**Burning Issues Symposium January 13-14, 2015**

**Miscellaneous from Notecards:**

Future Topics or General Questions:

* Potential future topics: smoke mgmt. in MI, Nat’l Weather Service, lake effect winds, air quality
* How to get unpublished data available?
* Sharing/collaborating on training:
  + Include times/dates/locations of face-to-face meetings
  + Include collection of canned PowerPoints/videos that support/replace face-to-face (this can reduce staff time spent managing/training volunteers, which is barrier to implementation)
  + Develop training videos!
  + Provide links to good online training videos and PowerPoints
* Human use of fire in N. America:
  + If humans set fire last 10,000 years, what was fire influence pre-homo sapiens? Lightning?
  + Has fire management looked at frequency of lightning strikes and fire starts in MI and Midwest? Graph it by decades?

On Rare Species:

* Discussion on refugia size; sounds like for insects in general 4 to 8 m2 is adequate for survival and recolonization by fire sensitive species in 2 years – would like a research brief/synthesis developed that makes this info easily accessible
* Research that backs up that butterfly diversity is higher in burned areas – linked with vegetation diversity increase? Studies that show this?
* More information regarding fire effects and conservation of pollinators, and general insect reintroduction potential?

On Invasive Species:

* Best Management Practice for incorporating invasive’s management into fire management:
  1. Survey invasive’s prior to burn, map/make map available to fire planners
  2. Consider types and placements of firebreaks through invasive patches, or as vectors for invasion
  3. Minimize soil disturbance where possible
  4. Clean equipment before the burn offsite at a staging area
  5. Limit entry after burn (how long, what types entry, how do you then monitor post-fire effects??)
  6. Monitor known locations invasive’s post-burn (how do you limit entry and still monitor post-burn…contradictory practice!)
  7. Make sure invasive’s treatments are budgeted for along with fire and other management techniques – link the treatments and funding
  8. Include invasive’s issues into any fire training – awareness is first step to implementation
  9. Put the invasive’s map into the burn plan!
* Is there a form or forum available to do inventory on invasive’s?
  1. How do we monitor progress on natives and invasive plant and animals?
  2. Can MISIN be overlaid or linked into a Manager’s existing GIS layer map?

Oak Savanna/Barrens Restoration:

* For studies looking at burning with and without thinning [in oak savannas], how much of the increase in species richness is from native versus non-native species?
* Compare girdling/chemical basal treatment [leave standing dead] versus cutting and dropping – are we not blocking plants from growing up, and what are the different fire effects from burning more fuel from cut-and-drop versus risk of dead standing.
* What are the long-term control, benefits, and cost of using herbicide instead of fire? Would like to see a longer session on real world comparisons of cost effectiveness per acre versus increase/decrease on diversity or target species.
* More information on *Rubus* spp. And savanna restoration. What burn regimes would tend to promote *Rubus* recruitment? What can reduce recruitment?