

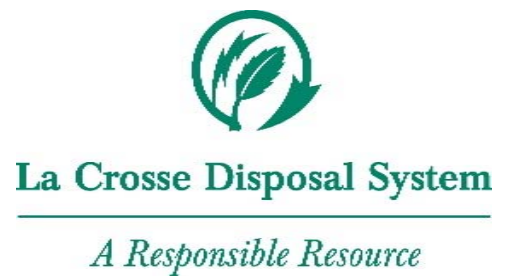


# Master Land Use Plan

La Crosse County Landfill

La Crosse, Wisconsin

November 13, 2015







# LA CROSSE COUNTY, WISCONSIN

## ZONING, PLANNING AND LAND INFORMATION OFFICE

La Crosse County Administrative Center  
400 4th Street North • 3rd Floor  
La Crosse, Wisconsin 54601-3200

Telephone: **(608) 785-9722** FAX: **(608) 785-5922**

November 16, 2015

RE: Landfill Master Land Use Plan

Mr. Henry A Koch, PE, Solid Waste Director  
La Crosse County Solid Waste Department  
6500 State Road 16  
La Crosse, WI 54601

Dear Mr. Koch:

The Master Land Use Plan for the La Crosse County Landfill is an officially recognized policy document by the County of La Crosse. It is intended to guide land use decision making in the region. The 2015 Plan update describes the context for land use planning at the landfill, highlights key accomplishments since the 2008 Master Land Use Plan was completed, and establishes a set of goals and strategies to guide short and long-term land use decision making at the landfill over the next 100 year period.

Sincerely,

Charlie Handy  
Planner  
La Crosse County, Wis.



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# Master Land Use Plan

## La Crosse County Landfill

### Executive Summary



## INTRODUCTION

La Crosse County (County) is tasked with managing the 350-acre La Crosse County Landfill (Landfill) site to achieve a balance of economic, social, and environmental land use objectives. In 2011, the County adopted a Master Land Use Plan for the landfill (MLUP) to guide land use decisions at the site.

This 2015 five-year update to the MLUP was initiated to:

- Plan for site utilization and conservation, to provide services to the public and protect the natural resources both during operations and after closure
- Develop the foundation of appropriate recreation both during operations and after landfill closure
- Preserve a buffer from adjacent rapid development patterns and to provide much needed open space in a rapidly developing area
- Recognize the unique nature of the site and its significant transitions from prairie to forest, meadow to bluff
- Utilize the planning process to assist policy makers in supporting collaborative decision-making aligned with adjacent municipal and county-wide planning efforts
- Continue to involve the public in landfill site land use decision
- Work with stakeholders, especially adjacent landowners on collaborative land use projects
- Maximize the asset value of the landfill through pro-active planning and management
- Promote phasing of activities, to utilize the large time horizon of the operations of the site and to establish present and future activities
- Create and maintain a base map for the landfill and potentially adjacent properties that identifies:
  - Ecological resources
  - Adjacent land uses and compatibilities
  - Service delivery and future spatial needs

---

### La Crosse County Solid Waste Management History

#### 1970s

Open burning dumps common in the region; first cell opened at the County landfill

#### 1980s

County contracts with Xcel Energy (formerly Northern States Power) to provide municipal solid waste (MSW) for use as fuel at Xcel's Waste to Energy facility

#### 1990s

Modern subtitle D landfill cell constructed at County landfill site

#### 2000s

1970s era County landfill remediated; new landfill capacity added; new pollution control equipment installed at Xcel facility; Solid Waste Policy Board (SWPB) established; Household Hazardous Material (HHM) facility opened; County and Wisconsin Department of Natural Resources (WDNR) approve SWMP

#### 2010-2015

Hauler rebate program successfully implemented; landfill gas-to-energy partnership implemented; Master Land Use Plan approved; single stream recycling adopted by cities of Onalaska and La Crosse; updated Solid Waste Management Plan prepared; Department joins WI DNR Green Tier program

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**“The La Crosse County Master Land Use Plan is a unique opportunity to protect, plan, and develop the best our landscape has to offer.”**

Sue Howe, Executive Director, 7 Rivers Region  
Outdoor Recreation Alliance

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La Crosse County Solid Waste Department



View of the La Crosse County landfill site



Special Waste Manager Randy Nedrelo guides local Boy Scouts on a tour of the landfill



Shingle recycling at the materials processing pad

## PLAN CONTEXT AND KEY ACCOMPLISHMENTS SINCE 2011

The Department has completed, and is continuing implementation of several items identified as priorities in the 2011 MLUP, including:

- Development of a Conceptual Natural Resource Management Plan (NRMP) to improve the ecological health and expand the community benefits of the site. The NRMP document also includes the Trail and Recreation Master Plan (TRMP) and Ecological Monitoring Plan (EMP), both of which are described below.
- Development of a TRMP that includes an inventory of existing trails, a vision for future trails and a framework for other recreational opportunities at the site
- Development of an EMP to measure improvements and make management changes as needed
- Construction of a pedestrian bridge over wetlands on the site and of additional trails on the site through the adjacent woods
- Engagement of a variety of stakeholders in decision-making processes and project implementation, through a significant public outreach effort
- Preparation of plans for a surface water management basin, including discussions with the Ho-Chunk Nation to design an effigy mound in the shape of a bear
- Initiation of the process to relocate and redesign the landfill entrance
- Implementation of new technologies to utilize landfill resources more responsibly, including partnership with Gundersen Health System to transport methane gas from decomposing landfill waste to Gundersen's nearby Onalaska campus where the gas is used as fuel to generate heat and electricity
- Construction and expansion of a materials processing pad for beneficial use materials
- Increased disposal capacity for Municipal Solid Waste (MSW)
- Improvement of ecological conditions on the site
- Benchmarking of ecological conditions (i.e. bio blitz and NRMP) to identify opportunities to improve ecological conditions that are sustainable and appropriate for current land use
- Implementation of a highly successful funding mechanism, citizen drop-off area user fees, in order to support trail and other recreational improvements
- Receipt of multiple awards recognizing high level of achievement at the landfill

## GOALS AND OBJECTIVES

The goals of the 2015 MLUP update are organized into three categories:

### Short Term Goals: Current Projects (0 to 5 years)

- Update MLUP every five years
- Based on recently completed Blue Ridge Landfill Study, evaluate day to day operations to limit impacts outside of landfill areas and maximize air space consumption
- Complete landfill entrance reconfiguration
- Develop an organizational leadership structure to help guide MLUP implementation
- Work collaboratively with adjacent landowners, area municipalities, and other key stakeholders on implementation
- Work with community groups to maintain and improve existing facilities including but not limited to trails and ecological enhancements
- Continue design and construction of recreational trails and facilities
- Design and implement ecological restoration activities
- Continue to ensure compatibility of economic development adjacent to site
- Provide more interpretive opportunities at the landfill

### Medium Term Goals: Life of the Landfill (5 to 30 years)

- Increase capacity in solid waste landfill
- Continue design and construction of recreational activities
- Continue to provide more interpretive opportunities at the site
- Continue to improve wildlife habitat through ecological restoration
- Continue to ensure compatibility of economic development adjacent to site
- Continue to enhance aesthetic and natural beauty of the site
- Monitor outcome of Xcel contract renegotiation and implement relevant contract requirements related to land use

### Long Term Goals: Landfill Closed (30 to 90 years)

- Perform 40 years of mandated long-term care
- Ensure landfill long-term site care is sustainable
- Finalize design and installation of closed landfill features
- Find alternative locations and/or approaches for solid waste management and related activities
- Serve as a hub for a variety of local and regional trails
- Serve as a significant asset to the region by providing interpretive



Trail building at Landfill

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**“The La Crosse Landfill should be considered a valued future public trust investment. The land is stunningly beautiful and has extraordinary character associated with its diversity..”**

7 Rivers Region Outdoor Recreation Alliance

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The landfill will serve a variety of recreational interests in the future

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**“Just because it’s a landfill it doesn’t have to look like a dump”**

Henry A. Koch, PE, Director  
La Crosse County Landfill

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Photo of immature Bald Eagle flying over landfill

**The MLUP provides a blueprint for creating valuable wildlife habitat within an urban setting that embraces a variety of key site features including prairies, forest, meadows, and bluffs.**



Solid Waste Director Henry Koch provides site orientation for participants in a recent Bio-Blitz



Photo of Brown Snake at landfill

opportunities, quality wildlife habitat, natural beauty, and open space for the region.

- Continue to ensure compatibility of economic development adjacent site.

Plan objectives provide more detail regarding how goals can be achieved. They are organized into the three categories: Ecological Restoration, Trail and Recreation, and Landfill Operations.

### Ecological Restoration Objectives

Planning for habitat restoration can begin quickly, progressively and sequentially. Related objectives include:

- Design and implement demonstration projects with neighbors such as native plantings in idle space in adjacent business parks
- Design and implement shared stormwater infrastructure and conservation development designs with willing adjacent landowners. Where feasible, emulate smaller, decentralized restored landscape features that can serve as wildlife habitat and park features
- Begin and complete the cleanup and restoration of the outer perimeter lands and next inside perimeter ring
- Continually promote the landfill ecological restoration by establishing a program or event, and/or coordinating with an existing program or event, for the purpose of communicating the restoration vision for the landfill property
- As appropriate, perform construction in future years in a manner that creates more natural contours
- As appropriate, create defined drainage-way features that add to the aesthetic beauty of the landforms
- Create secluded and quiet places with landforms. The landforms could be planted to augment the calm and peace one feels in a natura, wildlife-rich environment
- Create safe overlooks, promontories and observation areas on ridge tops, linked with trails and walking paths
- Restore bedrock features and dry prairies in sand overburden materials
- If feasible, establish an on-site tree nursery for producing stock for plantings, restore tree cover for forest and savanna restoration by direct seeding rather than planting individual trees, and continue tree test plots program.
- Re-grow healthy soils on the site by constructing a soil mixing and creation staging area.
- Develop interpretive messages/signage/style

## Trail and Recreation Objectives

The La Crosse County Solid Waste Department has invested in the conservation of natural resources and diversification of recreational opportunities while continuing its solid waste disposal and recycling activities. Working with the City of La Crosse, Outdoor Recreation Alliance, and other partners the landfill has begun building multi-use trails and mountain biking trails. Trail and recreation goals and objectives will be phased in as budgets allow, and if feasible at the time, and as landfill cell closure opens up areas for trails and recreational uses.

Specific objectives related to future trail and recreational development are listed below:

- Design the site for public access in the near future and sequentially open newly restored areas
- Expand trail system to serve walkers and hikers, bicyclists, mountain-bikers, and cross-country skiers
- Create scenic overlooks from tops of closed landfill caps and in natural settings to view the Mississippi River Valley
- Establish an interpretive center at the current landfill office
- Provide interpretive signs, displays, materials and programs to explain the ecology of the restored prairie, savanna, and woodland
- Create a BMX park
- Establish a sledding hill on a portion of a closed landfill cap
- Provide increased trail connectivity to off-site areas, such as north of Highway 16 and an underpass or overpass to reach areas south of I-90
- Continue to develop partnerships for trail construction and maintenance

## Landfill Operations Objectives

The remaining permitted site life for Phase 1 through Phase 8 of the landfill is 27 years, however with continued use of the Xcel facility or some similar solid waste processing facility, the landfill life may last well over 50 years. Therefore, landfill operations will continue to be a primary focus of land use planning over the next several decades.

Key objectives over this time period include:

- Finalize design and construct new entrance to landfill
- Continue to enhance the citizens drop off area
- Continuously identify new ways to maximize air space (alternative waste processing, improve waste compaction, waste diversion/re-use opportunities, etc)
- Attract compatible land uses adjacent to the landfill and promote economic development opportunities

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**Creating off-site “green fingers” will link the landfill to adjacent open space, neighborhoods, and businesses, providing both ecological and recreational benefits.**

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Photo of Boardwalk construction at landfill



Redesigning the landfill entrance will help reduce traffic congestion

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**“The Outdoor Recreation Alliance will be contributing to the dialogue to ensure these lands remain accessible and become part of the fabric of the community...”**

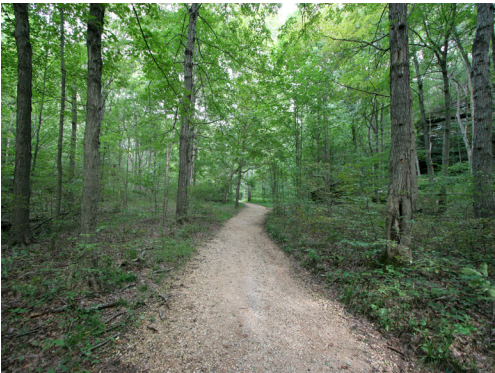
7 Rivers Region Outdoor Recreation Alliance

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Events at the landfill, such as Take Your Supervisor to Work Day, provide opportunities for decision-makers and other stakeholders to learn more about the operations and amenities at the site

**The La Crosse County Landfill Land Use Advisory Committee will engage the public and build support for recommendations contained in the 2015 MLUP.**



Looking Ahead: The landfill will provide multiple ecological, recreational, and cultural benefits

**“People support that which they help create”.**

Unknown Author

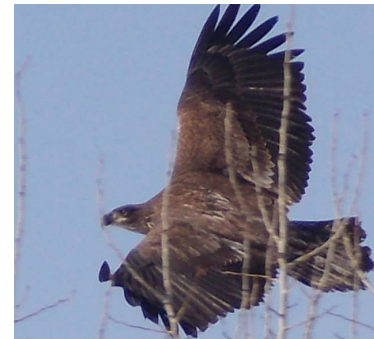
## IMPLEMENTATION

Implementing the MLUP will require a long-term sustained effort on behalf of many individuals, system partners, organizations, businesses, elected officials, and other landfill stakeholders.

It is recommended that the County create a La Crosse County Landfill Land Use Advisory Committee. The committee would oversee implementation of the MLUP, engage the public and build support for the Plan’s recommendations related to land use at the landfill. The committee should be comprised of representatives from the La Crosse County Board of Supervisors, the parks departments of the cities of La Crosse and Onalaska, and several members from communities neighboring the facility.

### Key Recommendations for 2016-2020:

- Recommend and adopt 2015 MLUP (2015)
- Construct landfill entrance improvements (2016)
- Begin to develop physical buffer area separating landfill operations from recreational improvements (2016-2017)
- Establish a formal Land Use Advisory Committee (2016)
- Develop a strategic plan for fundraising (2017)
- Develop a more detailed restoration and management plan for individual projects (2015-2016)
- Develop a research plan with partner educational institutions (2016-2017)
- Prepare for 2020 NRMP and TRMP updates (2018-2019)
- Update Master Land Use Plan (2018-2019)



For a full copy of the Master Land Use Plan, including detailed recommendations visit the Department's website:

<http://www.co.la-crosse.wi.us/solidwaste>

To arrange for a tour of the landfill contact the Department at:

608.785.9572





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# Master Land Use Plan

## La Crosse County Landfill

### 1.0 Introduction

La Crosse County (County) is a recognized leader in solid waste management in the region, the state of Wisconsin, and nationally. The County's Solid Waste Department (Department) is tasked with carefully managing the La Crosse County Landfill (landfill) in order to achieve a desired balance of economic, social, and environmental land use objectives. The term "landfill" is used to refer to the 350 acres of land owned and managed by the County. This land is a tremendously valuable asset for the region, and includes not only land dedicated to landfill operations but also high value recreational open space and ecological landscapes.

The County's Master Land Use Plan for the landfill (MLUP), adopted in 2011, establishes a clear approach to guide land use decisions at the landfill. The 2015 MLUP is a five year update which describes several key accomplishments since the 2011 MLUP was prepared (See Appendix 2011 Master Land Use Plan).

The 2015 MLUP also reflects and incorporates key findings and recommendations from the recently completed La Crosse County Landfill Conceptual Natural Resource Management Plan, Trail and Recreation Master Plan, and Ecological Monitoring Plan (NRMP), as well as the Solid Waste Management Plan (SWMP).

A variety of public participation techniques were used to engage County staff, key stakeholders, area landowners, adjacent municipalities, and the public in the development of these the 2015 MLUP and related planning documents.

### 1.1 Purpose of the 2015 Master Land Use Plan Update

The purpose of the 2015 MLUP update is reflected in the overall goals listed below, which remain unchanged since adoption of the 2011 MLUP.

1. To plan for site utilization and conservation, to provide services to the public and protect the natural resources both during operations and after closure
2. To develop the foundation of appropriate recreation both during operations and after landfill closure
3. To preserve a buffer from adjacent rapid development patterns and to provide much needed open space in a rapidly developing area
4. To recognize the unique nature of the site and its significant transitions from prairie to forest, meadow to bluff
5. To utilize the planning process to assist policy makers in supporting collaborative decision-making aligned with adjacent municipal and county-wide planning efforts
6. To continue to involve the public in landfill site land use decision
7. To work with stakeholders, especially adjacent landowners on collaborative land use projects
8. To maximize the asset value of the landfill through pro-active planning and management

9. To promote phasing of activities, to utilize the large time horizon of the operations of the site and to establish present and future activities
10. To create and maintain a base map for the landfill and potentially adjacent properties that identifies:
  - Ecological resources
  - Adjacent land uses and compatibilities
  - Service delivery and future spatial needs

Figure 1 – Setting of Landfill



## 2.0 Plan Context

This section of the MLUP summarizes information contained in the 2011 MLUP, as well as recent related land use planning efforts. It sets the stage for the Goals and Objectives described in Section 4. A copy of the 2011 MLU is provided in Appendix A.

## 2.1 Regional Context

The landfill site is located in west central La Crosse County, Wisconsin, and borders several municipalities including the cities of Onalaska and La Crosse and the towns of Onalaska, Medary, and Hamilton (See '1' in figure 2 on the next page). The landfill was built in the late 1970s, on land previously used for agriculture.

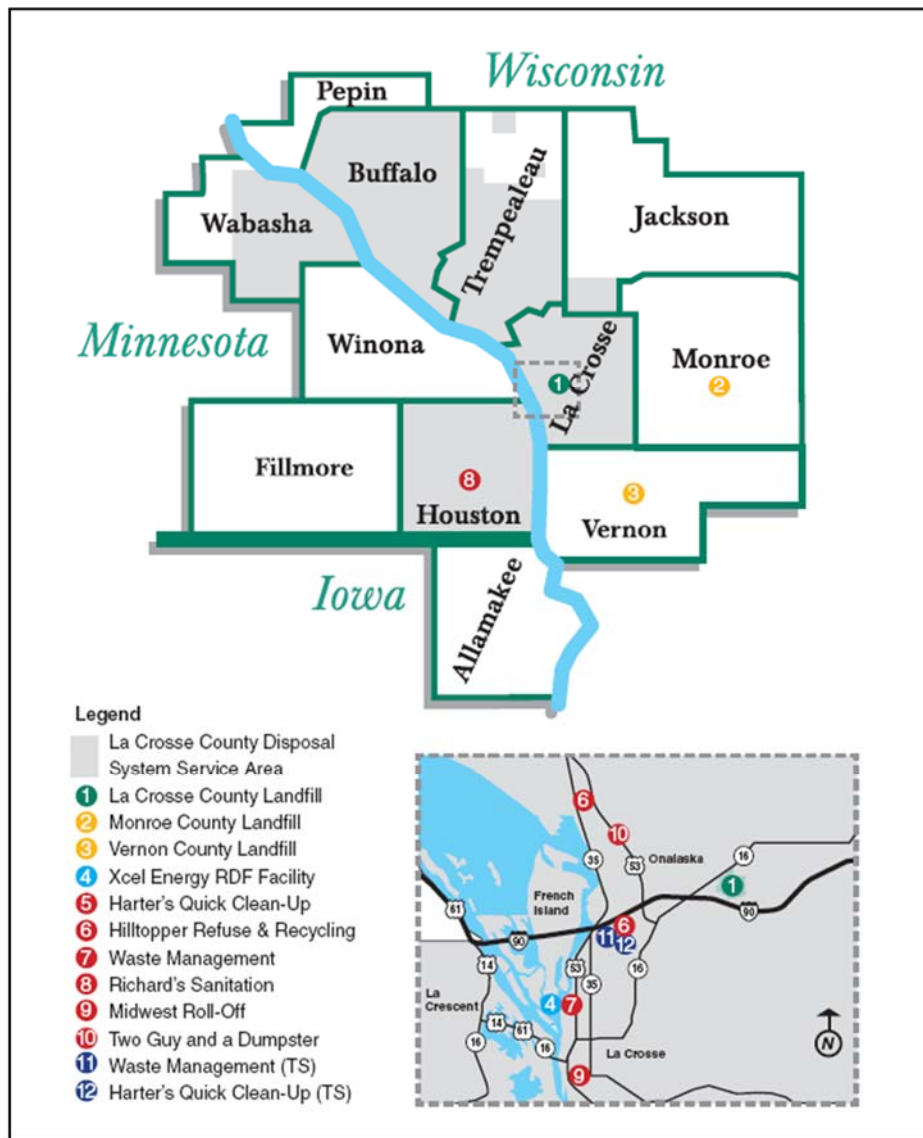


Figure 2 – Solid Waste Facilities in the La Crosse Regional Disposal System

The map below illustrates the scope of existing activities and land uses at the landfill. The eastern border of the site remains as forested bluff lands, while much of the western area of the site has been used for landfill operations over the years. For more information on trails see Appendix B La Crosse County Landfill Conceptual Natural Resource Management Plan, Trail and Recreation Master Plan, and Ecological Monitoring Plan (NRMP)



Figure 3 – La Crosse County Landfill Base Map

## 2.2 Current and Future Landfill Capacity

In 2006 the Department completed an expansion approval process, resulting in additional air space. The Department is currently constructing new cells in accordance with previously approved expansion plans.

As of January 1, 2015 the remaining constructed air space for the active municipal solid waste landfill (Phase I through Phase VI, and Phase VII Module 1 and Phase VIII Module 1) was estimated at 668,133 CY. Based on the filling rates from 2011 through 2013, the remaining permitted site life for Phase I- Phase VIII is 27 years.

Looking beyond 27-year time frame, there is enough land available for an additional expansion, however the exact life of the landfill is dependent upon many different factors. Given the remaining permitted site life, future potential expansions, and long-term care mandates, it is clear the County's vision must look nearly 100 years into the future. Over this same period, it is likely that urban growth and industrial development adjacent to the landfill property will consume surrounding land.

Sound land use decision-making is needed to assure the protection, restoration and maintenance of the land for habitat and recreational uses both within and adjacent to the landfill.

## 2.3 Land Use and Development Trends

In La Crosse County there is an estimated 190,000 acres of developable land according to an Existing Land Use Study (2014) conducted by the County, along with the La Crosse Area Planning Committee (LAPC). The study was completed to provide data for both the update to the La Crosse County Comprehensive Plan and the 2035 La Crosse and La Crescent Metropolitan Area Transportation Plan (MTP).

However, the demand for developable land continues to grow, especially for areas such as the landfill site, which border the cities of Onalaska and La Crosse.

Property values and development pressure have significantly increased in this area of La Crosse County. Additional utility and roadway investments will be required to continue this trend. It is anticipated the pressure to develop this land into a higher value, denser development will continue to drive the property values of adjacent properties up and make the expenditure for additional public infrastructure feasible.

As additional development occurs in the vicinity of the landfill, it is important to acknowledge that because of ongoing waste settlement and the potential for landfill gas migration, the landfill itself may need to remain undeveloped except for ecological, recreational, and cultural enhancements. Likewise, it will be important to limit non-compatible development in those areas immediately adjacent the landfill.

## 2.4 Planning for the Future

Future plans for the landfill site must reflect key site features, a broadly shared vision for the site as identified by the public and key stakeholders, as well as recently completed land use related planning documents.

### 2.4.1 Key Site Features

As identified in the 2011 MLUP, the land is stunningly beautiful and has extraordinary character associated with its diversity - from the high quality forests on the ridge tops,

primarily dominated by native plant communities, to the vistas over the larger landscape from the site and from nearby roads. In addition:

1. The property is a conservation and open space hub, which could serve as a large conservation center from which radiating "spokes" link the forested ridge tops, roadways with restored native landscapes, the La Crosse River corridor, and perhaps restored open spaces and habitats in adjacent private properties.
2. It may also serve as a connector that, once restored, could become a vital link in the County's open space preservation and park and recreation programs. By linking conservation areas, the property has potential to significantly increase in conservation and recreational values.
3. Whether it is viewed as hub or connector, the property should be viewed as a conservation seed, able to inspire and leverage the growth of relationships with adjacent private properties, corporate lands and other public lands, thus increasing the publicly available open space and protected conservation areas in La Crosse County.

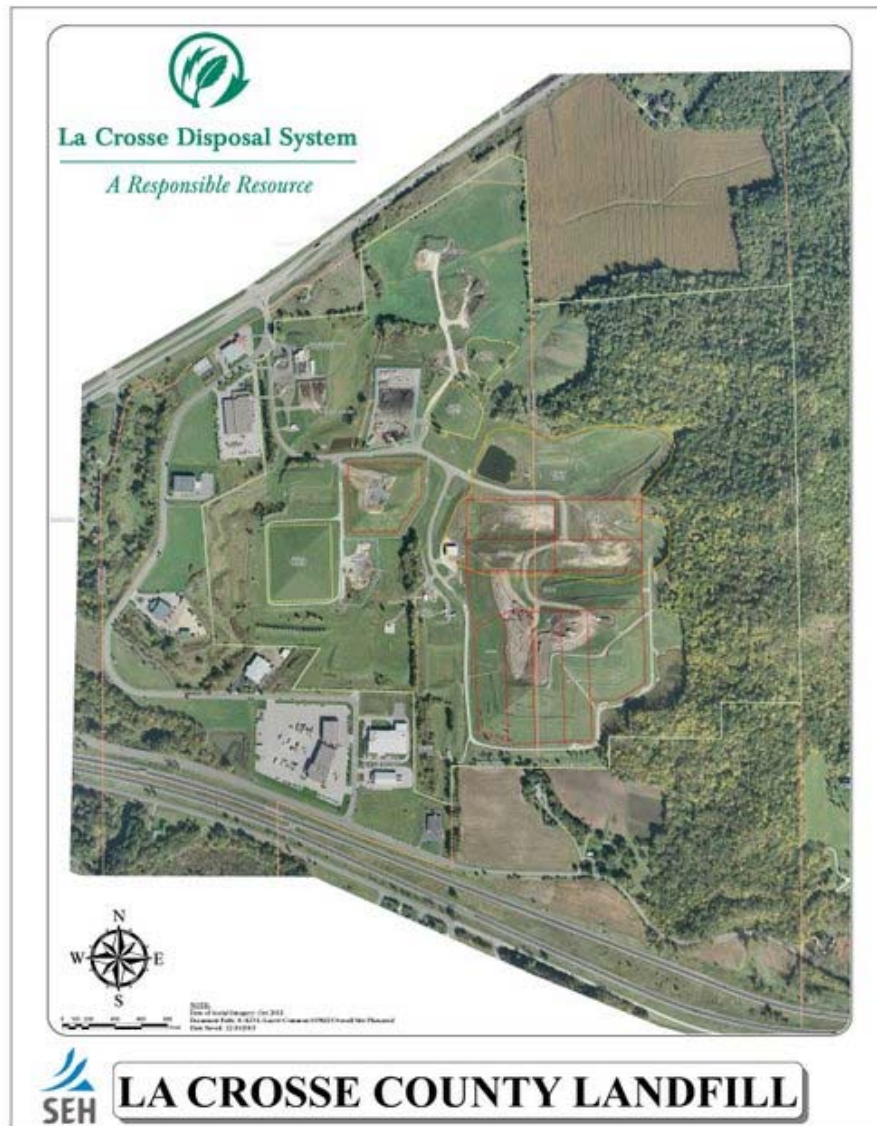


Figure 4 – La Crosse County Landfill Aerial Photo

## 2.4.2 Vision for the Landfill Site

The 2011 and 2015 MLUP included multiple opportunities for public participation including informational meetings, stakeholder meetings and interviews, presentations at Solid Waste Policy Board (SWPB) meetings, newsletters and other feedback mechanisms. Key themes which emerged from the public participation activities included:

1. The importance of walking trails on this site
2. A desire for appealing aesthetics. Both on-site and off-site viewsheds are important
3. Concern for improved traffic safety especially at the north entrance (Berlin Drive)
4. A commitment to effective storm water management, including major drainage areas, identification of wetlands, and best management practices
5. A desire to keep the property attractive, and to retain it as open space

In addition to these themes, many participants noted they were not aware the site was an operating landfill on a large site. This presents an opportunity to further promote the current public amenities and engage more stakeholders in future land use planning discussions.

Based on stakeholder input and additional analysis, an overall site vision was established during the preparation of the 2011 and 2015 MLUP. The site vision identified key focus areas to guide land use decision-making in the short-term, medium-term, and long-term. A majority of these phased priorities remain relevant in 2015, and will continue to serve as a broad framework for guiding land use decision-making at the landfill over the next five year period 2016-2020. They include:

### **Short Term: Current projects 0 to 5 years**

- Continue to design and build recreational amenities
- Continue to implement ecological and interpretive site enhancements
- Investigate the purchase of additional right-of-way and the redesign of the entrance, scale, and public drop off area
- Promote suitable economic development adjacent to site

### **Medium term: Life of the Landfill 5 to 30 years**

- Increase capacity in the solid waste landfill
- Continue design and construction of recreational amenities

### **Long term – Landfill closed 30 to 90 years**

- Complete design and installation of final land use
- Find alternative location for solid waste facility
- Perform 40 years of mandated long term care for the landfill



## **2.4.3 Recent Related Planning Efforts**

### **2.4.3.1 Conceptual Natural Resources Management Plan, Trail & Recreation Management Plan and Ecological Monitoring Plan (2015 NRMP)**

The 2015 NRMP brought together representatives of the landfill, local municipalities, and other stakeholders to articulate a long-term vision for the landfill, resulting in the following vision statement:

“The La Crosse County Landfill is a national model for demonstrating to and educating the public about the sustainable management of waste, while simultaneously providing exceptional interpretive and recreational opportunities for the community.”

Several short-term goals (1-5 years) were identified in the NRMP and TRMP, including:

- Attracting more people to the site to witness and learn about responsible waste management
- Providing more interpretive opportunities regarding: waste reduction, re-use, recycling; sustainable lifestyles; the site’s unique history and ecology; and ecological restoration
- Providing more public trails and recreational opportunities
- Enhancing the aesthetic and natural beauty of the site and improving wildlife habitat through ecological restoration
- Hosting community events at the landfill
- Establishing links to universities and schools to promote research and study at the site (a “living lab”)

Several long-term goals (5-100 years) were also identified in the NRMP and TRMP, including:

- Becoming a hub and connector for a variety of local and regional trails; becoming a popular community destination in the region and source of pride
- Having the ability to look back at far-sighted and innovative decisions made today and see how they have left a meaningful legacy for the La Crosse region and beyond

See Appendix B for a full copy of the report, which includes a summary of the extensive public participation efforts which informed plan development.

### **2.4.3.2 Solid Waste Management Plan (2015)**

The updated SWMP identified strategic issues related to financial sustainability, waste security, and other key priorities. The SWMP also identified land use as a priority strategic issue and included several recommendations to guide future decision-making. These recommendations are listed below.

1. Developing and systematically implementing a comprehensive funding strategy to ensure the plan is adequately funded
2. Providing more interpretive opportunities
3. Implementing ecological restoration activities and trails/recreation at the landfill
4. Engaging with educational institutions to use the landfill as a “living lab”
5. Identifying appropriate beneficial re-use opportunities adjacent to the landfill
6. Identifying stormwater management and other environmental service opportunities
7. Becoming a hub and connector for a variety of local and regional trails

A key concept that was brought forward during the development of both the 2015 NRMP and the 2015 SWMP was the importance of fostering community support for plan implementation

through partnerships, both existing and new. Strengthening existing and building new partnerships is seen as critically important because they allow the Department to leverage community expertise for activities such as fundraising, maintenance, trail building, and other improvements to the landfill, empowering citizens and other stakeholders to get involved and contribute to the long term vision for the site. Both plans identified the need for a more formal organizational structure to support partnership development. See Appendix C for a copy of the 2015 SWMP.

### 3.0 Key Accomplishments (2011-2015)

Since 2011 there have been several key accomplishments related to land use planning and implementation at the landfill, a summary of which are briefly discussed below.

#### 1. Funding for Trail and Recreational Improvement

Between 2011 and 2015, the Department implemented a funding mechanism to support the development of new trails, pedestrian bridges, and wetland boardwalks at the landfill. Fees paid by users of the popular citizen drop-off area at the landfill are applied directly to these site improvements. This approach is seen as equitable, because the users of the citizen drop off area are the primary users, and most likely to directly benefit from the recreational improvements at the landfill. Additional fundraising efforts will be required to fully implement the goals and objectives described in this plan.

#### 2. Methane Gas Capture and Collection

In 2012, the County and Gundersen Health System teamed up to design and construct a pipeline to transport methane gas from decomposing landfill waste to Gundersen's nearby Onalaska campus. There, the gas is used as fuel to generate heat and electricity, making the campus the only health care facility in the US to be completely energy independent.

#### 3. Conceptual Natural Resource Management Plan

The NRMP supports the landfill's MLUP and is a foundational tool that will enable La Crosse County to improve the ecological health of the landfill, as well as expand the community benefits it provides. It was developed over several years and completed August 17, 2015. It represents a major milestone for land use planning at the landfill. It describes the existing plant communities and wildlife habitats, lays out a vision and goals for improving the site's ecological health, and lists the activities that need to be carried out to achieve those goals.

The document also contains an ecological monitoring plan, which will allow the Department and its partners to measure the success of implementation activities over time, providing a feedback loop to recognize where adjustments should be made in order to achieve the long term vision for the site.

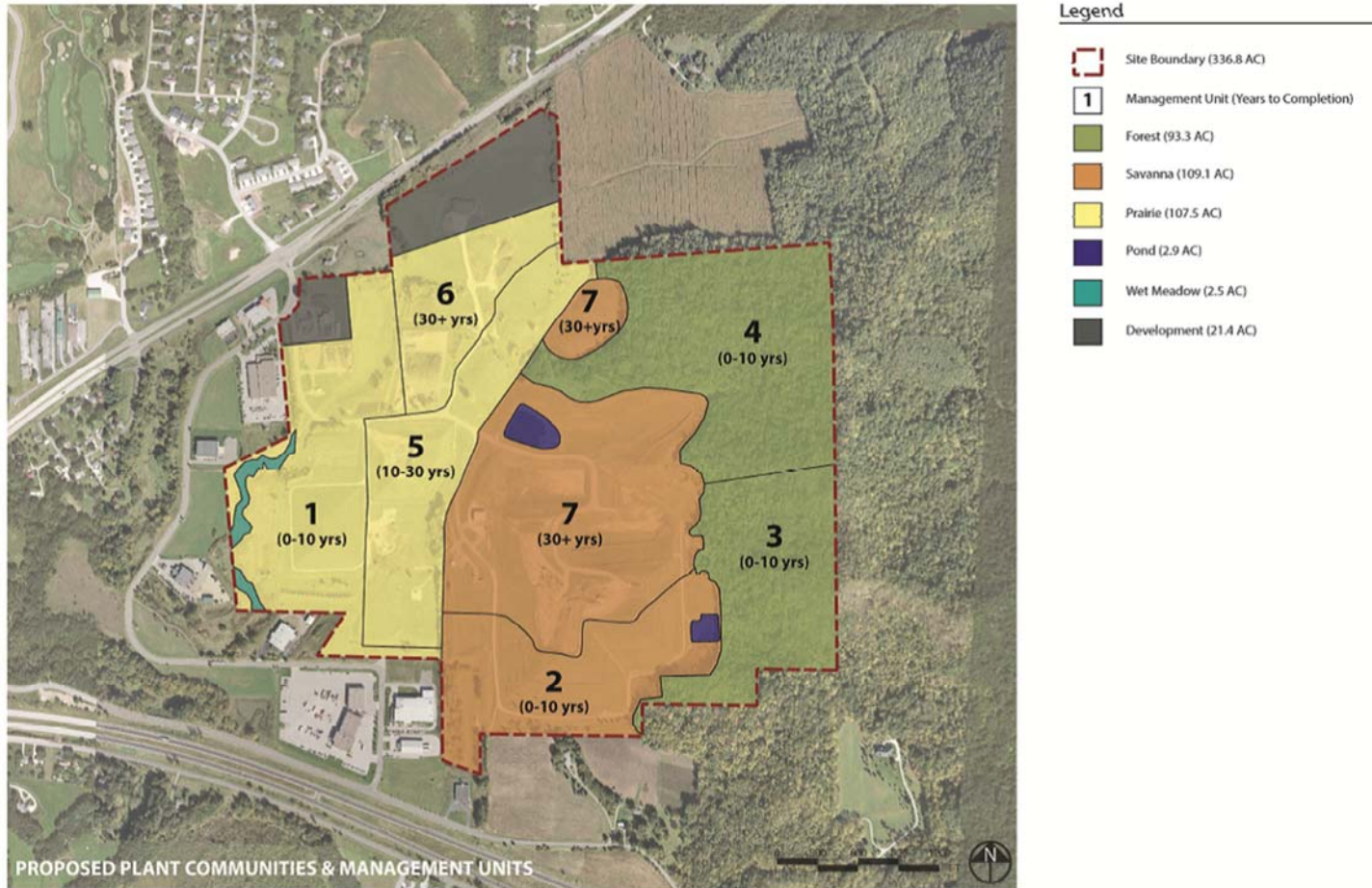


Figure 5 – Proposed Plant Communities and Management Units

#### 4. Trail and Recreation Master Plan

The Trail and Recreation Master Plan (TRMP) provides an inventory of existing trails (on site and in the vicinity), a vision for future trails and interpretation, and a framework for other recreational opportunities provided by the site (e.g., bird watching, sledding hill).

Concepts such as an interpretive center, interpretive signage along trails, site tours, and other programming will attract the community to the landfill and provide a unique opportunity for learning about waste, recycling, sustainability, energy, and other ecological topics.

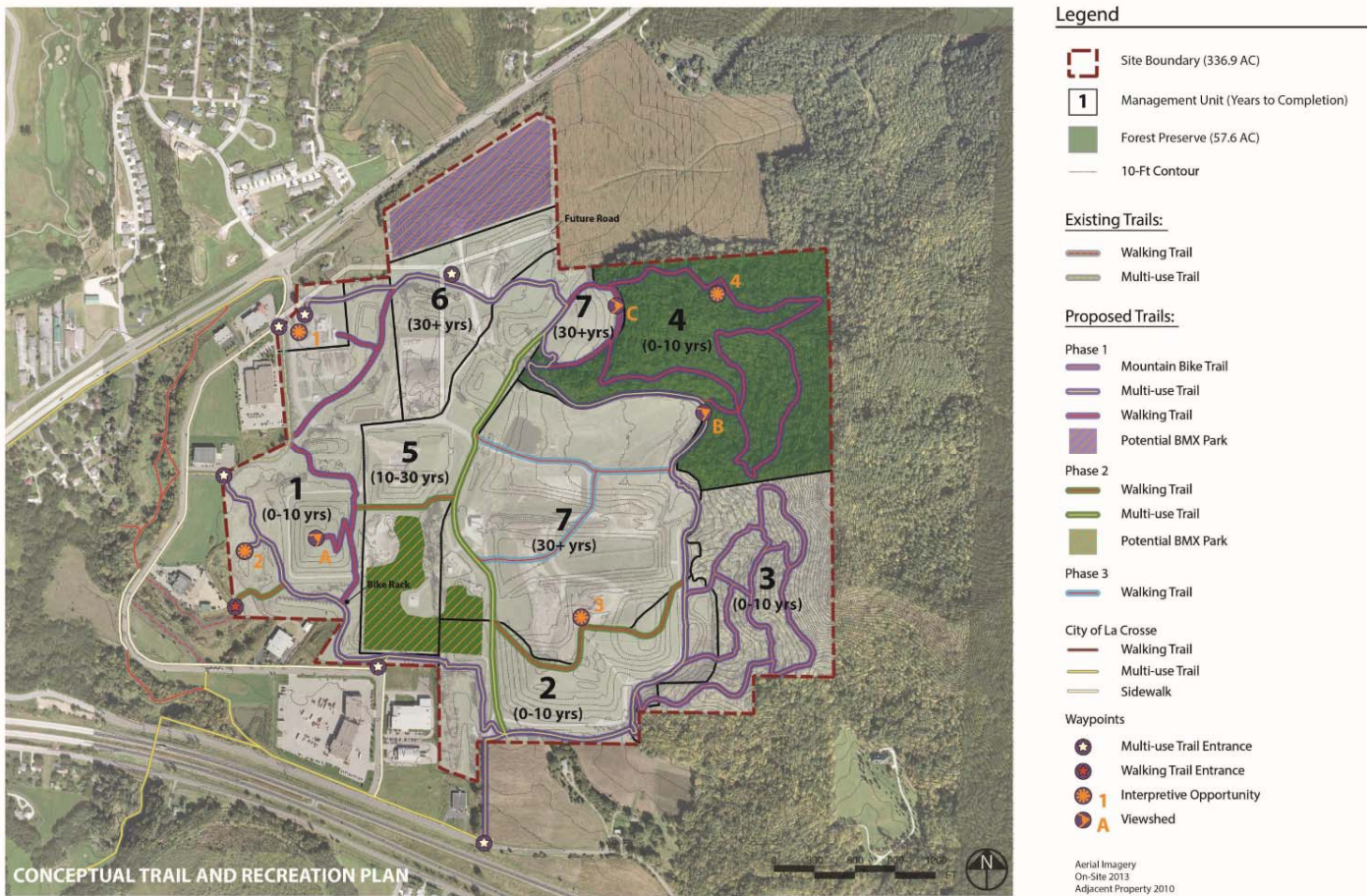


Figure 6 – Conceptual Trail and Recreation Plan

**5. Construction and Expansion of a Materials Processing Pad for Beneficial Use of Materials**

The first phase of the pad was constructed in 2010, was expanded several times, and will be completed in 2015. The area, approximately six acres, provides a location for consolidating recyclable clean wood, shingles, clean concrete, asphalt, and yard waste, thereby improving the landfill's operational efficiency.

**6. Increased Capacity**

During 2014 landfill liner sequence Phase VIII Module 1 was completed. At the same time, the County completed an approximate 5-acre closure of portions of Phase I and Phase II. The final permitted landfill liner construction sequences are schedule to be completed during 2018 (Phase VII, Module 2) and 2020 (Phase VIII, Module 2). Additional closure construction will also be completed during 2020.

## 7. Pedestrian Bridge and Trail Building

Several new trail improvements have occurred since completion of the 2011 MLUP. In 2013, a partnership with the City of La Crosse led to a trail extension that serves adjacent businesses and residents. The Eagle Scouts built a pedestrian bridge on the western border of the landfill in 2013-2014, improving pedestrian access to the site. In 2014 a ½ mile trail was constructed through the community forest. In 2015 an additional ½ mile trail in the woods and a pedestrian board walk over the wetland were installed. WisCorps, the Eagle Scouts and Boy Scouts have all contributed to the success of trail building efforts.



Figure 7 – Photo from 2015 Trail Building Event

## 8. Ecological Restoration

Hibernaculums (snake houses) were built by the Eagle Scouts and installed on landfill property during fall 2015. Kestrel Hawk houses will be constructed in spring 2016.

## 9. Redesign of Landfill Entrance

In 2015, the Department was tasked with developing an alternate entrance for the landfill to support a proposed frontage road on STH 16. This proposed roadway will provide access to future development along STH 16 and will also include the reconfiguration of the Landfill Road and Berlin Drive intersection.

Because the new roadway will require access changes to the existing site, an alternate location and layout for the scale, citizen drop-off area, and container storage area is under investigation. The reconfigured entrance area will improve safety and efficiency, while providing additional flexibility for future needs and demands at the landfill.

## 10. On-Site Activities

In addition to accomplishments noted above, the Department has also provided a number of opportunities for the public and other stakeholders to visit, learn about, and contribute to the future success of the landfill. A sampling of these activities are listed below.

- a) **Boy Scout Camporees.** The Department coordinated a 2013 Camporee with Boy Scouts at the landfill, providing an opportunity for them to learn about solid waste management while participating in service projects. In 2015 the Cub Scouts conducted a similar camping event at the landfill as well.

- b) **Wildlife Counts.** The Department has sponsored several wildlife counts since the 2011 MLUP was adopted, including the “Bio-Blitz” partnership. To date two Bio-Blitz’s have been completed, in 2013 and 2015. The partnership brings UW-La Crosse faculty and students to the landfill to engage in hands-on applied research.



Figure 8 – Photo from 2014 Bio-Blitz

- c) **Site Facility Educational Tours.** The Department regularly provides site tours to a wide variety of audiences including school children, university students, elected officials, WDNR staff, and others.
- d) **Faculty Partnerships and Internships.** The Department provides on-going faculty partnerships and student internship opportunities through its relationships with area high schools and institutions of higher education.
- e) **Other Boy Scout and Eagle Scout Activities.** Additional projects have been completed by various Scout groups, including installation of sitting benches along the access trail that runs alongside the perimeter of the landfill entrance.

## 11. Recognition Awards

Over the past five years the Department has been recognized at national, regional, and local levels through the receipt of numerous awards acknowledging the Department’s commitment and leadership in environmental performance, sustainability, and landfill operations. Receipt of these awards allows the Department to strengthen and foster new partnerships that are critical to the success of this plan.

## 12. Surface Water Management

The Department has had discussions with the Ho-Chunk Nation to design an effigy mound in the shape of a bear. The mound could be incorporated into a planned surface water management basin, providing an opportunity to transform a “typical” project into an innovative educational feature that celebrates cultural diversity and heritage. Discussions regarding the project are on-going.

Figure 9 – Photo from Boy Scout Camporee



## 4.0 2015 MLUP Plan Goals & Objectives

This section of the report identifies goals and objectives, along with suggested methods to achieve them. These goals and objectives were developed based on a review of the 2011 MLUP, the 2015 NRMP, the 2015 SWMP, as well as additional stakeholder interviews and feedback conducted by the La Crosse County Planning Department.

### 4.1 Goals

2015 MLUP goals are organized into three categories, and are intended to provide additional detail which builds upon the Site Vision described in Section 2.4.2.

#### 4.1.1 Short Term Goals: Current projects 0 to 5 years

1. Update MLUP every five years
2. Based on the landfill study recently completed by Blue Ridge Consultants, evaluate day to day operations to limit impacts outside of landfill areas and maximize air space consumption
3. Complete landfill entrance reconfiguration
4. Develop an organizational leadership structure to help guide MLUP implementation
5. Work collaboratively with adjacent landowners, area municipalities, and other key stakeholders on implementation
6. Work with community groups to maintain and improve existing facilities including but not limited to trails and ecological enhancements
7. Continue design and construction of recreational trails and facilities
8. Design and implement ecological restoration activities
9. Continue to ensure compatibility of economic development adjacent to site
10. Provide more interpretive opportunities at the landfill

#### 4.1.2 Medium term Goals: Life of the landfill 5 to 30 years

1. Increase capacity in the solid waste landfill

2. Continue design and construction of recreational amenities
3. Continue to provide more interpretive opportunities at the site
4. Continue to improve wildlife habitat through ecological restoration
5. Continue to ensure compatibility of economic development adjacent to site
6. Continue to enhance aesthetic and natural beauty of the site
7. Monitor outcome of Xcel contract renegotiation and implement relevant contract requirements related to land use



Figure 10 – Immature Bald Eagle Flying Over Site

#### 4.1.3 Long term Goals – Landfill closed 30 to 90 years

1. Perform 40 years of mandated long-term care
2. Ensure landfill long-term site care is sustainable via implementation of goals
3. Finalize design and installation of closed landfill features
4. Find alternative locations and/or approaches for solid waste management and related activities, while recognizing potential need to continue using front entrance area for transfer or processing activity
5. Serve as a hub for a variety of local and regional trails
6. Serve as a significant asset to the region by providing interpretive opportunities, quality wildlife habitat, natural beauty, and open space for the region
7. Continue to ensure compatibility of economic development adjacent to the site



Figure 11 – Dedication of Pedestrian Bridge



## 4.2 Objectives

Plan objectives provide more detail regarding how the goals listed above can be achieved. The objectives are organized into the following three categories and described below.

1. Ecological Restoration
2. Trail and Recreation
3. Landfill Operations

### 4.2.1 Ecological Restoration Objectives

Listed below are several concepts identified in the 2011 MLUP, which are being carried forward in the current plan. Some of these objectives may or may not be feasible, and therefore may be removed in the future.

Planning for habitat restoration can begin quickly, progressively and sequentially. Building upon the strengths of the site, restoration can start at the perimeter of the property and move inward on land that is not planned for expansion of solid waste cells. Eventually restoration can progress through each closed cell until the whole area is restored. Related objectives are listed below.

1. Design and implement demonstration projects with neighbors such as native plantings in idle space in adjacent business parks
2. Design and implement shared stormwater infrastructure and conservation development designs with willing adjacent landowners. Where feasible, emulate smaller, decentralized restored landscape features that can serve as wildlife habitat and park features
3. Begin and complete the cleanup and restoration of the outer perimeter lands and next inside perimeter ring



Figure 12 – Photo of Boy Scouts Doing Trail Construction and Clean Up

4. Continually promote the landfill ecological restoration by establishing an annual program or event such as the Bio-Blitz, and/or coordinating with an existing program or event, for the purpose of communicating the restoration vision for the landfill property
5. As appropriate, perform construction in future years in a manner that creates more natural contours
6. As appropriate, create defined drainage-way features that add to the aesthetic beauty of the landforms
7. Create secluded and quiet places with landforms. The landforms could be planted to augment the calm and peace one feels in a natural, wildlife-rich habitat

8. Create safe overlooks, promontories and observation areas on ridge tops, linked with trails and walking paths
9. Restore bedrock features and dry prairies in sand overburden materials
10. If feasible, establish an on-site tree nursery for producing stock for plantings, restore tree cover for forest and savanna restoration by direct seeding rather than planting individual trees, and continue tree test plots program
11. Re-grow healthy soils on the site by constructing a soil mixing and creation staging area
12. Develop interpretive messages/signage/style
13. Coordinate and collaborate activities with adjacent municipalities and organizations
14. In conjunction with partners, pursue grant funding and other resources to support ecological objectives

#### **4.2.2 Trail and Recreation Objectives**

The La Crosse County Solid Waste Department has invested in the conservation of natural resources and diversification of recreational opportunities while continuing its solid waste disposal and recycling activities. Working with the City of La Crosse and the Outdoor Recreation Alliance, the landfill has begun building multi-use trails and mountain biking trails. These goals and objectives will be phased in as budgets allow, and if feasible at the time, and as landfill cell closure opens up areas for trails and recreational uses.

Specific objectives related to future trail and recreational development are listed below.

1. Design the site for public access in the near future and sequentially open newly restored areas
2. Expand trail system to serve walkers and hikers, bicyclists, mountain-bikers, and cross-country skiers
3. Create scenic overlooks from tops of closed landfill caps and in natural settings to view the Mississippi River Valley
4. Establish an interpretive center at the current landfill office
5. Provide interpretive signs, displays, materials and programs to explain the ecology of the restored prairie, savanna, and woodland
6. Create a BMX park
7. Establish a sledding hill on a portion of a closed landfill cap



Figure 13 – Photo of Mountain Biker



Figure 14 – Photo of Walking Trail in Winter

8. Provide increased trail connectivity to off-site areas, such as north of Highway 16 and an underpass or overpass to reach areas south of I-90
9. Continue to develop partnerships for trail construction and maintenance

#### **4.2.3 Landfill Operations Objectives**

Based on the filling rates from 2011 through 2013, the remaining permitted site life for Phase 1- Phase 8 is twenty-seven (27) years, however additional space is available for an expansion and with continued use of the Xcel facility, or some similar solid waste processing facility, the landfill life may last up to 50 years. Therefore, landfill operations will continue to be a primary focus of land use planning over the next several decades. Key objectives over this time period include:

1. Finalize design and construct new entrance to landfill
2. Continue to enhance the citizens' drop off area
3. Continuously identify new ways to maximize air space (alternative waste processing, improve waste compaction, waste diversion/re-use opportunities, etc.)
4. Attract compatible land uses adjacent to the landfill and promote economic development opportunities

## **5.0 Implementation**

### **5.1 Background**

This section of the plan provides a framework for implementing the goals and objectives described in the previous section. As part of its on-going community outreach efforts, engaging elected officials, adjacent landowners and units of local government, trail and open space advocates as well as other stakeholder groups, will continue to be a priority for the Department as it moves forward with plan implementation.

Implementation of this plan begins with adoption of the plan by the La Crosse County Board of Supervisors. Following adoption, the County will weigh its land use decisions against this plan's goals, objectives, policies, and recommendations including decisions on private development proposals, public investments, regulations, incentives, and other actions.

La Crosse County can expect gradual change in the years to come. Although this plan has described policies and actions for future implementation, it is impossible to predict the exact future condition. As such, the goals, objectives, and actions should be monitored on a regular basis to maintain concurrence with changing conditions.

The original MLUP was approved in 2011 and significant changes and developments have occurred at the landfill complex since that time. For that reason, it is expected that a routine schedule of updating the MLUP will occur every five years, starting in 2015.

The process for updating the MLUP will start one year prior to the year the plan will be updated. In that year, listening sessions will be held and public input obtained. The 2015 NRMP may need to be updated. Any updates to the Plan of Operation, zoning conditions or comprehensive land use plans, and Capital Improvement Plans (CIP) will be incorporated into the MLUP. A flexible format for the MLUP needs to be maintained to accommodate such changes.

Once the MLUP has been updated, it will be presented to the SWPB and the Public Works and Infrastructure Committee seeking a recommendation for approval. After that, it will be submitted to the County Board for approval. The intent is not to write a new MLUP every five years, but to revise those sections that become outdated or where new knowledge and information require.

## 5.2 Organizational Approach

Implementing the MLUP will require a long-term sustained effort on behalf of many individuals, system partners, organizations, businesses, elected officials, and other landfill stakeholders.

It is recommended that the County create a La Crosse County Landfill Land Use Advisory Committee. The committee would oversee implementation of the MLUP, engage the public and build support for the Plan's recommendations related to land use at the landfill. The committee should be comprised of representatives from the La Crosse County Board, the Parks Department, the cities of La Crosse and Onalaska parks departments, and several members from communities neighboring the facility.

### **Other key organizational priorities related to implementation of the 2015 MLUP include:**

1. Creating a strategic plan for partnering and fundraising
2. Conducting fundraising and public education activities
3. Creating and disseminating communication collateral to inform media, community leaders and the public of the ongoing site efforts
4. Establishing a funding strategy to carry out plan implementation
5. Ensuring a dedicated reserve fund to carry out maintenance and capital projects
6. Developing a research plan with partner educational institutions
7. Establishing a physical buffer area separating landfill operations from existing and proposed recreational and cultural infrastructure improvements
8. Resolving any conflicts which arise with regard to landfill facility operations, ecological restoration/management and trail and recreation planning

### 5.3 Action Plan

The plan implementation table below provides a detailed list and work schedule of major actions that the County should complete as part of the implementation of this plan. It should be noted that many of the actions require considerable cooperation with others, including the citizens of La Crosse County, county staff, solid waste haulers, local/state governments, and adjacent property owners. The completion of recommended actions in the timeframe presented may be affected and or impacted due to competing interests, other priorities, and financial limitations facing the county.

Action	Responsible	Schedule
Recommend and Adopt 2015 MLUP	PW&I Committee; County Board	2015
Construct landfill entrance improvements	Department; Contractor, City of La Crosse	2016
Annual Capital Improvement Plan (CIP)	Department	Annually
Begin to develop physical buffer area separating landfill operations from recreational, cultural improvements	Department	2016-2020
Establish a formal Land Use advisory committee	County	2016
Develop a strategic plan for fundraising to help pay for maintenance and future service projects	Land use advisory committee; Department	2017
Develop a more detailed restoration and management plan for individual projects	Department; Consultant	2015-2020
Develop a research plan with partner educational institutions	Department, Institutions	2016-On going
Prepare for 2020 NRMP update, if needed	Department	2019
Update Master Land Use Plan	Department, County	2019

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# Appendix A

## La Crosse County Master Land Use Plan (2011)

Available at <http://www.co.la-crosse.wi.us/SolidWaste/>



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## Appendix B

### La Crosse County Landfill Conceptual Natural Resource Management Plan, Trail & Recreation Master Plan, and Ecological Monitoring Plan (2015)

Available at <http://www.co.la-crosse.wi.us/SolidWaste/>





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## Appendix C

### La Crosse Disposal System Solid Waste Management Plan (2015)

Available at <http://www.co.la-crosse.wi.us/SolidWaste/>