

Tantiusques Management Plan

2009



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Tantiusques Basic Management Plan

Location: Sturbridge, MA

Acreage: 60 acres (1964)

Completed by: Vincent Antil, Russ Hopping, Susan Edwards, Dick O'Brien.

Date: FOC approved, September 24, 2009

Supporting Reports and Materials:

Trustees Property Guide

Report on Crowd Site: "Two Examples of Marginal Architecture ..." by J. Edward Hood and Holly Izard, 1999.

Report on Interpretation: "History, Interpretive Program and Recommendations..." by John J. Daly, 2002.

I. Introduction

- a. Brief description of property: Tantiusques is a 57 acre property located on Leadmine Road in Sturbridge. Graphite was mined here by Native Americans, and later in the 1600's it was acquired by John Winthrop Jr. In the 19th century larger scale mining took place. The graphite going towards industrial uses and pencil lead. The main feature of this property is the remains of the mining operation. The parking area is located near the largest rock-cut and is connected by a trail. A loop trail about 1,200 feet long provides access to the rest of the property. The property is almost completely wooded. About 1,000 feet to the north on Leadmine Road is a subsidiary property, the Crowd Site. This was the location in the 19th century of the house and barn of Robert Crowd, who worked at the mine. Crowd, of African-American and Native-American decent was the son-in-law of mine manager Guy Scott, also of Native-American decent. A trail through the woods, passing through Mass. DFW's Leadmine Wildlife Management Area, connects Tantiusques with the Crowd Site. The Crowd Site was excavated by archaeologists from Sturbridge Village (also in Sturbridge) in the 1990's. A report on the excavations by Ed Hood, and a report with recommendations on historical interpretation of Tantiusques and the Crowd Site by John J. Daly are available.
- b. Acquisition history: Tantiusques was given to The Trustees by Roger Chaffee of Oxford, MA in 1962.
- c. Donor's wishes or other clear guiding principles: Mr. Chaffee donated Tantiusques in memory of George H. Haynes, his professor at Worcester Polytechnic Institute, who authored an early history of the mine.

II. Summary of Preliminary Management Goals

Tantiusques should be managed as a “C-level” property.

C-type management properties are characterized by low visitation, and modest resource significance and management complexity. Typically, these properties are an important local resource, but will not likely engage a broad range of visitors and volunteers.

III. Legal and Management Considerations

Hunting is allowed in season at Tantiusques. A state Wildlife Management Area is an adjacent property.

Tantiusques is a designated National Historical Site.

IV. Property Description:

A. Historic and Cultural Resources

Significant Historic Features:

- Tantiusques is a designated National Historic Site.
- The remains of the graphite mine consist of several trenches, debris piles, and remnants of cart paths. The main rock-cut is a trench about 400 feet long along the side of a ledge. Another section of trench, to the northeast, is separated from it by Lead Mine Road. At one time these two trenches connected, forming most of the mine. Over the years many sections of the mine have collapsed and filled in with material.
- The best preserved feature on the property is a mine shaft entrance about 150 feet south of the parking area. This shaft runs about 30 feet into the side of the ledge. The shaft entrance suffers from bad drainage, filling with ankle-deep water during wet periods.
- The Crowd Site consists of two foundations, a deep cellar hole where the house was, and shallower one for the barn. There is also an old well (capped). These features are on a 2 acres lot on the corner of Leadmine and Goodrich Roads. The lot is overgrown woodland and there are no signs or markers.

Threats to Historic Features:

- Over time the remains of the mine have suffered from cave-ins, slope erosion, and vegetation growth.
- Visitor’s have filled the main shaft with branches and small logs to stand on when the shaft is wet.

Opportunities:

- Cleaning up debris in the main shaft, improving drainage or providing a boardwalk into the shaft may improve the engagement value of the site.

B. Natural Resources

Significant Natural Features:

- The entire reservation is designated by Massachusetts BioMap as Supporting Natural Landscape for Core Habitat.
- Tantiusques is a densely forested landscape dominated by Oak-Hickory Forest with hemlock occasional. Mountain laurel is patchy but forms dense understory throughout. This forest serves as interior habitat for wildlife, including more than 25 species of birds.
- The rock outcrop bisecting the Reservation was mined for graphite historically and the main cave once served as a winter hibernacula for the endangered Indiana myotis bat, but due to cave-ins it may no longer serve as habitat.
- The reservation is part of a larger protected and undeveloped landscape that includes the Leadmine Wildlife Management Area.

Threats to Natural Features:

- Hemlock woolly adelgid, a non-native insect has the potential to severely alter forest species composition and structure. Although hemlock is not common at Tantiusques, 45% of trees sampled were infested with HWA in 2008.
- Global climate change has the potential to significantly alter the ecosystems and natural resources of Massachusetts including changes to the flora and fauna, especially invasive species.

Opportunities:

- Invasive plants currently occur at very low densities. Implementing a program of early detection and rapid response for new invasive species will reduce the potential of these species becoming established.

C. Scenic Resources

Significant Scenic Features: The remains of the lead mine are an interesting historical feature, but not scenic in the traditional sense.

Threats to Scenic Features: None

Opportunities: None

D. Structural Resources

Structure	Size	Current Use	Current Condition
Parking Area (gravel)	5 cars	visitor	Good

Threats to Structural Resources: None

E. Visitor Services and Engagement

Current Volunteer Engagement: None currently

Opportunities: Volunteer stewardship should be pursued.

Visitor Engagement: The history of the mine and Crowd homestead offer an interesting story for interpretation. However, low visitation, and the difficult character and topography of the site may limit potential for programming. Old Sturbridge Village has held interpretative programs in the past. They have been discontinued.

There is some interpretive information displayed on the bulletin board.

Opportunities: A number of steps may be taken to improve the quality of current visitor engagement:

- Update bulletin board panel with expanded interpretive material and better graphics.
- Cleaning up debris in the main shaft, improving drainage or providing a boardwalk into the shaft may improve the engagement value of the site.

Service:	Does it Exist?	Specific Description: age, condition, actively updated?
1. Approach signs that lead visitors to the property	N	
2. Entrance and trailhead signs.	N	Current Trustees entrance sign has been dislodged. Must be re-placed.
3. Kiosk or Bulletin Board meets standards.	N	Kiosk still functional but with old panels and old logos. Interpretive material on bulletin board could be improved.
4. Up-to-date Map on bulletin board and website.	Y	
5. Trails are clearly marked	Y	
6. Adequate parking area.	Y	
7. Interpretive Program.	N	No official programs are run. Non-Trustees use of the site may occur.

V. Current Resources Available for Management

a. Staff and Volunteers

Lack of staff and long travel distances are limiting factors in Central Region. There are 3 full-time field staff (one of which is dedicated to Doyle Estate and Cormier Woods) and 2 seasonal employees in the unit. The closest staff is based over an hour away.

Trustees staff are able to visit Tantiusques 4 times a year.

About 2% of staff time is allocated to Tantiusques.

Volunteer stewardship is the best option for this property. Currently there is no volunteer steward for Tantiusques.

b. Equipment

Central Region has: 2 pickup trucks, 1 dump truck, 1 tractors w/ bucket-loader, and chipper attachment.

c. Operating budget

Full FY10 operating budget for the entire region is \$ 205,000 (includes staff).

Tantiusques does not have a separate budget item.

d. Other (partners, etc.)

Old Sturbridge Village (OSV) is a potential partner in this area, however changing priorities at OSV have limited their interest in the site.

VI. Recommended One-time Actions

Rec#	Type	Resource Protection Action	Description/ Rationale	Phase	Rank	1 st staff	2 nd staff	Phase 1	Phase 2	Phase 3	Total	Vol.	Total Phase 1	Total Phase 2	Total Phase 3	Total Plan Costs all Phases	Budget Source	Operating	Supplemental	Capital	Targetted Funding Source	Notes	Status
								Staff	Staff	Staff	Plan	Op?	Costs	Costs	Costs								
								hours	hours	hours	Staff												
											Needs												
1	GM	Re-install Trustees Entrance sign.	Sign post was dislodged (May 2009). Sign itself may need replacing.	1	C	HR	E&O	4			4		\$100			\$100		\$100					NS
2	GM	Update interpretive material for bulletin board.	Current material is dated (old logo) and can be improved.	1	N	HR	E&O	20			20		\$100			\$100		\$100					NS
3	GM	Establish vounteer steward in the Sturbridge Area	The distance of Tantiusques and Quinebaug Woods from other properties make regular full-time staff visits difficult.	1	N	S							\$0									Joint property committee for Quinebaug Woods and Tantiusques may also be desired.	NS
4	VM	Clean up debris and improve access to mine shaft entrance.	Logs and branches have been placed in shaft by visitors. Improving drainage or providing a boardwalk will increase the sites aesthetics and engagement potential.	2	D	S	HR	16			16		\$200			\$200		\$200				Any work on the mine itself must be reviewed for its impact on the historic resource.	NS
TOTAL								40	0	0	40		\$400	\$0	\$0	\$400		\$400					

Key:
 Type: GM – General Management, NR – Natural Resource Management, VM - Visitor Management
 Phase: 1 – 2009 through 2011, 2 – 2012 through 2014, 3 – 2015 through 2017
 Rank: N – Needed, D - Desired
 Staff: DSR – Director of Structural Resources, EC – Ecologist, HR – Historic Resources, E&O – Ed. & Outreach Publications
 Budget Source: N – Not Applicable, O – Operating
 Status: IP – In Progress, NS – Not Started

VII. Routine Management Program

Line #	Task	Action Type	Acceptable Performance Level (APL)	Acceptable Frequency	Less than annual	Season	Who?	Volunteer Opp?	Total hours needed to reach APL	Add'l funds needed to reach APL	Notes
1	Property Visit	GM	Adequate	Monthly	no	W, S, Su, F	S	yes	20	\$100	Inspect signs, stock kiosk, pick-up trash, check trail conditions.
2	Monitor for Invasive Species	GM	Adequate	4 times a year	no	S,Su,F	S	yes	4		Few invasives on property. Opportunity for early intervention.
								TOTAL	24	\$100	

Key:

Action Type: GM – General Property Management, NR – Natural Resources Management
 Who?: EC – Ecologist, S - Superintendent
 Performance Level: Adequate - The task is currently completed at a level that does not hinder resource protection or the visitor experience.
 Strong - The task is completed in a manner/at a frequency that represents the ideal.

VIII. Conclusions

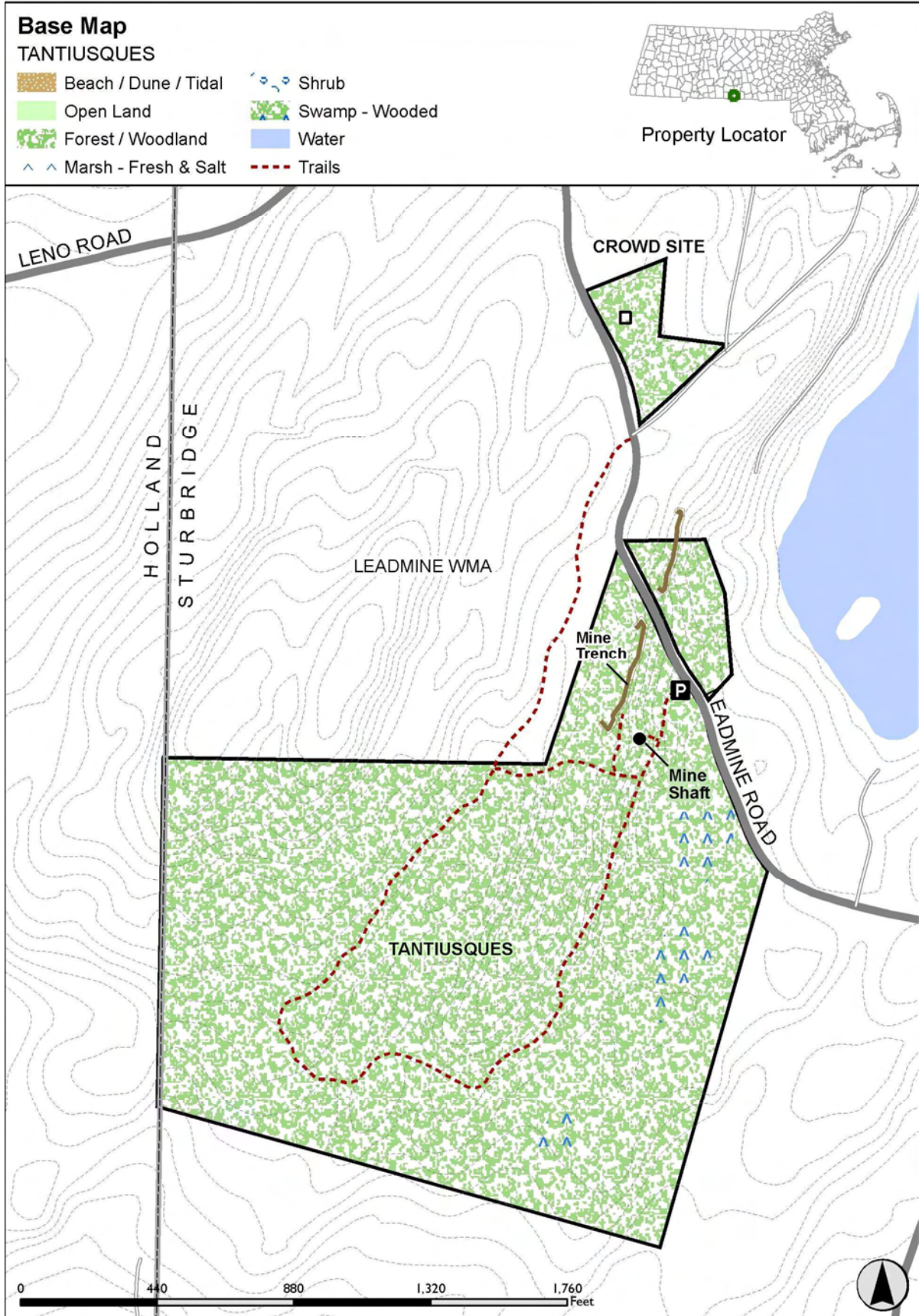
Low visitation, the poor physical quality of the mine remains, and distance from other Trustees' properties limit the property's appeal. Any improvements to the site should only proceed after assessing their impact on the historical resource.

Given the travel distances for staff, and limit budget, it has been difficult for the management unit to adequately manage this property. Establishment of a volunteer property steward may improve this situation.

IX. Monitoring and Review

Property plan should be reviewed annually by staff to ensure progress is being made to complete the recommendations. Future plan revisions may require additional research and field work.

APPENDIX A. Base Map



APPENDIX B: Natural Heritage & Endangered Species Program (NHESP) Resources Map



APPENDIX C: Open Space Context Map

