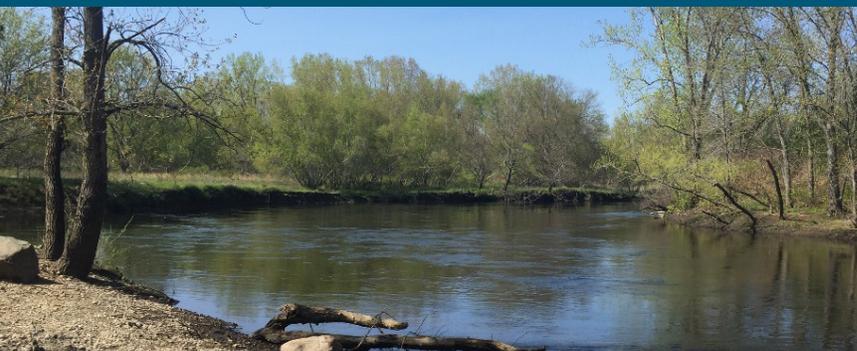


REUSE ASSESSMENT

Operable Unit 2 - Peterson/Puritan, Inc. Site
Lincoln and Cumberland, Rhode Island

FINAL
APRIL 2018



Introduction

The Peterson/Puritan, Inc. Superfund site (Peterson/Puritan site) is located in the towns of Cumberland and Lincoln, Rhode Island. The site includes two operable units along the Blackstone River. Operable Unit 1 includes the former Peterson/Puritan manufacturing facility and other industrial uses. Operable Unit 2 (OU2) includes several different waste disposal areas.

EPA's Superfund Redevelopment Initiative is sponsoring a reuse assessment to identify community reuse and aesthetic goals that can be considered during remedial design of OU2 of the Peterson/Puritan site.

Overview

OU2 of the Peterson/Puritan site is located within the Blackstone River Valley National Heritage Corridor. The Corridor was established by Congress in 1986 in recognition of the "unique and significant contributions to our national heritage of certain historic and cultural lands, waterways and structures within the Blackstone River Valley" including the region's textile milling, agricultural and transportation infrastructure history.

In 2015, EPA selected a remedy for OU2 that addresses contaminated floodplain soils, sediment, and groundwater within OU2 by excavating and capping waste in two containment systems. As part of the remedy selection process, EPA evaluated a number of design measures for capping that address the need to maintain the aesthetic and habitat characteristics of the riparian corridor consistent with the Blackstone River Valley National Heritage Corridor. This reuse assessment provides recommendations for integrating community goals for access and vegetation into the remedial design.

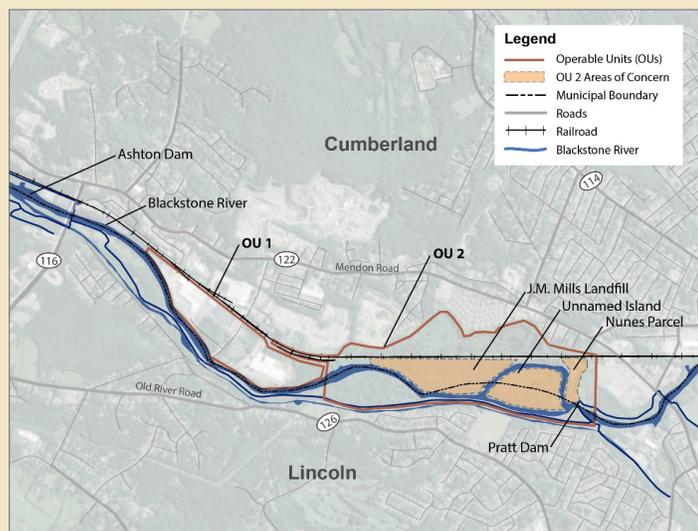


Figure 1. Site Operable Units and Context

Community Goals

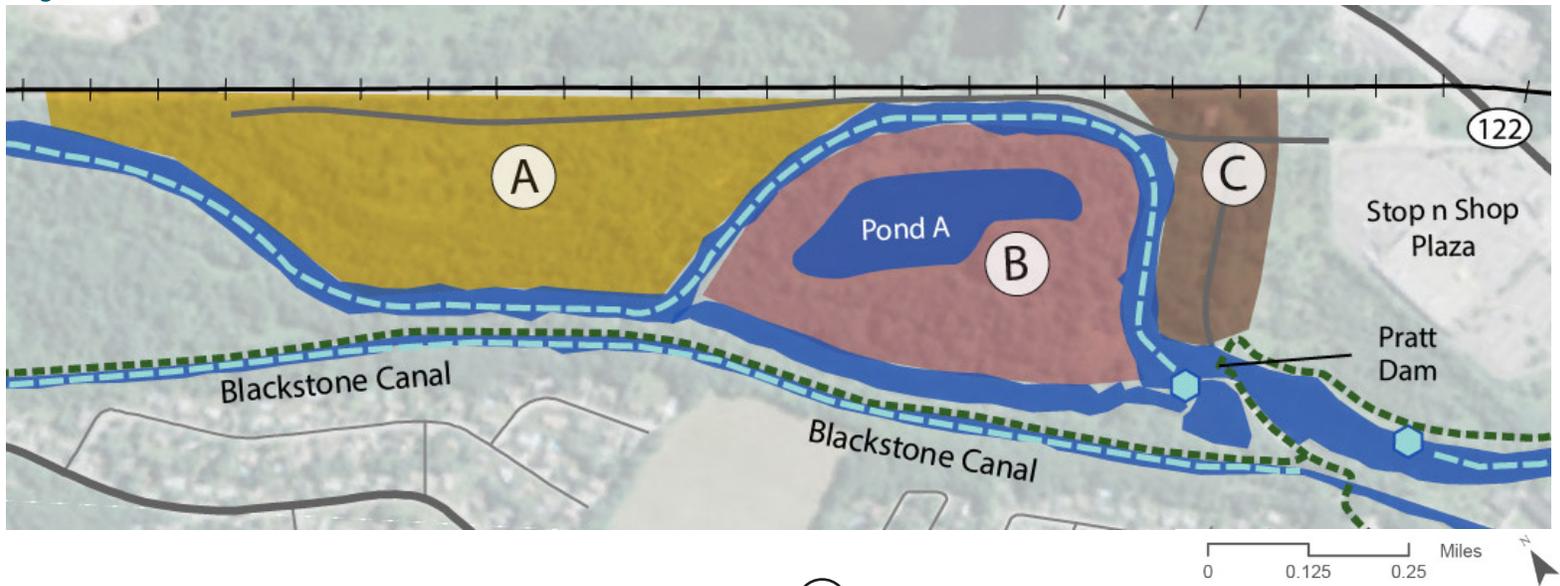
Throughout the remedial process, EPA has shared information and collected public comment regarding the Peterson/Puritan site. To develop community goals for OU2, the project team shared known priorities based on past public meetings and comment periods where community members had expressed their priorities for the site. Additionally, the project team hosted a public meeting for community input in May 2016, which was well attended by the community.

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Remedy Overview & Status

Figure 2. OU2 Areas of Concern



OU2 Areas of Concern

OU2 includes three disposal areas: the J. M. Mills Landfill, the Nunes Parcel, and the “Unnamed Island”. When in operation, all areas operated as a single disposal facility where waste was brought and deposited on the site.

A J.M. Mills Landfill

The approximately 30-acre former J.M. Mills Landfill is located in the northeastern portion of OU2 and is bordered by the Providence and Worcester Railroad, transmission lines, Blackstone River and Nunes Parcel.

Remedial considerations include:

- Consolidation of wastes from riverbank and floodplain
- Recontour existing landfill profile (3:1 slopes)
- Construction of Subtitle C cap
- Protective under 500-year flood conditions
- Stormwater controls
- Landfill gas collection system
- Revegetation

B Unnamed Island

The Unnamed Island is an approximately 25-acre area located within the Blackstone River 100-year floodzone and floodway. It is surrounded by the main and back channels of the river and the Pratt Dam.

Remedial considerations include:

- Excavate, consolidate and cap waste on Nunes Parcel

C Nunes Parcel

The Nunes Parcel is an approximately 8-acre area located at the southern end of OU2 bordered by a commercial shopping plaza, the Blackstone River, Pratt Dam and the J.M. Mills Landfill.

Remedial considerations include:

- Demolition of structures
- Consolidation of wastes in capped area Subtitle C landfill (3:1 slopes)
- Protective under 500-year flood conditions
- Stormwater controls
- Landfill gas collection system
- Revegetation

Site Remedy

- Soil cleanup levels have been established assuming continued monitoring and maintenance. The OU2 remedy will result in two landfills capped consistent with the requirements of a RCRA Subtitle C landfill.
- Landfill capping criteria will influence surface vegetation, drainage and riverbank stabilization options.
- The selected remedy anticipates future recreational use with emergency access.

Initial community reuse goals were identified through a review of public comments submitted related to the remedial design. The project team confirmed the following reuse goals during a community meeting held in May 2016 at the Cumberland Library.

Access

Blackstone River Bikeway

- Maintain existing Blackstone River Bikeway trails and expand onto site as appropriate and consistent with site remedy features.

Pratt Dam Portage and River Access

- Maintain existing portage take-out/put-in locations above and below the Pratt Dam.
- Improve and maintain portage walking route.
- Improve on-river signage warning at portage take-out location.
- Consider canoe/kayak rack with local yearly rental options.
- Consider a small dock or pier for fishing access.

Emergency Vehicle Access

- Maintain emergency vehicle access across Nunes Parcel.
- Consider including emergency vehicle access when developing new pedestrian/bicycle/vehicle routes.

Recreational Use & Programming

- Prioritize low-impact uses that balance public access and wildlife habitat.
- A range of low-impact uses could be considered including walking, hiking, biking, cross-country skiing, snowshoeing and small boat use. Include restrictions or limitations for ATVs, off-road motorcycles, dirt bikes and snow mobiles.
- Consider including a range of trail options for emergency and maintenance vehicle access, ADA compliance and narrow footpaths.
- Include recreational stewardship support services for maintaining cleanliness, safety and security of site.

Aesthetics & Vegetation

- Views of OU2 from the Blackstone River, the Blackstone River Bikeway, Lincoln and Cumberland are the most important to consider for aesthetics.
- A combination of vegetation and hardscape materials can be used to prevent river bank erosion.
- Prioritize native grasses, wildflowers, shrubs and trees that are appropriate for the southern New England climate and consistent with the Blackstone River Corridor.



The Blackstone River Bikeway (top) as it approaches the site and the Blackstone River portage area.



Low-impact walking trails with scenic views are a priority for nearby residents.



Maintaining and improving views of the site from the surrounding area will increase the aesthetic and recreational value of the Blackstone Heritage Corridor.

Site Access

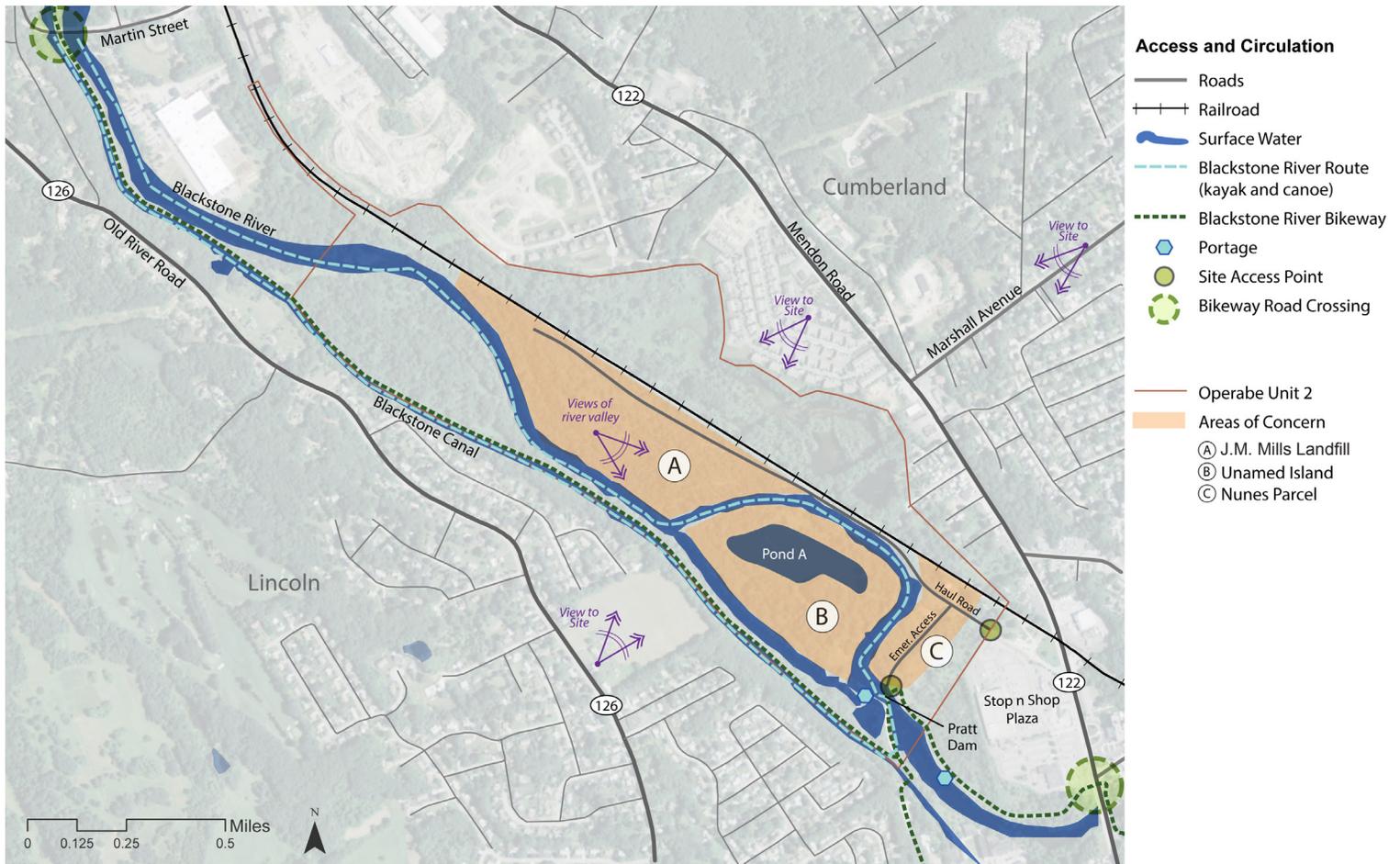


Figure 4. OU2, particularly the J.M. Mills Landfill, is visible from along Old River Road in Lincoln, from neighborhoods adjacent to the site and along Marshall Avenue in Cumberland. In addition to vehicular access, the site is accessible by bicycle, via the Blackstone Bikeway at the Martin and Mendon Road crossings, and via small boat on the Blackstone River.

Site Access

Route 122 is the main vehicular connector road to the site. Vehicles can enter the site via an existing haul road on the Nunes Parcel. Emergency vehicles can also access the site via this entrance. If public access was acquired for the Nunes Parcel, visitors could access the site via car, by bicycle along the Blackstone River Bikeway, or via small boat with portage before the Pratt Dam. The community has requested that emergency vehicle and public access be integrated into the remedial design.



View of the site from atop Marshall Avenue. The trees in the middle portion of the photo are on the J.M. Mills portion of the site.

Reuse Opportunities

The Peterson/Puritan site currently supports portions of the Blackstone River Bikeway, a multi-use trail and greenway that is now part of the Blackstone River National Historical Park. Additional public access options explored through the reuse assessment are highlighted below:

Continued Bikeway Use

The Blackstone River Bikeway could remain in active use during remedial activities and after remediation is complete. The Bikeway currently traverses along the edges of the Nunes Parcel and Unnamed Island parts of OU2.

Canoe Trail

The Blackstone River Corridor through the site will continue to include a blue-way trail for small boating use, enabling visual access to all three parts of OU2. Maintaining a portage route across the Pratt Dam is a key priority.

Expanded Public Access and Use Areas

Emergency service vehicle access routes are part of the Nunes Parcel remedial design. With its proximity to the bikeway and commercial retail areas, expanding public access trails to a walking or biking loop around the Nunes Parcel with a direct connection to the commercial center offers a near-term public access option. A viable owner and stewardship partner is needed to enable public access to any part of the site.

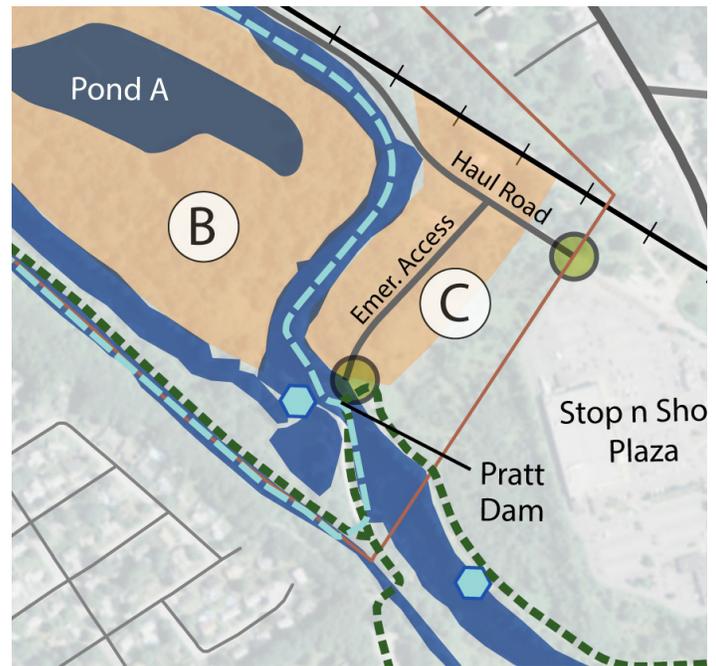


Figure 6. OU2 - Nunes Parcel Reuse Opportunities include continued bikeway, canoe and emergency vehicle access while expanding public access trails throughout the Site.



The Blackstone River Bikeway currently provides paved trails for walking and bicycling. Extending these trails onto the Peterson/Puritan site post-cleanup will extend recreational amenities for local residents and visitors.

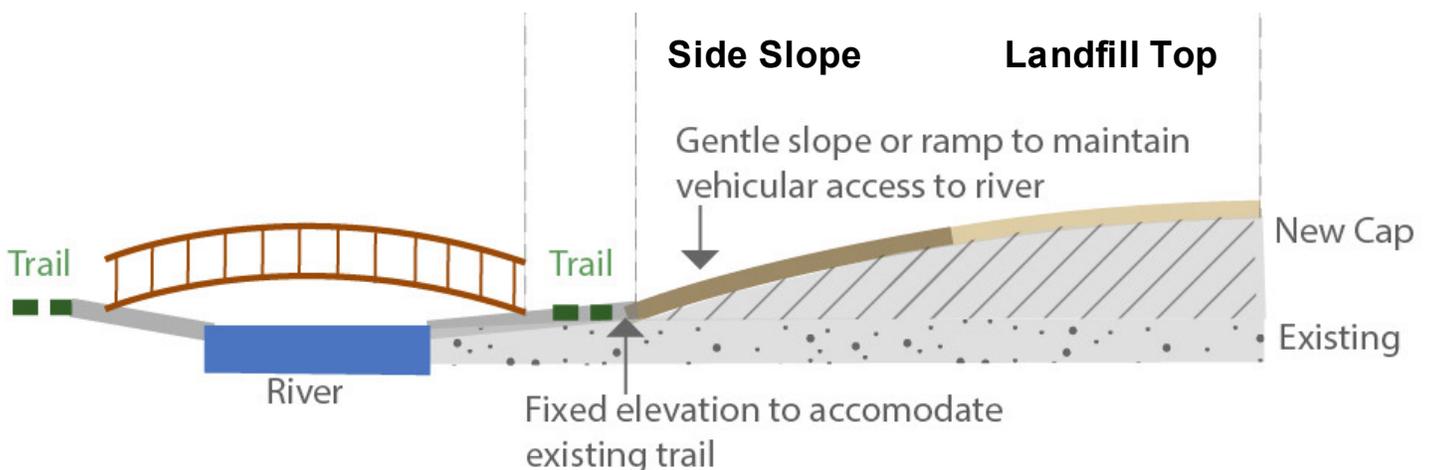


Figure 6. Slope considerations for the Nunes Parcel cap include maintaining existing Blackstone Bikeway trail grades and vehicular access, particularly for emergency vehicles, along the cap to the river.

Vegetation Zones

Figure 3. Vegetation Zones



Vegetation Zones

Based on topography, existing land use, zoning, site cleanup and remedial considerations, Figure 3 highlights three vegetation zones to be used for the site.

1 River Edge and Flood Plain

- Stream bank reinforcement likely needed for J.M. Mills Landfill and Nunes Parcel.
- Engineered or natural alternative options offer flexible stabilization approaches for varying conditions.
- Consider screening cap with taller vegetation planted in flood plains or buffer between river edge and side slope.

2 Side Slope

- Provide natural erosion control. Potential for engineered toe of slope.
- Plant with vegetation that can withstand flooding.

3 Landfill Top

- Provide habitat with a mix of small native shrubs, grasses and forbs.
- Potential for gravel or paved surface for trails and walking.
- Maintain access to methane collection system with potential for vegetative screening.

Vegetation Considerations

Nunes Parcel

Side Slope: Select plants that can withstand flooding, screen landfill side slopes and provide habitat. Consider masking reinforced toe of slope with naturalized river's edge.

Landfill Top: Provide habitat with small shrubs, grasses and forbs. Provide gravel or paved surfaces for trails while screening the methane collection system.

Unnamed Island

River Edge and Flood Plain: Select plants that can withstand flooding, screen landfill side slopes, provide habitat and protect naturalized river's edge.

J.M. Mills Landfill

River Edge and Flood Plain (off cap): Select plants that can withstand flooding, screen landfill side slopes, provide habitat and protect naturalized river's edge.

Side Slope: Select plantings to potentially screen height of landfill and improve river view aesthetics. Consider reinforced toe of slope along river and railroad edge. Consider plantings to control erosion and stabilize slope.

Landfill Top: Provide habitat with small shrubs, grasses and forbs. Provide gravel or paved surfaces for trails while screening the methane collection system.

River Edge & Flood Plain - River edge and flood plain areas could vary in materials including existing stone walls near Pratt Dam (left), vegetated mats and on-site materials for a more naturalized edge (middle) and re-grading to see native grasses and flood tolerant plants (right).



Side Slope - Side slope areas could provide natural habitat abundant with a wide variety of grasses, forbs and shrubs with meandering paths suitable for recreation activities.



Landfill Top - Landfill top areas could provide natural habitat abundant with a wide variety of grasses, forbs and shrubs with meandering paths suitable for recreation activities and opportunities to take in the view.



Ownership & Long-Term Stewardship

The ownership status of multiple properties within OU2 is currently uncertain. To implement the community goals for recreational access, the site needs to be transferred to a viable owner and stewardship partner such as a private owner, local government, land trust or other similar organization. Regardless of which entity owns the property over the long-term, to ensure opportunities for public access and use, local municipalities will need to participate in evaluating options.

Potential Ownership Transfer Options

Several options and considerations for long term ownership are outlined below.

Direct Acquisition

Municipality or some other entity acquires property and retains fee simple ownership.

Benefits/Limitations:

- Clears title to the property.
- Acquisition by the town may require a funding plan to support implementation of the reuse plan.
- Potential public access liability considerations.
- CERCLA (Superfund) liability protections extend to town or other entity consistent with Bona Fide Prospective Purchaser conditions (see below).
- A negotiated acquisition or multi-stakeholder partnership could include provisions for public access, and other land use decisions.

Municipal Acquisition with Transfer to Third-Party

Municipality acquires property, and then transfers title to a third-party to implement reuse plans.

Benefits/limitations:

- Clears title to the property.
- Limits financial responsibility for reuse implementation.
- CERCLA (Superfund) liability protections extend to town or other entity consistent with Bona Fide Prospective Purchaser conditions.
- Ownership transfer could occur at the same time as acquisition, or after the property has been acquired and held for a period of time.
- Simultaneous acquisition and transfer may limit town involvement in reuse decisions. Subsequent transfer could allow the municipality to direct planning, form partnerships, solicit proposals and transfer property to a third-party that has interests consistent with reuse priorities.
- Municipality needs to negotiate with future owner to ensure public access and site reuse; may require partnership or transfer to an entity with a public benefit mandate.



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