



Tryon Farm Institute

**NOTES from 9/20/12 site meeting re: Sedge Meadow maintenance, WHIP**

submitted by Scott Kuchta (9/21/12)

additions by Steve Messamer + Linda Byer (9/26/12)

Date: 9/20/12

Time: 10am-Noon

Location: Tryon Farm

Attendees: Scott Kuchta (TFI), Judith Tennent-Brown (TFI), Steve Messamer (Tryon Farm), Theresa Wojkovich (NRCS), Linda Byer (IN-DNR), Richard Matzat (Matzat Invasives Management)

**WHIP “pest management” (a/k/a invasive species management)**

*Contract summary:*

- Tryon is in year #2 (of 3) of this grant/cost-share program (as of 2012)
- program gives fewer funds every year, with the idea that fewer invasives should be present in successive years
- in 2012 Tryon is due to receive \$1,050 for the (re)treatment of 1.4 acres of land – see aerial photo, portions highlighted in red
- TFI will receive the funds whether or not we need them to treat the invasives; if we spend more than \$1,050 amount, then we are responsible; if we spend less (get volunteer labor, for instance), then we can pocket the savings

*Primary targeted invasives being treated at Tryon thru WHIP:*

- honeysuckle
- autumn olive
- multi-floral rose
- oriental bittersweet

*Historical summary:*

In 2011 Richard Matzat treated the targeted invasives in the treatment areas (red zone on aerial photo) by mulching with his specialized equipment – the same equipment he used clear the Sedge Meadow of willow and locust (also in 2011).

Significant re-sprouts have since appeared in the treated areas. Wojkovich, Byer, and Matzat agree that all re-sprouts (and any new growth) need to be addressed immediately – within 2 weeks – as the 2nd year follow-up treatment. They believe the best (most effective) treatment would be to hand cut all woody species and apply an herbicide (with dye) immediately to the stump debris. Alternatively, a foliar spray application of the herbicide could be applied to the leaves of the species without cutting, though the effectiveness is not as great as cut-and-dab method and may result in more “over-spray.”

Due to the seasonal timing restrictions (early fall), herbicide work must be conducted immediately as woody plants species are currently absorbing as much energy from the plant into the roots in

preparation for upcoming winter season. If applied too late, the effectiveness of the herbicide declines significantly.

Byer recommends use of Tordon herbicide – believes it to be most effective (more effective than RoundUp-Glyphosate). Matzat believes RoundUp to be a safer alternative to Tordon due to how it degrades rapidly when in contact with soil, whilst still achieving an acceptable level of success at damaging targeted species.

Matzat will provide cost estimate to apply foliar method herbicide treatment. It is suggested that any cut-and-dab method be conducted by volunteers (rather than by Matzat), due to difficulty for providing accurate labor-time estimates if cutting is desired.

#### **WHIP “early succession prairie habitat management” (a/k/a prairie maintenance)**

##### *Contract summary:*

- *money available for a prairie burn, or alternative treatments (like strip disking)*
- *this is 1x amount of money - eligible for \$11.25 /acre of treatment - up to \$52.00 max*
- *eligible for 1x free burn/treatment plan, written by DNR biologist Linda Byer*

##### *Historical summary:*

- *A late Spring 2012 inspection led by Byer and Wojkovich attended by Kuchta identified numerous beneficial native prairie species (floral) and at least one bird (fauna) only found in prairies – a good indication of the success of the habitat. Some invasive cottonwood woody species are identified. Byer does not see immediate need to conduct burn – suggests Fall 2012 as earliest potential time. Byer recommends burning no more than ~35% at any one time, in order to retain native habitat for fauna species present.*

Wojkovich confirms that plan is to cover burns in 2013 and 2014.

Byer confirms that she will write and provide burn plan now (2012) for prairie areas, to be applied in 2013/14 per Wojkovich note, rather than waiting until Spring 2013 when her workload will be heavy.

#### **Sedge Meadow maintenance**

##### *Historical summary:*

- *During the summer of 2011, Richard Matzat cleared approximately 3-5 acres of densely grown woody tree and shrub species from the western half of the Sedge Meadow using his specialized mowing-mulching equipment. No herbicide was used.*
- *Primary 2011 targeted species treated:*
  - o *locust (non-native, aggressive)*
  - o *willow (native, aggressive)*

- A site inspection in Spring 2012 was attended by Kuchta and Matzat. Following an unusually mild winter and a late season hard frost, re-sprouts of the locust and willow were present, but limited. Frost damage was clearly identifiable on many early-season re-sprout leaves.
- A late Spring 2012 inspection by Kuchta, Byer, and Wojkovich identified modest re-sprouts and the presence of several desirable native sedge flower species in areas which had been densely populated by willows and locust prior to 2011 Matzat clearing work. Byer and Wojkovich question success of non-herbicide (mulching only) treatment. Additionally, Byer suggests potential for a "winter burn" to be conducted immediately after first winter season's snow fall which saturates soil to prevent the organic soils from catching fire.

Following summer drought conditions and a more recent (4-6 weeks) wet period, inspection reveals significant re-sprouts of willow and locust species, with mixed densities and heights throughout the treated areas, but generally thicker re-sprouts in the northwestern most portions of the treated areas (nearest to the TFHA "Woods-Pocket Settlement"). Generally re-sprout species are shoulder-height or lower (note: species cleared in 2011 were generally 10' in height or taller).

Some small patches (~100 square feet) of willow/locust appeared in areas not densely populated prior to 2011 clearing work.

Numerous beneficial native grasses, sedges and forbs identified by Byer and Messamer, including:

- prairie grasses (likely planted):
  - o Big Blue Stem
  - o Indian Grass (*Sorghastrum nutans*)
  - o Switch Grass
- native sedges:
  - o Wool Grass
  - o Soft Stem Bulrush
  - o Nut Sedge
- Tall Sunflower (*Helianthus giganteus*)
- Purple Coneflower (*Echinacea purpurea*)
- Wingstem (*Verbesina alternifolia*)
- Daisy Fleabane (*Erigeron annuus*)
- Tickseed Sunflower or Bur-Marigold (*Bidens aristosa*)
- Barnyard Grass (*Echinochloa crus-galli*)
- Orange Jewel Weed (Spotted Touch-me-not) (*Impatiens capensis*)
- Entire-Leaved Resinweed (*Silphium integrifolium*)
- New England Aster (*Aster novae-angliae*)
- Heather Aster (*Aster pilosus*)
- 2 or 3 other white Aster species (*Aster* species)
- Several species of Goldenrod (*Solidago* species)
- Partridge-Pea (*Chamaecrista fasciculata*)
- Indian Hemp/Dogbane (*Apocynum cannabinum*)
- Bottle Gentian (*Gentiana andrewsii*)
- Slender Mountain-Mint (*Pycnanthemum tenuifolium*)
- Buttonbush (*Cephalanthus occidentalis*)

- Rattlesnake Master
- Late Boneset
- Coreopsis
- Gentian

Winter burn options were discussed. Winter burns are advantageous in sedge meadows (typically containing mucky soils with high organic content) because of ample dry debris / burn materials due to seasonal dormancy; additionally early season snows saturate the ground (preventing organic soils from catching fire), but typically melt during the day above the surface allowing for good burns.

Byer reports that, after looking at soil map of Sedge Meadow area, it was determined that it is not organic soil but rather sandy soil with a high water table. Therefore we should not be concerned about a muck fire.

All agree that that preferred goal of a proscribed burn for the TFI Sedge Meadow should be to damage and ultimately reduce the amount of locust and willow woody species present. With this specific goal in mind, Byer and Matzat suggest a late Spring (2013) burn, rather than an early Winter (2012) burn. Ideally the Spring burn would be conducted as late in the season as possible, where recent rains have saturated the soils, but general humidity levels remain low. Byer and Matzat agree that a late Spring would likely cause the most damage to the woody plants, which at that time of year are aggressively trying to re-sprout – will be shocked by the burn heat.

In lieu of early Winter 2012 burn, Byer and Matzat suggest pre-2013 mowing (bush-hogging) of woody species currently present in Sedge Meadow to help control the rapidly re-establishing dense willow/locust re-sprouts. Byer suggests only mowing in areas where Spring 2013 burn is to be conducted. Like her prairie advice, Byer recommends proscribed burns of no more than ~40% at any one time in order to retain wildlife cover/habitat. Matzat suggests focusing on the western and northwestern portions of the Sedge Meadow, where both pre-2011 and current re-sprout populations are highest. All agree.

Phragmites are discussed. Dense populations of tasseled (already to seed) species exist in two (2) primary areas, one immediately northwest of West Pond and the other immediately east of the northern half of West Pond. Numerous small emergent patches exist throughout the Sedge Meadow as well. All agree that foliar application of herbicide would be ineffective at this time of year, after plants have already gone to seed. Byer and Matzat recommend that phragmites be mowed this year (at time of locust/willow bush-hog mowing) to improve physical access to the affected areas, and then be treated in 2013, in 2 stages:

- (1) After late 2013 Spring growth, and immediately prior to tasseling (going to seed), the phragmites should again be mown down;
- (2) as the plants re-sprout in Summer 2013 – desperate to get back to tassel stage – an application of herbicide should be given.

West Pond and Island discussed. Presence of mature locust with thorn-covered branches and trunks identified on the island. Locust are only tall trees on the island, providing fair amount of shading. Matzat recommends setting low-priority for removal of these trees, as well as other smaller but denser

locust/willow patches on the Island. West Pond observed to have no standing water (due to Summer 2012 drought), with some mucky soils on bottom (from recent rains). Byer identifies dense annual non-native, non-aggressive grass ("Barnyard Grass") occupying bottom of West Pond – seeds likely stayed in the soils under the water for years.

Kuchta identifies the recent (Summer 2012) mature black locust removal work along western edge of the Sedge Meadow conducted by the Noonan family (Tryon Farm developer); wood has been harvested and utilized to create sun shading trellis work for houses at Tryon Farm. Estimation that more than 50% of pre-2012 population of locust has been removed. Kuchta to confirm that locust stumps have been treated with herbicide (to hinder re-sprouts) post-harvest, as was previously agreed to with the developer.

Matzat to provide cost estimate and scheduling for 2012 mowing/bush-hog work, with understanding that work needs to be conducted prior to onset of Winter season (immediate action not required).

## **CONTACT INFORMATION**

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