

## **Borough of Lemoyne Comprehensive Recreation, Park and Open Space Plan**

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### **Site Visit: Negley and Memorial Park w/ John Schwartz, DCNR Woodland Stewardship Practices Specialist & Trish Newdeck, DCNR Regional Advisor -Southcentral West**

June 24, 2022

Report:

I fully support the removal of the callery pears. And if the borough wants to recreate the vista of the city they should be selective in which trees are removed. I would try to retain the maximize shade and focus on not removing trees that would open up a view blocked by trees behind them. Pick the focal points and work backwards, you can't have a view from everywhere and have trees so be selective. Also since some of the soon to be removed trees may have been Treevitalize grant trees, I want to make sure the trees removed are replaced at least at a 1:1 ratio. My records only go back to 2013 so I don't have these trees in my personal files. The removed pears should be replaced with smaller shrubs and trees in the same area. They could also be replaced with bigger trees in other parts of the park. I'd love to entertain planting large street trees along the top of the bank just below the guard rail so that there is more tree canopy for the park that would impede the view minimally after the trees become established. The Cumberland road could even use a traffic calming device or chicane with a planting or rain garden in it, since it is a 15 mph zone and vehicles rarely follow that limit. The loss of one parking spot could have multiple benefits.

A consulting arborist should be brought in for regular tree risk assessments to help the borough prioritize their urban canopy maintenance. These can be found at [www.ISA-arbor.com](http://www.ISA-arbor.com) under the "find an arborist" tab. Some of the trees along the north/west side of Negley Park mostly the locusts have signs of decay (visible conks of cracked cap polypore) and should be looked at by an arborist or removed during the redevelopment process. There is also a large ash tree along Cumberland road that is showing signs of dieback potentially caused by emerald ash borer damage. The callery pears were showing signs that the suckers were being treated with herbicide and that practice should be stopped. Be sure anyone applying pesticides in the park is registered with the PA Dept of Ag and has the required training credits to maintain that registration. Any borough tree maintainers should attend the tree tenders training and also the PSU extension arborist short course to continue their arboriculture training.

Even though this isn't tree related, the borough should probably work with the neighboring landowner about the use of park property for access to the back of the residential lot. I'm not sure if municipal land can be adversely possessed but it's a possibility for private lands in PA. If

they are unwilling to work with them a strategically placed concrete bench in the park redesign might be a functional solution.

The most interesting native plant we saw was the elderberry on the bank below the trail. Elderberries are a wonderful native shrub that provide a showy white flower clusters followed by an edible (sometimes bitter) berry that wildlife greatly enjoy. Adding edibles to the park design would help connect the residents to nature. Several of my planting suggestions have edible fruit, foliage, or nuts.

**Invasives we saw as we walked included:**

[Callery pear](#) these invasive Asian pear trees should be cut down and the stump ground or treated with herbicide. They are prolific stump sprouters.

[Poison hemlock](#) this is in a group of herbaceous plants called biennials meaning “two year”. They germinate spring through fall and linger as a low rosette of leaves for a year then quickly bolt and flower in the middle of summer the following year. It’s easiest to treat the first year rosettes but the bolted flower shoots are easier to find. Foliar spray the first year rosettes with broad leaf selective herbicides like triclopyr or 2-4d. Bag and trash the second year flower heads. For non-chemical control: The second year flowering stalks can be cut off just below the ground with a shovel or mattock before they set seed and bagged up for trash. Garlic mustard, poison hemlock, and some thistles(not Canada thistle) are treated the same way.

The best way to get rid of this highly toxic 5-8 ft tall biennial, herbaceous carrot-relative is to spray it the first year with triclopyr , 2,4-d or some other broad leaf specific herbicide. Second best option: spray it with glyphosate any time before it bolts to produce flowers. I suggest using broad leaf selective herbicides to allow the grass to continue to grow and shade out the hundreds of thousands of seeds that just need a little light to start the process over again. Or if you want/need to do it chemically free, wait until it is flowering and cut it at the ground and bag it up for the trash. Or mow it to the ground repeatedly throughout the growing season. Power wash your mower deck/string trimmer before using it anywhere else to avoid bringing the tiny seeds with you. Cut it too early and it will send up a new flower stalk, cut it too late and the pollinated flowers will ripen into seeds on the ground. Bagging and trashing the seed heads/flowers ensures this doesn’t happen. Minimize soil disturbance and try to keep other things growing where it is found. The name of the game is stopping seed production combined with shading it out with desirable vegetation. The seeds can persist for several years in the soil so be ready for multiple years of treatment. Monitor, monitor, monitor... one skipped plant sets you back years and puts tens of thousands of seeds back in the site. Hand pulling should be done with rubber gloves and long sleeves. The stems are juicy some people develop severe reactions to the sap. Getting large amounts of sap on you(string trimming in shorts) is a bad idea. All parts of the plant are deadly toxic to ingest.

[Burdock](#) this biennial typically only gets established and can become a problem in areas with disturbed soils: construction sites, roadsides, and farm fields. Mowing before flowering can reduce seed production. 2-4d should ideally be applied to the first year plants.

[Norway maple](#) this large European tree resembles sugar maple but can be distinguished by the blimp shaped buds and milky sap that comes out of the leaves and stems. Hack and squirt or cut stump treat these in natural areas or remove them as they can be replaced in the park. These were widely planted and are common around old farmsteads.

[Tree of heaven](#) (Ailanthus) this highly prolific tree is easy to kill through hack and squirt or basal bark treatments. Do not hack and squirt in the spring until the leaves are fully emerged. Late summer is the best time to target tree of heaven. Cutting them down without chemical treatment causes every tiny root to send up a new stem. Do not cut or dig them until the stem is dead. If time or resources are limited, priority should be given to taking out the female stems. The females have the clusters of seeds in late summer and empty “grape stems” stay on in the winter. These trees are the primary host for the new invasive [spotted lanternfly](#). Getting the tree of heaven out of your land is a great way to reduce the number of spotted lanternfly you will have to deal with later. Male trees can be used as trap trees to lure SLF to it’s death. A trap tree is treated with a systemic pesticide(imidacloprid or dinotefuran) and one sap feeding session is all that it takes to kill the lanternfly. Tree of heaven is weak wooded and quickly rotting tree, once the trees are dead they can be cut, but do not cut before you’re sure they are dead.

[Shrub honeysuckle](#) foliar sprays are used to treat this shrub with glyphosate and/or triclopyr mixed with water and a surfactant are usually effective against these shrubs. Large specimens can be cut stump treated.

[Japanese honeysuckle](#)(vine) this semi evergreen vine can be foliar sprayed with glyphosate and surfactant on a warm day in winter.

## **Chemical Techniques**

### **Foliar**

This technique is the most familiar for people. Using backpack sprayer, ATV/Tractor mounted handheld wand, boom, or mist blower the applicator sprays a fine mist with the goal to usually just glisten the foliage. Some chemicals will say to the point of wet. Any drop that runs off is normally wasted chemical, however some chemical labels say to the point of run off. It is best to try to cover the majority of the foliage of the plant with a fine mist. Glyphosate, Oust xp, escort xp, and triclopyr are the most commonly used foliar chemicals in a forest setting. Larger droplets can help reduce off target effects by reducing the effect of wind. This technique is most applicable to plants that are waist high or lower. If the plants are over your head there will be extensive overspray to the surrounding vegetation and the potential for increased exposure to the person applying.

### **Hack and squirt**

Hack and squirt would be my method of choice for killing some woody species. This can be used on larger stems. Late summer is the best time of year for herbicide treatments on Ailanthus. You would put one deep hatchet slash parallel to the ground all the way around the trunk for every inch of diameter. This creates a small cup that you can dribble herbicide directly into the water moving vessels of the tree. Leave intact bark in between hacks so you do not trigger the suckering response. Inside of that hack you dribble one healthy squirt of Glyphosate. The label

will tell you how much exactly but it's usually around one or two squirts per hack. [Here is a video on how to do the hack and squirt method.](#) One thing I would change from this video is that I wouldn't use just any old squirt bottle. Pay the extra couple dollars for a chemical resistant squirt bottle. A cheap bottle he referred to would rust out within few weeks of storing glyphosate (it's a salt).

I typically use full strength glyphosate which is somewhere between 41 and 50% active ingredient. Some labels allow for a 50/50 dilution with water.

### **Cut Stump treatments**

This method is typically used on larger trees. The tree is cut off and the cut surface of the stump is painted with concentrated round up (glyphosate) or triclopyr. On large stumps(over 6-8 inches) only the outer 2 inches needs to be painted because the heartwood is not a water moving part of the stem. Any chemical that runs down the bark is wasted. This is not advised for Ailanthus.

### **Basal Bark Treatment**

Woody stems can be treated any time of year with triclopyr (Garlon 4 or Tahoe 4) this is mixed in an oil carrier and sprayed on the lower portion of a stem. The application completely encircles the stem from about 12-15 inches to the ground. This is only used on stems less than 6 inches in diameter. Pathfinder II is a premixed triclopyr formulation.

### **Record Keeping**

Please remember to keep detailed notes on your spray records. Here is a [handy chart](#) to help you write down all the info needed. It is required whenever applying chemicals to ensure you do not over apply, but it's also good self-protection in case your neighbor decides your spray killed their trees, poisoned their well, or some other chemically induced problem. Your records will show that you sprayed the proper amount, in the label approved sites, and stayed within the proper use parameters.

**Whenever using herbicides be sure to read and follow all label instructions. The label is the law. Any brand names are not an endorsement of that particular brand simply an example of a readily available product.**

### **Memorial Park**

In memorial park removal and replacement of the callery pears with native species would be great. The trees surrounding the ball field could be replaced with any species but smaller leaved trees like beanless honey locust or Kentucky coffeetree may help keep the leaves from accumulating on the field/fence. Many of the trees would benefit from a mulch application following the rule of 3s. Aim for 3 inches deep, in a 3 ft circle for new plantings, and kept 3 inches from the trunk. This would do two things, reduce mower damage and the associated compaction from weekly mowing on the critical root zone and help increase water and airflow to the root system. There was a large tree over the gazebo that showed signs of internal rot and should be evaluated by an arborist or removed. The non native trees should be replaced with

natives as they are removed. Mainly sawtooth oak and zelkovas or potentially Chinese elms(I didn't write it down). This would be the lowest priority item I saw.

Below, I have attached a short list of potential short native trees and shrubs for the replacement of the callery pears(there's a ton more out there).

### **Shrubs for vistas and erosion control**

There are many options for planting something low maintenance to maintain a vista. If you don't want to have to mow your vista, getting native low growing aggressive vegetation on the site is the best option. The lowest plants on my list would be the sedges that top out at around 18 inches. More info about them in the sedge lawn section below trees. Soil will be the determining factor for deciding what will grow well on your planting sites. Since it is a vista there should be plenty of sunlight to keep things growing nicely. See the attached "dncr\_nativeplants.pdf"

Soil characteristics are going to be the determining factor. This depends on pH mostly. I've highlighted acidic soil loving stuff in red, more basic soil growers in blue. I'd assume based on the current trees(hackberry, locust, walnut) in the undeveloped areas that the soil is very basic. Deer browsing may be an issue with most of the shrub suggestions. There is a surprising number of deer roaming the streets of Lemoyne in that side of town. Short fences can be put up temporarily until the plants are established enough to start reproducing.

Native plants for Wildlife Habitat and Conservation Landscaping

<https://www.fws.gov/chesapeakebay/pdf/NativePlantsforWildlifeHabitatandConservationLandscaping.pdf>

### Short shrubs under 4'

- -Northern bush honeysuckle *Diervilla lonicera* (top choice)
- \*New Jersey tea *Ceanothus americanus* (Top choice)
- \*fragrant sumac, *Rhus aromatica* (top recommendation) really SHORT woody shrub. 'gro-low' cultivar is extremely short
- \*black huckleberry *Gaylussacia baccata*
- -Wild or smooth hydrangea *Hydrangea arborescens*
- -sheep laurel *Kalmia augustifolia*
- \*black chokeberry *Aronia melanocarpa*
- \*lowbush blueberry *Vaccinium angustifolium*
- \*pasture rose *Rosa carolina* (In areas without multiflora rose)
- -Fly honeysuckle *Lonicera canadensis*

These are taller than 4' but can all be kept smaller through pruning if desired.

- -common ninebark *Physocarpus opulifolius* (top recommendation)
- \*Spicebush *Lindera benzoin* (top choice)

- \*elderberry *Sambucus canadensis* (top choice)
- -winterberry holly *Ilex verticillata* (top choice)
- -leatherwood *Dirca palustris* (very cool and extremely rare plant in the landscape!) lower wildlife value than others but also deer proof.
- \*swamp rose *Rosa palustris* (great choice if not mixed with multiflora rose)
- \*black haw *Viburnum prunifolium*
- \*High bush cranberry *viburnum trilobum*
- -grey, silky, downy dogwood *Cornus* spp.
- -Rhododendron *Rhododendron maximum*
- -buttonbush *Cephalanthus occidentalis*
- -Beautyberry *Callicarpa americana*
- -Allegheny chinquapin *Castanea pumila* (bigger almost a tree)
- \*Allegheny/American plum *Prunus alleghaniensis/Prunus Americana* (bigger almost a tree)
- \*American/beaked hazelnut *Corylus Americana/ Corylus cornuta* (bigger shrubs)

### Small Trees

- Musclewood *Carpinus caroliniana*
- Ironwood *Ostrya virginiana*
- Witch-hazel *Hamamelis virginiana*
- Flowering dogwood *Cornus florida*
- \*Serviceberry *Amalanchier* spp.
- \*Crabapple *Malus* spp.
- Hawthorn *Cretageus* spp.
- \*Paw paw *assimina triloba*
- \*Redbud *Cercis canadensis*

\*Edible fruit, nut, flowers, or foliage

### **Native plantings for Lawn Conversion/Meadow Creation**

Pennsylvania has way too many mowed lawns. These lawns are (sometimes)fertilized, compacted, continuously mowed ecological deserts. The effects of these lawns are impacting water quality, there is a movement to reduce the amount of lawns in Pennsylvania to help improve our habitat and filter stormwater before it reaches our waterways.(MS4 credits) So if you're working in a lesser used area, please consider planning a native meadow instead of a putting green of nonnative grasses. There is funding available through DCNR for lawn conversion/meadow plantings.

### Lawn to meadows: The Basics

<https://extension.psu.edu/meadows-and-prairies-wildlife-friendly-alternatives-to-lawn>

The basic premise of the meadow conversion would be to take mowed lawn and convert it to a native meadow or prairie habitat. The benefits would be increased wildlife habitat, increased stormwater infiltration, lower yearly maintenance costs, increased carbon storage, improved soil health, a reduction of overall herbicides and pesticides used, reduced carbon footprint, and increased aesthetic beauty. The simplified version of how to accomplish this is to:

1. Remove the existing grass. This can be accomplished through herbicides and light tillage. Sometimes repeat application are necessary if the weed/grass seed bank is well established.
2. Prepare a seed bed through cultivation.
3. Plant the seed. A seed drill is the best method of application, but hand seeding can work okay. Hydroseeding is not optimum. A list of native mixes containing fast growing temporary “nurse crop” species and longer lived native perennial species can be found below.
4. Mow with a brush hog once at 8 inches to reduce weed seed production. Repeat as needed for the establishment period.
5. Mow 1/3 of the planting once a year to maintain the meadow.

The attached SeedMix2page.pdf is a DCNR guidance document for revegetating after any earth disturbance which gives the most basic native seed suggestions. [Ernst Seeds](#) has many different seed mixes or you can craft a custom mix for native plantings.

Here is a great guide for meadow creation:

[Mid-Atlantic Native Meadows: Guidelines for Planning, Preparation, Design, Installation, and Maintenance \(xerces.org\)](#) this is from the pollinator group Xerces Society for Invertebrate Conservation

### **Sedge lawns**

If you do require to have some lawn in a hard to mow place, a sedge lawn can be a happy medium between the look of a traditional lawn and the benefits of a natural meadow planting. Sedges are native plants that look like grass. These are typically sold as plugs. Plant the plugs on a 6-12 inch spacing to allow the plants to expand into a solid mat of willowy “grass-like” growth over time.

Again if I neglected anything I look forward to hearing from you and would be happy to add more detail anywhere you need it.

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The information contained in these minutes was recorded by Pashek + MTR and represents our interpretation and understanding of the discussions that occurred during the meeting. Please notify Pashek + MTR within one week of distribution. Otherwise, minutes will be distributed as final, and assumed accurate as written.

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