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| **Maine Natural Resource Conservation Program**  **Management Plan Template 2013** |
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|  |
| **Organization** |
| **Author and title** |
|  |

*The general outline that follows is designed to assist in the development of the Long-term Management Plan for MNRCP Projects. Objectives and tasks are provided for illustrative purposes only and may not represent management requirements for every site. Items in italics are for guidance and should be deleted and replaced with the pertinent information.*

*Maps of similar content may be combined as long as the information they are to convey is clear and well-defined.*

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# Geographic Information

**Site Name:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Township/County:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Total Site Size:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Type of Ownership:** (i.e., fee or conservation easement; if easement include landowner’s name) .

**Date Acquired:**  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# Introduction

## Purpose of Management plan

Conservation of this property was funded (“in part”, if other funders were involved) by the Maine Natural Resource Conservation Program as compensation for unavoidable impacts to resources under the Maine Natural Resources Protection Act. The purpose of this management plan is to ensure that the property is managed and maintained in perpetuity in accordance with the Project Agreement between [*the project sponsor*], The Nature Conservancy, and the Maine Department of Environmental Protection.

## Long-Term Steward and Responsibilities

The Long-Term Steward of the site is [*steward name*]. \_[*Steward name*], and subsequent Long-Term Stewards if the property is transferred, shall implement this management plan, managing and monitoring the property in perpetuity to preserve its habitat and conservation values in accordance with the MNRCP Project Agreement.

## Management Plan Review

The management plan will be reviewed at a minimum once every 5 years by the Long-Term Steward. The plan may be revised or supplemented with additional information and management recommendations. Any revisions other than edits that change the management actions beyond standard maintenance activities will be reviewed with MNRCP, MDEP and U.S. Army Corps of Engineers.

# Property Description

## Setting and Location

*Describe the location and general physical setting of the property: rural, urban, forest, field, upland, wetland, streams, etc. Detailed natural resource information will be described in section V. Note if the property is adjacent to other conservation holdings. Provide maps of:   
1) the general vicinity to show the parcel location in relation to municipal boundaries, major roads, lakes and streams, and other distinguishable landmarks, and   
2) the parcel which shows the property boundaries on a topographic map or aerial photo.*

## Directions and Access

*Include driving directions, legal access points for the property, and information on parking and trailhead amenities (include road map with trailhead and parking locations, if applicable).*

## History and Land Use of Property

### Acquisition History

*Describe the MNRCP project sponsor’s acquisition of the site, including funding sources, as well as historic land ownership, if known.*

### Land Use

*Describe past and present land use including farming/agriculture, forest harvest history, development history, history of recreational use, etc.*

### Cultural Features

*Describe all existing architectural features including roads, trails, buildings, stone walls/fencing, water control structures, boat launches, historic areas, etc., and their intended future use on the property.*

### Existing Easements or Other Restrictions

*Include descriptions/locations of any existing easements, rights-of-way or leases, their nature (buried pipeline, overhead power, ingress/egress, snowmobile trail, mineral or timber rights or other interests held by others), authorized users (if known), access procedures, etc.*

### Archeological Sites

*Describe any known archeological sites without providing their specific locations on the property, and include a summary of the results of any site surveys/inventories, including who conducted them. An assessment of the impacts of management should be given for such sites.*

### Human Use Map

*Include a human use map showing locations of cultural features, including: roads, hiking and/or snowmobile/ATV trails, structures, boat launches, easements, rights-of-way, leases, etc.*

### Legal Documents Appendix

*Legal documents such as deeds, legal description, rights-of-way, deed restrictions, survey, mineral rights, conservation easements, Notice of Grant Agreements, conditions of transfer, etc. may be included in an Appendix as applicable.*

## Adjacent Land Uses

Description of adjacent uses -- *Detail the baseline adjacent land uses. These land uses may change over time; however, the description of the baseline conditions will give the Long-Term Steward some idea of the conditions present when the management plan was first developed.*

# Natural Resources

*Documentation of the current conditions on the site*

## Aquatic Resources

*Describe all wetlands, streams and aquatic resources on the site with acreage/length, species and general characteristics and habitat quality*.

*Include maps showing all aquatic resources on the site*

## Baseline Description of Biological Resources

* 1. **Biological Species and Communities**

*Include a general description of biological and other natural resources including but not limited to: natural community structure, natural resource inventory data, wildlife use, conservation targets, natural disturbance, assessment of native vs. invasive and non-native species, an overview of native plant species present, if applicable, including their habitat and management.*

*Include maps of resources*

*Complete lists of species may be included in Appendices.*

*If invasives are present see subsection F “Threats” below*

* 1. **Endangered, Threatened and Rare Species, and Species of Special Concern** 
     1. *Describe all federal and state endangered and threatened species that occur or may occur on the site. Provide a map showing locations, if applicable.*
     2. *Describe all rare species and species of special concern such as MDIFW/MNAP mapped species and community occurrences that occur or may occur on the site. Provide a map showing locations, if applicable.*

## Soils & Geology

*Describe soils & geology on the site*. *NRCS has a information on soils data online:* [*http://soils.usda.gov/*](http://soils.usda.gov/)*;* [*NRCS online soil survey data: http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm*](file:///C:\Users\kjensen\Documents\NRCS%20online%20soil%20survey%20data:%20http:\websoilsurvey.nrcs.usda.gov\app\HomePage.htm)*.*

*An informational brochure about the soil data can be found at:* [*ftp://ftp-fc.sc.egov.usda.gov/NSSC/pub/WSS\_brochure.pdf*](ftp://ftp-fc.sc.egov.usda.gov/NSSC/pub/WSS_brochure.pdf)*.*

*The Maine Office of GIS has geological data layers (*[*http://www.maine.gov/megis/catalog/*](http://www.maine.gov/megis/catalog/)*).   
A soils scientist or other professional may also be used.*

*Include a soils and geology map. This map may be combined with the Hydrology and Topography map; see section below.*

## Hydrology and Topography

*Describe hydrology and topography of the site. Describe surface flows onto and off of the site. Indicate whether wetlands are driven by surface flows (i.e., fluvial systems) or groundwater flows from offsite sources. Describe the Strahler order (*[*http://usgs-mrs.cr.usgs.gov/NHDHelp/WebHelp/NHD\_Help/Introduction\_to\_the\_NHD/Feature\_Attribution/Stream\_Order.htm*](http://usgs-mrs.cr.usgs.gov/NHDHelp/WebHelp/NHD_Help/Introduction_to_the_NHD/Feature_Attribution/Stream_Order.htm)*) of the streams onsite, a description of the channel structure and a summary of the regional climate.*

*To the extent possible, include a hydrology and topography map.*

## Summary of Restored or Enhanced Resources

*If restoration/enhancement has taken place (or will take place) on the property, describe all restored or enhanced resources, including acreages and/or lengths. Include final, as-built plans and a map showing the locations.*

## Threats (existing or potential)

*Identify areas that may be of management concern or items that may compromise biological integrity over time. Include any known or potential issues such as:*

1. **Motorized Vehicle Use**
2. **Waste Disposal**
3. **Invasive Species, Pests and Pathogens**

*Invasive species threaten the diversity or abundance of native species through competition for resources, predation, parasitism, interbreeding with native populations, transmitting diseases, or causing physical or chemical changes to the invaded habitat. Describe any current invasive species infestations on the site or in adjacent areas and include a map showing locations.*

1. **Vandalism and Encroachment**

# Management Vision & Goals

*Describe the overall vision and goals for management of the site as a whole into the future.*

*The overall goal of long-term management is to foster the long term viability of the resources, and any listed species/habitat. Routine monitoring and minor maintenance tasks are intended to assure the viability of the site in perpetuity. Those chosen to accomplish monitoring responsibilities will have the knowledge, training, and experience to accomplish monitoring responsibilities. An objective of this long-term management plan is to conduct regular monitoring to identify any issues that arise, and use adaptive management to determine what actions might be appropriate. Adaptive management means an approach to natural resource management which incorporates changes to management practices, including corrective actions as determined to be appropriate. Adaptive management includes those activities necessary to address the effects of climate change, fire, flood, or other natural events. Before considering any adaptive management changes to the long-term management plan, the Long Term Steward will consider whether such actions will help ensure the continued viability of site’s biological resources and conservation values.*

*Sample goals: The primary management goal is to preserve the ecological integrity of the various wetlands located on the property while simultaneously providing limited human access to this unique ecological area through a network of pedestrian trails.*

*OR The preserve shall be forever used, operated and maintained in its current undeveloped and open space condition, for the long-term protection of wetlands, conservation of wildlife and other natural resources. Low-impact recreation and nature observation will be allowed.*

*OR The future condition of the property will be high value, forested wetlands with associated, upland buffers. Long-Term Steward will manage the property as habitat for wildlife and as a recreational/educational resource for the public. No forestry or active wildlife management is planned. The existing woods road/trail on the property will be maintained for low impact recreation and nature observation.*

*A bulleted list of goals may be included.*

**To reach these goals, the Long-Term Steward will: *(examples)***

* *Maintain the property in its undeveloped state.*
* *Maintain the quality of the existing natural resources.*
* *Maintain and expand Best Management Practices that limit soil erosion and protect local water quality;*
* *Provide regulated, passive recreational opportunities where appropriate;*
* *Protect, maintain, and enhance existing cultural (aesthetic) resources; and*
* *Facilitate educational opportunities relating to natural resources, natural resource management, and conservation.*

## Permitted Uses: *(examples)*

* 1. *Passive Recreation (hiking/walking, snowshoeing, cross-country skiing)*
  2. *Hunting & fishing – may be allowed on the site but are not specifically funded or a part of this long-term management plan.*
  3. *Recreational leases (camps, snowmobiles, etc.)*

## Prohibited Uses: *(examples)*

1. *Off-road/motorized vehicles*
2. *Camping or overnight use*
3. *Fires*
4. *Cutting or removal of vegetation*

## Public Use Guidelines: *(i.e., general guidelines Long-Term Steward has developed for its holdings – if* *desired and applicable*)

* *Carry in, carry out*
* *Day-use only*
* *Keep dogs on leash at all times*
* *Stay on the trails*
* *Respect abutting private property*
* *Avoid disturbing plants and wildlife*

# Management Actions

*This section includes the actions that need to be taken over time to maintain the site. Subsections may include:*

## *Natural Resources*

1. *Management of wetlands, streams and other natural resources*

***Objectives:*** *Monitor, conserve and maintain the site’s natural resources. Limit any impacts to resources from human use, vehicular travel, invasive species or other adverse impacts*

* *Action: At least one annual walk-through survey will be conducted to qualitatively monitor the general condition of these habitats. General topographic conditions, hydrology, general vegetation cover and composition, invasive species, erosion, will be noted, evaluated and mapped during a site examination. Notes to be made will include observations of species encountered, water quality, general extent of wetlands and streams, and any occurrences of erosion, structure failure, or invasive or non native species establishment.*
* *Action: Establish reference sites for photographs and prepare a site map showing the reference sites for the file. Reference photographs will be taken of the overall site at least every five years from the beginning of the long-term management, with selected reference photos taken on the ground more frequently, \_\_\_\_\_ times per year (if applicable).*

*Special attention should be paid to any area adjacent to or draining from off-site lands. Streams and wetlands should be observed near bank boundaries to observe if increased sediment deposition has occurred. The report should provide a discussion of any recent changes in the watershed (i.e., subdivision being developed upstream of stream bank).*

1. *Ecological Monitoring for Threatened/Endangered/Rare/Special Concern Species [If applicable. The methodology used may vary for different plant and animal species as determined in consultation with the appropriate agencies]*

***Objectives****: Monitor population status and trends. Manage to maintain habitat for* ***\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_****.*

* *Action: Monitor status every year by conducting population assessment surveys. The annual survey dates will be selected during the appropriate period as identified by the applicable agencies and will generally occur from \_\_\_\_\_ through \_\_\_\_\_ each year. Occupied habitat will be mapped and numbered to allow repeatable data collection over subsequent survey years.*
* *Action: Visually observe for changes to occupied habitat, such as changed hydrology or vegetation composition. Record any observed changes. Size of population (1 acre, etc).*
* *Action: Implement other actions that enhance or monitor habitat characteristics for \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.*

1. *Invasive Species, Pests and Pathogens [Note: Species-specific objectives and Actions will need to be developed in consultation with the appropriate agencies]*

***Objectives****: Monitor and maintain control over invasive species, pests and pathogens that diminish native natural resources on the site. The Long-Term Steward shall consult the Invasive Plant Atlas of New England (available at:* [*http://nbii-nin.ciesin.columbia.edu/ipane/*](http://nbii-nin.ciesin.columbia.edu/ipane/) *) or appropriate state or federal agencies for guidance on what species may threaten the site and on management of those species.*

* *Action: Mapping of presence of invasive species, pests and pathogens presence shall occur during the first five years of site management, to establish a baseline. Mapping shall be accomplished through use of available technologies, such as GIS and aerial photography.*
* *Action: Each year’s annual walk-through survey (or a supplemental survey) will include a qualitative assessment (e.g., visual estimate of cover) of invasive species. Additional actions to control invasive species will be evaluated and prioritized as needed.*

*Attached to this plan are fact sheets (including identification aid) for all invasive/non-native species known to be present on the site.*

1. *Vegetation Management (if approved as part of MNRCP award)*

***Objectives****: Adaptively manage vegetation based on site conditions and data acquired through monitoring to maintain biological values. Analyze effects of any authorized forestry, agricultural or field maintenance activities on the wetland, streams, and buffers on the site. If determined appropriate, develop and implement specific vegetation management techniques (e.g., selective thinning) in coordination with MNRCP. [Site specific targets for vegetation may be specified here and actions revised or added to achieve those targets].*

* *Action: If determined to be in accordance with MNRCP requirements, develop a forest management plan for review and approval by the MRNCP.*
* *Action: Implement vegetation management techniques, as approved by MNRCP.*

## Infrastructure and Facilities, Security and Public Access

1. *Gates, Parking, Fences, Signage, and Property Boundaries*

***Objective****: Monitor and maintain condition of gates, parking areas, fences, signage, and property boundaries to prevent casual trespass, allow necessary access, and facilitate management.*

* *Action: During each site visit, record condition of parking areas, gates, fencing, signs, crossings, and property boundaries. Record location and type of any maintenance issues, with recommendations for resolution, if applicable.*
* *Action: Maintain gates, fences, signs, crossings and property boundary markers as necessary. Repair or replace as necessary, and as funding allows.*

1. *Roads, Trails and Structures*

***Objectives****: Create/maintain trails to allow public access as necessary and in accordance with the MNRCP Project Agreement. Include a summary of OPDMD assessment. Monitor and maintain condition of roads, trails and structures to facilitate management, public use, and prevent adverse impacts to wetlands, streams and other resources. Retire unnecessary sections of existing road.*

* *Action: During each site visit, record condition of roads, trails and structures. Record location and type of any maintenance issues, with recommendations for resolution, if applicable.*
* *Action: Maintain roads, trails and structures as necessary. Replace as necessary, and as funding allows.*

1. *Trash and Trespass*

***Objectives****: Monitor sources of trash and trespass. Collect and remove trash, repair vandalized structures, and rectify trespass impacts. Specifically address any ATV issues, existing or potential.*

* *Action: During each site visit, record occurrences of trash and/or trespass. Record location and type of any trespass issues, with recommendations to avoid, minimize, or rectify trash and/or trespass impacts.*
* *Action: At least once yearly collect and remove as much trash as possible and repair and rectify vandalism and trespass impacts.*
* *Action Take appropriate action to address issues of vandalism or trespass, including but not limited to:*
  + *Outreach to violators*
  + *Placement of boulders, gates or other obstructions to prevent access*
  + *Contacting local law enforcement*

# Funding and Task Prioritization

## Funding

*Long-Term Steward will oversee implementation of the management plan, monitoring activities, and long-term stewardship of the property. With assistance from stewardship volunteers, the Long-Term Steward will maintain and monitor the property in perpetuity.*

*Table 1 summarizes the anticipated start-up/development costs for the site. Table 2 summarizes the anticipated annual costs for long- term management for the site After initial start-up costs, annual costs associated with the long-term maintenance of the property are estimated to be $\_\_\_\_\_ . $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ will be/has been placed into a stewardship endowment to be maintained by \_\_\_\_\_\_\_\_ and distributions from the endowment will cover costs associated with stewardship of the property, if applicable. With the current annual estimated capitalization rate of \_\_\_\_ the total endowment amount required will be $****\_\_\_\_\_\_\_\_\_\_\_\_\_****.*

[*The sample lists of tasks in Tables 1 and 2 are not meant to be exhaustive. Some sites may have more elements to consider and some may have fewer depending on the attributes of the site*]

## Task Prioritization and Cost Estimates

**Table 1: Schedule of Start-up Activities** *(examples)*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Goal** | **Action** | **Priority** | **Target Date** | **Completed By** | **Cost** | **Notes** |
| Infrastructure | Boundary Line Marking | 1 | Summer 2013 | Steward | $200 |  |
| Infrastructure | Install Gates and locks | 1 | Summer 2013 | Contractor | $1,000 |  |
| Infrastructure | Parking lot development | 2 | Fall 2013 | Contractor | $5,000 | Gravel and equipment costs |
| Infrastructure | Trail Planning & Development | 3 | Spring-Fall 2014 | Steward & volunteers | $1,000 | Mileage & equipment |
| Infrastructure | Design/Purchase Signs | 1 | Spring 2013 | Steward | $500 |  |
| Infrastructure | Install Signs | 2 | Summer 2014 | Steward & volunteers | $50 | Mileage & equipment |
| Natural Resources | Establish baseline for monitoring | 2 | Summer 2013 | Steward & volunteers | $200 |  |
| Infrastructure | Garbage Dump Cleanup | 2 | Summer 2013 | Contractor | $5,000 |  |
| Infrastructure | Install Boulders/ Barricades | 1 | Spring 2013 | Contractor | $4,000 |  |
| Natural Resources | Invasive species baseline | 1 | Summer/Fall 2013 | Steward & volunteers | $200 |  |

**Total Start up Costs:\_\_\_\_\_\_\_\_**

**Table 2 Estimated Annual Costs** *(examples)*

|  |  |  |
| --- | --- | --- |
| **Cost** | **Cost per year** | **Notes** |
| Staff Time | $2,000 |  |
| Trail Maintenance | $500 |  |
| Property Taxes | $5.000 |  |
| Boulder/Road Barricade Maintenance | $400 |  |
| Sign Maintenance/replacement | $100 |  |
| Trash Removal | $500 |  |
| Brochures, Information | $100 |  |
| Mileage | $200 |  |
| Monitoring | $500 |  |
| Boundary Marking (every 5 years) | $100 | 5 year cost/5 for cost per year |
| Management Plan Update (every 5 years) | $50 | 5 year cost/5 for cost per year |

**Total Annual Costs:\_\_\_\_\_\_\_\_\_\_\_\_**

# Literature Cited

# Appendices

*May include: species lists, Other Power Driven Mobility Device (OPDMD) assessment form(s), legal documents, historical documents, etc***.**