

EAGLE PARK MANAGEMENT PLAN

BRISTOL, VERMONT



DRAFT FOR SELECTBOARD REVIEW

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Bristol Conservation Commission

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A. Existing Conditions

1. General Description of Property

Eagle Park is a 5.5-acre parcel located at 908 Lincoln Road approximately 0.7 mile east of Bartlett's Falls near the Bristol-Lincoln town line (Figure 1). The park offers a sparsely-forested meadow along the New Haven River for bird-watching, picnicking, and recreating, and features the Chuck Baser Memorial Universal Fishing Platform that provides Americans with Disabilities Act (ADA) compliant access to the river for fishing. The property is owned by the Town of Bristol, and is jointly managed by the Bristol Selectboard, the Recreation Department and the Conservation Commission.



Figure 1. Approximate boundaries of Eagle Park, accessed from a parking area on the south side of Lincoln Road (Property boundaries, approximated from Bristol Tax Parcel Maps, are for planning purposes only and do not represent actual surveyed boundaries).

2. Recent History

The town of Bristol acquired the lands of Eagle Park in 2000 during recovery efforts following the flood of July 1998 (Figure 2). Grant funding from the VT Agency of Commerce & Community Development supported site cleanup and buyout of these lands which were subsequently conveyed to the town. A condition of the buyout was that the site remain undeveloped and be incorporated into the Town's park system (Bristol Land Records).

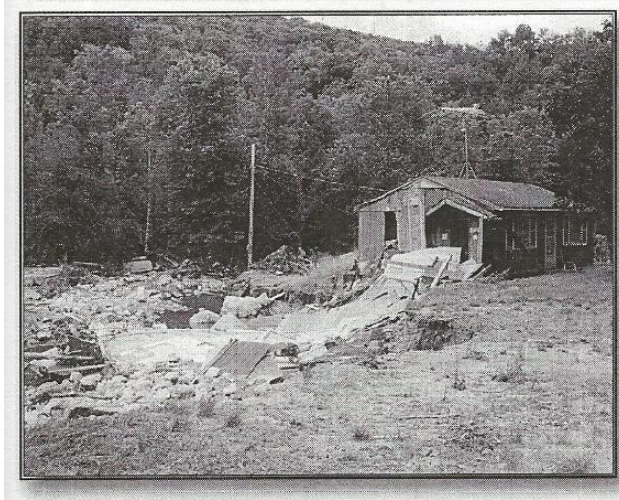


Figure 2. Buildings previously on site were damaged during the 1998 flood. Source: History of Bristol, Vermont: 1762 – 2012, 4th Ed., Bristol Historical Society, 2012

Following acquisition of the parcel in 2000, the town of Bristol maintained Eagle Park as a day-use area with recreational access to the New Haven River. Boulders were installed along the perimeter of the parking area to prevent vehicular access through the park. The grass lawn areas continued to be mowed with access for landscaping equipment permitted through a locked gate along Lincoln Road. A sign for the park was constructed as part of a Boy Scout eagle project (Figure 3).



Figure 3. Eagle Park sign

Beginning in 2009, the Bristol Conservation Commission conceived of a Universally-accessible Fishing Platform (UFP) to be located at the site, for mobility-challenged citizens and visitors to the region. The resulting fishing platform constructed in 2011-2012 is ADA compliant, and was one of the first river-side UFPs located in Vermont (most other platforms are lake-side). Conservation Commission member, Pete Diminico, was instrumental in spearheading this project and oversaw construction. In a ceremony on October 12, 2012, the UFP was dedicated to the memory of Chuck Baser, a past Commission member, enthusiastic angler and advocate for protection of the New Haven River. The platform, designed by Milone & MacBroom, Inc. and constructed by Dock Doctors, won a Vermont Association of Landscape Architects Open Space Honor Award in 2013. The fishing platform was funded through a grant from the Vermont Fish & Wildlife Department, with additional contributions from the Chuck Baser memorial fund, New Haven River Anglers Association, and Bristol Conservation Reserve Fund. Rocky Dale Gardens donated the plants in a perennial garden. An informational kiosk was installed at the edge of the parking lot, and a wheel-chair accessible picnic table was constructed.

3. Ecological Setting

Eagle Park is located in the floodplain of the New Haven River; accordingly, the ecology of the site is closely tied to the river and its flooding history and frequency. General habitat types include:

- Riverine: the river itself and its cobble riffle-pool substrates;
- Riparian: the slopes and vegetation immediately adjacent to the river;
- Floodplain forest: forest between the riparian area and the meadow; and a
- Maintained meadow: a mowed grass field off the parking lot.

Tree species include Eastern Hemlock, White Pine, Ash, Yellow and White Birch, Sugar Maple and Red Maple.



Figure 4. Maintained meadow just south of the Eagle Park gravel parking lot; entry to ADA-compliant gravel-packed access path to Universal Fishing Platform.

4. Wildlife Resources

The intermix of river with forest, forest edge, and meadow provides habitat for white-tailed deer, woodchucks, and numerous bird species. Black bears, moose, bobcats, and grouse have been sighted within the contiguous forest blocks to the north and south of the park. White-tailed deer wintering areas are located within a half mile to the north of the park. A prominent wildlife road crossing is located just east of the park at the Bristol-Lincoln town line connecting the Bristol Cliffs forest block to the south and west with the Drake Woods forest block to the north (Bristol Town Plan, p. 98).

Wild and stocked brook trout are found in the New Haven River adjacent to this park. Annually, since at least 1999, the Vermont Fish & Wildlife Department has stocked year-old brook trout upstream of Bartlett's Falls in the spring months.¹

Macroinvertebrate and fish surveys conducted at the park by VTANR Watershed Management Division in the Fall of 2016 indicated excellent and very good conditions, respectively, with low turbidity and nutrient concentrations (VT Integrated Watershed Information System database accessed March 2022).²

5. Historical and Cultural Resources

Prior to the 1998 flood, these lands were the former location of River Haven Grocery Store and Campgrounds. The grocery store operated year-round; the campground operated from May through December and consisted of five, four-person heated cabins and 15 camping sites, including 8 sites with electrical hookups (History of Bristol, 3rd Ed., 1981).

Prior to 1979, and beginning in 1965, the site operated as Brookside Hide-Away Cabins, and sustained damages during the flood of August 1976 (12 August 1976, Addison Independent).

6. Archeological Resources

To date, no official archeological evaluations are known to have been completed on the property. However, given the ideal juxtaposition of river and low-lying woodlands, it is possible that Native Americans actively used the area, especially as a temporary residence and hunting/fishing ground.

7. Topography and Geology

Eagle Park is positioned on gently-sloping lands that comprise the inside of a meander bend of the New Haven River. Elevations range from 840 feet at the parking lot along Lincoln Road to approximately 800 feet in the river channel at the western property boundary. The New Haven

¹ <https://anrweb.vt.gov/FWD/FW/FishStockingSearch.aspx>.

² <https://anrweb.vt.gov/DEC/IWIS/>.

River has an overall gradient of 2.0% along the park, with steeper gradients in downstream reaches.

Soils at the park include gravelly sandy loams and silt loams (Soil Survey Staff, 2022) that have developed on alluvial sediments carried by the current river and a more ancient river during the centuries following glacial retreat from the landscape more than 20,000 years ago (Springston et al., 2014; Stewart and MacClintock, 1969).

Bedrock underlying the park is more than 500 million years old, and consists of quartzites of the Cheshire Formation (Kim et al., 2014). Regionally, these rocks are part of the Hinesburg Thrust, a fault zone that trends north-south following the Route 116 valley. A thrust fault is a series of older rock layers that are pushed above younger rocks during progressive collision of crustal plates.

8. Hydrology

The New Haven River is a “flashy” river, rising quickly in response to rain and snowmelt events. Several large floods (1927, 1936, 1938, 1976, and 1998) have impacted the watershed, with the 1927 flood being the one of largest magnitude on record. The floods of 1976 and 1998 each resulted in damages to buildings that were previously located at Eagle Park (12 August 1976, Addison Independent; Bristol Historical Society, 2012). More recently, high water in August 2011 and October-November 2019, has damaged the UFP platform and access ramp.

The upstream drainage area of the New Haven River at the Eagle Park location is 48 square miles, or 41% of the total New Haven River watershed which drains to the Otter Creek.

B. Current Uses

Current uses are divided according either to the level of activity or type of use, and include Active and Passive Open Space.

1. Active Open Space

Active open space may be defined as land surfaces utilized for specialized recreational activities, often with equipment in place. The active open space at Eagle Park includes a small picnic area, gravel parking lot, perennial garden, and Universally-accessible Fishing Platform (UFP) with ADA-compliant access ramp. These areas see regular use by anglers, and families, and even host Tai-Chi classes for Elderly Services (Figure 5).

Eagle Park marks the upstream extent of a 1.1-mile length of Class IV rapids known as “The Ledges” (<https://www.americanwhitewater.org/content/River/view/river-detail/2992/main>) White-water kayakers use Eagle Park as a “put-in” location to run The Ledges during ideal flow conditions on the river which can occur from spring through fall of the year. Markings on the underside of the UFP platform have been used to indicate ideal flow conditions with reference to the USGS streamflow gauging station located several miles downstream at Brooksville, VT, near the Route 7 crossing of the New Haven River.



Figure 5. Eagle Park sees regular use by anglers, kayakers, picnickers and fitness classes.

2. Passive Open Space

Passive open space describes an area where the natural condition of the land provides the setting for human activities. Relevant activities at Eagle Park include bird-watching, hiking, fitness, fishing, and wading, and nearly the full park acreage outside of the parking area and UFP / picnic area is classified as passive open space.

C. Current Issues

Along with all the beneficial uses described above, public land may be subject to occasional conflicts of use, inappropriate use or other conditions that pose concerns. Current issues related to use of Eagle Park include:

1. Structural Condition of Universal Fishing Platform and Ramp

Because of its function as an ADA-compliant fishing access, this platform and ramp is purposely located along the river side and is periodically overtopped by floodwaters and receives large woody debris and ice. The platform is anchored between two large glacial boulders to mitigate for impacts from ice, debris and strong currents. Effects of past flood and ice-out events have been usually mild and addressed during annual cleanup activities of the Bristol Conservation Commission and other citizen volunteers (Figure 6). The Conservation Commission directed installation of a concrete ramp on the lower half of the access path in 2018 in an effort to reduce the need for repeated gravel replacement.



Figure 6. Universal Fishing Platform (a) receives ice during thaw event on January 30, 2013. (b) Bristol CC members replace gravel on access ramp to the platform during an August repair activity following flooding on July 1, 2017 that eroded a segment of the walkway.

Two past flood events were sufficiently impactful to result in more substantial damages. Both floods were federally-declared disaster events. The first occurred in 2011 on August 28 during Tropical Storm Irene – a flood with an annual exceedance probability of approximately 3% in the New Haven River watershed (Olson, 2014). The gravel-packed access ramp was washed out, and expenses to restore the ramp were reimbursed, in part, through federal and state grants. The second substantial flood event occurred on November 1, 2019. Heavy rains following a wet October, generated peak flows on the New Haven River with an annual exceedance probability of 1 to 2% (Olson, 2014). Post-event site inspections and survey indicated that floodwaters rose to approximately 1 foot over the top surface of the platform, and the upstream anchoring boulder moved (SLR Corp presentation to Selectboard, 9/27/21). Brackets attaching the platform were separated from the boulder, and the platform is now off-level. The concrete ramp was undermined and cracked.



Figure 7. (a) Large woody debris was caught by the UFP railings during flooding on Oct 31 – Nov 1, 2019. (b) Floodwaters eroded gravel from the access path and the concrete slab cracked when undermined during this same event.

To ensure maximum reimbursement of proposed repairs to the platform and ramp from federal and state agencies under this federally-declared disaster, design plans for repair must be reviewed and approved by the appropriate agencies. The COVID-19 pandemic emerged in the months immediately following the 2019 flood, and led to delays and disruptions to the normal process of FEMA site inspections and design review. In 2021, the Bristol Selectboard engaged the engineering firm that worked on the original construction to conduct an inspection of the site, and develop design plans for repair of the platform and ramp, as well as mitigation designs for FEMA review and approval. Mitigation alternatives include removable railings on the platform, and an access ramp of composite decking founded on helical piles to replace the gravel and concrete access ramp. At the time of this Management Plan update, a determination from FEMA on both the repair and mitigation designs was pending.

2. Use After Dark and Unsanctioned Activities

Overnight use of the park is allowed with prior approval of the Bristol Selectboard. For example, the Boy Scouts have conducted training in the park and camped overnight. Occasional evidence of unapproved overnight use at the park is identified during weekly inspections by the Bristol Recreation Department staff – typically in the summer months.

3. Invasive Plants

Due to its land use history and a seed source from the river, the park contains some invasive plant species. Most evident are Japanese knotweed and shrub honeysuckle; other less offensive plants include wild garlic. However, a complete inventory of invasive plants has not been conducted at the park. Japanese Knotweed along the south side of the access ramp for the UFP has been regularly managed by cutting back mature plants, and hand-pulling young plants and seedlings.

4. Emerald Ash Borer

At least 17 native ash trees have been identified in Eagle Park and two in the park vicinity along the Bristol-Lincoln Road (Figure 8). Approximately half of the trees are in poor condition and all trees are being closely monitored for signs of Emerald Ash Borer infestation by Bristol Recreation Department staff. The Emerald Ash Borer (EAB) Beetle (*Agrilus planipennis*) is an invasive species that has been confirmed in Bristol by the Vermont Department of Forests, Parks and Recreation in June 2019. This beetle represents a serious threat to all native Ash trees in Eagle Park and the surrounding properties. In 2020, The Bristol Conservation Commission, the Town of Bristol and local volunteers have created an EAB strategic management plan that addresses how to best move forward to address this issue. The Bristol Recreation Department

and Conservation Commission will continue to monitor the most recent state guidance and best practices for ash tree management.

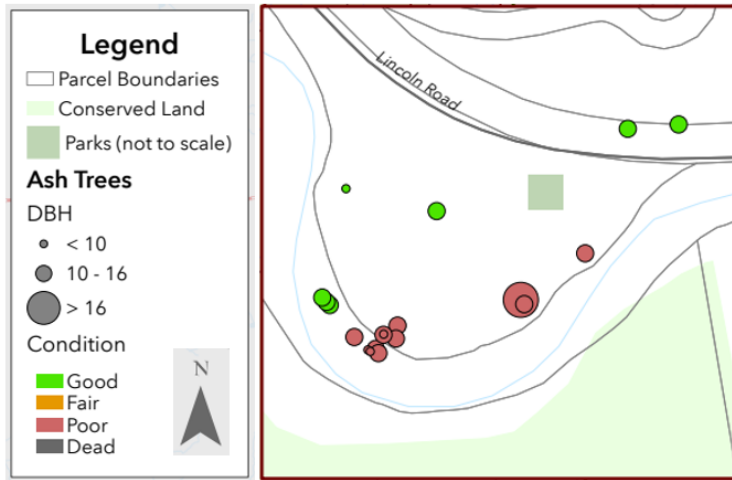


Figure 8. Ash tree inventory in Eagle Park, excerpted inset figure from “Map 1: Emerald Ash Borer Inventory: Bristol, Vermont (2021)” created by Addison County Regional Planning Commission. DBH = Diameter at Breast Height (inches).

5. Boundary Issues

There are no known boundary issues at the present time. The park is bounded by paved Bristol-Lincoln Road to the north, and by the New Haven River along all remaining borders. Across the river from the park are lands owned and maintained by the Green Mountain National Forest.

6. Trash Dumping

Occasional litter has been an issue at Eagle Park, typically concentrated near the parking lot and picnic area. Green Up activities in the spring of each year coordinated by the Conservation Commission have organized citizens to remove trash from the park. The Bristol Recreation Department has added a “Pack it in; pack it out” sign at the entry to the trail off the parking lot. Weekly inspections by the Recreation Department will continue to monitor whether this issue persists.

D. Management Objectives

1. Objectives

Eagle Park is a town-owned open space that has potential for a combination of uses and conditions, including a small area of active recreation and passive open space. The property offers unique opportunities not only for recreational use associated with access to the scenic river, but also for educational activities by school groups and residents.

Management objectives and related management practices must be carefully balanced with the resource concerns and scenic nature of the river itself. Accordingly, listed below are overarching objectives that address both uses and conservation:

- Access to the park by anglers, bird-watchers, and fitness groups is integral to the recreational function of the open space and should be enhanced as best practices allow.
- The use of the park for educational purposes should be pursued and enhanced whenever possible.
- Public access to the park should be weighed against the protection of sensitive resources.

2. Activities by Management Area

To accomplish these objectives, possible activities by management area include the following:

- Active open space: including the small picnic area, gravel parking lot, and Universally-accessible Fishing Platform (UFP) with ADA-compliant access ramp.
 - Birding
 - Photography
 - Gardening
 - Fishing
 - Wading/Swimming
 - Kayaking
 - Picnicking
 - Fitness Classes
 - Ramp maintenance
 - Management of invasive plants
 - Geo-caching
- Riparian zone: a zone approximately 50 feet landward from the outermost edge of the river channel.
 - Fish & invertebrate identification
 - Plant & tree identification
 - Mammal identification
 - No clearing of vegetation is permitted except for dead or damaged trees that may pose a safety hazard.
- Passive open space: areas not included in the other two.
 - Hiking / Fitness
 - Birding
 - Photography
 - Fishing
 - Plant & tree identification
 - Mammal identification
 - Management of invasive plants

Eagle Park is a day-use site open from dawn to dusk. No public access is allowed between dusk and dawn, except for specific activities granted prior approval by the Selectboard. Motorized

vehicles are not permitted at the park. Visitors may enjoy swimming or wading in the river, however no life guard is available. Trespassers between dusk and dawn will be handled according to the Town's Trespass Ordinance.



Figure 9. Access ramp leading to the UFP is flanked by a perennial garden on the north and invasive Japanese Knotweed to the south. (Photo dated prior to 2018).

E. Management Roles

Management of Eagle Park will be achieved through cooperative actions of several groups.

1. Conservation Commission

The Bristol Conservation Commission is a town board with a mission to conserve Bristol's natural and cultural heritage for present and future generations, raise public awareness for these resources and provide opportunities for greater involvement by the community (<http://bristolvt.org/boards-commissions-committees/conservation/>). The Commission has developed this management plan for the park in keeping with implementation actions outlined in the Bristol Town Plan (2020). Along with the Selectboard and Recreation Department, the Commission is charged with maintaining existing public facilities and outdoor spaces that encourage social and leisure time activities among town residents. The Commission works closely with the Recreation Department on maintenance of the park, including tending to the perennial garden and management of Japanese Knotweed along the platform access ramp.

2. Recreation Department

Bristol Recreation Department (www.bristolvt.myrec.com) is committed to offering lifelong learning opportunities through a wide range of quality recreational and performing arts activities to people of all ages. The Recreation Department has contributed to this management plan for the park, and oversees weekly maintenance activities.

3. Selectboard

The Bristol Selectboard is ultimately responsible for recreation and healthy living in the town of Bristol, with support from the Conservation Commission and Recreation Department. The Selectboard reviews and approved this management plan for the park, and works with the Conservation Commission and Recreation Department to secure the necessary resources to maintain and improve the town parks.

4. Department of Public Works

The parking lot is maintained by the Department of Public Works crew or contractors, as determined by the Selectboard and Recreation Department. The lot is plowed in the winter, once primary roads are clear.

5. Other Volunteer Organizations

Other volunteer organizations that may contribute to future maintenance and improvements at the park include the Boy Scouts and Girl Scouts, as well as student groups from Mount Abraham Union High School. The New Haven River Anglers Association, is a regional group dedicated to the protection and enhancement of the New Haven River. Addison County River Watch Collaborative has traditionally posted water quality monitoring results in the kiosk at Eagle Park to communicate results for monitoring stations located upstream and downstream on the New Haven River.

F. Recommended Actions

1. Actions by the Conservation Commission

- Continue active involvement as overseers of the protection and enhancement of the natural resources at the park.
- Continue to coordinate with the Bristol Selectboard on design plans and funding for repair and mitigation of flooding damages to the UFP and ramp.
- Continue to coordinate Green-Up Day clean-ups at the park, including tending to the perennial garden.
- Maintain contents of the kiosk at the park.
- Encourage public participation in on-site invasive management activities.
- Coordinate with experts, watershed groups, and/or academic groups to conduct inventories of invasive species as well as bird, plant, mammalian, fish and invertebrate species at the park.
- Develop management plans for control and eradication of invasive plant species.
- Continue to work cooperatively with Bristol Selectboard, Recreation Department and others for the protection and enhancement of the park.

2. Actions by the Recreation Department

- Continue active maintenance activities at the park including weekly inspections.
- Increase signage and other online notifications that clarify the day-use nature of operations from dawn to dusk.

3. Actions by the Selectboard

- Work with the Conservation Commission on items involving the protection and enhancement of natural resources at the park.
- Work with the Conservation Commission and Recreation Department to provide funding to support activities for repair and mitigation of flooding damages to the UFP and ramp.
- Through activities of the Emerald Ash Borer town committee, inventory the ash trees at the parcel and develop a management plan for these ash trees.
- Closely monitor any actions by the Recreation Department concerning unsanctioned or overnight activities at the park.
- Closely monitor any actions by the Police Department relating to illegal activities at the park.
- Provide oversight of the activities of all municipal boards and public groups at the park.

G. References

- Bristol Historical Society. (2012). History of Bristol, Vermont: 1762-2012. (4th Ed.)
- Kim, J., Gale, M., Chu, K., Cincotta, M., and Cuccio, L. (2014). Bedrock Geologic Map of the Northern Portion of the South Mountain Quadrangle, Addison County, Vermont. Vermont Geological Survey Open File Report VG14-1.
- The Outlook Club. (1981). History of Bristol, Vermont: 1762-1980. (3rd Ed.),
- Soil Survey Staff, (2022). Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at the following link: <http://websoilsurvey.sc.egov.usda.gov/>.
- Springston, G, Thomas, E, and Kim, J, (2014), [Surficial Geologic Map of the northern 2/3 of the South Mountain Quadrangle](#), Vermont: VGS Open File Report VG14-2.
- Stewart, D. P. & MacClintock, P. (1969). The Surficial Geology and Pleistocene History of Vermont. Waterbury, VT: Vermont Geological Survey Bulletin No. 31.
- Thompson, E. H. and Sorenson, E. R. (2000). [Wetland, Woodland, Wildland: A guide to the natural communities of Vermont](#). Hanover, NH: University Press of New England.
- Town of Bristol. (2020). Bristol Town Plan.