

# American Peat Technology, LLC (APT)

Proposed Peat Harvest Project

Seavey and Pliny Townships, Aitkin County, Minnesota



Global Solutions • American Innovation

# Agenda

- APT Operations and Products –
  - Resource Need –
    - Site Selection and Design –
- Field work, permits and timeline –

# Who is APT?

Aitkin, Minnesota

Incorporated in 2003

Value-added peat products

- ❖ Agriculture

- ❖ Water remediation

40 year-round employees



# Why?

## Agriculture

- Protein
- Fewer chemical inputs
- Precision agriculture

## Clean water

- Heavy metal contamination
- Sulfates, mercury, arsenic, selenium, phosphorus

## Green economy

- Minnesota resources
- Job creation
- Ecological benefit in reclamation







Reed-sedge peat

bioAPT

Drying and  
granulation



APT<sub>sorb</sub>



An aerial photograph of a peatland landscape. The terrain is a mosaic of different colors and textures, representing various peatland types. A large, irregularly shaped area in the center and lower-left is highlighted with a blue border. This highlighted area is predominantly a uniform brown color, indicating a specific peatland type. The surrounding areas include patches of green, dark brown, and lighter brown, suggesting different vegetation or peat characteristics. The text "Prior-converted peatlands" is overlaid on the brown highlighted area.

Prior-converted peatlands







# Spencer Site





# Spencer Site

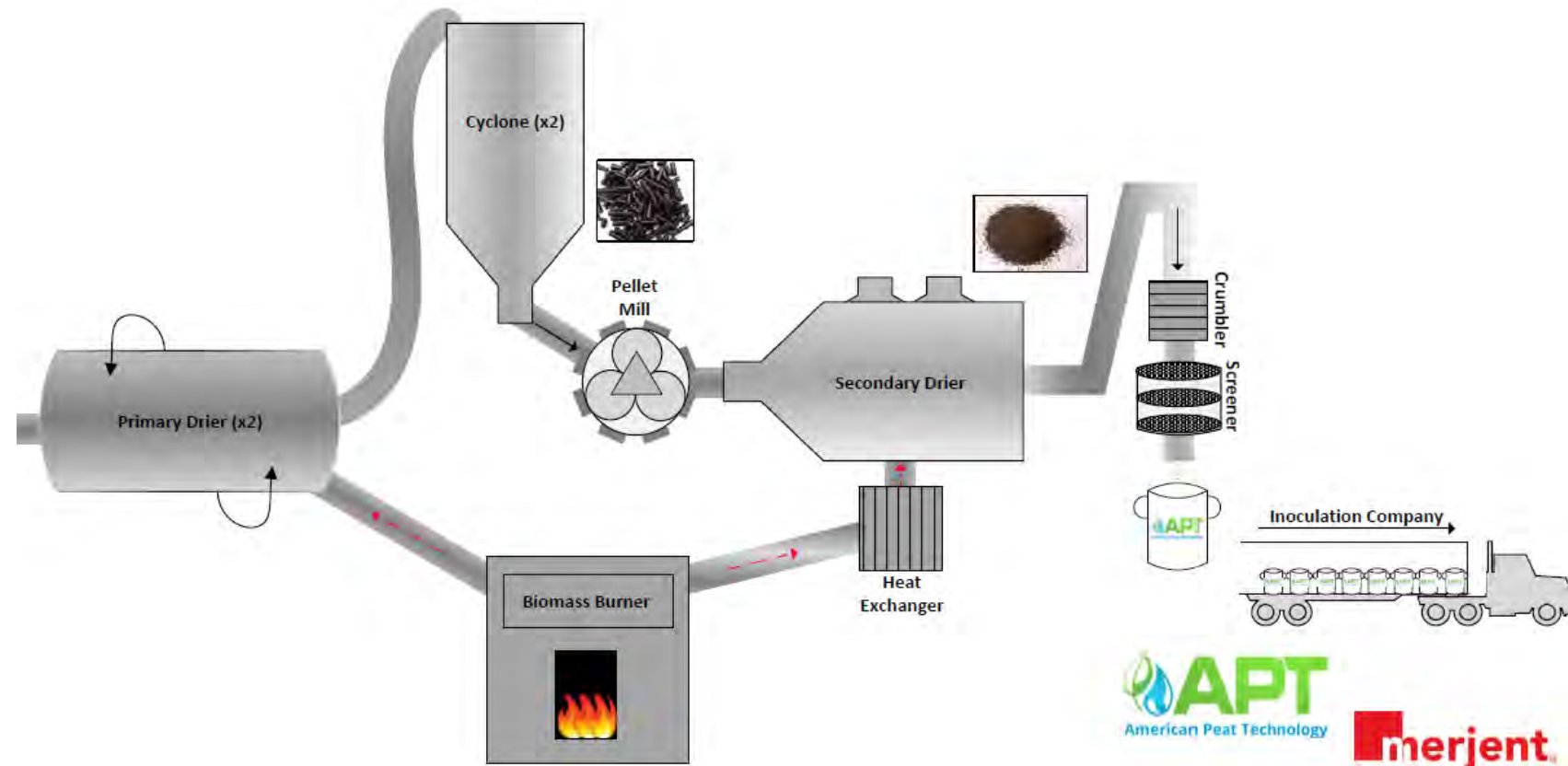


# Reclamation

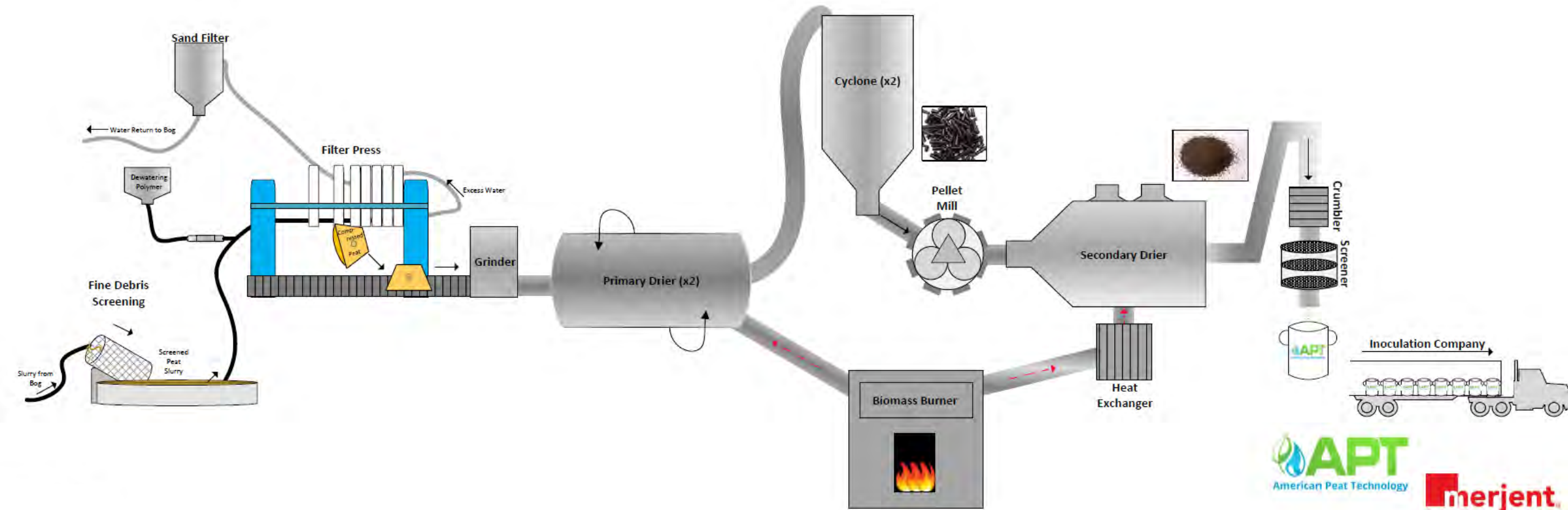




# Process Overview- Spencer Plant



# Process Overview- Dewatering process





# Process Overview- Spheronized Product



# Product Demand



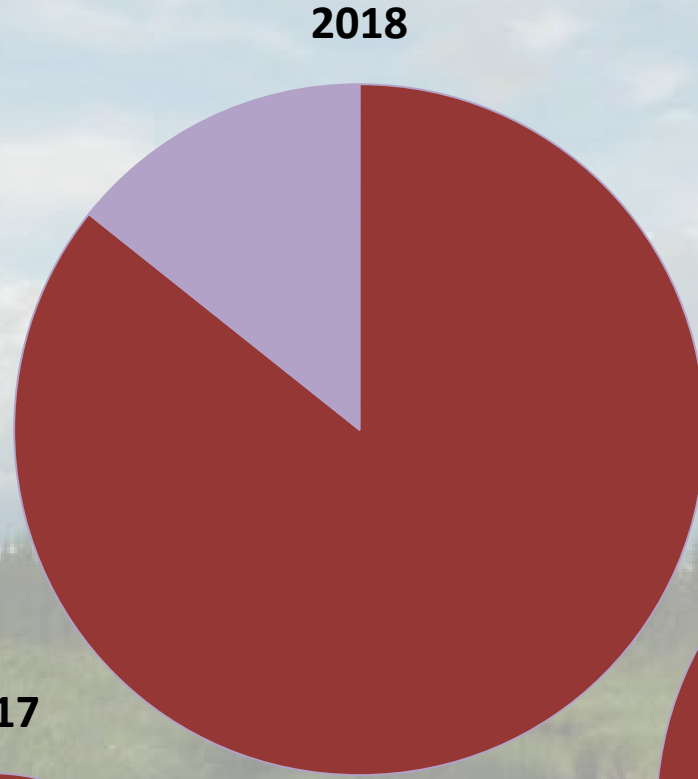
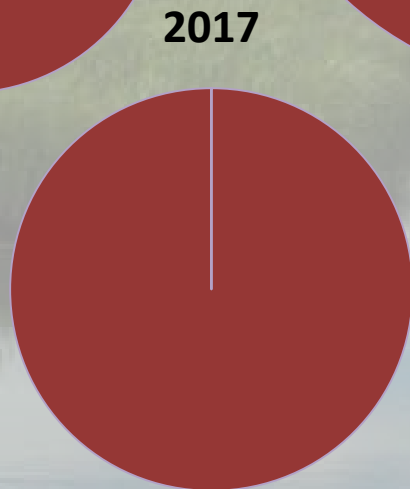
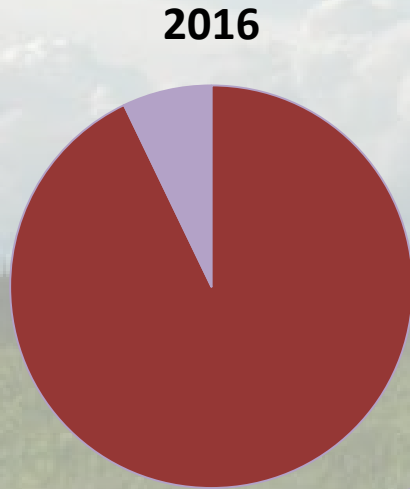
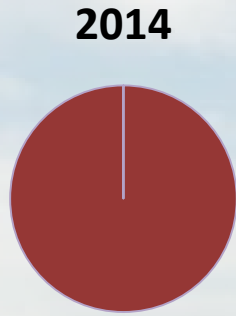
**X 1200 =**

**15 acres**

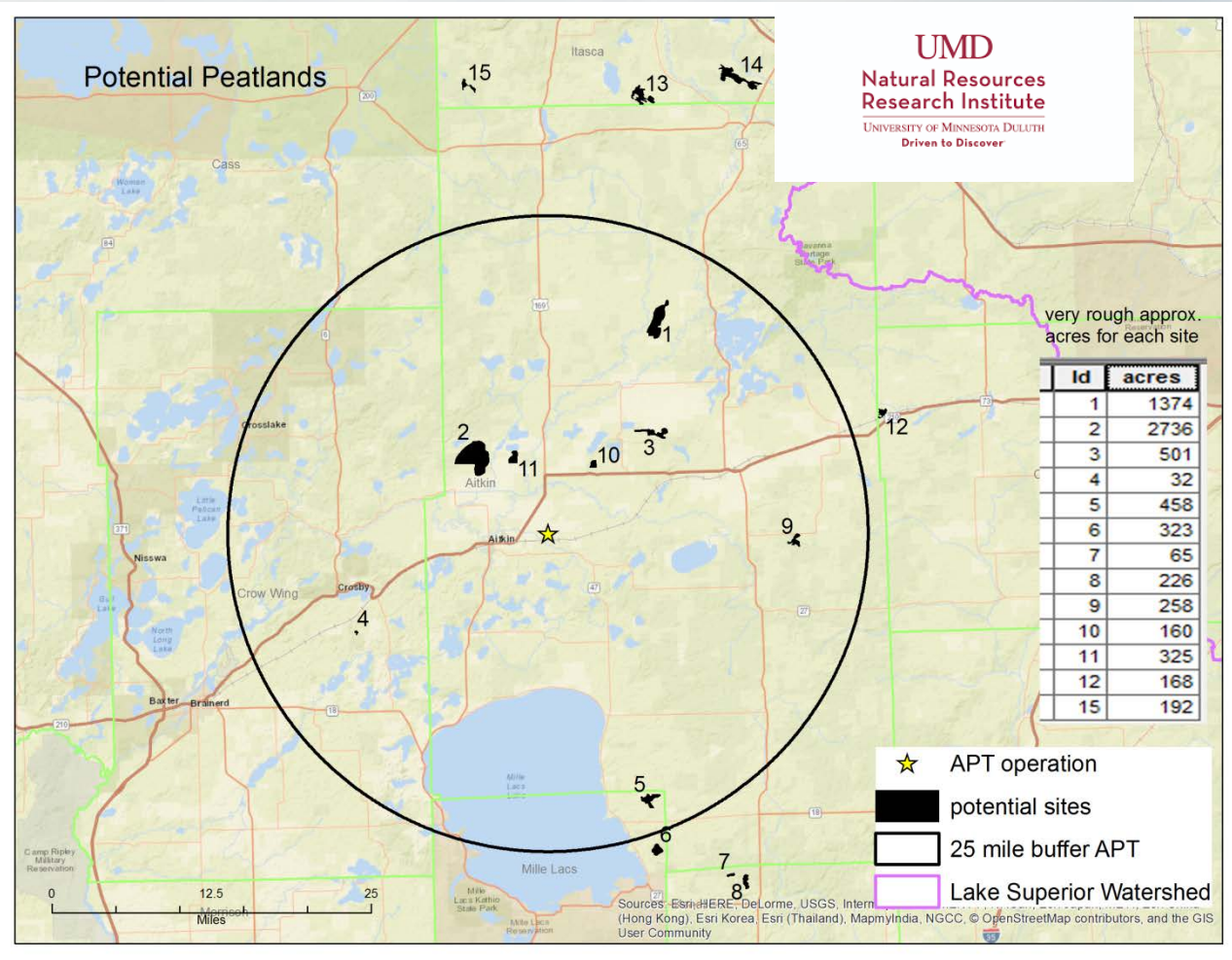
**Current Permit to Mine  
will only meet flat demand  
for ~30 years**



# Product Demand



# Initial Site Selection

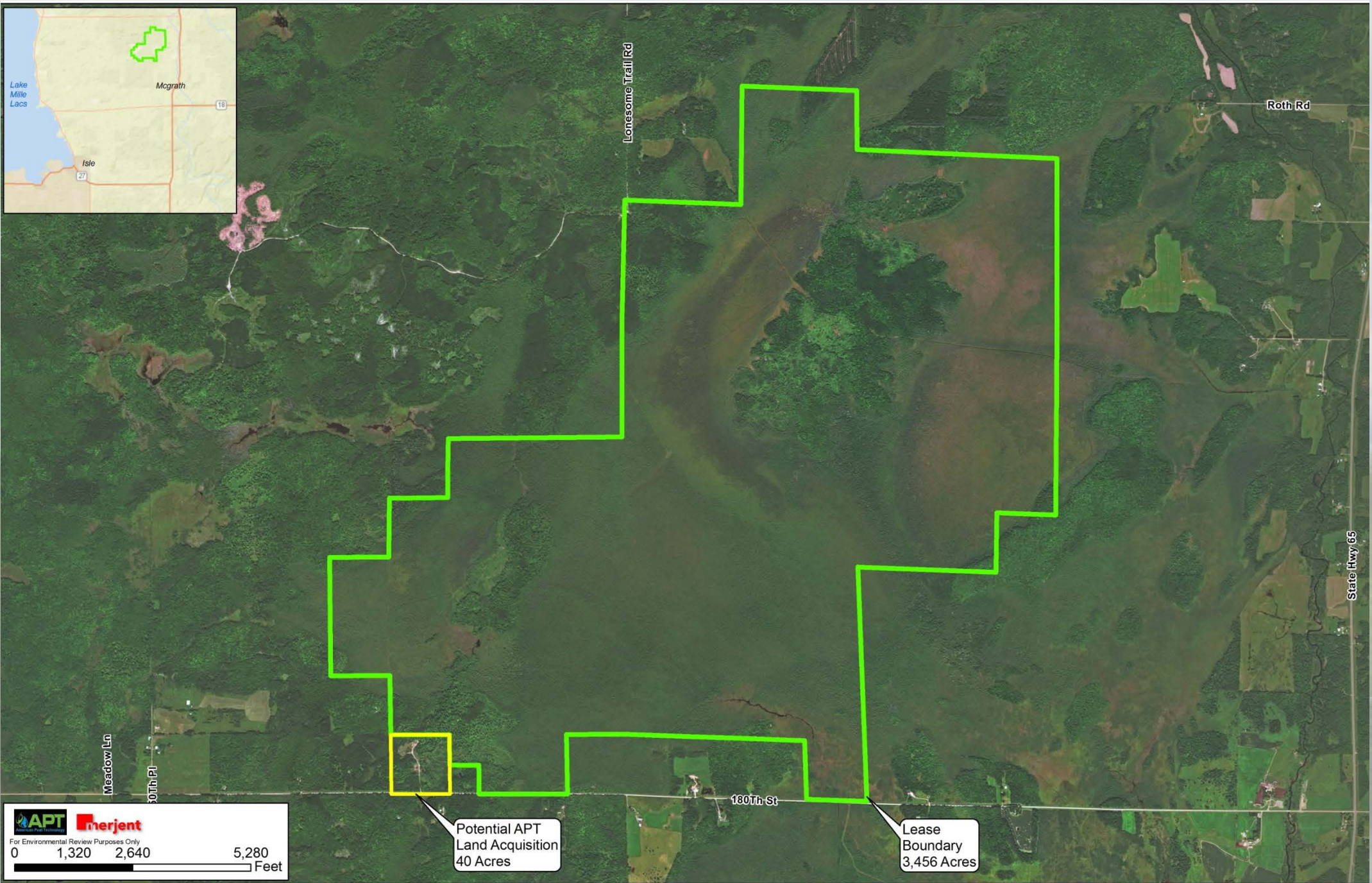


- **APT Site Criteria:**
  - Local
  - Geographically close
  - Land for processing plant
  - Minimal sphagnum peat layer
  - Avoid Lake Superior Watershed
- **Resources Used:**
  - Windshield hours
  - NRRI GIS analysis
  - Public peat resources (MDNR)
  - Chemistry and resource analysis (pH, ash content, CEC)
- **Seavey-Pliny Selection**
  - Near McGrath, MN
  - Originally 10K+ acres under consideration for peat lease





# Lease Boundary



**APT** **Merjent**  
For Environmental Review Purposes Only  
0 1,320 2,640 5,280  
Feet

Potential APT  
Land Acquisition  
40 Acres

Lease  
Boundary  
3,456 Acres

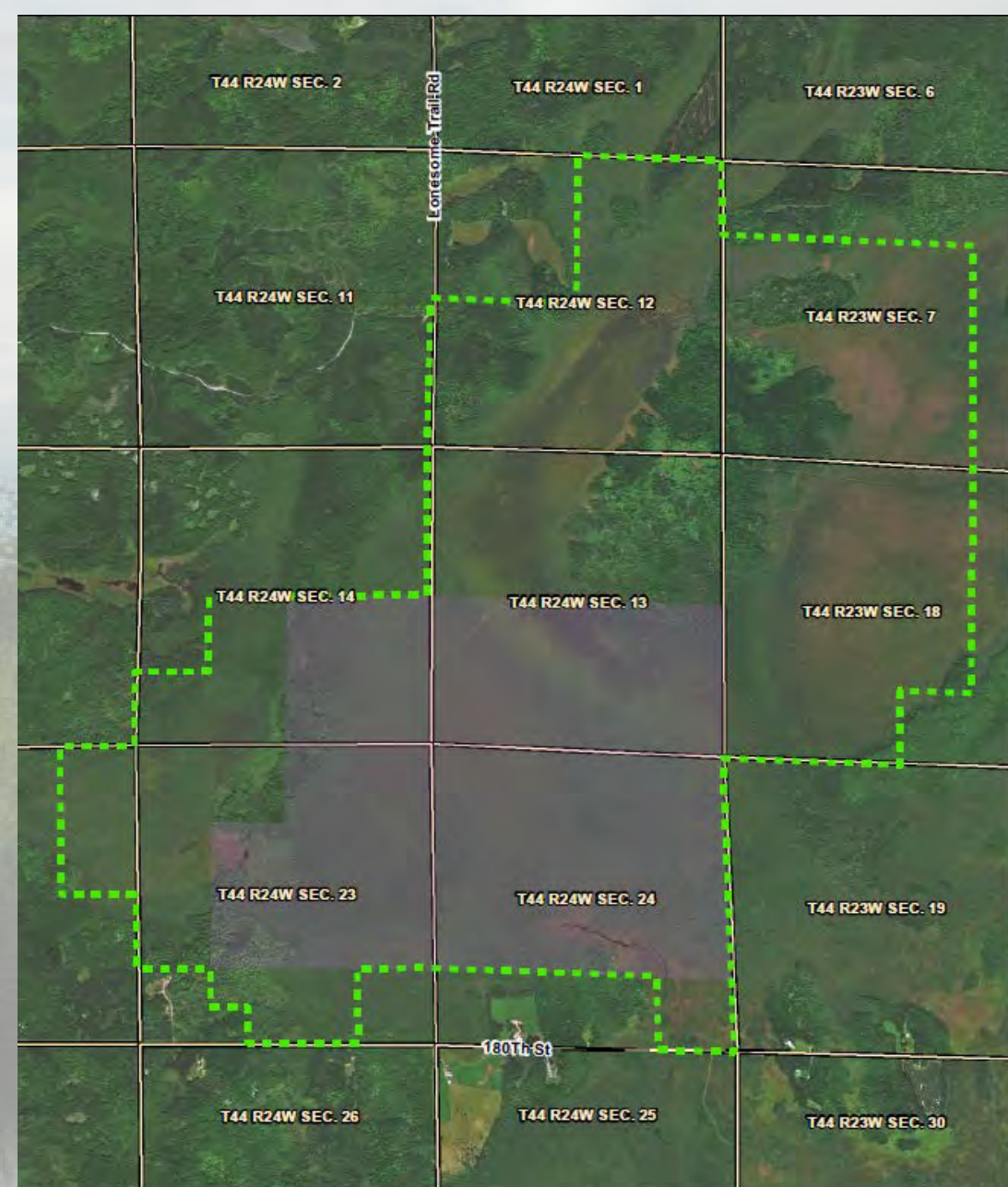


# Proposed Site and Process

- Site Refinement –
- Harvest Approaches and Methods –
- Processing Steps –



# Site Selection- Refined



- Area of Focus- Southern Portion of Lease Area (~1200 Acres)
- Simplified Hydrologic Monitoring
- Accessibility to Proposed Facility Location
- Avoidance of Sensitive Flora Finds



# Ditch and Drain- Design Alternative



## Advantages

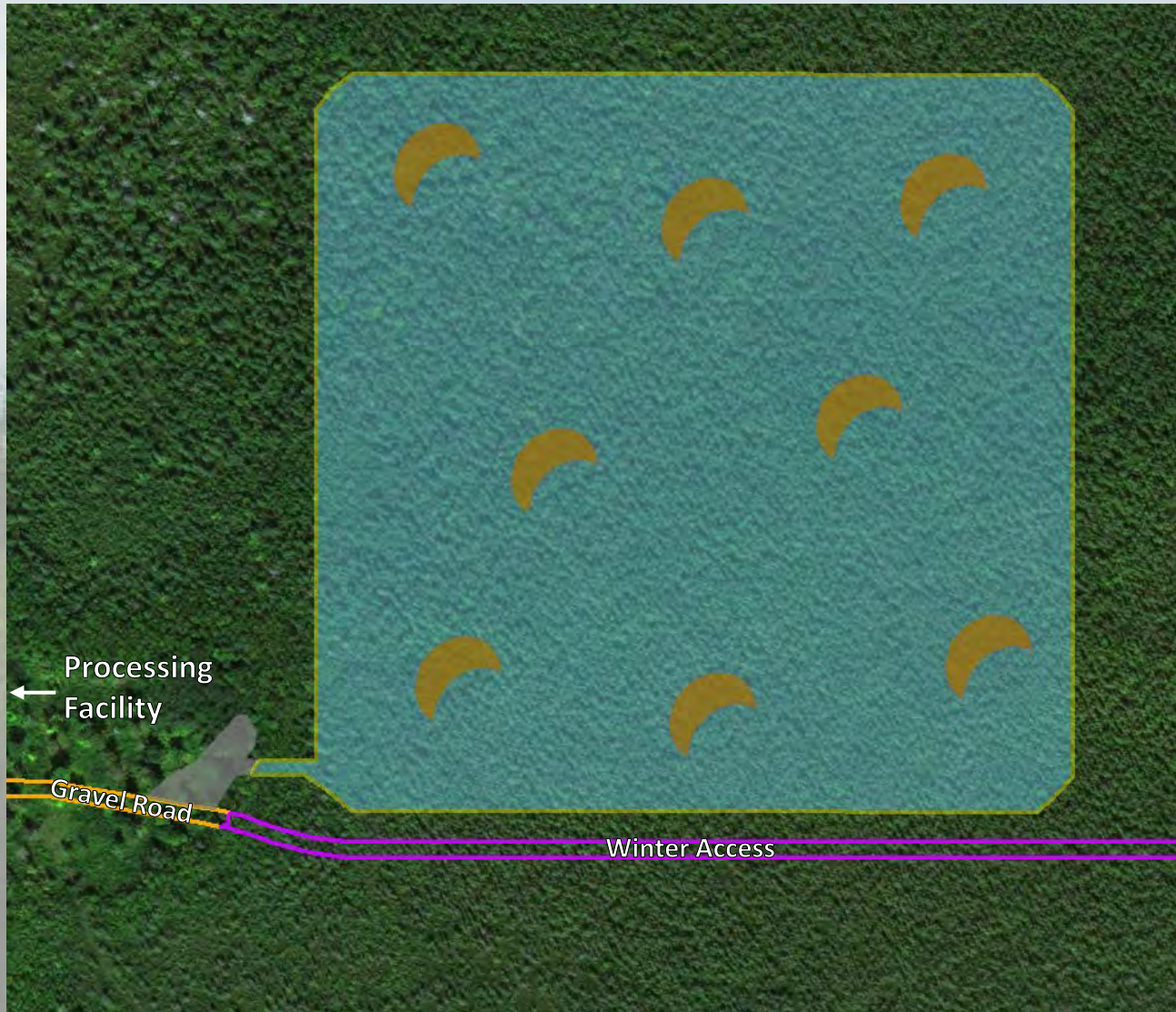
- Common Methodology
- Reduced Mine Footprint

## Disadvantages

- Significant Hydrologic Change
- Resource Intensive
- Impractical



# Island Layout- Design Alternative



## Advantages

- Phased Tree Clearing and Site Preparation
  - Minimize Impact to Resource until necessary
- Reduced Mine Footprint
  - Maximizes Resource Extraction

## Disadvantages

- Potential introduction of outside soil and aggregate increases modeling complexity
- Challenges to sequenced restoration and closure
- Large, open water complex will remain



# Cell Layout- Design Alternative



## Advantages

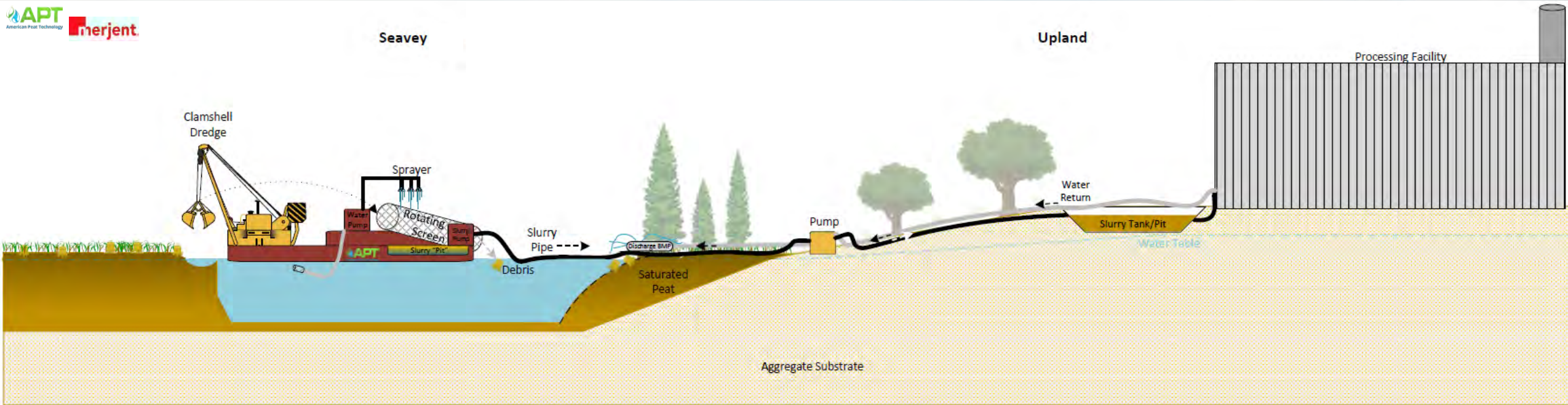
- Phased Tree Clearing and Site Preparation
  - Minimize impact to resource until necessary
- Sequenced Site Restoration and Cell Closure

## Disadvantages

- Increased footprint from pillar area between cells (resource not fully utilized)



# Wet Harvest Method



# Prior and Ongoing Studies

- Strategic messaging–
- 2017/2018 Fieldwork–
- Timeline–



# “Getting the word out”



MPRnews | Sections ▾ | Members ▾ | More ▾

## Minnesota firm tries an ancient solution to heavy metal pollution

 Martin Moylan · Aitkin, Minn. · Apr 9, 2018 Business



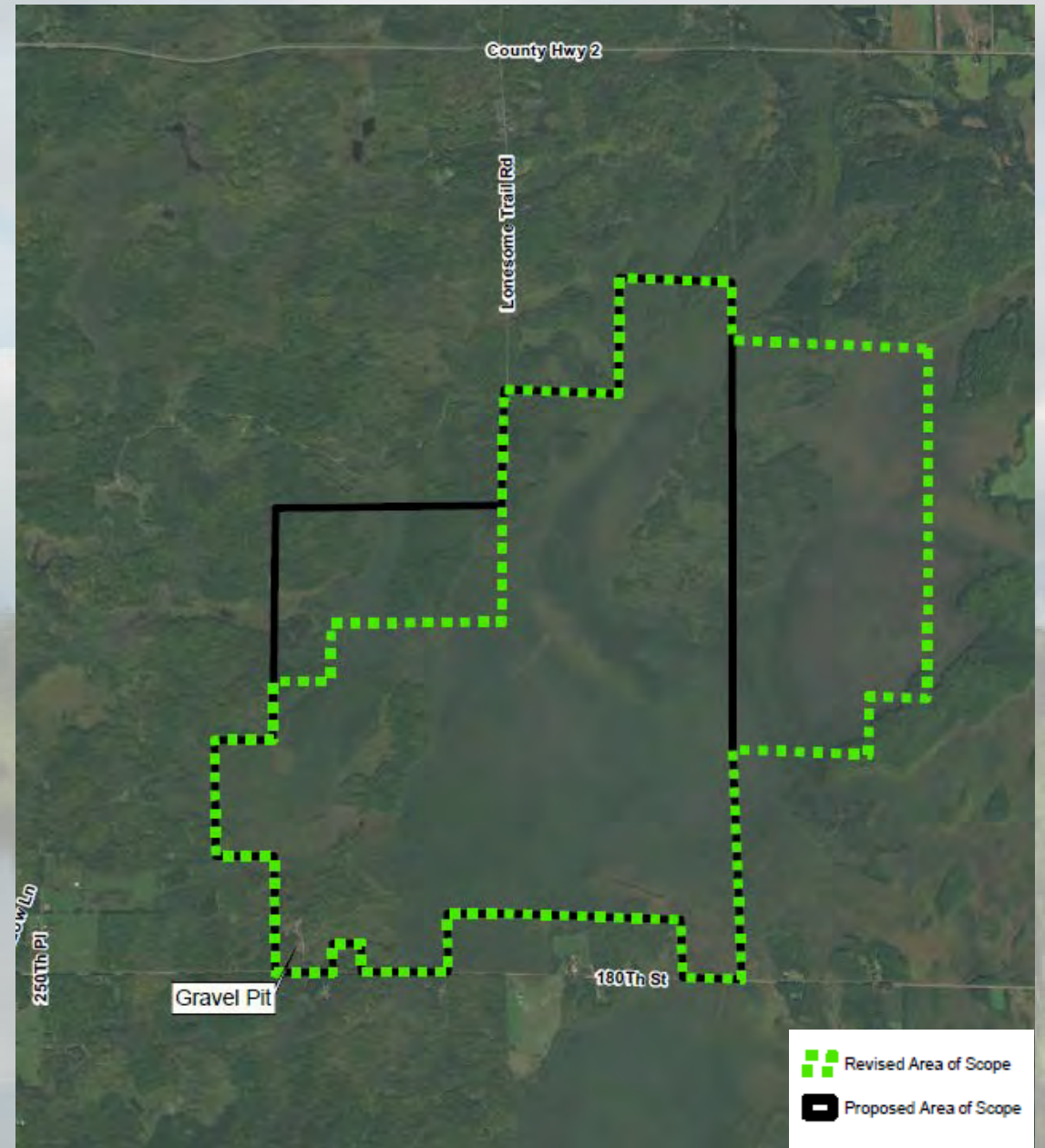
## State Executive Council approves peat leases for American Peat Technology

By [Brainerd Dispatch](#) on May 19, 2018 at 1:00 p.m.



# 2017 Field Efforts

- Peat Sampling
- Wetland survey
- Native plant community and rare flora survey
- Archaeology survey
- Architecture/Historic Resources survey
- Hydrogeology surveys
  - Surface water
  - Ground water



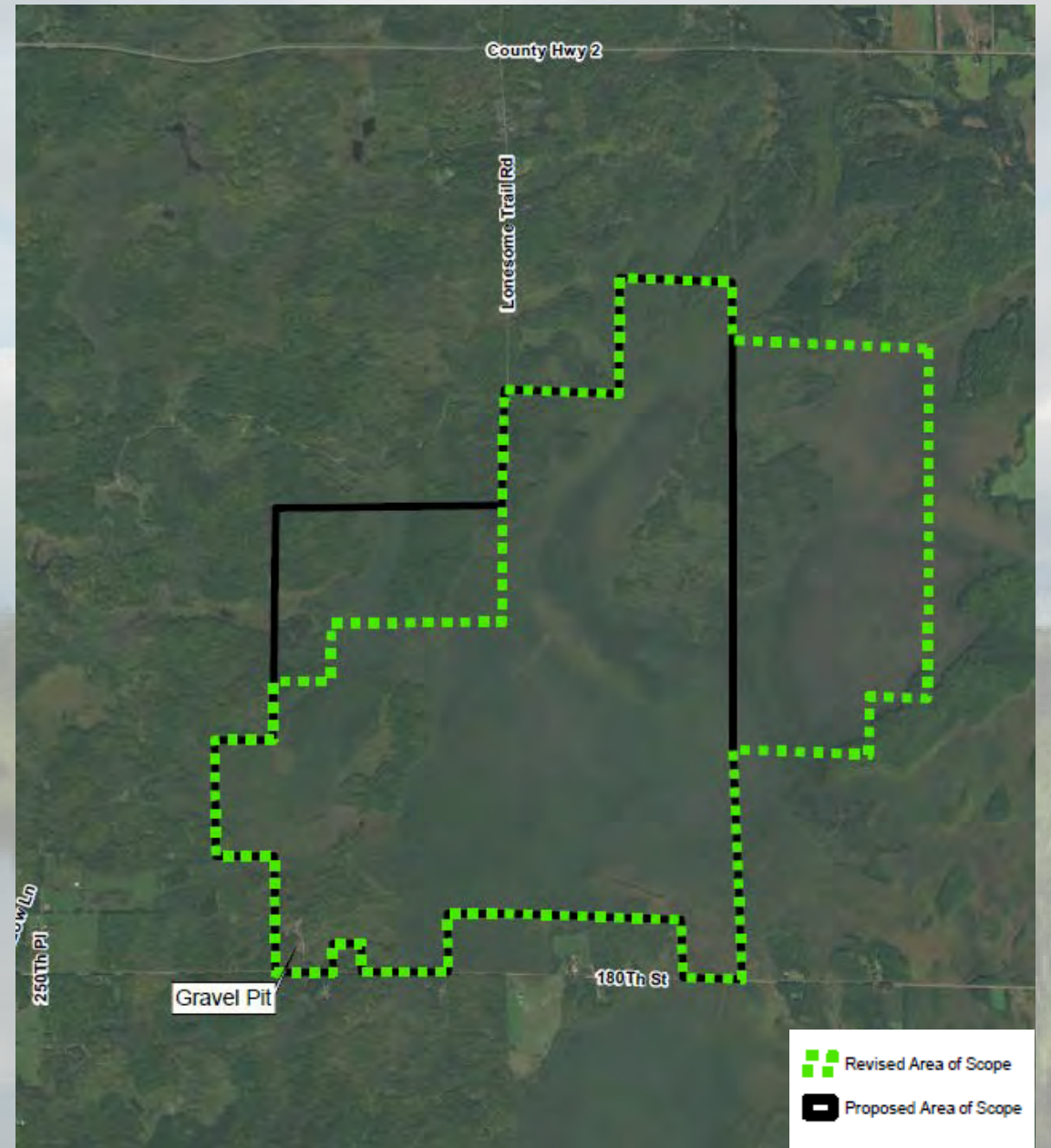


# 2017 Peat Sampling



# 2018 Field Efforts

- Peat Sampling
- Wetland survey
- Native plant community and rare flora survey
- Archaeology survey
- Hydrogeology surveys
  - Surface water
  - Ground water
- Bald Eagle Surveys (NEW)
- Traditional Cultural Resource Surveys (NEW)





# Environmental Review and Permitting Timeline

Timeline	Responsible Party	Action
May 2018	APT/MDNR	Initiate Pre-Scoping Process
January 2019	APT	EAW Submittal
June 2019	MDNR	Publication of Final EIS Scoping Decision
July 2019	MDNR	<u>EIS Process</u> : Publication of EIS Preparation Notice to EQB Monitor
July – November 2019	MDNR	Draft EIS Preparation and Publication
December 2019 – March 2020	MDNR	Draft EIS Comment Period, Comment Meetings, and Final EIS Publication
May - June 2020	MDNR	FEIS Determined Adequate
June 2021	APT	Receive all Environmental Permits and Authorizations
Winter 2021	APT	Initial Site Clearing
Summer 2022	APT	Year 1 of Peat Harvest
Summer 2023	APT	Processing Plant Operational
2039-2043	APT/MDNR	Lease Renewal and Re-Initiate Environmental Review

# Permits and Approvals

Agency	Permit or Action	Permitted Activity
USACE – St. Paul District and MPCA	Section 404 Individual Permit and associated state 401 Individual Water Quality Certification	Authorizes discharge of dredged and fill material into waters of the United States, including wetlands.
USFWS	Section 7 Endangered Species Act (ESA) Consultation (Federal endangered and threatened species)	Establishes conservation measures and authorizes, as needed, take of ESA species. Required as a result of the federal action triggered by the USACE Section 404 Permit.
MnHPO and Tribal Historic Preservation Offices	Historic Properties consultation, Section 106, National Historic Preservation Act (NHPA)	Assists in identifying historic properties and consulting with government agencies on ways to avoid or reduce effects on historic properties. Required as a result of the federal action triggered by the USACE Section 404 Permit.
MDNR	Minnesota Environmental Policy Act State Environmental Review	Required for peat mines that exceed 320 acres in size.
	Permit to Mine	Construction and operations of a peat mine that exceeds 40 acres in size, or that have the potential for significant environmental effects. Will include preparation of mining and reclamation plans that apply the same principles and standards for replacing wetlands, either by restoration or creation of wetland areas, that would be acceptable in WCA mitigation plans.
	Water Appropriation Permit	Authorizes withdrawal and use of water from surface or ground sources.
	Dam Safety Permit (Potential)	Authorizes construction of dams that are greater than six feet in height or impound more than 15 acre-feet of water.
	Endangered Species Permit for State-protected Flora (Potential)	Outlines plans for avoidance, minimization, and mitigation of take of state-protected flora species and authorizes take of individuals (note, not currently needed based on 2017 survey finds)
	Beaver Dam Removal and Trapping Permits	Authorizes removal of a dam and trapping of beavers.
MPCA	National Pollutant Discharge Elimination System (NPDES) Construction Stormwater Permit,	Authorizes ground disturbance with approved protection measures to manage soil erosion and stormwater discharge on construction site.
	NDPES/ State Disposal System (SDS) Industrial Wastewater Discharge Permit	Authorizes ongoing discharge of process wastewater.
	Air Emissions Permit	Emission of regulated pollutants from regulated equipment at the peat processing facility.
	Aboveground Storage Tank Permit	Operation of aboveground storage tanks at peat processing facility.
Aitkin County	WCA LGU Wetland Replacement	Wetland Conservation Rules, adopted under the WCA, do not apply to peat mining operations that are subject to a Permit to Mine (see note above).
	Various local authorizations and approvals	As determined by project specifics and agency consultations



A scenic landscape featuring a calm body of water in the foreground, surrounded by lush green reeds and grasses. In the background, a dense forest of evergreen trees stretches across the horizon under a vast, blue sky filled with soft, white clouds. The overall atmosphere is peaceful and natural.

## Questions & Comments