

APPENDIX II

MiRAM Assessment Data and Categorization (January 2010)

Wetland MiRAM Score Results
and
Categorization (January 2010)

| Wetland | MiRAM Score | Wetland Type |
|---------|-------------|--------------------------------|
| A | 56 | Natural wetland |
| B | 53 | Natural wetland |
| C | 45 | Natural wetland |
| D | 36 | Natural wetland |
| E | 61 | Storm water retention basin |
| F | 66 | Storm water retention basin |
| G | 12 | Natural wetland |
| H | 46 | Storm water retention basin |
| I | 39 | Mitigated wetland (stormwater) |
| J | 13 | Natural wetland |

| Category * | Description | Range | Total on site |
|--------------------|----------------|---------|---------------|
| 1 | low quality | 0-29 | 2 |
| 1 or 2 (gray zone) | | 30-34.9 | |
| modified 2 | restorable low | 35-44.9 | 2 |
| 2 | medium quality | 45-59.9 | 4 |
| 2 or 3 (gray zone) | | 60.9 | 1 |
| 3 | high quality | 65-100 | 1 |

* scoring breakpoints for wetland category based on the ORAM

APPENDIX III

Table 1. Herbicide Application Information for Phalaris australis (DNRE)

Table 2. Herbicides to Control Buckthorn (MNDNR)

Table 1. Herbicide Application Methods for Phragmites Australis *

| | | IMAZAPYR | GLYPHOSATE | COMBINATION |
|------------------|-------------|---|---|---|
| TREATMENT TIMING | | Apply to actively growing green foliage after full leaf elongation and up to first killing frost (i.e., June up to first killing frost) | Apply after plants are in full bloom in late summer up to the first killing frost (i.e., late August up to first killing frost) | Apply after plants are in full bloom in late summer up to the first killing frost (i.e., late August up to first killing frost) |
| HERBICIDE RATE | HIGH VOLUME | Six pints per acre | Six pints per acre | Three pints glyphosate and three pints imazapyr per acre |
| | LOW VOLUME | 1 - 1.5% solution | 1 - 1.5% solution | No recommended rate is available |
| COST | | High | Low | Medium |
| EFFECTIVENESS | | High Allows treatment earlier in the growing season | Medium Good results where water level management is available | High Recommended for most sites |

| METHOD | PHRAGMITES STAND CHARACTERISTICS | SITE CONDITIONS | TREATMENT TECHNIQUE | PRECAUTIONS |
|--------------------|--|--|---|---|
| INJECTING STEMS | Scattered or isolated | Effective in areas where impacts to desirable, native plant species must be avoided. | Cut plants to waist height. Add one drop of herbicide to hollow stems with a squirt bottle or syringe. | Seed heads should be removed from the site after cutting to prevent seed spread. |
| HAND SWIPING | Scattered or isolated | Effective in areas where impacts to desirable, native plant species must be avoided. | Cover (wipe) each individual stem using a cotton wicking glove worn over a chemical resistant glove. | Use care not to over-saturate or drip herbicides on native vegetation. |
| BACKPACK SPRAYER | Scattered to moderately dense stands | Use on low-wind days to prevent drift outside the treatment area. Use carefully to avoid native plants. | Spray close to leaves using low pressure. | Utilize flat fan nozzles to minimize non-target exposure. |
| WICK OR DAUBER | Moderately dense to dense stands greater than 1 acre | Targets phragmites without impacting shorter plant species. Useful when complete eradication of all plants is not desired. | Saturate absorbent material with low pressure sprayers attached to an ATV or tractor. The area must be covered twice, in opposite directions. | Herbicide will not be effective on stems broken or damaged by the equipment. |
| BOOM SPRAYER | Dense stands greater than 1 acre | Use on low-wind days to prevent drift outside the treatment area. Use carefully to avoid native plants. | Attach low pressure boom sprayers to an ATV or tractor. | Herbicide will not be effective on stems broken or damaged by the equipment. |
| AERIAL APPLICATION | Dense stands greater than 5 acres | Use on low-wind days to prevent drift outside the treatment area. Use carefully to avoid native plants. | Spray area from helicopter booms using proper droplet size, boom length and nozzle type. | Large scale application may affect adjacent plant communities. Using a skilled pilot is imperative. |

* Source: A Guide to the Control and Management of Invasive Phragmites – Michigan Department of Natural Resources (2010)

| Herbicides to Control Buckthorn * | | | |
|--|----------------------|--|-------------------------|
| Trade Name | Chemical Name | Concentration | Use |
| Ortho Brush-B-Gon | Triclopyr amine | Premixed at 8% | Cut stump |
| Ferti-Lome Brush Killer and Stump Killer | Triclopyr amine | Premixed at 8.8% | Cut stump |
| Garlon 3A | Triclopyr amine | 25-50% solution with water | Cut stump |
| Garlon 4 | Triclopyr ester | 1 part Garlon 4 and 3 parts bark oil/diluent | Cut stump or basal bark |
| Roundup, Rodeo, Accord, Etc. | Glyphosate | 25-50% solution with water | Cut stump |

* Minnesota Department of Natural Resources. 2010. The Minnesota Department of Natural Resources Web Site (online). Accessed 2010-11-5 at <http://www.dnr.state.mn.us/sitctools/copyright.html>

APPENDIX IV

Photographic Log (October 2010)

PHOTOGRAPHIC LOG



1) Wetland A: Natural FO and SS wetland within Bayswater Green Commons showing thick vegetation.



2) Wetland B: Natural FO wetland in the vicinity of Alwyeh Green Commons.

PHOTOGRAPHIC LOG



3) View of upland forested buffer between Wetland B and Wetland D.



4) Wetland C: Small natural FO wetland adjacent to US-23; upland forested buffer connects this wetland to Wetland E.

PHOTOGRAPHIC LOG



5) View of Wetland C's upland forested buffer; this buffer is located between Wetland C and Wetland E. Note US-23 in the background.



6) Wetland D: Natural SS wetland adjacent to US-23 and an upland forest buffer.

PHOTOGRAPHIC LOG



7) Wetland E: Storm water wetland north of Alwyeh Green Commons showing PFO, and SS areas.



8) Drain pipe connecting to Wetland E.

PHOTOGRAPHIC LOG



9) Alternate view of Wetland E showing evidence of seasonal flooding and dead snags, which provide adequate wildlife habitat.



10) Alternate view of Wetland E showing dead snags and adequate buffer in the background.

PHOTOGRAPHIC LOG



11) Evidence of wildlife use within wetland E.



12) View of common reed (*Phragmites australis*) adjacent to residences on the right and upland buffer on the left in the vicinity of wetland E.

PHOTOGRAPHIC LOG



13) Wetland F: Storm water wetland within Ashburnam Green Commons showing an extensive SS and PFO system.



14) View looking down to Wetland G, a natural SS wetland adjacent to US-23.

PHOTOGRAPHIC LOG



15) Alternate view of Wetland G showing EM vegetation including common reed (*Phragmites australis*).

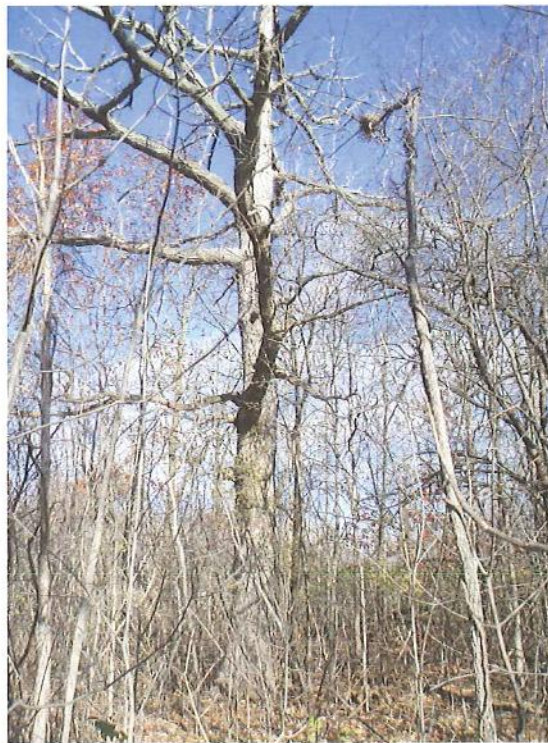


16) Wetland H: Storm water wetland within Lochaven Green Commons showing an EM and open water system and forested buffer.

PHOTOGRAPHIC LOG



17) Portion of Wetland H showing emergent vegetation including purple loosestrife (*Lythrum salicaria*).



18) Partial view of Wetland H's buffer showing 30" DBH dead red oak (*Quercus rubra*), which may provide excellent wildlife habitat.

PHOTOGRAPHIC LOG



19) Panoramic view of Wetland I: a mitigated wetland in the vicinity of Kilburn Park #2.



20) Retention basin within Wetland I showing emergent vegetation, algae, and narrow buffer.

PHOTOGRAPHIC LOG

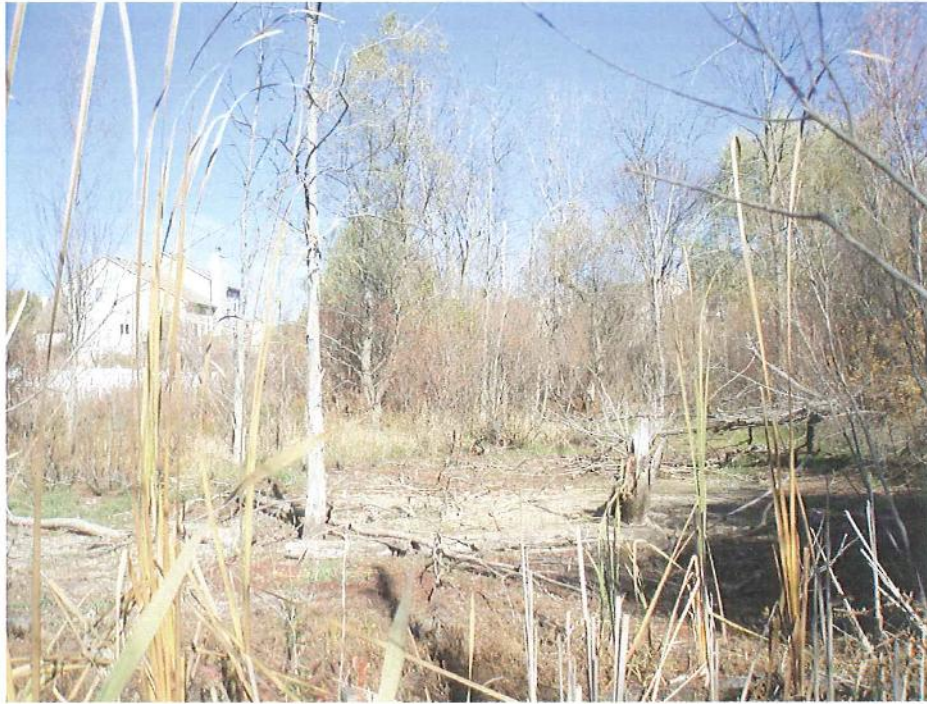


21) View of buffer between retention basin (picture 19) within Wetland I and residences.



22) Emergent vegetation within Wetland I, including common reed (*Phragmites australis*).

PHOTOGRAPHIC LOG



23) View of dried basin within Wetland I showing emergent vegetation and remnants of open water.
Note wildlife structures.



24) Alternate view of Wetland I and grassy areas in the vicinity of Kilburn Park #2.

PHOTOGRAPHIC LOG



25)Wetland J: Natural wetland adjacent to US-23 showing EM vegetation including common reed (*Phragmites australis*).