



TOWN OF WATERTOWN Conservation Commission

Administration Building

149 Main Street

WATERTOWN, MASSACHUSETTS 02472

Leo Martin, Chair
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Jamie O'Connell, Member

TO: Michael Driscoll, Town Manager and the Honorable Town Council
FROM: Laurel Schwab, Senior Environmental Planner/Conservation Agent
RE: Whitney Hill Park Annual Report 2020

DATE: February 12, 2021

Whitney Hill Park Annual Report, 2020

Background: On 8 January 2013 the Watertown Town Council, by unanimous vote, adopted Resolution No. 3 (R-2913-3), A Resolution Preserving the Property Known as Whitney Hill Park. The resolution directs the Watertown Conservation Commission (WCC) to submit, each year prior to 31 December, "a recommended plan for maintenance and educational activities" for Whitney Hill Park. For a comprehensive, long-term outline of the WCC's response to this directive, see Appendix A herewith, Whitney Hill – A Proposal for Development of a Stewardship Plan.

SUMMARY

Activities in 2020: As in 2019, conditions in 2020 caused an indefinite pause in coordination with the Watertown High School (WHS) biology department and the Department of Public Works (DPW) Forestry Division owing to curriculum change and/or personnel departures and changes, all complicated by the COVID-19 pandemic. There has been a consequent slowdown in the planning and implementation of many activities.

- Routine annual inspection and maintenance of sample plot markings.
- Preparation of text for information signage.
- Installation of information signboards at main Park access points.

- Draft mapping of existing footpath system.
- Recommended installation of a third sign at Marshall Street-Oliver Road public access point.
- Initial communications regarding the Park with new DPW Forestry Supervisor-Tree Warden.

Plans for 2021:

- Resumption of dialogue with WHS biology department to determine nature and extent of potential collaboration on ecological studies there during 2021. The following two items are examples of such collaboration.
- Herbaceous plant survey by site-wide inventory and/or sample plot, with special attention to invasives.
- Red-backed Salamander survey.
- Repeat of 2015 woody vegetation survey.
- Completion of mapped woody plant material collection for WHS biology department herbarium.
- Refinement of draft footpath map for inclusion on information signboards.
- Installation of the third information sign at junction of Marshall Street and Oliver Road.
- Investigation of erosion-control measures and means of implementing them.

FULL REPORT

Activities in 2020: The onset of precautions taken in response to the COVID-19 pandemic in March 2020 confounded hopes of resuming ecological research in partnership with WHS for the duration of the year. Collaboration with relevant DPW personnel only began in earnest during December, shortly after the post of Forestry Supervisor/Tree Warden, vacant for over a year, was finally filled. For the indefinite future, group activities in the Park will remain highly dependent on public policy designed to combat the current and future threat of COVID-19 to community health.

Individual activities included sample plot monitoring and maintenance, and mapping. In March and April the WCC monitored the 32 sample plots and renewed selected flagging to facilitate their field identification. Five amphibian cover boards were not found. In collaboration with computer scientist Ray Smith, the WCC prepared a draft map of the existing footpath system superposed on a recent aerial photograph.

The WCC recommended and collaborated on the installation of two information signboards at the abutting ends of Marion Road on the east and Marlboro Terrace on the west, then developed and posted text for the signboards bearing relevant Park regulations. The WCC also recommended installation of a third, smaller sign at the third public access point to the Park, where Marshall Street and Oliver Road meet and expand to provide layby parking for about six cars.

Plans for 2021: A survey of the Park's herbaceous community, at least its invasive species, had been proposed for 2020, but this activity depended largely on use of WHS GPS units purchased for the Whitney Hill work, and a modicum of related WHS collaboration, regrettably discouraged by the COVID-19 pandemic. Initiation of such research appears problematic, as may Red-backed Salamander monitoring. Replacement of missing cover boards, and the affixing of new laminated labels for all 32

(made ready in 2019) depend on the prospect of their future educational use. Since the boards age with exposure to weathering and risk loss from human disturbance, they will all be removed for safe-keeping if not likely to be usefully employed during the upcoming spring through early fall.

Since the 2015 woody vegetation database represents the fundamental analysis of Park habitat with full quality control by the WCC, a repeat survey would yield the most valuable results of any survey that could conceivably be undertaken. Failing participation of a full student class, the alternative of recruiting a team of student volunteers enlisted for Community Service over summer is a possibility. As a last (but arguably best, because most efficient) resort, several adult volunteers willing to commit a minimum of ten hours apiece could be organized over the course of several months, under contemporaneous WCC supervision. By whatever means an updated survey of woody vegetation can be achieved, this exercise should be the research priority for 2021. In the process of recording these data, woody plant specimens can be collected to complete the WHS herbarium holdings.

The draft map of the Park's major footpaths needs GPS skills to realign selected path segments relative to a few of the sample plot centers, which have been mapped with superior accuracy. The footpath map is relatively schematic. Footpaths simply need reconciliation with sample plot centers where their respective locations fail to sufficiently match the ground truth. This task needs completion so that the final map can be added to the information signboards.

The sign that has been proposed for the parking layby at Marshall Street and Oliver Road would be far simpler than the two weatherproof signboards already in place. A standard metal sheet would suffice, bearing a list of only essential Park regulations, the most important of which is the reminder that dogs must be kept on leash. Installation of the sign will follow the drafting of this list by the WCC.

Over the past few years, a frequent observation among WCC members as well as regular Park users has been that some footpath segments need management to control erosion. The WCC recommends securing the services of a consultant with experience in such matters, with the prospect of implementation either by the DPW or others, or some combination thereof. Since some of the erosion-prone footpaths currently run straight up and down steep slopes, reorientation of such segments should be among the remedial measures considered.

APPENDIX A

Whitney Hill – A Proposal for Development of a Stewardship Plan

Phase 1 General public meeting, to hear citizen opinion about the future of Whitney Hill, and citizen response to the Conservation Commission's proposal for that future. Meetings thereafter to be held periodically as needed, preceded by adequate publicity promulgated through official Town announcement, press notice and communication directly with individual abutters.

Phase 2 Inventory (~ two-year data collection):

Site history from earliest records, investigation of site natural history.

History

- Written references

- Maps (e.g. Sanborn property maps)

- Aerial imagery ca. 1920s to present

- Tree aging by selective core borings

Site ecology

- Geology (at least surficial characteristics)

- Hydrology (e.g. catchment identification)

- Soils (e.g. organic content, pH, major nutrients)

Vegetation

- Major strata (trees, saplings, shrubs, vines, herbs-seedlings)

- Dominant species (size, distribution)

- Invasive exotic species (incl. ranking by degree of threat)

- Others (e.g. mosses, fungi)

- Standing dead trees

- Downed dead wood

- Creation of site-specific herbarium to facilitate consistent identification

Animals

- Birds (species, seasonality, breeding observations)

- Mammals (species observations incl. baiting, tracking, live trapping)

Invertebrates

- Decomposers in topsoil and organic debris

- Pest species (e.g. Winter Moth periodicity, Asian Long-horned Beetle watch)

- Butterflies, dragonflies

- Nocturnal insects by night-lighting

Human use

- Tracks ("desire lines"), major and minor

- Waste disposal (e.g. gardening and construction debris, stump dumping, littering)

- Other

- Adverse impacts (e.g. soil erosion, disturbance of natural vegetation, spread of invasive species).

Mapping

Topography

Location of major invasive species zones

Location of long-term monitoring quadrats

Location of existing human tracks

Aesthetics

Identification of landscape value (e.g. autumn foliage, picturesque trees, unusual wild flowers, tranquility), with heavy reliance on citizen input.

Photographic record of these assets

Identification and refinement of educational opportunities to pursue

Phase 3 Analysis of findings: establishment of an ecological baseline for study of future change, with provision for management as necessary for preservation of its general character.

Listing of the site's most important aspects

Management concerns

Management resources (e.g. individual specialists, volunteer groups, school programs) available to help solve perceived problems.

Management solutions

Phase 4 Stewardship goals and objectives.

Goals: Overall purpose (e.g. enhance public understanding and appreciation of the site, establish the basis of long-term ecological research, reduce unplanned disturbance, control invasive plants).

Objectives: Specific tasks to achieve the goals in measurable steps (e.g. interpretative labeling, ranking of invasive species and zones by degree of threat for priority control).

Stewardship Chart: Assignment of responsibility, time frame, and budget for achieving each objective.

References: Sources of supporting information

Appendices: Additional useful information
