Native Seed Collection Standard Protocols

The principal reason for native seed collection by the Parks & Recreation Division is to preserve the genetic integrity of native plants that have evolved within specific geological regions of Michigan when implementing ecological restoration of the unique natural communities within our State Park system. All other subsequent benefits from the use of native plants are outcomes based on this principal.

All actions throughout the course of collecting, storing, cleaning or otherwise handling of all native seed must prevent the contamination of each container of seed by seed from other geological regions. It is also critical for different species from the same geological region to be kept separate as well. For the purposes of this document we will refer to these geological regions by the parks that lie within them.

Herbaceous Seed Collection Protocols:

Seed Collection Kit: Milk jugs, paper lunch bags, grocery bags, lawn leaf bags, duct tape, drying cloth, markers, pens, volunteer forms, scissors, clipboard, and rope.

The use of plastic milk jugs for seed collection is ideal. They may be used from park to park so long as they have been completely cleaned of the seed from the last location.

Each SPECIES from each SITE must be collected separately, bagged and stored separately. Weed seed contamination during collection is expected to be minimized. Some consolidation may occur based on collection sites and end-use. However, this will be handled at a later date when seed is processed for cleaning and long term storage.

If collecting directly into paper bags use a new bag each day. This will prevent contamination, reduce the impact of spilling and minimize time from collection to proper storage. Daily bags of the same species may be combined from the same SITE.

SEED MUST REMAIN SEPARATE FROM ALL OTHER SEED WHEN IT IS:

- The same species from two different parks
- Two different species from two different parks
- The same species, but from a remnant, a planted site, or a propagation plot at two different parks.
- Two different species from the same park
- The same species, but from a remnant, a planted site, or a propagation plot at the same park
- The same species, but from a remnant site outside the park boundaries and a site within the closest park.
- Do not mix volunteer collected seed with DNR staff collected seed until it has been weighed and inventoried.

If contamination of a container of seed occurs (no matter how few improper seeds are mixed) that container must be labeled “CONTAMINATED SEED” and include both species names and both location names. It must be kept separate from all other collections.

Preventing Contamination:

CONTAMINATION CAN BE AS LITTLE AS ONE SEED. SO CLEAN MEANS CLEAR OF ALL SEED AND SEED DEBRIS.

- All collections should be sealed and labeled immediately on site upon completion each day. Double bagging and the use of duck tape on openings in paper bags is critical to ensure contamination does not occur during handling and storage.
- All equipment, clothing, vehicles, etc. must be washed, or otherwise cleaned with compressed air, vacuum and tweezers to assure all seed (native, non-native, invasive, etc.) is not transferred to another park.
- Paper bags may only be used once. Regardless of its condition if it had seed in it and the same seed from the same location is not going back into it then it must be destroyed (recycled, put into a dumpster or burned).
- Bags must not be used to start brush piles unless the bag was used for seed at the burn site.
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Labeling:

All bags must be labeled with the following information:

1. Species name represented by six letter botanical code. Common name is acceptable if species was assigned.
2. Park Name. Written out or as two or four letter code.
3. Site collected. Management unit, site name or FA#.
4. Date collected. i.e. 10/14/2008

Storage:

All seed must be stored in paper bags. Any one bag should only be roughly half full or depending on seed type at least not packed tightly in each bag. There should be equal amounts of air and seed.

Bags should be doubled or seems duck tapped. Tops should be minimally folded and duck tapped. If possible do not roll-down the extra bag material. Tape closed with air pocket in bag.

Seed should be stored in a cool, dry, rodent free location and preferably dark. For short term storage a general temperature range between 70F and 40F with a humidity range between 30% and 60% is safe for most species.

Ideal long term storage should be at 40/40. That is 40 degrees Fahrenheit and 40% humidity for most species.

STR’s:

A single summary STR should be done for each park where seed is collected. A separate STR is required if the method of collection changes (i.e. hand vs. mechanical). List total hours spent on this activity by park. List all species collected, the number of bags and bag type in the description area (or on back if necessary).

Species Population Health:

If the species collected is a perennial and in abundance there is no limit on collection. Any over harvesting or population depletion concerns can be alleviated by varying collection locations from year to year.

If the species collected is an annual and in abundance then collection should be random throughout the location/population (not concentrated in one area) and should not exceed 70%. Varying collection sites year to year will also help maintain healthy populations.

If the species is rare or in relatively low abundance at any one location then limit collections to 30% regardless of its growth habit.

If the species is listed as special concern, state threatened or state endangered then special considerations should be taken into account. In addition to securing appropriate permits, the collection, storage, and propagation techniques should be thoroughly planned out in advance.