














A SUSTAINABILITY CAMPUS FOR DANE COUNTY

A hub for recreation, environmental education, renewable energy, and innovation of circular economies.

May 24, 2021



-  [Scale House](#)
-  [Hand Unloading & Bicycle Exchange](#)
-  [Shingle & Tire Recycling](#)
-  [Clean Sweep](#)
-  [C&D Recycling](#)
-  [Brush & Logs](#)
-  [Active Landfill](#)
-  [Groundwater Protection & Monitoring](#)
-  [Air Quality & Odor Control](#)
-  [Native Prairie Final Cover](#)
-  [Renewable Natural Gas](#)

About Waste & Renewables

Providing environmentally-sound and sustainable waste management and renewable energy solutions for current Dane County residents and future generations.

2021

Planning for the future has begun. Currently in the vertical expansion process to extend the life of Rodefild Landfill.

2023

If a new site was secured, waste diversion could begin with organics, mattresses and other waste streams.

2027

Rodefild site closes without a vertical expansion.

2030

Estimated maximum site life of Rodefild Landfill.

Current Status

1. Dane County's Landfill is anticipated to reach capacity by 2030
2. It can take as much as 10 years, or more, to obtain a permit for a new site. Formally starts with site surveys and data collection.
3. In discussions with the City about Yahara Hills Golf Course as the home for future Sustainability Campus

Old Paradigm

New Paradigm

Reimagining Landfill sites as Integrated Waste Management Hubs

Traditional Landfill

Integrated Waste Management

Waste is a Liability

Waste is a Resource

Minimal Business Activities

Prosperous Center for Business

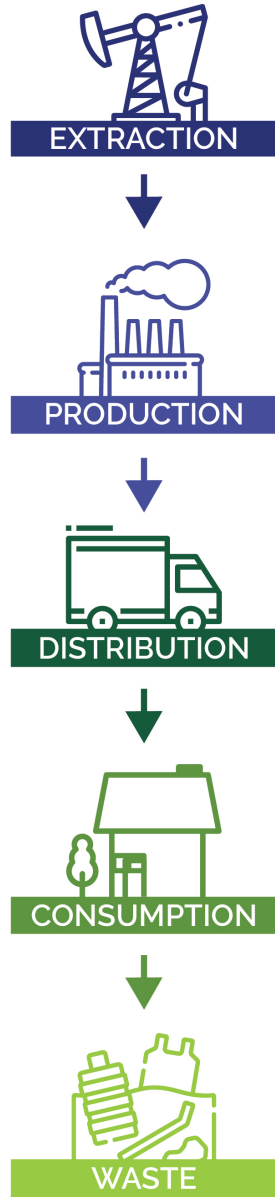
Zero Energy Generation

Onsite Renewable Power

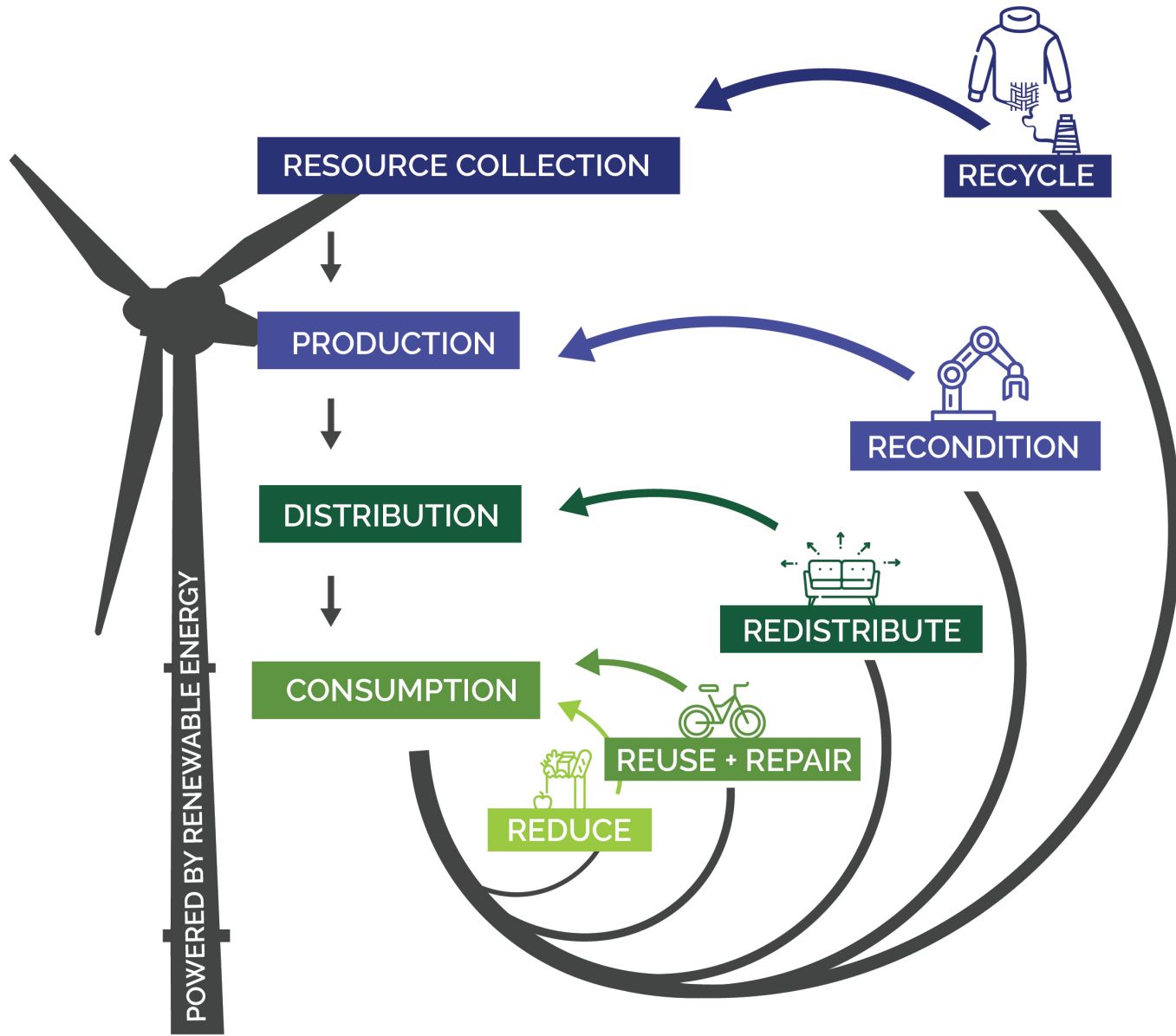
No cultural or social significance, a place to avoid

Innovative social hubs, a place to recreate and learn

LINEAR ECONOMY MODEL



CIRCULAR ECONOMY MODEL



SITE DIAGRAM

2023 - 2045

LEGEND:

- GOLF GREEN
- GOLF FAIRWAY
- GOLF ROUGH
- NATURALIZED LANDSCAPE
- SUSTAINABILITY CAMPUS
- LANDFILL CELLS
- ORGANIC COMPOST
- SUSTAINABILITY CAMPUS / GOLF SUPPORT
- OPEN WATER
- BUILDING FOOTPRINTS
- PROPOSED MULTIUSE TRAIL
- PROPOSED ROADWAYS
- POTENTIAL SITE ACCESS POINT
- PARCEL LINES
- 75 - 100 YEAR AIRSPACE BOUNDARY
- EXISTING BICYCLING ROUTE
- FEASIBLE FUTURE BICYCLING ROUTE



SITE DIAGRAM

2023 - 2045

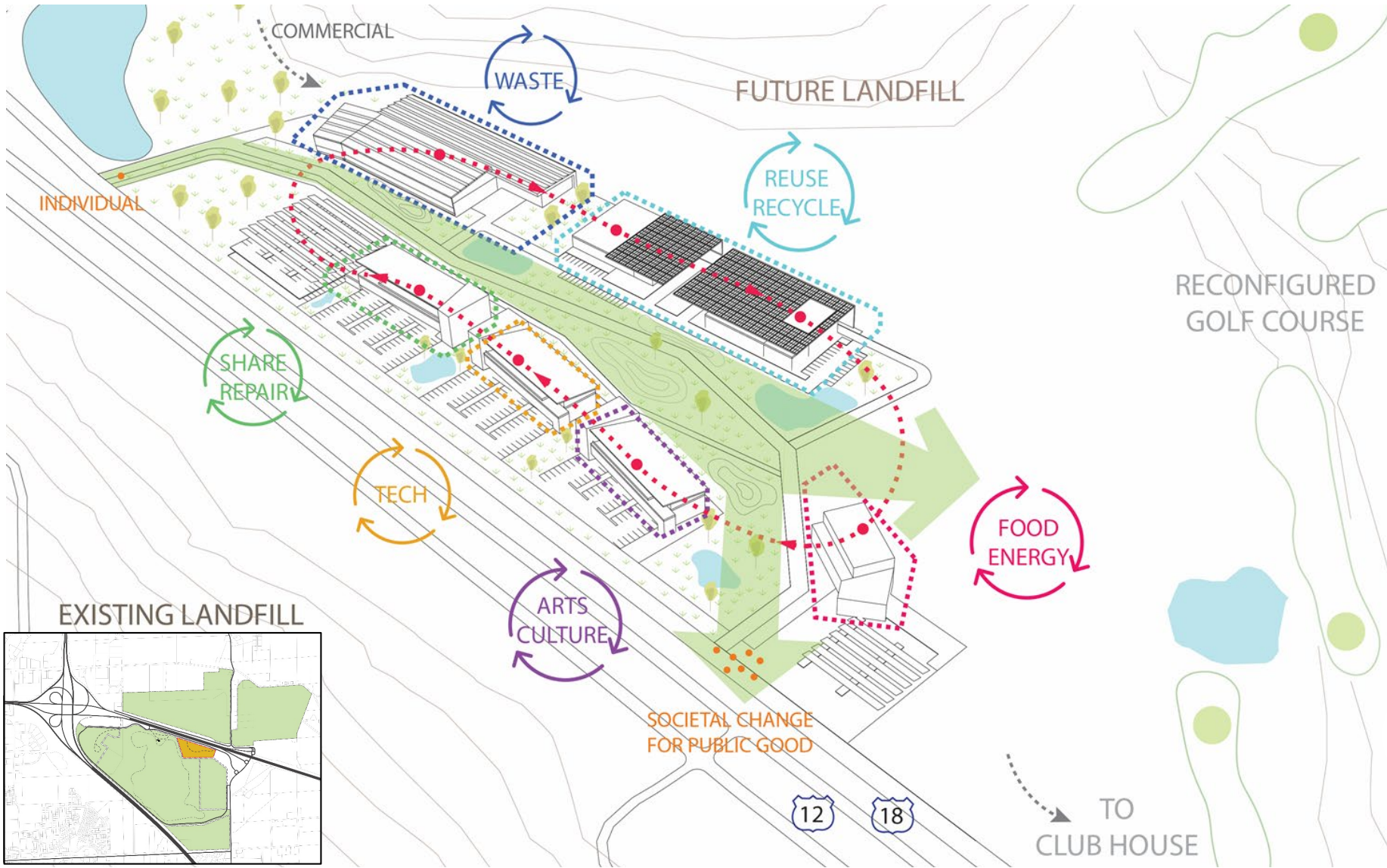
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CIRCULAR CAMPUS

Campus Vision and Goals



Create Low Barrier to Entry Jobs



Reduce GHG Emissions & Waste



Foster Social Innovation and Change



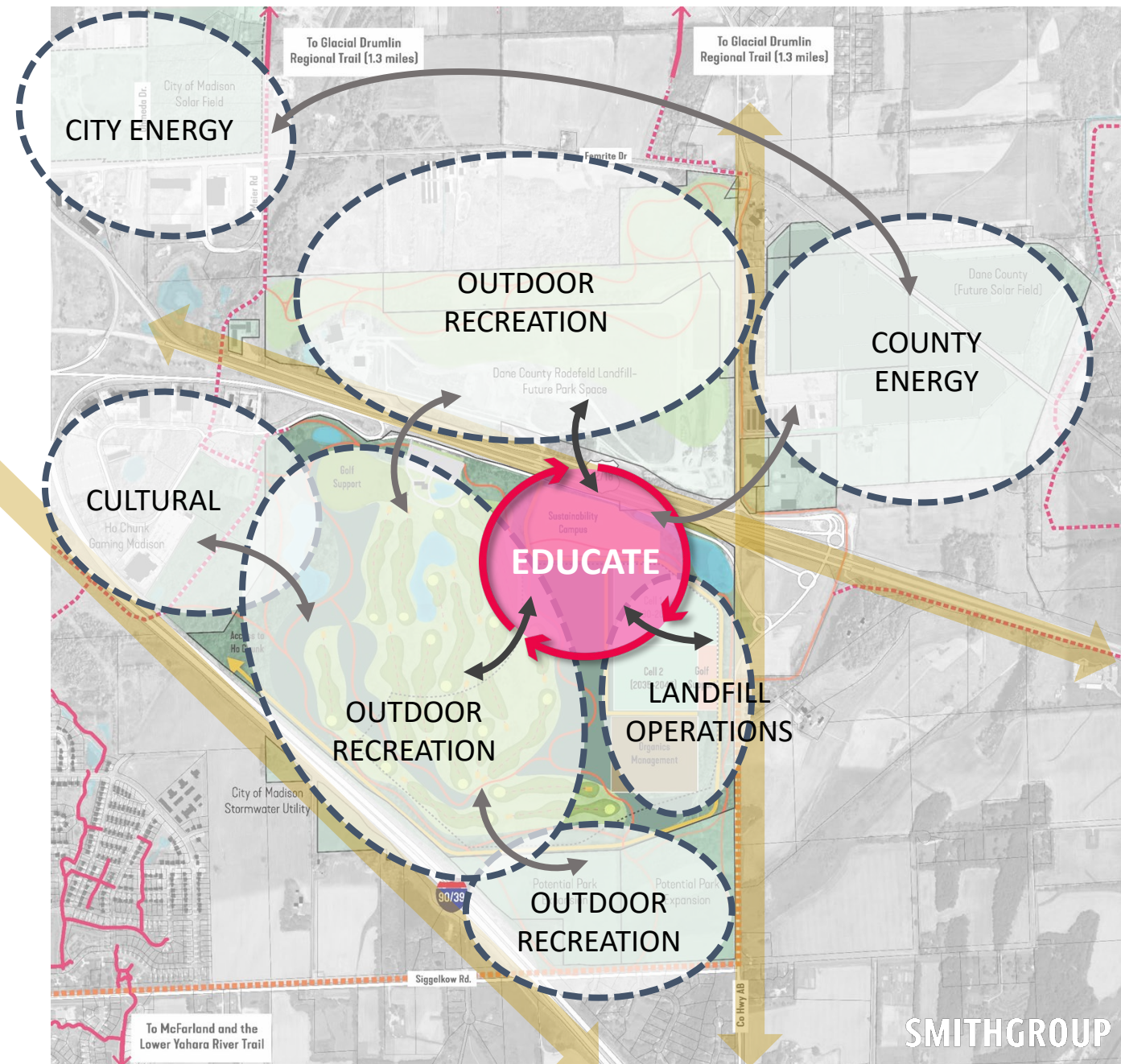
Create New Business Opportunities



Create a Destination and Complement Surrounding Uses

Campus as a holistic and long term vision

1. Site has potential to serve our community for +100 years. Requires planning so that the site can grow and adapt to fit future need.
2. Although construction may not begin for 8-10 years, the W&R infrastructure will be built and serve as a the anchor to the campus.
3. All elements of the campus must consider goals of the neighbors and the community





US Municipalities Laying the Groundwork

[Kent County, Michigan](#)

- 250 acre business park
- RFP responses received fall 2020

[Phoenix, Arizona](#)

- Zero waste by 2050 through education, PPPs, and enhanced recycling services

[Austin, Texas](#)

- Zero waste by 2040
- [Materials marketplace](#) to connect for reuse
- Lessons learned:
[Re]Manufacturing Hub



Other Local Leaders



[La Crosse County, Wisconsin](#)

- Business park surrounding the Landfill, Habitat Restore is one tenant
- Recreational trails and environmental education

[Outagamie County, Wisconsin](#)

- Resource Recovery Park with drop off area designed to capture more materials from the waste stream

Opportunity: Mattress Recycling



- Currently accept over 20,000 mattress each year
- Bulky items result in +\$200,000 of lost potential revenue annually
- Springs recycled as scrap metal, wood frames create landscaping mulch, cotton used in industrial oil filters and foam paddings turns into carpet underlay
- *Policy considerations: mattress stewardship ordinance or ban from landfill disposal*

Opportunity: Co-Location of a Reuse Store

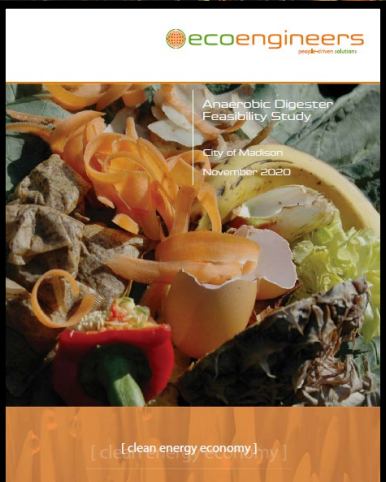


RETUNA -Eskilstuna, Sweden

- Divert materials for higher better use – **Top of the Recycling Pyramid**
- High visibility location and existing traffic/potential customers
- Local and Global Examples:
 - Habitat for Humanity
 - RETUNA (pictured)
 - Urban Ore, Last Chance Mercantile, Deconstruction Inc
- Policy Considerations:
Deconstruction Ordinance and Building Materials Resale

Opportunity: Organics and Food Waste

- Dedicated area for organics and food waste management
- Start with composting
- Secure the feedstock and continue to assess feasibility of a regional scale digester
- Place for workshops education, possibility of a community garden
- *Policy considerations: food waste/organics landfill ban – but would this be effective at a county level?*



Opportunity: Circular Plastics



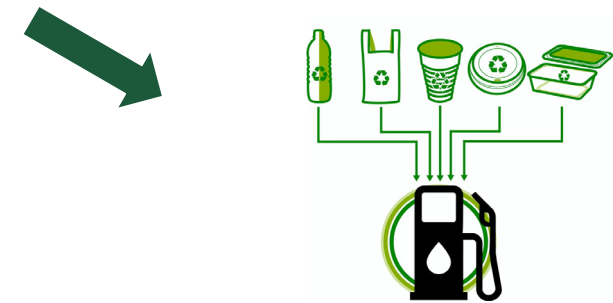
Post consumer plastic waste
(15.3% of current)



Pellet or Flake Ready for
Manufacturing



Pellet or flake can be used
to make new products.



Film and other plastics can be
converted to fuel through pyrolysis

Local Stakeholders



RECREATIONAL
GROUPS



NEIGHBORS



MATERIAL
PROCESSORS



GOVERNMENT



Madison Nordic Ski Club



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