MEMORANDUM
VILLAGE OF NORTHBROOK
DEVELOPMENT AND PLANNING SERVICES DEPARTMENT

TO: ENVIRONMENTAL QUALITY COMMISSION

FROM: TESSA MURRAY, GREENEST REGION CORPS MEMBER

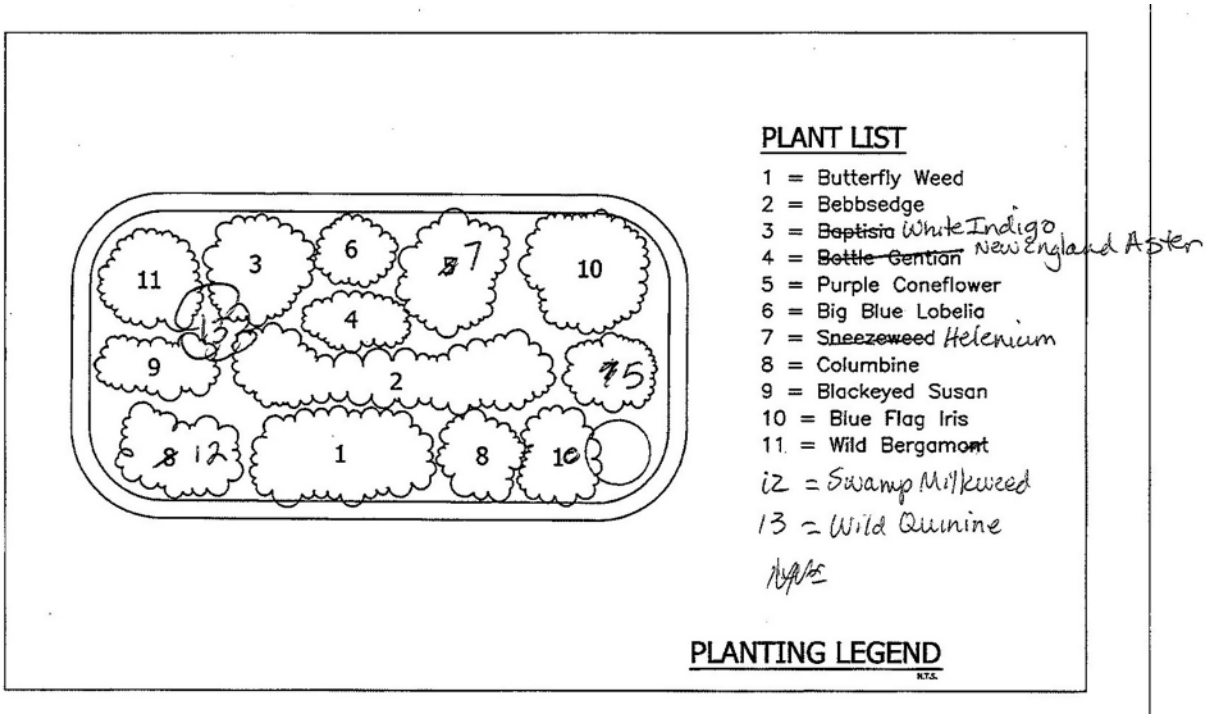
DATE: OCTOBER 28, 2020

SUBJECT: VILLAGE HALL RAIN GARDEN REVITALIZATION PROJECT

INTRODUCTION

In 2011, the Village installed a rain garden outside of the Village Hall Board Room. Including costs of labor and excavation, the rain garden cost over $1,500 at the time. The original garden maximized stormwater drainage capacity with an elaborate scheme of inlets and outlets. The garden included 13 species of plants native to Illinois wetlands including New England Asters, Blackeyed Susans, Swamp Milkweed, and Purple Coneflower. These plants thrive with seasonal flooding events, thus should survive when the gutter from the Village Hall roof empties into the garden after a deluge of rain.

The combination of plants used in 2011 includes flowers that bloom in different times of year. When Wild Bergamot flowers emerge in early spring, the first adult and premature insects to come around have a food source. On the other hand, Asters bloom and provide sustenance for the final lingering insects in late fall. I made note of this and incorporated the same features in the plants chosen for this revitalization project. Depicted below is the schematic plan for the garden that was originally planted.



The garden's original plan from 2011

Perhaps as a result of the lack of maintenance, overtime the garden has lost most of the natives (except the Black-eyed Susans and Irises in each corner) and gained invasive species including, but not limited to, garlic mustard and weedy bellflower. The demonstration rain garden outside Village Hall is a key opportunity to set an example of what a large difference a small plot of land dedicated to native landscaping can make, in terms of providing pollinator habitat and natural storm water drainage techniques. Wetland plants native to Illinois have unique abilities to filter and absorb excess water during rain events, and prairie plants with their deep (sometimes miles long!) root systems are important in promoting carbon sequestration in soils.

On October 28, 2020 the revitalization project began to return this demonstration garden back to its "roots". Throughout the year as the seasons change the Village will document this endeavor as a guide for gardeners new to native gardening.

The garden in October 2020, before revitalization

Native seeds, organic mushroom compost, and peat moss was all used for this project.

STEP 1: SEED PREP

Most native plant seeds have fully matured by fall and begin to naturally dry out and disperse. With the permission of the groundskeeper of a restored prairie, the Village was able to remove seeds and seed

pods from native plants to bring to Northbrook. It is important while doing this to leave most of the established plant's seeds for itself by taking less than half, and to only use those that can be easily removed and therefore are fully mature. Prior to planting, the seeds can be stored in a canvas bag in a cool dark space such as a garage or shed (plastic bags and heated homes may damage the seed). Since the seeds were pulled directly from adult plants, they could not be planted directly in the soil, but instead needed to first be processed by hand. For example, processing a milkweed seed involves cracking open a dry seed pod and removing the seeds.

Unopened Milkweed seed pod

Opened pod, the brown seeds are at the bottom and attached to fluffy feather-like wings that promote dispersal through wind.

For the Rattlesnake Master, processing the seed involves picking them off with gloves on. The spikes seen above are the seeds and would be painful to remove with bare hands.

STEP 2: SOIL PREP

Next, five bags of mulch compost were added to the plot. Terry Cichocki, Village Forester from Public Works, advised staff to stay away from wood mulch, as this may make the soil less hospitable to seed germination. Next, it was time to lightly rake the mulch to ensure even distribution. We also removed the flowering weeds to prevent further development. In most cases it is best to trim off flowering heads of weeds to prevent reseeding, rather than removing the entire weed roots and all. If an area is vulnerable to invasion, uprooting will disturb the soil and make the intrusion of additional weeds more possible.

STEP 3: PLANTING AND PLANNING

The processed seeds were separated into categories of grasses and wildflowers, because Ms. Cichocki

also encouraged a grass border at the edge of the plot to help tame invasive introduction. Next, the seeds were placed back in the canvas bag then mixed with peat moss as a carrier, using a 2:1 carrier-to-seed ratio.

Processed seeds

Processed seeds with peat moss carrier

This mixture was scattered into the garden, and then we turned some of the compost back on top of these seeds. The planting process was completed on a sunny day so hopefully the seeds will settle in place in the soil before any heavy rain falls.

The garden in October 2020, after mulching and seeding

The great thing about planting natives is that nature is on your side in doing so. The plants which were seeded are set to thrive naturally with Northbrook's typical climate. Additional seeds were planted on November 5, and will continue to be monitored. Fallen leaf litter will be an added layer of mulch to enrich the soil. The dormant seeds will enjoy these last few cool rainy months to settle into the soil and require the months of frost to trigger germination come springtime.