

# Hiawatha NF

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Native Plant Materials Projects

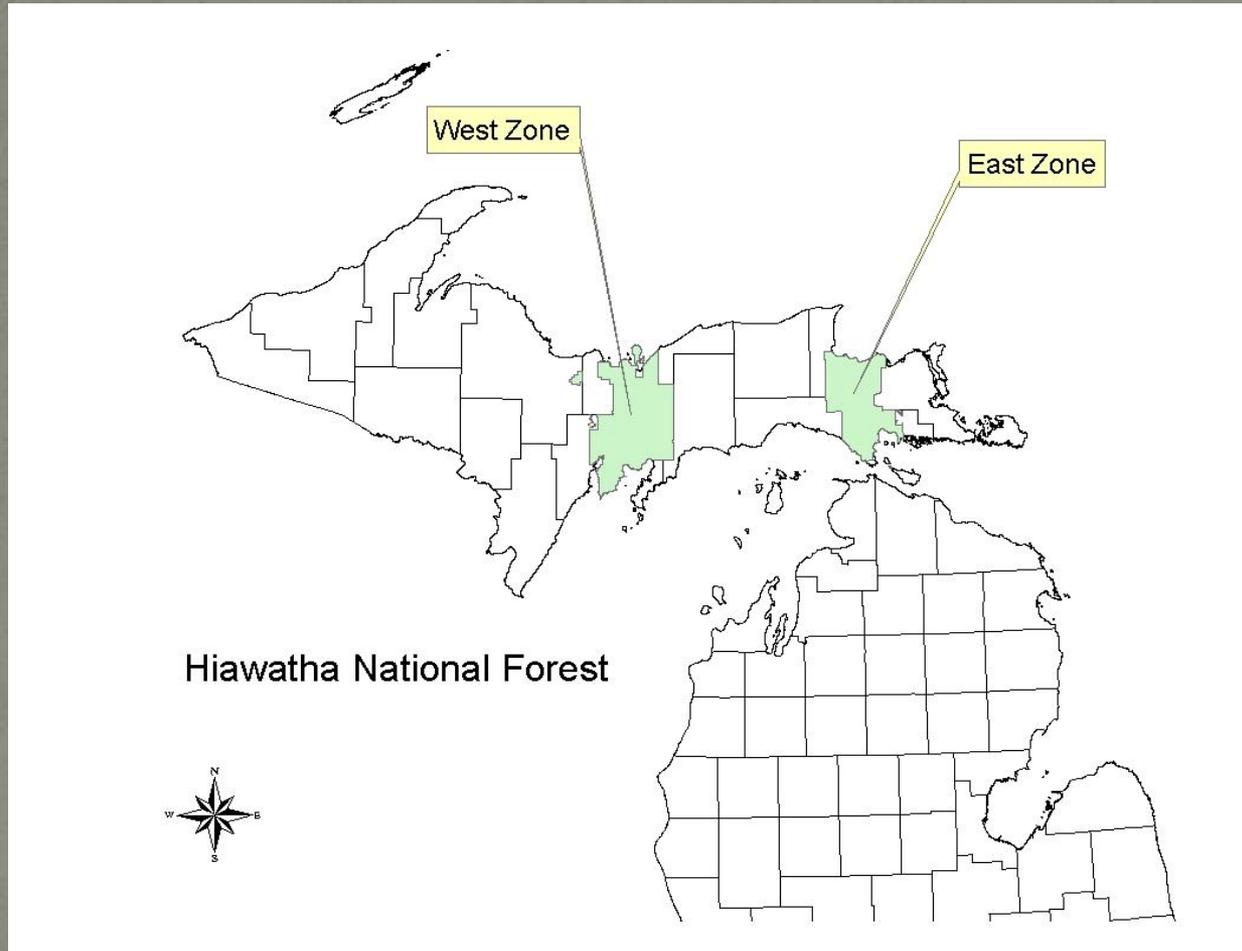
2007-2010

# Native Plant Materials Projects

## Staff

- 1 east zone botanist
- 1 west zone botanist
- 1 program manager/budget coordinator
- other FS permanent personnel and seasonals
- volunteers
- contractors

# Native Plant Materials Projects



# Historic Influence on Native Vegetation

- Logging in the late 19<sup>th</sup> century
- Fires occurring after logging
- Wildfire suppression
- Introduction of non-native species
- Populations of native plants do exist (e.g. dunes, pine savannas, wetlands)
- Landbase - 40% wetlands



# HNF Native Plant Program

- Native Seed Harvest & Preparation
- Native Seed Orchards
- Marquette Greenhouse
- Restoration Projects
- Native Plant/Pollinator Gardens
- Public Outreach/Education
- Partnerships



# HNF Native Plant Program

- Since 2007 the Forest greenhouse has raised and successfully out-planted nearly 140,000 native wildflower and grass plugs and created a native seed cache of more than 800 pounds of seed harvested from the HNF.
- Volunteers are instrumental in the success of the native plant program along with long standing partnerships with USFS Northern Research, Superior Watershed Partnership, Northern Michigan University, MSU Extension, Grand Island Association and Moosewood Nature Center.



## Forest Greenhouse

Volunteers seeding  
cells for NFN<sub>3</sub>  
funded restoration  
projects on HNF for  
summer of 2010.



**Long time  
greenhouse  
volunteer Linda  
Rehorst**

Linda is our volunteer greenhouse assistant, she is a “Master Gardener”, and works closely with the Forest greenhouse contractor Sue Rabbitt.

(Interior racks expanded our growing operations at the Forest greenhouse by doubling our growing capacity. Materials funded by NFN<sub>3</sub>.)



## Seed Drying Racks

NFN<sub>3</sub> funding used to purchase materials and small contract for Robert Neely. Neely constructed 3 sets of seed drying racks for the Forest Greenhouse. The racks are portable and easy to work with. Paper for lining each shelf was donated by a local paper mill.



## Tray-Cell Storage

Fall of 2010 NFN<sub>3</sub> monies were used to construct storage racks to hold all planting trays and containers.

With the help of NFN<sub>3</sub> funding since 2007 we have gradually upgraded our planting containers by purchasing new container systems from Steuwe and Sons. The new systems are high quality polyethylene for increased life expectancy. The new containers are easy to clean and most importantly they are recyclable materials. Using the new nursery containers has helped increase production and quality of our native plugs.



## Forest Seed Harvester

Portions of NFN<sub>3</sub> funding in 2009 was used towards the equipment needed for developing our mechanical seed harvesting operations. Today with our seed harvester we can collect roughly 500 pounds of warm season grass seed in just 2-3 days.

# Native Seed harvesting...

Forest Staff funded through NFN<sub>3</sub>...  
Wildlife biologist Janet Ekstrum harvesting  
Big bluestem from one of the West Unit seed  
orchards...

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Contractors harvesting native seed from the Forest...  
Sue Rabitaille owner of Borealis Seed Company  
harvesting warm season grasses from a Forest seed  
orchard...

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## Weighing and Catalog Native Seed

Native seed is kept at the Forest Greenhouse facility in the Forest Seed Cache. As of December 2010 we had approximately 800 pounds of native seed stored. NFN<sub>3</sub> funding has been instrumental in the Forest being able to build up our seed cache through funding full time staff, small contracts and purchasing native seed from Borealis Seed Company.



## Forest Native Seed Cache

NFN<sub>3</sub> funded the purchase of materials and a small contract for Robert Neely who constructed 4 sets of shelves, 5 rows high for storage of native seed harvested from the HNF. Funding is also used to purchase roughly 30 plastic totes each year for storing dried seed.



**NFN<sub>3</sub> funded native  
plant materials  
projects on the  
Hiawatha NF**

The following series  
of slides are sites  
where native plugs  
raised at the Forest  
greenhouse, from  
native seed harvested  
from the Hiawatha  
NF, were utilized for  
restoring degraded  
sites, create  
interpretive native  
plant gardens and  
pollinator habitats  
since 2007.

# Grand Island NRA

Farm Field Restoration

Summer of 2008

Before NNIP treatments and first  
transplanting...

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Summer of 2010

After NNIP treatments and transplanting  
more than 50,000 native plugs. Approximately  
2 acres have been successfully restored  
providing essential pollinator habitat on the  
island.

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# 2010 -Grand Island NRA

## Farm Field – West Side of Opening

West side of the farm field...

Prescribed Fire was used spring of 2010 to treat NNIP and stimulate raspberry and strawberry production...

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Summer of 2010

After transplanting more than 35,000 native wildflower plugs...

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# 2010 - Grand Island NRA Williams Landing Restoration

July 2010... south side of landing after site was impacted by ARRA construction...

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July 2010... south side of landing after being restored with native plugs and live transplants...

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# Grand Island NRA

## Williams Landing Restoration

North side of Williams Landing in the beginning stages of restoration planting...

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North side of Williams Landing after transplanting native plugs and live transplants....

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# 2009 - Rapid River Pollinator Garden

Before....

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After....

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# Sandtown Restoration

**Before...**

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After 3 days of planting plugs raised at the greenhouse and live transplants rescued from the Solex greenhouse site.....

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# Munising RD Native Plant Gardens

Looking North



Looking West



# St. Ignace Native Plant Garden

Before....

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After....

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# 2007 - Bay Furnace Campground Restoration Projects....

**Septic Field... after NNIP were  
hand pulled**

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**Septic Field... After  
transplanting native plugs**

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# 2007 - Rock River Canyon Restoration on the NCT ...

**Before...**

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**After...**

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# 2007 -Pollinator garden at Big Bay...

Students planting native plugs ...

Big Bay Pollinator Garden



# Native Plant Vendors



- Borealis Seed Company
- Only known vendor using HNF STZ
- Toumey Nursery – seed provided by HNF (attempting 12,000 plugs for FY11)

# Partnerships



- NMU – student volunteers
- MSU – Life of Lake Superior, Master Gardener’s Class
- Superior Watershed Partnership
- North Central Research Station
- Central Upper Peninsula CWMA
- Borealis Seed Company
- Moosewood Nature Center
- Eastern Upper Peninsula CWMA
- Chippewa/East Mackinac Conservation District

# Challenges



- New Workforce Organization – less personnel
- Needs for native materials outpacing supply
- Only one commercial source for our STZ materials