird which are becoming rarer due to the loss of open meadow and farmland habitat.
 - b. Work with the local Audubon chapters to identify the species which would most benefit from nesting boxes and design or purchase boxes which suit those species' needs.
 - c. Installation of nesting boxes could potentially be a community or volunteer event to raise awareness of bird conservation and spark interest in the Crow Hill property.

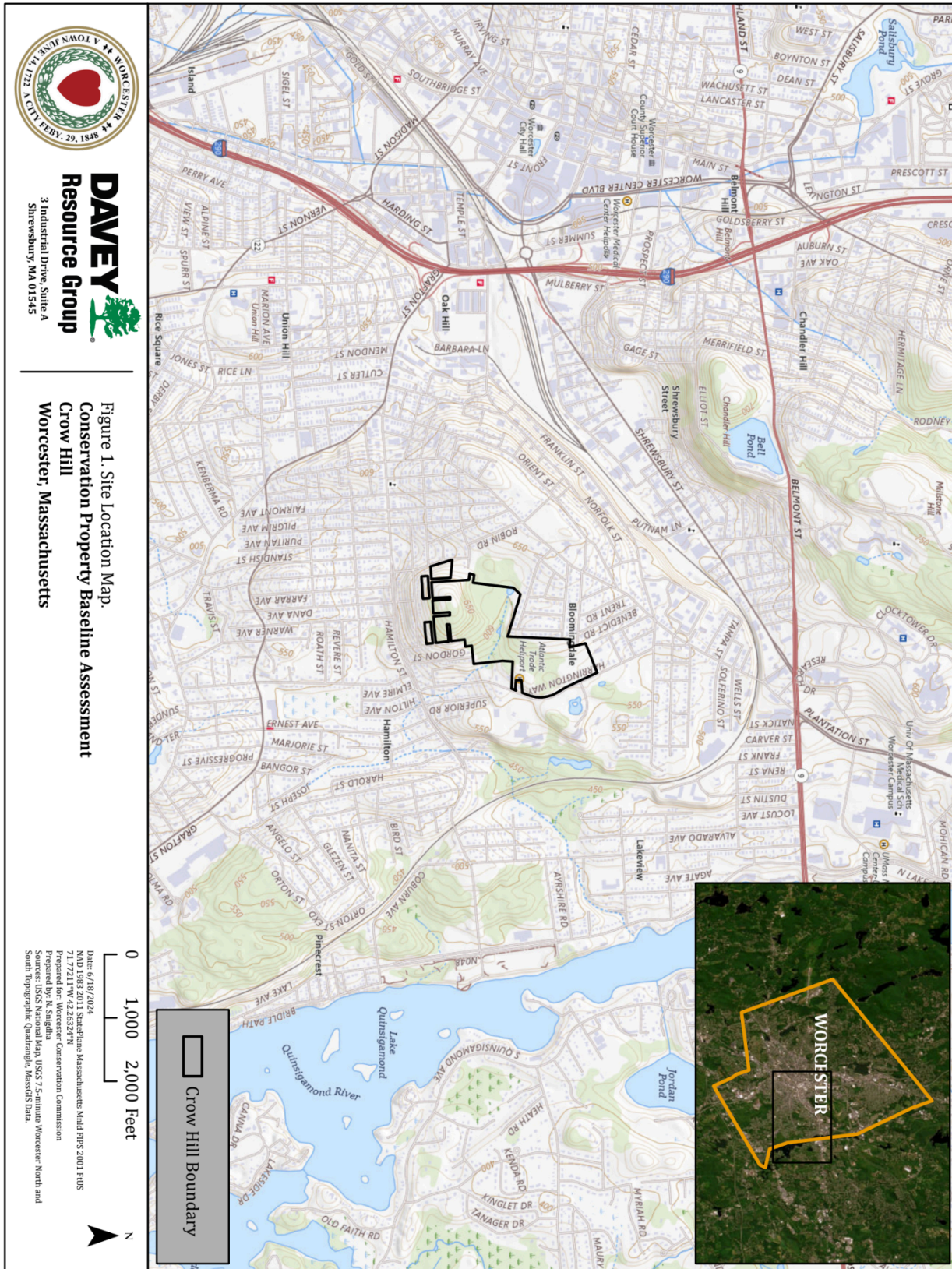
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The Greater Worcester Land Trust Inc. (n.d.). The Greater Worcester Land Trust. <https://www.gwlt.org/crow-hill.html>

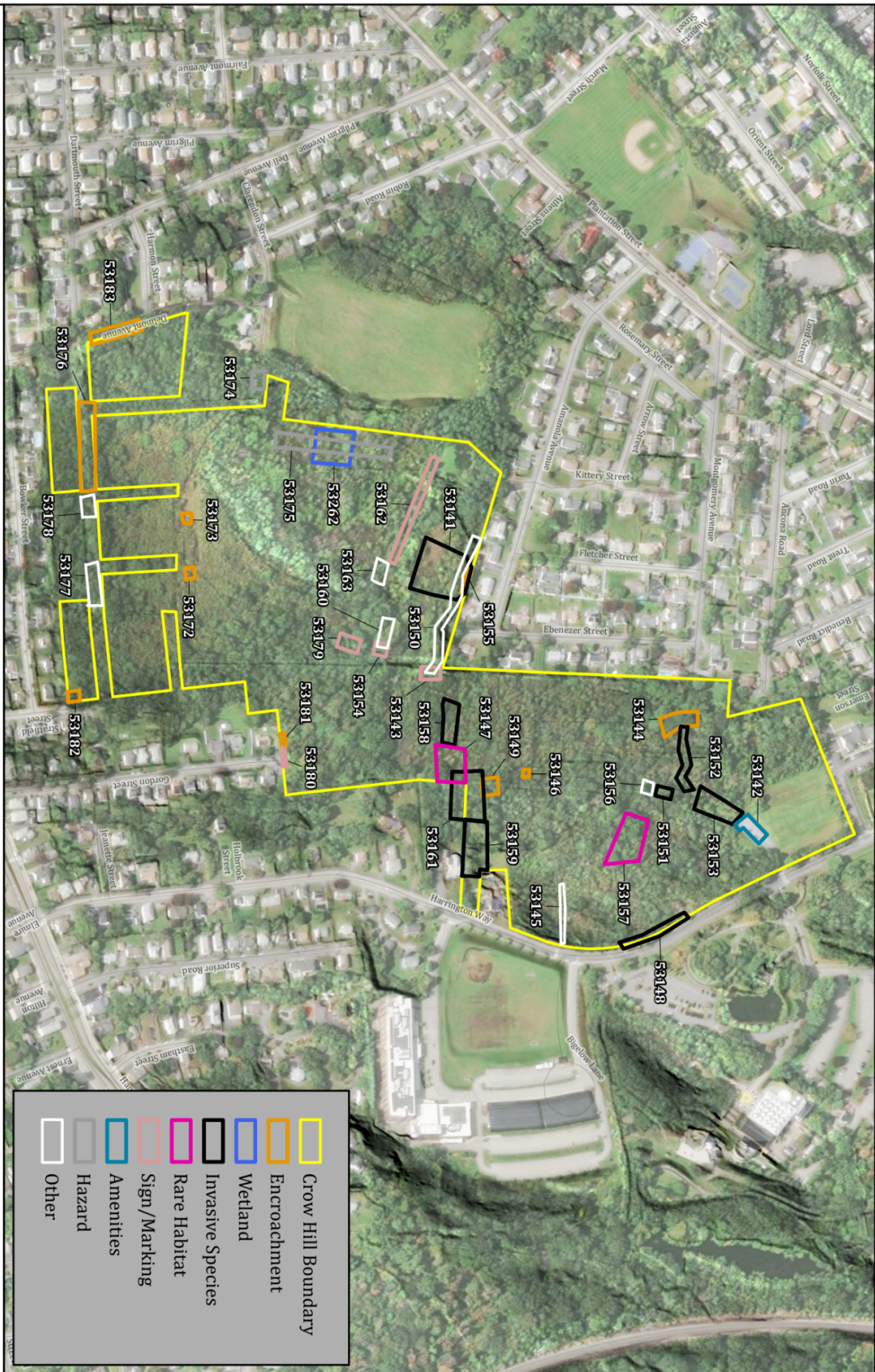
APPENDIX A: MAPS





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

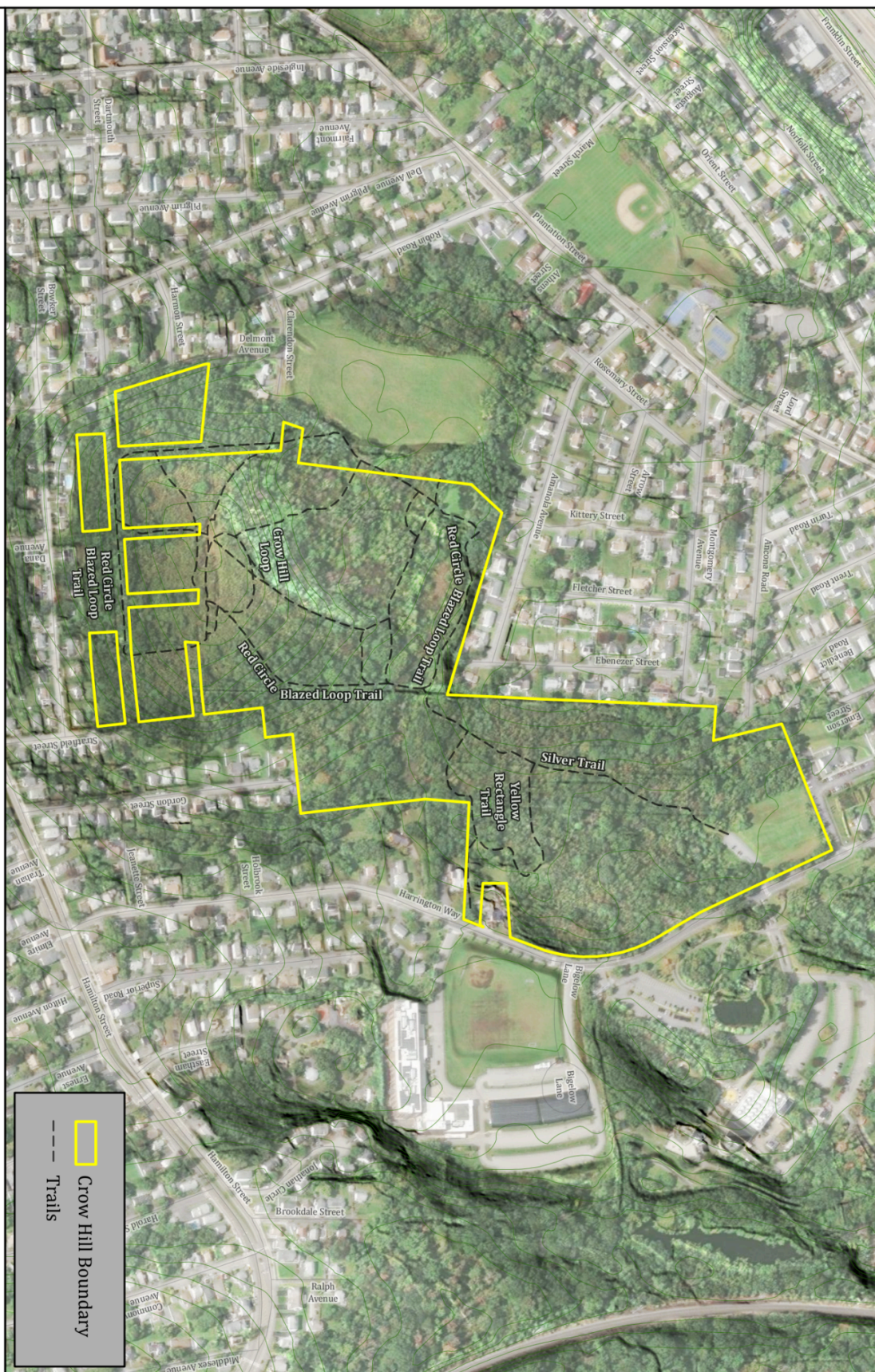
Figure 2. Existing Resources Summary Map.
Conservation Property Baseline Assessment
Crow Hill
Worcester, Massachusetts



Map 2: Existing resources summary map.



Figure 3. Existing Trails Summary Map.
Conservation Property Baseline Assessment
CROW HILL
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
Crow Hill
Worcester, Massachusetts



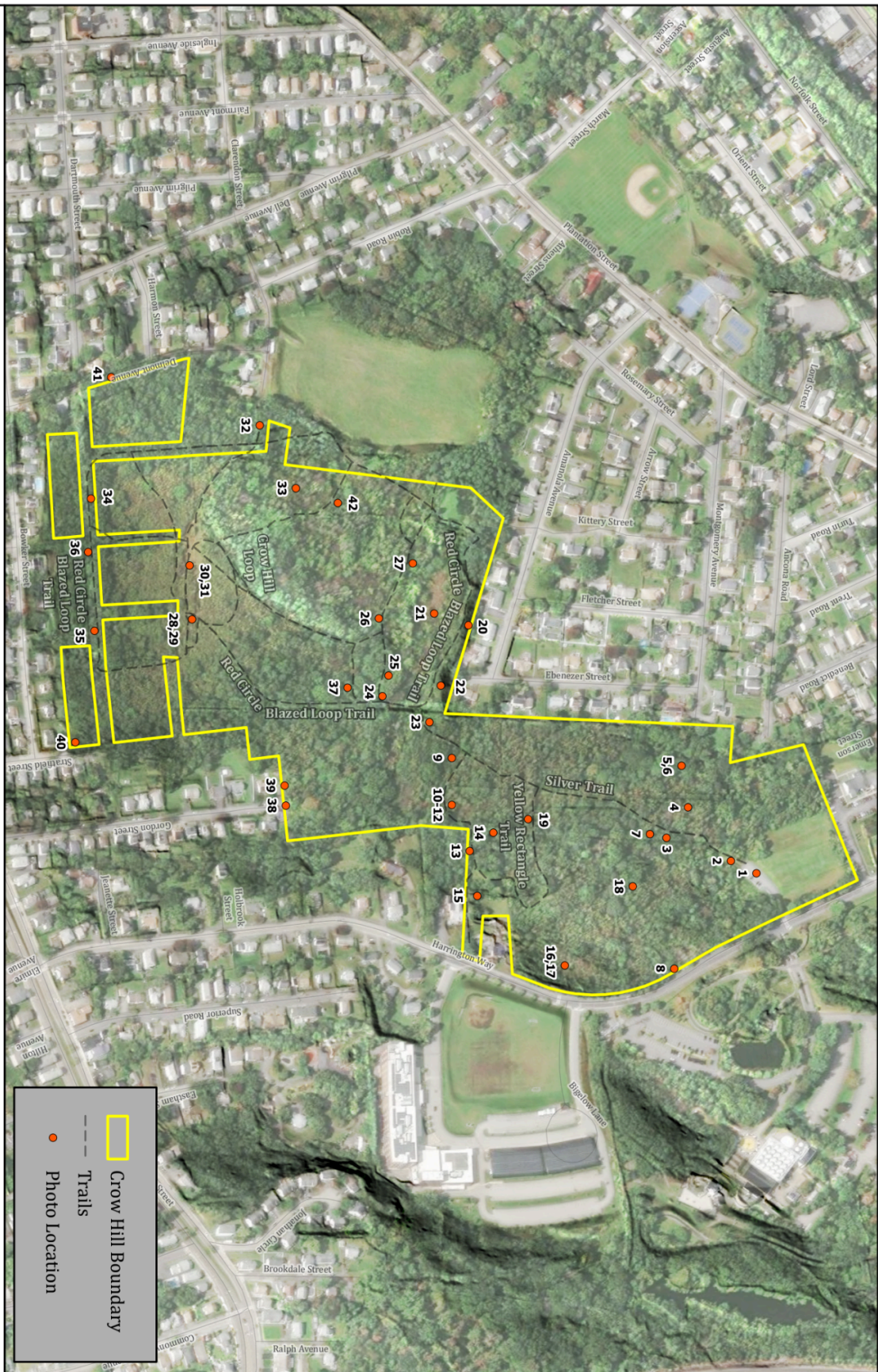
Map 4: Existing tree health rank summary map.



DAVEY
Resource Group

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Shrewsbury, MA 01545

Figure 5. Representative Photo Locations Summary Map.
Conservation Property Baseline Assessment
Crow Hill
Worcester, Massachusetts



Map 5: Representative photo locations summary map.

Crow Hill Savannah Worcester



Map 6: Trail map currently available online, provided by the Greater Worcester Land Trust. Trails depicted on this map are no longer accurate.

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	53142	Amenities	Well-marked parking area across from the EcoTarium with an informational sign. Access to the Evelyn Silver Trail.
2	53153	Invasive Species	Invasive plants along the start of the Silver Trail, including Japanese knotweed (<i>Reynoutria japonica</i>), multiflora rose (<i>Rosa multiflora</i>), glossy buckthorn (<i>Frangula alnus</i>), autumn olive (<i>Eleagnus umbellata</i>), and Oriental bittersweet (<i>Celastris orbiculatus</i>).
3	53151	Invasive Species	Japanese knotweed along the trail.
4	53152	Invasive Species	Oriental bittersweet and buckthorn along the trail. Poison ivy along the trail.
5, 6	53144	Encroachment	(Photo 5) Sign prohibiting dumping and motor vehicles. (Photo 6) Dumping of yard waste.
7	53156	Other	Unmarked and undocumented trail splitting off toward the southeast. Trail appears less well-traveled than the main marked trail and is grassy.
8	53148	Invasive Species	Unmarked trail from Photo 7 meets Harrington Way. Japanese knotweed is present all along the boundary of Harrington Way.
9	53158	Invasive Species	Invasive shrubs dominate the area including autumn olive, multiflora rose, crabapples (<i>Malus</i> spp.), and hawthorns (<i>Crataegus</i> spp.).
10, 11, 12	53147	Rare Habitat	(Photo 10) Black oak savannah with evidence of burning in the past. Early successional species such as gray birch (<i>Betula populifolia</i>) are present as well as black oak (<i>Quercus velutina</i>). (Photo 11) Evidence of burning at the base of a tree. (Photo 12) Gray birch (<i>Betula populifolia</i>) and other early successional species.
13	53161	Invasive Species	Mature black oak savannah with an invasive understory including autumn olive, Japanese knotweed, Oriental bittersweet, and wisteria (<i>Wisteria</i> spp.)
14	53149	Encroachment	Dumping of yard waste.
15	53159	Invasive Species	Area being overrun by wisteria.

Photo ID	Polygon ID	Type	Comments
16, 17	53145	Other	(Photo 16) Trail from North High School. This trail is not marked on any maps but has a red arrow pointing to the trail from the road, with parking available across Harrington Way at the high school. (Photo 17) Trail from North High School
18	53157	Rare Habitat	Black oak savannah with evidence of past burns.
19	53146	Encroachment	Drywall and metal dumped off the trail.
20	53155	Encroachment	Lumber dumped behind 44 Amanola Avenue.
21	53141	Invasive Species	Invasive plants present including phragmites (<i>Phragmites</i> spp.), Japanese knotweed, honeysuckle (<i>Lonicera</i> spp.), multiflora rose, and garlic mustard (<i>Alliaria petiolata</i>).
22	53150	Other	Red blazed trail (Red Circle Trail) is overgrown and disused, but still marked on maps of the property.
23	53143	Sign/Marking	Red circle marking on a tree previously identified the start of the Red Circle Trail from Photo 22. The marking has been crossed with a blue “x”, possibly to indicate that it is no longer a managed trail.
24	53154	Sign/Marking	Intersection of Silver Trail with the new Red Trail. It is marked on a tree as the Red trail but is marked as a minor, unnamed and unmarked trail on the map.
25	53160	Other	Muddy section of the trail - adding wooden planks or other structures could help reduce erosion and improve trail accessibility.
26	53163	Other	Wet and puddled section of trail with footpath created to circumvent the wettest area.
27	53162	Sign/Marking	New trailbed marked out with orange flagging. The old trail in the area is very wet and muddy, possibly due to use by ATVs.
28, 29	53172	Encroachment	(Photo 28) Trail damaged by ATV use. (Photo 29) Trail splits. ATV tracks are visible.
30, 31	53173	Encroachment	(Photo 30) Firepit. (Photo 31) Firepit and open area.
32	53174	Other	Entrance to the property from Clarendon Street. There is a dead tree caught up in a catalpa (<i>Catalpa speciosa</i>) which could pose a hazard to property users.

Photo ID	Polygon ID	Type	Comments
33	53175	Hazard	Coyote pups were spotted along the trail, with a possible coyote den in the area. The trail appears to be overgrown and seldom used.
34	53176	Encroachment	ATV tracks along the trail.
35	53177	Other	Trail is identified on maps as the Red Trail and has blazes on trees, but the trail is overgrown.
36	53178	Other	The Red Trail continues straight (to the right in photo) The trail made by the ATV track which turns south is more well-defined.
37	53179	Sign/Marking	Side trail flagged out with orange tape but not marked on trail map.
38	53180	Sign/Marking	There does not appear to be any trail access to the property from the end of Gordon Street, but there is a sign identifying the property as owned by the City of Worcester and naming it "Crow Hill Savannah".
39	53181	Encroachment	Part of the Crow Hill property along the boundary with 37 Gordon Street has been cleared and a driveway has been routed over it.
40	53182	Encroachment	Dumping of yard waste at the end of Stratfield Street. There is a "No Dumping" sign posted at the location.
41	53183	Encroachment	Yard waste dumped along Delmont Avenue, close to or possibly over the Crow Hill property boundary. Yard waste dumping has the potential to introduce invasive species to the property.
42	53262	Wetland	(Photo 42) The dominant species in much of this area is gray birch in the young age category. (no photo) In wetter areas the vegetation is dominated by elm (<i>Ulmus americana</i>), rushes (<i>Juncus</i> spp.), and sedges (<i>Carex</i> spp.)



Photo 1

Polygon ID: 53142

Type: Amenities

Comments: Well-marked parking area across from the EcoTarium with an informational sign. Access to the Evelyn Silver Trail.



Photo 2

Polygon ID: 53153

Type: Invasive species

Comments: Invasive plants along the start of the Silver Trail, including Japanese knotweed (*Reynoutria japonica*), multiflora rose (*Rosa multiflora*), glossy buckthorn (*Frangula alnus*), autumn olive (*Eleagnus umbellata*), and Oriental bittersweet (*Celastris orbiculatus*).



Photo 3

Polygon ID: 53151

Type: Invasive species

Comments: Japanese knotweed along the trail.



Photo 4

Polygon ID: 53152

Type: Invasive species

Comments: Oriental bittersweet and buckthorn along the trail. Poison ivy along the trail.



Photo 5

Polygon ID: 53144

Type: Encroachment

Comments: Sign prohibiting dumping and motor vehicles.



Photo 6

Polygon ID: 53144

Type: Encroachment

Comments: Dumping of yard waste.



Photo 7

Polygon ID: 53156

Type: Other

Comments: Unmarked and undocumented trail splitting off toward the southeast. Trail appears less well-traveled than the main marked trail and is grassy.



Photo 8

Polygon ID: 53148

Type: Invasive Species

Comments: Unmarked trail from Photo 7 meets Harrington Way. Japanese knotweed is present all along the boundary of Harrington Way.



Photo 9

Polygon ID: 53158

Type: Invasive Species

Comments: Invasive shrubs dominate the area including autumn olive, multiflora rose, crabapples (*Malus* spp.), and hawthorns (*Crataegus* spp.).



Photo 10

Polygon ID: 53147

Type: Rare Habitat

Comments: Black oak savannah with evidence of burning in the past. Early successional species such as gray birch (*Betula populifolia*) are present as well as black oak (*Quercus velutina*).



Photo 11

Polygon ID: 53147

Type: Rare Habitat

Comments: Evidence of burning at the base of a tree.



Photo 12

Polygon ID: 53147

Type: Rare Habitat

Comments: Gray birch (*Betula populifolia*) and other early successional species.



Photo 13

Polygon ID: 53161

Type: Invasive Species

Comments: Mature black oak savannah with an invasive understory including autumn olive, Japanese knotweed, Oriental bittersweet, and wisteria (*Wisteria* spp.)



Photo 14

Polygon ID: 53149

Type: Encroachment

Comments: Dumping of yard waste.



Photo 15

Polygon ID: 53159

Type: Invasive Species

Comments: Area being overrun by wisteria.



Photo 16

Polygon ID: 53145

Type: Other

Comments: Trail from North High School. This trail is not marked on any maps but has a red arrow pointing to the trail from the road, with parking available across Harrington Way at the high school.



Photo 17

Polygon ID: 53145

Type: Other

Comments: Trail from North High School.



Photo 18

Polygon ID: 53157

Type: Rare Habitat

Comments: Black oak savannah with evidence of past burns.



Photo 19

Polygon ID: 53146

Type: Encroachment

Comments: Drywall and metal dumped off the trail.



Photo 20

Polygon ID: 53155

Type: Encroachment

Comments: Drywall and metal dumped off the trail.



Photo 21

Polygon ID: 53141

Type: Invasive Species

Comments: Invasive plants present including phragmites (*Phragmites* spp.), Japanese knotweed, honeysuckle (*Lonicera* spp.), multiflora rose, and garlic mustard (*Alliaria petiolata*).



Photo 22

Polygon ID: 53150

Type: Other

Comments: Red blazed trail (Red Circle Trail) is overgrown and disused, but still marked on maps of the property.



Photo 23

Polygon ID: 53143

Type: Sign/Marking

Comments: Red circle marking on a tree previously identified the start of the Red Circle Trail from Photo 22. The marking has been crossed with a blue "x", possibly to indicate that it is no longer a managed trail.



Photo 24

Polygon ID: 53154

Type: Sign/Marking

Comments: Intersection of Silver Trail with the new Red Trail. It is marked on a tree as the Red trail but is marked as a minor, unnamed and unmarked trail on the map.



Photo 25

Polygon ID: 53160

Type: Other

Comments: Muddy section of the trail - adding wooden planks or other structures could help reduce erosion and improve trail accessibility.



Photo 26

Polygon ID: 53163

Type: Other

Comments: Wet and puddled section of trail with footpath created to circumvent the wettest area.



Photo 27

Polygon ID: 53162

Type: Sign/Marking

Comments: New trailbed marked out with orange flagging. The old trail in the area is very wet and muddy, possibly due to use by ATVs.



Photo 28

Polygon ID: 53172

Type: Encroachment

Comments: Trail damaged by ATV use.



Photo 29

Polygon ID: 53172

Type: Encroachment

Comments: Trail splits. ATV tracks are visible.



Photo 30

Polygon ID: 53173

Type: Encroachment

Comments: Firepit.



Photo 31

Polygon ID: 53173

Type: Encroachment

Comments: Firepit and open area.



Photo 32

Polygon ID: 53174

Type: Other

Comments: Entrance to the property from Clarendon Street. There is a dead tree caught up in a catalpa (*Catalpa speciosa*) which could pose a hazard to property users.



Photo 33

Polygon ID: 53175

Type: Hazard

Comments: Coyote pups were spotted along the trail, with a possible coyote den in the area. The trail appears to be overgrown and seldom used.



Photo 34

Polygon ID: 53176

Type: Encroachment

Comments: ATV tracks along the trail.



Photo 35

Polygon ID: 53177

Type: Other

Comments: Trail is identified on maps as the Red Trail and has blazes on trees, but the trail is overgrown.



Photo 36

Polygon ID: 53178

Type: Other

Comments: The Red Trail continues straight (to the right in photo) The trail made by the ATV track which turns south is more well-defined.



Photo 37

Polygon ID: 53179

Type: Sign/Marking

Comments: Side trail flagged out with orange tape but not marked on trail map.



Photo 38

Polygon ID: 53180

Type: Sign/Marking

Comments: There does not appear to be any trail access to the property from the end of Gordon Street, but there is a sign identifying the property as owned by the City of Worcester and naming it "Crow Hill Savannah".



Photo 39

Polygon ID: 53181

Type: Encroachment

Comments: Part of the Crow Hill property along the boundary with 37 Gordon Street has been cleared and a driveway has been routed over it.



Photo 40

Polygon ID: 53182

Type: Encroachment

Comments: Dumping of yard waste at the end of Stratfield Street. There is a “No Dumping” sign posted at the location.



Photo 41

Polygon ID: 53183

Type: Encroachment

Comments: Yard waste dumped along Delmont Avenue, close to or possibly over the Crow Hill property boundary. Yard waste dumping has the potential to introduce invasive species to the property.



Photo 42

Polygon ID: 53262

Type: Wetland

Comments: The dominant species in much of this area is gray birch in the young age category.