ILLINOIS NATURE PRESERVES COMMISSION
Minutes of the 226th Meeting
(Approved at the 227th Meeting)

Jarrett Prairie Center
7993 N. River Road
Byron, IL 61010

Tuesday, May 9, 2017

226-1) Call to Order, Roll Call, and Introduction of Attendees

Commissioner Dann called the meeting to order at 10:02 a.m. and read the roll call.

Commissioners Present: George Covington, Donnie Dann, Pen Daubach, William McClain, Jo-Elle Mogerman, Charles Ruffner, Deborah Stone, David Thomas

Commissioners Absent: Abigail Derby Lewis

Commission Advisors Present: Ryan Prehn, Illinois Historic Preservation Agency (IHPA); Joyce Hoffman, Illinois Endangered Species Protection Board (IESPB)

Commission Consultants Present: Joseph Roth, Openlands

Others Present: Marni English, John Nelson, Bob Edgin, Steven Byers, Justin Dillard, Valerie Njapa, Tom Lerczak, Kelly Neal, Emma Plotts, Angella Moorehouse, Kim Roman and Debbie Newman, Illinois Nature Preserves Commission (INPC); Chris Young, Nancy Williamson, Ann Holtrop, Jenny Skufca and Dawn Cobb, Illinois Department of Natural Resources (IDNR); Jeannie Barnes, Illinois Natural History Survey (INHS); June Keibler, George Johnson, Rose Johnson, Ed Harney, Sue Harney and Katie Meyer, Dundee Township Open Space District (DTOSD); Judy Beck, Glenview Park District; Sarah Surroz, Conserve Lake County; Bill Kleiman, The Nature Conservancy's Nachusa Grasslands; Jill Kennay, Natural Land Institute (NLI); Kathleen O'Connor, Libertyville Township; Russell Brunner and Todd Tucker, Byron Forest Preserve District; Paul Soderholm.

Commissioner Dann asked Todd Tucker to tell us about Byron Forest Preserve District.

Todd answered that he has been with the Byron Forest Preserve District for 23 years and that they own nearly 2,000 acres. 612 acres surround Jarrett Prairie Center and includes a golf course with 450 acres of dolomite prairie. They also own a 200-acre drag strip down the road from the Jarrett Prairie Center. The Jarrett Prairie Center underwent major renovations and became a Natural History Museum as well as educational center. Todd worked to increase the 140 acres of nature preserves to 295 acres in the late 90's.

Commissioner Dann recognized and thanked INPC staff for the dedication to their work.

226-2) Adoption of Agenda

It was moved by Commissioner Covington, seconded by Commissioner Stone, and carried that the Agenda be adopted.

226-3) Approval of Minutes for the 224th Meeting, September 13, 2016 and 225th Meeting, January 24, 2017

It was moved by Commissioner Ruffner, seconded by Commissioner Mogerman, and carried that the minutes from the 224th Meeting be approved.

Commissioner Dann read the following:

At the 225th Meeting of the INPC, held on January 24, 2017, at the Illinois Department of Transportation, 2300 S. Dirksen Parkway, Springfield, Illinois, legal protection was completed by the Commission for 4 tracts of land totaling 464.9 acres. These areas are privately owned by individuals, corporations or not-for-profit groups who donated the value of the protection agreement to the public. This private land was permanently preserved without further acquisition of the land by the State. The dollar value of the tracts of private land is nearly $1.7 million dollars based on conservative estimates from the IDNR's Division of Realty. Lands protected included Jens Jensen Grasslands and Woods Land and Water Reserve, Harms Flatwoods Nature Preserve, Rockcastle Creek Nature Preserve and a buffer addition to Searls Park Prairie Nature Preserve.

Protection of these lands came about because the Commission had seven staff in the field working with private and public landowners. There are now 388 dedicated nature preserves totaling 58,477 acres and 183 land and water reserves totaling nearly 50,976 acres.

Commissioner Dann asked for a motion and approval of the 225th Meeting minutes.

It was moved by Commissioner Daubach, seconded by Commissioner Ruffner, and carried that the minutes from the 225th Meeting be approved.

226-4) Next meeting date and location

September 12th, 2017 Peoria Park District, Peoria, IL

226-5) INPC Staff Report

APPENDIX I

Commissioner Dann called on Tom Lerczak.

Reflecting on a photo of George and Barbara Fell, Tom encouraged everyone to read *Force of Nature*, the biography of George Fell and the story of the INPC, where the idea came from and how it evolved.

Tom reported that Angella Moorehouse in addition to supervising intern, Emma Plotts, has been working on conservation guidelines for the state-threatened regal fritillary butterfly and the federally endangered rusty patched bumblebee. She was appointed by the Illinois Endangered Species Protection Board to the Technical Advisory Committee for Terrestrial Invertebrates. John Nelson submitted a request to control phragmites on Northeastern Illinois Nature Preserves with $20,000 from the INPC's operation funds. Valerie Njapa was instrumental in getting a contract with the Illinois Geological Survey to purchase data loggers and batteries to monitor hydrogeochemical data at Bluff Springs Fen NP and Lake in the Hills NP. The money came from the salary for the vacant Area 6 position. Kim Roman was instrumental in facilitating three prescribed fires and participated in 15 prescribed fires. Debbie Newman led and organized three prescribed fires in Area 7, and excels in mentoring volunteers and organizing volunteer groups. In organizing a volunteer group she was able to certify an apprentice prescribed fire boss.

226-6) IDNR Staff Report

APPENDIX II

Acting Chief Ann Holtrop updated the Commissioners on the IDNR, Division of Natural Heritage (DNH).

Commissioner Dann commented that the geographic boundaries of the Natural Heritage staff does not align with the Commission staff but there is a lot of coordination state-wide. He asked if this arrangement works well.

Chief Holtrop answered that is true and at the Division meeting we will discuss how the two staffs can communicate more effectively, plan work together, figure out different rules and responsibilities, and leverage resources. At a field level, the two staffs work well together.

Commissioner Dann indicated that this has been his experience in Northern Illinois.

226-7) Endangered Species Protection Board Staff Report

APPENDIX III

226-8) Cook Co. – Bobolink Meadow Land and Water Reserve, Registration

Kim Roman, on behalf of the Forest Preserves District of Cook County, requested approval to register Bobolink Meadow as an Illinois Land and Water Reserve. The site is a 918-acre site and is located in the Morainal Section of the Northeastern Morainal Natural Division of Illinois. It lies mostly in a former glacial lakebed that was in agricultural production before the 1960's, and has undergone a major hydrological and plant community restoration facilitated by the 2008 O'Hare Modernization and Mitigation Account. More than 300 acres of the site's wetlands were created or enhanced as a result of the mitigation funding, and approximately 500 acres total have been restored to a mosaic of mesic to wet prairie with interspersed patches of sedge meadow and shallow emergent communities. The open, graminoid communities at this site, combined with similar habitats within the Bartel Grassland Land and Water Reserve, which lies immediately adjacent to Bobolink Meadow, provide approximately 900 acres of contiguous grassland habitat. These two sites combined are one of the most important protected grassland complexes in the

Chicago region for breeding grassland birds. It supports the second largest population of bobolinks (*Dolichonyx oryzivorus*) in Illinois. The state-endangered king rail (*Rallus elegans*) also nests at Bobolink Meadow, as do many other species considered in Greatest Need of Conservation by the Illinois Department of Natural Resources (IDNR). Additionally, the site is well-known to provide winter habitat for the state-endangered short-eared owl (*Asio flammeus*) and northern harrier (*Circus cyaneus*), and also attracts an impressive variety of shorebirds and waterfowl species during spring and fall migration. The site's qualifying features for registration as a Land and Water Reserve are its 1) grassland habitat of more than 80 acres that support breeding populations of area-sensitive grassland wildlife species, 2) habitat for endangered or threatened species, 3) wetlands at least 50 acres in size, 4) unusual concentrations of wildlife such as migration stop-over, feeding, and rest sites, and 5) buffer/expansion of Bartel Grassland Land and Water Reserve.

Kim commented that Joe Roth is the primary project coordinator for this site.

Joe Roth commented that they are working with the Forest Preserves on the reforestation area to expand the grassland and increase the amount of emergents and sedgemeadow; as well as working with Jim Herkert, Illinois Audubon Society, to look more closely at the plant community structure in relation to grassland nesting birds if there are questions research-wise that they can give guidance to other grassland managers in the region.

Commissioner Stone recused herself since she works for Cook County.

It was moved by Commissioner Covington, seconded by Commissioner Ruffner, that the following resolution be approved:

> The Commission grants approval for the registration of Bobolink Meadow as an Illinois Land and Water Reserve, as described in the proposal presented under Item 8 of the Agenda for the 226th Meeting.
>
> (Resolution 2382)

226-9) <u>Lee Co. – Addition to Ryan Wetland and Sand Prairie Land and Water Reserve, Registration</u>

John Nelson, on behalf of the Lee County Soil & Water Conservation District, requested to register 6.75 acres as an addition to their Ryan Wetland and Sand Prairie Land and Water Reserve. The proposed addition is located in the Grand Prairie Section of the Grand Prairie Natural Division and is eligible for registration by the Illinois Nature Preserves Commission (INPC) due to its designation as part of a Category II INAI site documented to provide habitat for two state-listed species: one reptile and the regal fritillary butterfly (*Speyeria idalia*). The proposed addition (6.75-acres) and the existing reserve (41.5-acres) are part of the 202.3-acre Ryan Wetland and Sand Prairie Illinois Natural Areas Inventory (INAI) site (#1681). The INAI site consists of low to moderate quality ephemeral sand ponds, sand prairies, and wetlands that provide habitat for a wide variety of wildlife, including several animal species identified on the Illinois Wildlife Action Plan as Species in Greatest Need of Conservation: regal fritillary (*Speyeria idalia*), two reptile species, American badger (*Taxidea taxus*), northern bobwhite (*Colinus virginianus*), American woodcock (*Scolopax minor*), great egret (*Ardea alba*), and slender glass lizard (*Ophisaurus attenuates*). The proposed addition has natural areas of similar quality to those found within the original reserve. If approved, this addition to the Ryan Wetland

and Sand Prairie Land and Water Reserve will bring the total acreage of protected land at this site to 48.25-acres. It is recommended by the Illinois Nature Preserves Commission field staff that this 6.75-acre parcel be registered in perpetuity as an addition to the Ryan Wetland and Sand Prairie Land and Water Reserve.

Commissioner Ruffner commended John on the land use history that he used in the proposal and commented that he would be using some of it for his classes in the fall.

John thanked Bob Edgin for keeping all the land survey notes that makes it easy to insert them into the proposal.

It was moved by Commissioner Daubach, seconded by Commissioner Ruffner, that the following resolution be approved:

> The Commission grants approval for the registration of an addition to Ryan Land and Water Reserve, as described in the proposal presented under Item 9 of the Agenda for the 226th Meeting.
>
> (Resolution 2383)

226-10) Cook Co. – Addition and Buffer Addition to Kennicott's Grove Nature Preserve, Dedication

Steve Byers, on behalf of the Glenview Park District, requested preliminary approval for dedication of a 44.19-acre addition to the 50-acre Kennicott's Grove Nature Preserve. The proposed addition includes 24.19 acres as nature preserve and 20.0 acres as nature preserve buffer. Both Kennicott's Grove Nature Preserve and the proposed addition are located within the 144.7-acre property owned by the Glenview Park District that is referred to as "The Grove." Kennicott's Grove Nature Preserve received final approval for dedication at the Commission's 155th Meeting in May 1997 (Resolution # 1359). "The Grove" also includes the Kennicott House, Redfield House, and Interpretive Center and was recognized by the National Register of Historic Places in 1973 and was granted National Historic Landmark status in 1976. The proposed 44.19-acre addition lies adjacent to the Kennicott's Grove INAI site (INAI # 1469) and includes Grade C mesic upland forest and ponds located within the nature preserve addition and a prairie restoration within the nature preserve buffer addition. The existing nature preserve and proposed nature preserve addition provide suitable habitat for two State-listed species; the swollen sedge (*Carex intumescens*) and one snake species. Kennicott's Grove Nature Preserve and the proposed addition are located in the Morainal Section of the Northeastern Morainal Natural Division in the northern part of Cook County, Illinois. In 1973, when it appeared that much of "The Grove" would be converted to other uses, the Save the Grove Committee was formed and petitioned the Glenview Park District to acquire part of "The Grove". In 1974, citizens voted affirmatively by a large margin (88% in support) to begin land acquisition at "The Grove." Protection of Kennicott's Grove Nature Preserve and the proposed addition supports several elements of the Illinois Comprehensive Wildlife Conservation Plan (the Plan). Additionally, the site provides suitable nesting habitat for 10 bird species, 2 amphibian species, and 2 reptile species identified in the Plan as Species in Greatest Need of Conservation. Formal protection of the two parcels totaling 44.19 acres will protect Grade C mesic upland forest and pond communities that support a number of plant and animal species, protect a portion of the original prairie grove first described by Dr. John Kennicott in 1850, further protect Kennicott's Grove Nature Preserve from incompatible land uses, and is consistent with the first proposal that

recommended dedication of all surviving portions of the original prairie grove. Finally, Kennicott's Grove Nature Preserve and the proposed addition are a fitting companion to the designation of "The Grove" as a National Historic Landmark.

Judy Beck thanked Steve Byers for all his hard work and dedication. She spoke about the relationship and partnership between the Glenview Park District and the Village of Glenview.

It was moved by Commissioner Stone, seconded by Commissioner Thomas, that the following resolution be approved:

> The Commission grants preliminary approval for the dedication of an addition to Kennicott's Grove as an Illinois Nature Preserve, as described in the proposal presented under Item 10 of the Agenda for the 226th Meeting.
>
> (Resolution 2384)

226-11) Cook Co. – Glenview Naval Air Station Prairie Nature Preserve, Dedication

Steve Byers, on behalf of the Glenview Park District, requested preliminary approval for dedication of the 30.0-acre Glenview Naval Air Station Prairie as an Illinois Nature Preserve. The proposed nature preserve is located within the 32.0-acre Kent Fuller Air Station Prairie/Evelyn Pease Tyner Center. Glenview Naval Air Station Prairie was included on the Illinois Natural Areas Inventory (INAI # 1495) as a Category II site in recognition of the presence of one State-listed animal and three State-listed plant species. The proposed Glenview Naval Air Station Prairie Nature Preserve supports Grade C mesic and wet-mesic prairie, Grade C wet prairie, and Grade C freshwater marsh. The proposed Glenview Naval Air Station Prairie Nature Preserve is located in the Chicago Lake Plain Section of the Northeastern Morainal Natural Division in the northeastern part of Cook County, Illinois. The namesake for the proposed nature preserve is the Glenview Naval Air Station that remained in operation from 1942 until 1995. For the period from 1923, when the airfield was first built until the closure of the Glenview Naval Air Station in 1995, it is very likely repeated mowing maintained the prairie. Upon closure of the base, the entire base was conveyed to the Village of Glenview. Community interest in reuse of the base grew and in 1999, the Village of Glenview formally recognized the prairie and increased the designated size of the prairie from 14 to 31 acres. In 2007, the Village of Glenview conveyed the prairie to the Glenview Park District. Protection of the Glenview Naval Air Station Prairie supports several elements of the Illinois Comprehensive Wildlife Conservation Plan (the Plan). Additionally, the site provides suitable nesting habitat for 8 bird species and one reptile species identified in the Plan as Species in Greatest Need of Conservation. The proposed Glenview Naval Air Station Prairie Nature Preserve encompasses the entire Glenview Naval Air Station Prairie INAI site. Most notably, the mesic and wet-mesic prairies at this site (totaling 23.22 acres) are considered G-2 or "imperiled globally." Their protection as part of the Illinois Nature Preserves System is consistent with the recommendations of the Chicago Wilderness Biodiversity Recovery Plan. The Commission acknowledges the long-term interest and support of the Village of Glenview, the Glenview Park District, and volunteer steward Kent Fuller for long-standing efforts to protect and steward the Glenview Naval Air Station Prairie.

It was moved by Commissioner Covington, seconded by Commissioner Ruffner, that the following resolution be approved:

The Commission grants preliminary approval for the dedication of Glenview Naval Air Station Prairie as an Illinois Nature Preserve, as described in the proposal presented under Item 11 of the Agenda for the 226th Meeting.

(Resolution 2385)

226-12) Lake Co. – Donnelley Buffer Addition to Almond Marsh Nature Preserve, Dedication

Steve Byers, on behalf of Libertyville Township, requested preliminary approval for dedication of the 53-acre Donnelley Nature Preserve Buffer Addition to Almond Marsh Nature Preserve. Almond Marsh (a 110-acre parcel) received final approval for dedication as Almond Marsh Nature Preserve at the Commission's 129th Meeting in November 1990 (Resolution # 1048). Since then there have been four additions to Almond Marsh Nature Preserve totaling 47.5 acres. Additional lands located in the vicinity of Almond Marsh Nature Preserve have been protected; Oak Openings Nature Preserve (73.29 acres) and Ryhan Tract Land and Water Reserve (13.72 acres). Almond Marsh is included in the Illinois Natural Areas Inventory (INAI # 1253) and features Grade B freshwater marsh and Grade B sedge meadow wetlands. The proposed Donnelley Nature Preserve Buffer Addition includes Grade C freshwater marsh (20 acres), Grade C savanna (9 acres), and cropland (24 acres) that is being restored to prairie and savanna. Conversion of the cropland began in 2016. Almond Marsh Nature Preserve and the proposed addition are centrally located within the 5,770-acre Liberty Prairie Reserve located in south-central Lake County, Illinois in the Morainal Section of the Northeastern Morainal Natural Division. Protection of the proposed addition supports elements of the Illinois Comprehensive Wildlife Conservation Plan. The proposed Donnelley Nature Preserve Buffer Addition will provide water quality benefits to Almond Marsh and provide a large block of restored grasslands for birds, and further buffer Almond Marsh Nature Preserve from incompatible land uses. The proposed Donnelley Nature Preserve Buffer Addition (53 acres) will increase the size of Almond Marsh Nature Preserve from 157.5 acres to 210.5 acres. The Commission acknowledges the long-term interest and support of Libertyville Township in the protection and stewardship of lands located in the Liberty Prairie Reserve.

Steve recognized the leadership of Sarah Surroz, Conserve Lake County and Kathleen O'Connor.

Commissioner Stone asked who owned the fields to the west and east.

Steve answered primarily Libertyville township and thought that those would come back to the Commission for consideration for protection.

Kathleen O'Connor thanked the Commission and Steve for their support and encouragement in stewarding this project.

Commissioner Covington abstained from voting due to his professional relationship with the township.

It was moved by Commissioner Daubach, seconded by Commissioner Mogerman, that the following resolution be approved:

The Commission grants preliminary approval for the dedication of a buffer addition to Almond Marsh Nature Preserve, as described in the proposal presented under Item 12 of the Agenda for the 226th Meeting.

(Resolution 2386)

Break for Lunch 12:00 – 12:50 p.m.

Commissioner Dann recognized and thanked Bill Kleiman for the field trip of Nachusa Grasslands.

226-13) McLean Co. – Addition to Stubblefield Woodlots Nature Preserve, Dedication

Justin Dillard, on behalf of the Sugar Grove Foundation, requested preliminary approval of 5.56-acres as the James Stubblefield Nature Preserve Addition to the 11.7-acre Stubblefield Woodlots Nature Preserve, which consists of two tracts (5.22 acres and 6.49 acres) that are not adjacent, but separated from each other by about 90 feet. The James Stubblefield Nature Preserve Addition is adjacent to both of these tracts, and would connect the two initial tracts, establishing the Stubblefield Woodlots Nature Preserve as one contiguous preserve. All of the current preserve and the proposed addition are Grade B mesic upland forest, part of the Funks Grove Natural Area (INAI #721). The 1,005-acre Funks Grove Natural Area is a remnant of a prairie grove (i.e., a wooded area surrounded by prairie) that once encompassed about 3,000 acres, and is located within the Grand Prairie Section of the Grand Prairie Natural Division. The most obvious and impressive trees are the large sugar maples (*Acer saccharum*), bur oaks (*Quercus macrocarpa*), and black walnuts (*Juglans nigra*). A notable component of this forest is blue ash (*Fraxinus quadrangulata*). Stubblefield Woodlots Nature Preserve is open to the public, although there are no established trails, and none are planned. Management of the site will focus on controlling non-native and invasive species. The Illinois Comprehensive Wildlife Conservation Plan and Strategy would be supported by this dedication through the Forest, Land and Water Stewardship, and Invasive Species campaigns.

Commissioner Ruffner asked if the large oak and maple trees are part of the floral analysis that needs done at this site.

Justin answered that it is. The sugar maple is established in the forest and it is hoped to slowly replace downed, larger trees with oak and hickory.

It was moved by Commissioner Daubach, seconded by Commissioner Thomas, that the following resolution be approved:

The Commission grants preliminary approval for the dedication of an addition to Stubblefield Woodlots Nature Preserve, as described in the proposal presented under Item 13 of the Agenda for the 226th Meeting.

(Resolution 2387)

226-14) Kane Co. – Buffer Addition to Dixie Briggs Fromm Prairie Nature Preserve, Dedication

Steve Byers, on behalf of Dundee Township, requested final approval for dedication of a 94.4-acre nature preserve buffer addition to Dixie Briggs Fromm Prairie Nature Preserve. The 56.5-acre Dixie Briggs Fromm Prairie Nature Preserve received final approval for dedication at the Commission's 179th Meeting in May 2003 (Resolution # 1722). The proposed nature preserve

buffer addition received preliminary approval for dedication at the Commission's 225th Meeting in January 2017 (Resolution # 2374). The proposed nature preserve buffer addition includes 18 acres of Grade C mesic upland forest and a 71.4-acre cultural community (formerly cropland) that is being restored to either prairie (66.4 acres) or forest (5 acres). Restoration began in 2004. Dixie Briggs Fromm Prairie Nature Preserve and the proposed addition are located in the Morainal Section of the Northeastern Morainal Natural Division in the northeast corner of Kane County, Illinois. Protection of the proposed addition supports several elements of the Illinois Comprehensive Wildlife Conservation Plan. Six species of birds identified in that plan as Species in Greatest Need of Conservation have been recorded from the proposed addition. Dedication of the proposed nature preserve buffer addition will increase the size of Dixie Briggs Fromm Prairie Nature Preserve from 56.5 to 150.9 acres and honors a recommendation from the original proposal that stated: "…the balance of the land (owned by Dundee Township) should be included as nature preserve buffer once the crop production is replaced with an active prairie restoration effort." The proposed nature preserve buffer addition will provide water quality benefits, will provide a large block of grasslands for birds, and further protect Dixie Briggs Fromm Prairie Nature Preserve from incompatible land uses. The Commission acknowledges the long-term interest and support of Dundee Township in the protection and stewardship of Dixie Briggs Fromm Prairie Nature Preserve.

Steve recognized Sue Harney for her passion and leadership to Dundee Township.

Sue Harney thanked all the volunteers who were present.

It was moved by Commissioner Covington, seconded by Commissioner Mogerman, that the following resolution be approved:

> The Commission grants final approval for the dedication of a buffer addition to Dixie Briggs Fromm Nature Preserve, as described in the proposal presented under Item 14 of the Agenda for the 226th Meeting.

(Resolution 2388)

226-15) <u>Lake Co. – Donnelley Buffer Addition to Liberty Prairie Nature Preserve, Dedication</u>

Steve Byers, on behalf of Libertyville Township, requested final approval for dedication of the 109-acre Donnelley Nature Preserve Buffer Addition to Liberty Prairie Nature Preserve. The 47-acre Liberty Prairie received final approval for dedication at the Commission's 129th Meeting in November 1990 (Resolution # 1062). Since that time Libertyville Township has formally protected two nature preserve buffer additions to Liberty Prairie; the first addition receiving final approval for dedication at the Commission's 180th Meeting in October 2003 (Resolution # 1743) and the second addition receiving final approval for dedication at the Commission's 212th Meeting in October 2012 (Resolution # 2206). The proposed Donnelley Nature Preserve Buffer Addition to Liberty Prairie Nature Preserve received preliminary approval for dedication at the Commission's 225th Meeting in January 2017 (Resolution # 2375). Liberty Prairie Nature Preserve and the proposed addition are centrally located within the 5,770-acre Liberty Prairie Reserve located in south-central Lake County, Illinois. Liberty Prairie Nature Preserve and the proposed Donnelley Nature Preserve Buffer Addition are located in the Morainal Section of the Northeastern Morainal Natural Division. The proposed Donnelley Nature Preserve Buffer Addition consists of a cultural community (cropland) that is being restored to dry-mesic, mesic,

and wet prairie. Efforts to begin conversion of the cropland to prairie began in 2014. Protection of the proposed addition supports elements of the Illinois Comprehensive Wildlife Conservation Plan. The proposed Donnelley Nature Preserve Buffer Addition will provide water quality benefits, will provide a large block of grasslands for grassland birds, and further buffer Liberty Prairie Nature Preserve from incompatible land uses. The proposed Donnelley Nature Preserve Buffer Addition will increase the size of Liberty Prairie Nature Preserve from 75 to 184 acres. The Commission acknowledges the long-term interest and support of Libertyville Township in the protection and stewardship of Liberty Prairie Nature Preserve.

Commissioner Covington abstained from voting due to his professional relationship with the township.

It was moved by Commissioner Thomas, seconded by Commissioner Ruffner, that the following resolution be approved:

> The Commission grants final approval for the dedication of a buffer addition to Liberty Prairie Nature, as described in the proposal presented under Item 15 of the Agenda for the 226th Meeting.

(Resolution 2389)

226-16) Logan Co. – Addition to Elkhart Hill Grove Nature Preserve, Dedication

Tom Lerczak, on behalf of Elizabeth Pasquesi and Catherine Carolin, requested final approval for their 65.2-acre proposed nature preserve addition to Elkhart Hill Grove Nature Preserve (65.2 acres). This 65.2-acre proposed nature preserve addition was registered as Elkhart Hill Grove Land and Water Reserve in 2002. Preliminary approval of this nature preserve addition was conferred at the 225th meeting of the Illinois Nature Preserves Commission (Resolution # 2376) on January 24, 2017. The existing dedicated nature preserve is owned by William McClellen Drake Jr, Victoria Evan-Cook, Valentine Snell, Mason Hammond Drake, and Ascha Kells Drake. All of the proposed preserve addition is Grade A mesic upland forest that is included within the 210.2-acre Elkhart Hill Natural Area (INAI #0178). Elkhart Hill Natural Area is located in the Springfield Section of the Grand Prairie Natural Division; it is the only prairie grove in Illinois located on a glacial kame (from the Illinoisan glacial period). Sugar maple (*Acer saccharum*), blue ash (*Fraxinus quadrangulata*), and bur oak (*Quercus macrocarpa*) are important canopy species. Other common species in smaller diameter classes include slippery elm (*Ulmus rubra*), American elm (*Ulmus americana*) and hackberry (*Celtis occidentalis*). Wood nettle (*Laportea canadensis*) is a dominant herbaceous species. Pawpaw (*Asimina triloba*) is a common understory tree that typically occurs in large patches. The forest supports a rich wildflower display which includes species such as dutchman's-breeches (*Dicentra cucullaria*), Virginia bluebells (*Mertensia virginica*), blue-eyed Mary (*Collinsia verna*), false rue anemone (*Isopyrum biternatum*), bloodroot (*Sanguinaria canadensis*), broad-leaf waterleaf (*Hydrophyllum canadense*), white trillium (*Trillium flexipes*), toothwort (*Dentaria laciniata*), and spring beauty (*Claytonia virginica*). Hiking and limited horseback riding, a reserved right with provisions to be outlined in the site's master plan for management, will be allowed with permission from the landowners and restricted to established trails. White-tailed deer (*Odocoileu*s *virginianus*) hunting will be allowed with permission from the landowners as a population control method following INPC management guidelines (Volume 5, Number 1). The landowners are seeking final approval of their 65.2-acre registered reserve as a nature preserve

addition to Elkhart Hill Grove Nature Preserve for the higher level of protection. Upon dedication, Elkhart Hill Grove Nature Preserve will consist of 130.4 acres.

It was moved by Commissioner Ruffner, seconded by Commissioner Covington, that the following resolution be approved:

> The Commission grants final approval for the dedication of an addition to Elkhart Hill Grove Nature Preserve, as described in the proposal presented under Item 16 of the Agenda for the 226th Meeting.
>
> (Resolution 2390)

226-17) JoDaviess Co. – Approval to construct picnic shelter with observation deck at Wapello Land and Water Reserve

John Nelson, on behalf of the JoDaviess Conservation Foundation (JDCF), requested approval for the construction of a picnic shelter with an observation deck at its Wapello Land and Water Reserve. The site was approved by the INPC in 2006 as the first LWR afforded legal protection due to the presence of significant archeological features. As part of the registration proposal, the landowner retained the right to construct and use a small parking area in the northeast corner of the reserve. An archeological survey of the parking area was conducted in 2006 and a gravel parking lot constructed soon after. The following text form the Allowable Uses section of the original proposal pertains to the current request:

> "Recreational and educational activities will be promoted within the reserve. Future plans include the development of a small parking lot (adjacent to Rt. 84) with an informational kiosk and hiking trail system with interpretive signage extending from the parking area through the various community types. Bank fishing and a canoe launch site may also be developed along the Apple River. Other possible recreational development could include restrooms beside the parking lot. With the exception of sign posting and activities involving the uppermost surface soils at plow line depth within the agricultural field, any ground-disturbing activities on the site, including the above mentioned recreational development, will require written permission from INPC and IDNR and may necessitate an archaeological investigation of the area."

While the Allowable Uses section references a parking area, restrooms, kiosk, etc., no mention is made for a picnic shelter. However, the designation of the "parking area" for visitor uses is explicitly implied as part of the "recreational and educational activities" to be promoted at the site. Figure 1 and 2 illustrate the location of the proposed pavilion within the "parking area" reserved for visitor use facilities. This location is within the area previously surveyed for archeological resources used for approval of the existing parking area. Based on the extensive archeological surveys done on this site there is no known feature(s) near the proposed shelter site/parking lot (Milhouse, 2007: UIUC-ITARP CONTROLLED SURFACE COLLECTIONS AT THE WAPELLO LAND AND WATER RESERVE, May 11, 2006, April 23-26 and 1 May 2007 ITARP Research Report Series Number 117, *Philip G. Millhouse* University of Illinois-ITARP November 2007).

The proposed picnic shelter will have a maximum footprint of 20 ft. x 40 ft (Figure 3) with concrete floor, and post and metal roof construction. If funds allow, the pavilion will have a second-story

observation deck overlooking the re-created prairie landscape and former Native-American village. Total height approximately 22 ft.

If approved, the picnic shelter will provide a nice dry and shaded gathering place out of the sun for JDCF staff, volunteer stewards, and the public who frequent the site. It will also be used as a gathering and launching area for school field trips.

APPENDIX IV (Staff Opinion)

Commissioner Stone commented that is great they are getting people out to this site and asked John if he had any comment from the State Archeological Survey.

John answered he had not had any comments from them but referred to Dawn Cobb being the most familiar with it.

Commissioner Dann commented that as conservationist, we need to encourage ways within the limits of protection to get the public into the preserves to appreciate for themselves, which is implied in this proposal.

Joe Roth asked if the steps to get to the observation would be within the 20 ft. x 40 ft. building plan and will they have adhere to the Americans with Disabilities Act (ADA).

John answered that he did not think they would have to adhere to ADA and was unsure if the stairs would be within that 20 ft. x 40 ft. and guessed that it would be outside of it based on the concept design. He didn't think the steps would go beyond 3 ft. of the 20 ft. x 40 ft.

Commissioner Daubach asked if they were planning for restroom facilities in the parking area footprint.

John answered that they will and was part of the original proposal.

It was moved by Commissioner Daubach, seconded by Commissioner Mogerman, that the following resolution be approved:

> The Commission grants approval for the construction of a picnic shelter with an observation deck at Wapello Land and Water Reserve, as described in the proposal presented under Item 17 of the Agenda for the 226th Meeting. (Resolution 2391)

226-18) <u>Herbicide Updates</u>

Bob Edgin requested revisions to the INPC's Vegetation Management Guidelines and authorization for staff to make changes and maintain a database of approved herbicides. The current Vegetation Management Guidelines has 40 species. In the past, revisions to these guidelines were written by Nature Preserves Commission or Division of Natural Heritage staff and the revised documents sent to all Commission consultants for comments. Any comments received were incorporated into the revision and the Guideline was brought before the Commission for approval. As a result, it often took several months for revisions to receive final approval. The Vegetation Management Guidelines are species specific and currently there is no

central database listing the herbicides that have been approved for use in high quality, buffer or disturbed areas within the Nature Preserve system. As a result, there are inconsistencies in the guidelines regarding approved herbicide uses, and questions regarding the use of herbicides with trade names other than those mentioned in the guidelines can be difficult to answer. Staff is requesting permission to make minor changes to existing Vegetation Management Guidelines, maintain a database of previously approved herbicides, and to make future revisions to existing Vegetation Management Guidelines at the staff level.

APPENDIX V (Bob's Powerpoint Presentation)

Commissioner Thomas thanked bob for this and asked if there were any guidelines for biological control.

Bob answered that biological control is listed in some of the guidelines but was unable to include it in the spreadsheets.

Commissioner Daubach asked if this would be available online.

Bob answered that it was his intent to make it available on the INPC webpage.

Commissioners Daubach and McClain commended Bob on this vegetation management guideline and the ease of use it will provide.

It was moved by Commissioner Thomas, seconded by Commissioner Daubach, that the following resolution be approved:

> The Commission grants approval for revisions to the INPC's Vegetation Management Guidelines and authorizes staff to make changes and maintain a database of approved herbicides, as described in the proposal presented under Item 18 of the Agenda for the 226th Meeting.
>
> (Resolution 2392)

226-19) Public Comment Period (3 minutes per person)

Paul Soderholm, Edward F. Vassallo Land and Water Reserve owner, commented and requested publication again of the Illinois Outdoor Magazine.

226-20) Other Business

Kelly Neal informed the Commission on the use of BTK and pheromone disruptents to reduce the reproduction of Gypsy Moths in Nature Preserves and the approval of permits for doing this and some discussion ensued.

226-21) Adjournment

Commissioner Ruffner motioned to adjourn. It was seconded by Commissioner Thomas and approved. The INPC adjourned at 2:12 PM.

NOTE: DUE TO TECHNICAL DIFFICULTY RECORDING, NOT ALL QUESTIONS AND COMMENTS WERE AUDIBLE.

APPENDIX I

Illinois Nature Preserves Commission
memorandum

To:	Commissioners
From:	Tom Lerczak, Kelly Neal, Valerie Njapa, Marni English
Date:	May 9, 2017
Subject:	Staff Report for the 226th Meeting of the Illinois Nature Preserves Commission
	Reporting Period: January –April 2017

KEY (Please use the following abbreviations. If others are needed please define)

COA = Conservation Opportunity Area
Co. = County
ESPB = Endangered Species Protection Board
FPD = Forest Preserve District
IDNR = Illinois Department of Natural Resources
IDOT = Illinois Department of Transportation
IEPA = Illinois Environmental Protection Agency
INAI = Illinois Natural Areas Inventory
INPC = Illinois Nature Preserves Commission
ISGS = Illinois State Geological Service
LWR = Land and Water Reserve
NAAF = Natural Areas Acquisition Fund
NHL = Natural Heritage Landmark
NP = Nature Preserve
ORC = Office of Resource Conservation
SP = State Park
NWR = National Wildlife Refuge
PD = Park District
SWCD = Soil & Water Conservation District
TNC = The Nature Conservancy
TNI = The Nature Institute

AREAS

Area 1 - John Nelson
Area 2 - Steven Byers
Area 3 - Kim Roman
Area 4 - Angella Moorehouse
Area 5 - Thomas Lerczak
Area 6 - Vacant
Area 7 - Debbie Newman
Area 8 - Bob Edgin
Area 9 - Vacant

INPC OPERATIONS

1. Staff Actions

In the absence of an INPC Director, Chris Young, Director of the Office of Resource Conservation, remains the official supervisor for all INPC staff. Tom Lerczak has continued to serve as coordinator of the field staff, in addition to handling certain INPC administrative functions (e.g., signing INPC correspondences such as letters to county recorders), fielding staff questions, weighing in on issues, and monitoring and approving staff expenditures for fiscal documents; as well as ordering herbicide. He has also assisted Marni English with proofing the INPC meeting agenda and summary staff report. In addition, filling in for a lack of upper level INPC administrative staff, Tom Lerczak continues to take the lead in the review of protection proposals for the INPC agenda, while proposals in which he is the author or co-author have been reviewed by Angella Moorehouse; Tom Lerczak, Valerie Njapa and Kelly

Neal are attending ORC staff meetings as time allows; Marni English is monitoring the INPC budget with Tom Lerczak; and Debbie Newman is administering the INPC Facebook Page.

Angella Moorehouse has been supervising her resident intern, Emma Plotts, who will complete her internship in August. Justin Dillard began his resident internship under Tom Lerczak on February 6th.

1. Hiring efforts.

1.1 INPC Director: Clarification is in progress.
2.2 INPC Natural Areas Preservation Specialists:
Area 6: Submitted for posting. No timeline.
Area 9: Interviews set for May 11 and 12.
1.2 Natural Areas Protection Manager (Natural Resource Manager 2): Submitted for posting. No timeline.
2.4 Nature Preserves Operations Manager (Natural Resource Manager 2): Submitted for posting. No timeline.

2. 2015-2020 Strategic Plan.

Tracking of the Strategic Plan implementation has been hampered due to all INPC upper level administrative positions remaining unfilled. Yearly evaluations of INPC staff, which can be used to track progress on the Strategic Plan, have not been completed. Updating the graphical dashboard has been deferred until administrative capabilities improve.

OUTREACH/PARTNERSHIP/TRAINING/VOLUNTEER COORDINATION/MEETINGS ATTENDED

- **Kelly Neal**
  - Kelly Neal attended the 173rd Meeting of the Endangered Species Protection Board, presenting INPC's report to the Board.
- **John Nelson**
  - Presentation at Wild Things Conference – UIC campus 2/18 "Presettlement Landscapes of Illinois…"
  - Presentation to Middle Rock River COA partners 1/31 "Using Historical Data for Restoring Natural Areas.
- **Steve Byers**
  - Illinois Association of Conservation Districts
  - Fox River Summit
  - Hackmatack NWR, Land Protection Update
- **Kim Roman**
  - Attended Kankakee River Watershed conference at Olivet Nazzarine University.
  - Participated in public outreach meetings and conservation planning meetings regarding Kankakee National Wildlife Refuge and Conservation Area.
  - Represented INPC at the Chicago Wilderness Executive Council meeting.
- **Angella Moorehouse**
  - Attended Day of Insects conference at Iowa State University, Ames, IA
  - Attended Peoria PD strategic planning meeting
  - Attended meeting to discuss development of Middle Illinois River Conservation Collaboration project with Emma Plotts (intern).

- **Tom Lerczak**
  - Attended annual meeting of Friends of Sangamon Valley, February 4
  - Attended Heritage Arc/GIS computer training in Springfield, February 9
  - Completed required cyber-security training online, March 8
- **Justin Dillard** (Area 5 Intern)
  - Pesticide Applicator Course/Certification
  - Prescribed fire course/certification
  - Chainsaw safety course
- **Debbie Newman**
  - Vital Lands Summit
  - Facebook Administration
  - Salt Lick Point LWR Wildflower Hike
- **Bob Edgin**
  - Attended ARC-GIS Training.

PROTECTION

Landowner Contact for Unprotected Sites

Discussion of protection options with the following landowners and potential funders:

Area 1

- Land Conservancy of McHenry Co.
- Natural Land Institute
- Winnebago Co. FPD
- Byron FPD

Area 2

- Libertyville Township
- Dundee Township
- Glenview PD
- Conserve Lake Co.
- FP Cook Co.
- FPD Kane Co.

Area 3

- Contacted one private landowner adjacent to Iroquois Sands LWR.

Area 4

- Prairie Land Conservancy
- TNC
- Rock Island Co. FPD
- Peoria PD
- Illinois Department of Natural Resources
- 6 private landowners

Area 5

- 2 private landowners

Area 7

- 2 private sites, Monroe Co.

Area 8

- 1 private landowner contacted

Landowner Contact for Protected Site

The following landowners of sites protected in the Nature Preserves System were contacted by INPC staff:

Area 1

- IDNR
- JoDaviess Conservation Foundation
- Jane Adamsland Parks Foundation
- Private landowners x 6

Area 2

- FP Cook Co.
- Glenview PD
- City of Elgin
- St Charles PD
- Lake Co. FPD

Area 3

- Friends of Kankakee
- USFWS
- IDNR
- TNC
- Forest Preserves Cook Co.
- FPD of Will Co.
- Kendall Co. FPD
- Joliet PD
- Calumet Memorial PD
- Champaign Co. SWCD
- 3 Private Landowners
- The Conservation Foundation

Area 4

- Monmouth College
- IDNR
- Illinois Historic Preservation Agency
- Peoria PD
- Prairie Land Conservancy
- 5 private landowners

Area 5

- Metamora PD
- ParkLands Foundation
- Save the Prairie Society
- Sugar Grove Foundation
- Pekin PD
- Village of Creve Coeur
- IDNR
- Fondulac PD
- Macon Co. CD
- 7 private landowners

Area 7

- Missionary Oblates
- Heartlands Conservancy
- Clifftop
- 10 private landowners

Area 8

- 18 Private landowners contacted

Preserve Designs

Preserve designs were developed for the following NP/LWR per Strategic Plan:

Area 2

- Almond Marsh NP
- Kennicott's Grove NP

PROTECTED SITE MONITORING

Easement/Dedication Boundary Monitoring/Surveys

Easement/dedication monitoring/boundary surveys took place at the following protected areas:

Area 1

- Freeport Prairie NP boundary survey

Area 2

- Liberty Prairie NP
- Dixie Briggs Fromm Prairie NP

Area 4

- Cedar Glen LWR
- Robert Evers LWR
- Burton Cave NP
- Mississippi River Sand Hills NP
- Williams Creek Bluff LWR

Area 5

- Letcher Basin LWR
- Ridgetop Hill Prairie NP
- McCoy Woods NP
- Tomlin Timber NP
- Mettler Woods NP
- Stubblefield Woodlots NP
- Dirksen-McNaughton Woods NP
- Crevecoeur NP
- ParkLands NP
- Mehl's Bluff NP
- Goode's Woods NP
- King Forest NP
- Gillespie Prairie LWR
- Denby Prairie NP
- Bennett's Terraqueous Gardens NP
- Fondulac Seep LWR
- Fondulac Seep NP
- Thomas W. and Elizabeth Moews Dore Seep NP
- Mt. Palatine Cemetery Prairie NP

Area 7

- E. Dora Bohm Memorial Woods NP
- Toadwood Scrubs NP

Area 8

- Preutt Wods NP
- Beadles Barrens NP
- Robert Ridgway Grasslands NP
- Robeson Hills NP and LWR
- Big Creek Memorial Woods NP
- Lost Creek Marsh NP and LWr
- Schulte Woods NP
- Culley Barrens LWR
- P and E Refuge LWR
- Padgett Pin Oak Woods LWR
- Padgett Brother Sweet Gum Woods LWR

Nature Preserve Baseline Monitoring

Baseline information was gathered for the following NPs:

Area 2

- Kennicott's Grove NP

Area 7

- E. Dora Bohm NP
- Toadwood Scrubs NP

BIOLOGICAL INVENTORIES

Unless otherwise specified, routine inventories were conducted at the following sites (target group of species or species if applicable):

Area 2

- Bluff Spring Fen NP - groundwater

Area 4

- Cedar Glen NP/LWR bald eagle winter surveys, Melanthium virginicum rosette surveys

Area 5

- Mason Co. Sand Areas (Illinois chorus frog [*Pseudacris illinoensis*])

Area 7

- William A. Demint NP

INAI UPDATE

Area 2

- Kennicott's Grove
- Glenview Naval Air Station Prairie

Area 5

- Tazewell 013

STEWARDSHIP

Planning

Area 1

- Amboy Marsh NP
- Apple River Canyon NP
- Apple River Canyon LWR
- Ryan Wetland and Sand Prairie LWR
- Tapley Woods LWR

Area 2

- Baker's Lake NP
- Bellaeau Woods LWR
- Bluff Springs Fen NP
- Brewster Creek Marsh NP
- Harm's Flatwoods NP
- Reed-Turner Woodland NP
- Springbrook Prairie NP
- Sternes Fen NP
- Superior Street Prairie LWR
- Truitt-Hoff NP

Area 3

- Braidwood Dunes NP
- Long Run Seep NP
- Marjorie C. Carlson NP
- Matthiessen Dells NP
- Pecumsaugan Creek-Blackball Mines NP
- Sand Ridge NP
- Starved Rock NP
- Yorkville Prairie NP
- Collins Station Prairie LWR
- Iroquois Sands LWR

Area 5

- Fondulac Seep NP (with Justin Dillard)

Area 7

- Palisades NP
- Paul Wightman Subterranean NP

Area 9

- Round Bluff NP
- Cache River LWR

Consulting, contract work conducted, administered or completed:

Area 2

- Sternes Fen NP
- Bluff Spring Fen NP

Area 5

- Stubblefield Woodlots NP
- Dirksen-McNaughton Woods LWR

Area 7

- Horse Creek Glade NHL
- Harry's Prairie NHL
- William A. Demint NP
- Salt Lick Point LWR

INPC managed volunteer workdays completed:

Area 1

- Spring Hollow Addition to Boone Creek Fen NP

Area 2

- Sleepy Hollow Ravine NP
- Bluff Spring Fen NP
- Trout Park NP
- Trout Park River's Edge LWR
- Hybernia NP
- Sternes Fen NP

Area 7

- Missionary Oblates Woods NP

Prescribed burns completed:

Area 1

- Boone Creek Fen NP
- Wilson Prairie NP
- Edward F. Vassallo LWR
- Boloria Fen and Sedge Meadow NP
- Pine Rock NP

Area 2

- Chain O' Lakes SP
- Queen Anne Cemetery NHL
- Sternes Fen NP
- Boloria Sedge Meadow and Fen NP
- Hybernia NP
- Harlem Hills Prairie NP
- Wilson Prairie NP
- Boone Creek Fen NP
- Spring Hollow Addition to Boone Creek Fen NP

Area 3

- DesPlaines Dolomite Prairie LWR
- Kankakee River NP
- Mineral Marsh NP
- Pine Rock NP
- Chain O'Lakes SP
- Volo Bog NP
- Moraine Hills SP
- Silver Springs SP
- Kankakee River SP
- Voight-Pauper Cemetery Prairie LWR

Area 4

- Robert A. Evers LWR
- Williams Creek Bluff LWR
- Stony Hills NP
- Siloam Springs SP
- Meredosia Hill Prairie NP (Area 5)

Area 7

- William A. Demint Memorial Hill Prairie NP
- Harry's Prairie NHL
- Palisades NP

Area 8

- Beadles Barrens NP
- Beall Woods NP and SP
- Brown Barrens NP
- Faulkner-Franke Railroad Prairie NP
- Fern Rock NP/Giant City SP
- Jasper Co. Prairie-chicken Sanctuary NP
- Lost Creek Marsh NP
- Marion Co. Prairie-chicken Sanctuary NP
- Robert Ridgway Grasslands NP
- Red Hills Woods NP
- Lake Murphysboro Hill Prairies LWR
- Margaret Guzy Pothole Wetlands LWR
- Marjorie Brines White Oak Woods LWR
- McAdams Peak LWR
- Prairie Ridge LWR – Jasper Co.
- Prairie Ridge LWR – Marion Co.
- Wise Ridge LWR
- Lake Sara Flatwoods NHL Units 1 & 2
- Robert Green Prairie NHL
- Capel Hill Prairie INAI site

- William A Demint Memorial Hill Prairie NP
- Cache River LWR – Boss Island Tract
- Cache River LWR – Wildcat Bluff Tract
- Degonia Canyon LWR
- Flag Pond LWR
- Horn Prairie Grove LWR
- Forbes Woodland INAI site/Stephen A Forbes SP
- Robeson Hills INAI site
- Cecil B Meeker SHA
- Embarras River Bottoms SHA
- Horseshoe Lake SP
- Sam Parr SP

Other land stewardship completed by staff:

Area 1

- Boone Creek Fen NP
- Freeport Prairie NP

Area 2

- Sternes Fen NP – restore groundwater hydrology

Area 3

- Grant Creek Prairie NP
- Sweet Fern Savanna LWR
- Wilmington Shrub Prairie NP
- Yorkville Prairie NP

Area 5

- Sand Prairie Scrub Oak NP

Area 7

- Missionary Oblates' Woods NP
- William A. Demint NP
- Fults Hill Prairie NP

Area 8

- Beadles Barrens NP
- Marjorie Brines White Oak Woods LWR
- Dry Fork Woods NHL

Threats to Sites Report for the 226th Meeting of the Illinois Nature Preserves Commission (reporting period: January 3 – April 14, 2017)

Bluff Spring Fen NP, Cook County – Steven Byers, Valerie Njapa

- **Issue:** Illinois Route 20 being redesigned; opportunity to address runoff and chlorides entering Bluff Spring Fen NP.
- **Threat:** Increased traffic may increase the amount of chlorides entering NP. Monitoring data from recent years show increasing chloride levels in NP, which can cause adverse impacts to the fen habitat.
- **Status:** Ongoing. INPC staff are coordinating with Jim Miner (ISGS) and Janel Veile (IDOT) to work on inclusion of BMPs in project design to reduce the amount of chlorides entering this site.

Bluff Spring Fen NP, Cook County – Steven Byers, Kelly Neal

- **Issue:** City of Elgin Fire Department responded to wildfire and damaged graminoid fen and calcareous seep wetlands.
- **Threat:** Direct impact to fen wetlands and alteration in groundwater flow.
- **Status:** New and completed. INPC met on site with Elgin Fire Department Battalion Chief and Assistant Fire Chief; provided map showing location(s) where fire could be contained from perimeter roads. Damage to fen wetlands partially restored by volunteers and remainder by Stantec, acting on behalf of Forest Preserves of Cook County and following site visit with INPC staff.

Busse Woods NP, Cook County – Steven Byers, Kelly Neal, Valerie Njapa

- **Issue:** Nicor Gas to clear overhead vegetation (canopy trees) from ROW to detect pipeline leaks to comply with federal regulations.
- **Threat:** Direct impact to canopy trees along ROW.
- **Status:** Ongoing. INPC staff met with Nicor Gas representatives to review options and alternatives to tree-clearing activities.

Goose Lake Prairie NP, Grundy County – Kim Roman, Valerie Njapa

- **Issue:** A neighbor of the IDNR-owned NP dredged/deepened ditches that drain wetlands within NP.
- **Threat:** Deepening existing/naturalized ditches lowers water levels within the NP. Soil was stockpiled, and trees were uprooted and deposited within and immediately adjacent to the NP boundary. Hydrology has been altered, and soil disturbance provides opportunity for exotic species to proliferate.
- **Status:** New. Staff are coordinating with the US Army Corps of Engineers, IDNR, neighbor, and purchaser of neighbor's property.

Bliss Woods NP, Kane County – Steven Byers, Valerie Njapa

- **Issue:** Lead shot deposited in Bliss Woods NP years ago by local gun club, site owned by FPD of Kane County.
- **Threat:** Lead shot poses long-term threat to aquatic resources.
- **Status:** Ongoing. INPC staff coordinating with IEPA, FPD, consultants for former owner of gun club property, and Illinois Attorney General's Office to resolve issues related to remediation and post-remedial restoration activities and to ensure compliance with the consent order.

Freeman Kame NP, Kane County – Steven Byers, Valerie Njapa

- **Issue:** Residential development proposed along the eastern perimeter of NP.
- **Threat:** Potential direct impacts to surface hydrology that flows from NP, through proposed development, and back along the border of the NP. Direct impact to breeding Blanding's turtles.
- **Status:** New. INPC met with consultants, FPD of Kane County, IDNR Consultation staff, Village of Gilberts staff, and representatives of landowner/developer to discuss threats posed by development and review options that would minimize impacts to natural resources and listed species.

Norris Woods NP, Kane County – Steven Byers, Kelly Neal, Valerie Njapa

- **Issue:** Landowner has ingress/egress rights to privately-owned parcel surrounded by the NP, and has voiced safety concerns about the access route currently used.
- **Threat:** New proposed route by private landowner will directly impact terrestrial and aquatic resources in NP buffer.
- **Status:** Ongoing. INPC staff coordinating with staff of St. Charles Park District (NP owner) to determine alternatives to route proposed by individual that would minimize impacts to protected resources and also address safety issues.

Middlefork Savanna NP, Lake County – Steven Byers, Valerie Njapa

- **Issue:** State of Wisconsin has initiated planning for third rail line adjacent to the NP.
- **Threat:** Possible direct and indirect impacts to terrestrial resources in NP.
- **Status:** Ongoing. INPC staff coordinating with Lake County FPD and Lake Forest Open Lands Association in requesting a full Environmental Impact Statement for the project.

North Dunes NP, Lake County – Steven Byers, Valerie Njapa

- **Issue:** Lake County Water District wants to install second waterline to provide redundancy for water delivery system.
- **Threat:** Installation of new waterline could cause direct and indirect impacts (sedimentation) to the NP.
- **Status:** Ongoing. INPC staff coordinating with IDNR Offices of Realty & Environmental Planning and Resource Conservation to determine route for waterline that avoids or minimizes impacts to North Dunes NP.

Rollins Savanna NP, Lake County – Steven Byers

- **Issue:** The Village of Third Lake is proposing to replace the Third Lake Dam located within 25 feet of the NP boundary.
- **Threat:** Direct or indirect impacts associated with removal.
- **Status:** Ongoing. INPC coordinating with Lake County FPD and Village to review options and plans for dam removal.

Gillespie Prairie LWR, Macoupin County – Tom Lerczak, Justin Dillard, Valerie Njapa

- **Issue:** Violation of IDNR License Agreement and LWR Administrative Rules related to installation of pipeline.
- **Threat:** Disturbance to soil and destruction of natural vegetation.
- **Status:** New. Discussions have occurred between INPC and staff in IDNR Offices of Realty & Environmental Planning, Land Management, and Resource Conservation. Case has been referred to IDNR legal counsel for assistance.

Bohm Woods NP, E. Dora Bohm Memorial NP, William and Emma Bohm Memorial NP, and Toadwood Scrubs NP, Madison County - Debbie Newman, Valerie Njapa

- **Issue:** Proposed 486-person student housing development adjacent to the south boundary of Bohm Woods NP.
- **Threat:** Proposed development threatens the hydrology of the NP complex and integrity of the forest interior songbird community. Also potential for physical damages caused by littering and unauthorized intrusions and uses.
- **Status:** Ongoing. Proposed development was approved by the Edwardsville City Council in December 2016. INPC anticipates completion of the final plan in the spring of 2017 with construction to follow soon after. INPC and IDNR staff remain involved as the planning process continues, and agreed to assist with planting guidelines and species selection for landscaped areas. Developer has proposed putting buffer area between development footprint and boundary of Bohm Woods into a conservation easement.

Elizabeth Lake NP, McHenry County – Steven Byers, Valerie Njapa

- **Issue:** Contractor sprayed herbicide in Elizabeth Lake NP, owned by McHenry County Conservation District (MCCD).
- **Threat:** Direct impacts to aquatic resources (plants) in NP.
- **Status:** Ongoing. INPC staff coordinating with MCCD, IDNR Legal Counsel, and Attorney General's Office regarding a settlement with the responsible parties (Contractor and Village of Twin Lakes in Wisconsin). Consent Order for settlement with the Village of Twin Lakes is close to completion.

Crevecoeur NP, Tazewell County – Tom Lerczak, Justin Dillard

- **Issue:** New encroachments from neighbors along southern boundary of NP.
- **Threat:** Refuse dumping and unauthorized use of the NP.
- **Status:** New. The Village of Creve Coeur, owner of the NP, and site managers have been notified and corrective actions recommended.

Illinois Nature Preserves Commission

memorandum

To: Commissioners

From: Kelly Neal

Date: April 18, 2017

Subject: Staff Report on Request from the Illinois Department of Agriculture and U.S. Forest Service to Treat Gypsy Moths with Btk

The Illinois Department of Agriculture and the U.S. Forest Service Slow the Spread (STS) Program requested permitting from the Illinois Nature Preserves Commission (INPC) to treat forested nature preserves in LaSalle County with Btk (*Bacillus thuringiensis kurstaki)* to treat non-native gypsy moth (*Lymantria dispar*). The intent of treatment with Btk would be to slow the spread of non-native gypsy moth into Illinois and to hopefully limit the degree of potential defoliation at these forested sites.

Gypsy moth has been problematic in the eastern United States. During gypsy moth outbreaks, many species of hardwoods may be defoliated; repeated defoliation causes decreased growth, dieback, and tree mortality.

Btk is a bacterial biological control commonly used on Lepidopteran (moth and butterfly) pests in agriculture. The bacteria release toxins in the gut of Lepidoptera larvae and leads to eventual death. While not as environmentally toxic as insecticide, Btk is not species specific and is believed to cause abnormally high larval mortality in non-target moth and butterfly species.

Due to concern for the risk to native Illinois Lepidoptera and because high rates of defoliation by gypsy moth has yet to be demonstrated in Illinois, INPC has not permitted treatment of gypsy moth using Btk at INPC sites since 2001. (In 2001, INPC did permit a portion of a nature preserve owned by a park district to be treated, but most of the native habitat within that nature preserve was excluded from treatment). The STS Program applies for permits annually for INPC sites they believe should be controlled for gypsy moth. The only permitting INPC has allowed since 2001 is for treatment using a species specific pheromone mating disruptant which is applied aerially. This mating disruptant is specific only to gypsy moths. It is supposed to significantly reduce reproduction.

In 2016 INPC issued a permit to treat Starved Rock NP and other forested INPC sites in LaSalle County with the pheromone mating disruptant. All of these sites are owned by the Illinois Department of Natural Resources(IDNR). The STS Program believes that these treatments were not effective based on annual increase in male “trap catch” from 2013 to 2016 and finding gypsy moth egg masses this past winter at Starved Rock/LaSalle County sites. Using this information and extrapolating the potential for significant defoliation at Starved Rock, the STS staff made the case for treatment using Btk in 2017 at the INPC sites in LaSalle County. STS has been quite persistent in pursuing this permit for 2017.

In our review of this request, INPC staff and IDNR Natural Heritage Biologists have had concern for negative impacts to non-target native Lepidoptera. The level of impact to native moths and butterflies that might result from Btk application would not as a matter of course be allowed under the Illinois Natural Areas Preservation Act (INAPA), except under Section 23 “for management to preserve or restore natural conditions”. We also recognized that there may be the potential for

defoliation by gypsy moth of forested habitat which could impact many species beyond Lepidoptera. The areas proposed for spraying do not show any records for threatened or endangered moths or butterflies. Our knowledge of use of the area by non-listed moths and butterflies is limited.

The landowner, IDNR also weighed these biological considerations. They had concern for impacts to non-target moths and butterflies, but also recognized that alternative treatments are less effective against gypsy moth once their populations reach high densities and the potential for the resultant habitat wide impacts of defoliation on all species using that habitat. IDNR as landowner also acknowledged its responsibility to assist partner agencies in slowing the spread of the invasive gypsy moth and requested that INPC issue permits for 2017 **ONLY** at:

- Starved Rock NP
- Mattheissen Dells NP
- Margery C. Carlson NP
- Pecumsaugan Creek - Blackball Mines NP

IDNR emphasized that any future requests to treat INPC sites owned by IDNR would require a case by case evaluation.

To determine whether INPC permitting would be possible, staff reviewed INAPA, the administrative rules promulgated under the act as well as INPC Management Guidelines. Our analysis included:

- The Rules for Management of Nature Preserves allows for control of noxious species as provided in the master plan or management schedule (17 Ill Adm Code. 4000.425 b)
    - Btk will manage for the noxious species, gypsy moth (but there is the issue of non-target lepidoptera to be considered)
    - INPC can prepare a management amendment (permit) to address control
- We discussed consideration of impacts to non-target native lepidoptera to be similar to the thought process involved for Incidental Take Authorization for listed species. If there is a level of confidence that any potential non-listed native lepidopteran species might be impacted and those species have stable populations elsewhere in the region or state, then the potential negative impacts from a 2017 treatment may be recovered from those other populations.
    - While we don't have much information about what species of moth and butterflies are using these areas, the hope is that the due to the timing of the spraying there might be less impacts to species active later in the season.
    - No prairie or grassland habitats will be sprayed, so there should not be impacts to species that use this type of habitat.
- While we don't currently have a Gypsy Moth Guideline, the INPC Mosquito Control Guideline is a model that provides a similar type of decision framework. The guideline requires that there be documentation of a significant threat to/or within an INPC site. In circumstances where there has been the potential to have a negative impact, INPC has allowed treatment of mosquitos within the boundaries of INPC sites. A similar reasoning process could be used for treating gypsy moths in *2017 at Starved Rock NP and other LaSalle County INPC sites*. For mosquitos, the requirement is documentation of presence of disease that could impact human health; for gypsy moth it would be the potential for population sizes to be high enough to cause significant defoliation.

Commission Chair Donnie Dann, as well as Commissioners David Thomas and Bill McClain were consulted on this issue. Commissioners and INPC staff all had a significant level of concern for

impacts to native moths and butterflies, but also recognized that gypsy moth could potentially defoliate the high quality natural areas represented in the nature preserve sites in LaSalle County. Commissioner McClain's statement summarized the input received from Commissioners "…if this were allowed, it would be with great reluctance and should be done with consideration of collateral damage to native Lepidoptera." Commissioner McClain also noted that there should be more consideration to eliminating other exotic/invasive species, plants as well as animals. In consultation with above Commissioners, at the request of the landowner - Illinois Department of Natural Resources, using the above analysis, INPC staff agreed to issue a permit to STS to treat LaSalle County INPC sites with Btk for 2017 ONLY. The permit included the following requirements:

- Rate of application of Btk should be as low as possible within boundaries of the nature preserves. At most the rate as specified on the label (Foray) may be used. All other label specifications must be followed.
    - Label specifications for buffers to endangered or threatened (E/T) habitat of moths and butterflies should be adhered to.
- There should be NO applications over grasslands, prairies and other open/non-forest habitat areas.
    - Wind speed and direction should be accounted for to prevent drift into these areas. Buffers to grasslands should be similar as those specified on label for E/T species.
- If at all possible, treatment should be as limited as possible and consideration given to the need to treat within nature preserves in LaSalle County other than Starved Rock. If possible, exclude the following sites:
    - Mattheissen Dells NP
    - Margery C. Carlson NP
    - Pecumsaugan Creek - Blackball Mines NP
- Documentation of the degree of 2017 infestation and the effectiveness of the 2017 treatment should be reported to INPC with the required annual report as described at the end of this permit.
    - Efforts should be made to assess impacts on lepidoptera other than gypsy moths and provide reports to INPC. Please contact DNR District Heritage Biologist, to try to coordinate monitoring of non-target impacts to moths and butterflies.

IDNR Division of Natural Heritage Report
226th INPC Meeting
May 9, 2017

Good morning, Commissioners.

The Division of Natural Heritage is pleased to provide the following update:

- The Division continues to operate in three regions: Northern (former regions 1 and 2), Central (former regions 3 and 4), and Southern (former region 5) Units. Staff in these three regions are supervised by one full time regional administrator and two Temporarily Assigned ones.
- The Division continues to seek ways to more efficiently implement our five goals. Supervisors worked with staff to plan work schedules for the time period of January – June. Our intent is to track the accomplishments of staff toward their planned activities. There is much more to accomplish than our existing resources allow. Therefore, we believe we need to explore multiple ways to evaluate success. Work plans give us flexibility to identify a subset of tasks to accomplish and track progress towards those activities. It allows us to focus and feel good about what we can accomplish with the resources that we have.
- Programs have begun identifying priorities for our next work plan cycle (July 1, 2017 – June 30, 2018). These will be discussed at the Division meeting.
- On May 17-19, Division staff and INPC field staff will meet at Allerton Park. The purpose of this meeting will be to: 1) foster communication among staff and between Heritage and INPC, 2) establish priorities for Division goals and identify work tasks to be addressed in annual work plans, 3) provide best available science for incorporation into work tasks, and 4) identify opportunities of maximizing the limited financial and personnel resources available.

Natural Area Stewardship

- Program staff continue to analyze prescribed burn data. Refinements to the web-based mapping tool are underway.

Natural Areas Inventory

- Program Staff are working with ESRI, a Geographic Information System Company, to combine the multiple Natural Areas Tracking System databases. The disconnect among these databases is a main reason why the INAI Category 1 recheck was not complete. ESRI will finish work by the end of June. Program staff will then work with field staff to finalizing the INAI update work.

Monarch Butterfly

- IDNR continues to work with conservation partners throughout Illinois in developing a conservation strategy to enhance monarch butterfly population and its breeding and feeding habitat. Governor Rauner has declared May as Monarch Month in IL. IDNR will be hosting the directors and technical staff from Department of Ag, IDOT and EPA in May to discuss the conservation strategy and agency supported efforts toward monarchs.

Division Goals:

- Goal 1. Inventory – Use standardized inventory techniques to document the current distribution, abundance, and condition of high quality natural communities and native vulnerable plant and animal species and their habitats.
- Goal 2. Protection and Defense- Proactively develop strategies to prevent and minimize harm to high quality natural communities and native vulnerable plant and animal species and their habitats. Address and mitigate impacts when they occur.
- Goal 3. Stewardship – Improve and maintain the quality of significant natural features at sites, and the quantity, quality, and connectivity of habitat for vulnerable plant and animal species.
- Goal 4. Communication – Develop conservation messages on high quality natural communities and vulnerable species and their habitats, and promote these messages throughout the Division, across IDNR, and among conservation partners and the public.
- Goal 5. Professional Development – Provide learning opportunities for Division staff throughout all stages of careers in order to encourage staff growth and incorporation of best available science into work tasks.

APPENDIX III
INPC 226
Item 7

ILLINOIS ENDANGERED SPECIES PROTECTION BOARD

One Natural Resources Way, Springfield, Illinois 62702 - 1271; dnr.espb@illinois.gov

Report to the Illinois Nature Preserves Commission's 226th Meeting
Jarrett Prairie Center, Byron, Illinois
9 May 2017
Prepared by Joyce Hofmann, IESPB Chair

- The Board held its 173rd meeting on 17 February 2017. Three newly appointed Board members attended the meeting: Dr. Angelo Capparella of Illinois State University, Dr. Tracy Evans of the Illinois State Museum Research and Collections Center, and Dr. Philip Willink of the Shedd Aquarium. The Board now has eight appointed members. In addition, Chris Young, Director of the IDNR Office of Resource Conservation has been designated as the non-voting member of the Board.

- At the 173rd meeting the Board approved lists of experts to serve on Endangered Species Technical Advisory Committees (ESTACs) for aquatic invertebrates and terrestrial invertebrates. These committees meet to review listed species for the next revision of the Illinois List of Endangered and Threatened Species.

- The Amphibian/Reptile ESTAC met on 1 March, the Fish ESTAC on 12 April, and the Aquatic Invertebrate ESTAC on 2 May. The Terrestrial Invertebrate ESTAC is scheduled to meet on 15 May. The final animal ESTAC will be that for mammals.

- The Board approved a Biennial Report for July 2014-June 2016. The report is posted on the Board's website.

- The Board's next quarterly meeting will be held 19 May at the Midewin National Tallgrass Prairie Visitor Center in Wilmington, beginning at 10 am.

APPENDIX IV

Illinois Nature Preserves Commission

memorandum

To: Commissioners

From: Kelly Neal

Date: April 21, 2017

Subject: INPC Staff Recommendation Regarding Item 17 - Request to Construct Picnic Shelter with Observation Deck at Wapello Land and Water Reserve

Background:

Wapello Land and Water Reserve (LWR) is a 78.74-acre site owned by the JoDaviess Conservation Foundation (JDCF). The Wapello Reserve contains one-half mile of the eastern portion of the Apple River and is located within the central portion of the Apple River Illinois Natural Areas Inventory Site (INAI #1647). Although archaeological features are not recognized as part of the Illinois Natural Areas Inventory, the Illinois Nature Preserves System does consider significant archaeological resources as a qualifying feature for protection in nature preserve dedication and land and water reserve registration programs. Formerly known as the John Chapman Archaeological Site, after a former landowner, the Wapello Reserve contains the only known platform mound remaining within the Apple River Valley (Millhouse 2003b). The site is unique in that it contains a settlement of a mixing of peoples of the Terminal Late Woodland and Mississippian cultures.

Proposal/Request:

The JDCF requests approval for the construction of a picnic shelter with an observation deck at its Wapello LWR. The site was approved by the INPC in 2006 as the first LWR afforded legal protection due to the presence of significant archeological features. As part of the registration proposal, the landowner retained the right to construct and use a small parking area in the northeast corner of the reserve. An archeological survey of the parking area was conducted in 2006 and a gravel parking lot constructed soon after.

The proposed picnic shelter will have a maximum footprint of 20 ft. x 40 ft. (Figure 3) with concrete floor, and post and metal roof construction. If funds allow, the pavilion will have a second-story observation deck overlooking the re-created prairie landscape and former Native-American village. Total height approximately 22 ft.

If approved, the picnic shelter will provide a nice dry and shaded gathering place out of the sun for JDCF staff, volunteer stewards, and the public who frequent the site. It will also be used as a gathering and launching area for school field trips.

Legal Authorities and Responsibilities:

The Illinois Natural Areas Preservation Act (525 ILCS 30/2) (INAPA) states that "…Natural lands and waters together with the plants and animals living thereon in natural communities are a part of the heritage of the people. They are of value for scientific research, for teaching, as reservoirs of

natural materials … as places of historic and natural interest and scenic beauty and as living museums of the native landscape wherein one may envision and experience primeval conditions in a wilderness-like environment. They also contribute generally to the public health and welfare and the environmental quality of the State."

The Administrative Rule for the Register of Land Water Reserves (17 Ill. Adm. Code 4010.210) states "The registration agreement shall be the prevailing authority with respect to allowable use and management of a registered land and water reserve. A management program, as provided for in Section 4010.220, may allow for deviations from this Part if the deviations do not threaten the natural features or natural quality of the area."

Section 4010.250 of the LWR Rule lists allowable uses that include nature observation and study and picnicking.

The Approval of Specific Management and Uses Section of the LWR Rule (4010.270) states: "Management and uses not otherwise allowed by this Part may be specifically approved by the Department and the Commission where the management or use is consistent with the management Program…"

The Management Plan for the site lists one of the objectives for the site as "protection of the archaeological values is to provide professional research opportunities to increase the knowledge of the peoples that inhabited this area from approximately 1050 to 1350 A.D. and to ensure the long-term preservation of artifacts and cultural values of the site."

The Allowable Uses section of the original proposal states:
"Recreational and educational activities will be promoted within the reserve. Future plans include the development of a small parking lot (adjacent to Rt. 84) with an informational kiosk and hiking trail system with interpretive signage extending from the parking area through the various community types. Bank fishing and a canoe launch site may also be developed along the Apple River. Other possible recreational development could include restrooms beside the parking lot. With the exception of sign posting and activities involving the uppermost surface soils at plow line depth within the agricultural field, any ground-disturbing activities on the site, including the above mentioned recreational development, will require written permission from INPC and IDNR and may necessitate an archaeological investigation of the area."

The original management schedule at time of registration lists "Promote recreational and educational uses" as a management objective and "Develop system of foot trails, parking area, interpretive signs, etc…" as a management action under this objective.

<u>Analysis</u>:
A primary reason for registration of this site as a Land and Water Reserve was to protect the qualifying feature of archaeological resources present at the site. Extensive archeological surveys done in the area of the current parking lot and location of proposed picnic shelter and observation deck indicate that there are no known feature(s) (Milhouse, 2007: UIUC-ITARP CONTROLLED SURFACE COLLECTIONS AT THE WAPELLO LAND AND WATER RESERVE, May 11,

2006, April 23-26 and 1 May 2007 ITARP Research Report Series Number 117, *Philip G. Millhouse* University of Illinois-ITARP November 2007).

As stated in the Rules for Land and Water Reserves, the registration agreement is the prevailing authority with respect to allowable uses and the management program may allow for deviations if they do not threaten the natural features or natural quality of the area. The area designated for this proposed structures as can be seen in aerial images does not have significant natural quality at this time. The Allowable Uses section of the registration document references a parking area, restrooms, kiosk, etc. While there is no mention of a picnic shelter, the designation of the "parking area" for visitor uses is explicitly implied as part of the "recreational and educational activities" to be promoted at the site.

The archeological features for which the site was registered will not be impacted by the construction of the observation deck and picnic shelter. These structures will facilitate the JDCF objectives of promoting public education and recreational uses at this site.

Recommendation:
Illinois Nature Preserves Commission staff recommends approval of the picnic shelter and observation deck as proposed with the condition that the Illinois Department of Natural Resources Archaeologist review prior to construction.

Suggested Changes to the Vegetation Management Guidelines and the Revision Process

The Vegetation Management Guidelines (VMG) were first developed in the early 1990's to provide guidance and recommended methods for controlling the most common non-native or invasive species occurring in sites enrolled in the Illinois Nature Preserves Commission's (INPC) programs. Each of the 23 original guidelines was tailored to a species or species group and provided life history information and recommended practices for controlling the species in high quality, buffer and highly disturbed sites. Nature Preserves Commission and Division of Natural Heritage (DHN) staff and respected leaders in natural areas management were enlisted to develop the guidelines. Drafts of the VMG's were sent to INPC consultants and advisors for comments. After the comments were incorporated into the VMG, the VMG's were brought before the Commission at various meetings for approval.

By 2002, new herbicides and additional scientific data on the species covered by the VMG's rendered some of them outdated and several additional species were becoming problematic. The INPC undertook an effort to revise the 23 existing VMG's and sought suggestions for other species deemed to be problematic, or were likely to become so in the near future. It was decided that 17 additional VMG's would be developed, bringing the total number to 40.

Bob Edgin was assigned as the project coordinator and 25 staff from INPC, DNH, Illinois Natural History Survey and U.S. Forest Service staff volunteered to author the revisions or develop new guidelines. As in the previous endeavor, VMG drafts were sent to all INPC consultants and advisors for comments. If comments were received, they were incorporated into the draft and the final version was submitted for approval at regularly scheduled Commission meetings.

At the time of its writing, each VMG represented to best available information on the target species and control measures. However, the process for developing and approving the VMG's was long and could take up to a year for an individual VMG to be written, or revised, and receive final approval. The entire project took five years to complete with Bob spending one of every 6 days working on the project the final two years.

The project provided a very good set of individual documents; however, a number of shortcomings have been identified in the ensuing years. In some instances, inconsistencies in recommended control practices were also discovered. For example, glyphosate, sold under a variety of trade names, is recommended for foliar application in buffer and disturbed sites in 25 VMG's, but is not included in the VMG for autumn olive (*Elaeagnus umbellata*) even though it is labeled for control of the species. In other instances, broadleaf specific herbicides labeled for use on cetatin species are recommended for use in buffer and disturbed sites but not in high quality areas. However, non-selective herbicides such as Roundup are approved for control of those species in high quality areas. This scenario contradicts guiding principle 3 in the INPC's Management Guidelines for Illinois Nature Preserves Volume 4 – Herbicide Use which states "Use an herbicide and application time that make the herbicide as selective as possible for the

target species". Table 1 contains recommended changes to existing VGM's that would rectify these inconsistencies or reflect new information regarding control of other species.

Another shortcoming of the project is the lack of a master list or database of herbicide formulations, trade names, applications, etc., that are recommended in the various guidelines. A recent review of the VMG's found there are at least 40 herbicide formulations marketed under 52 different trade names mentioned in the VMG's, collectively. Constituency groups occasionally ask INPC staff about the use of an herbicide other than those mentioned in a particular VMG. Without a master list or database, there is no efficient way to cross reference recommended herbicides or their application between the various VMG's. When such questions arise, staff must read through the VMG's of species with a similar life history to see if the herbicide has been approved for other species. It is suggested that a searchable or filterable database be developed and maintained.

Finally, changes to the revision process need some contemplation. The review process of the past was laborious and not expeditious. The lag time between final revisions and final approval at Commission meetings meant some VMG's were outdated almost immediately after gaining approval. Consideration should be given to allowing staff to make minor revisions to existing VMG's while bypassing consultant and advisor review.

Table 1. Recommended changes to Existing Vegetation Management Guidelines

Vegetation Management Guideline	Recommended Change
Autumn olive	Approve use of Roundup for foliar application in buffer and disturbed areas. Other glyphosate herbicides are approved for this use, but Roundup is not.
Crown Vetch	Approve use of broadleaf specific herbicides Tahoe 3A, Garlon 3A and Platoon for use in high quality areas. Currently, only broadleaf specific herbicide approved for control of crown vetch in high quality areas is Transline which is very expensive.
Fescue	Approve use of herbicide Plateau for use in high quality areas. Plateau is specially formulated for use in native grass stands and is labeled for control of fescue.
Japanese hops	Approve use of herbicide Tahoe 3A for use in high quality areas. Tahoe 3A has same chemical formulation Garlon 3A which is approved for control of Japanese hops in high quality areas.
Kentucky bluegrass	Approve use of grass-specific herbicides Envoy, Fusilade DX, Fusion, Poast, and Poast Plus for control of Kentucky bluegrass in high quality areas. Currently, prescribed fire is the only recommended treatment for Kentucky bluegrass in high quality areas.
Musk thistle	Approve use of broadleaf specific herbicides Savage CA, Weedar 64, Barrage HF, Weedone 638 and Curtail for use in high quality areas. These herbicides are approved for use in buffer and disturbed sites but not in high quality areas. However, non-selective, systemic herbicides such as Roundup are approved for control of musk thistle in high quality areas.
Purple loosestrife	Approve use of broadleaf specific Habitat herbicide for use in high quality areas. Habitat herbicide label specifies its use is limited to non-native species or species considered to be a nuisance at state or federal level. It is approved for use in buffer or disturbed areas.
Reed canary grass	Approve grass-specific herbicides Intensity One, Poast and Poast plus for use in high quality, buffer and disturbed sites. Currently no grass-specific herbicides are approved for use in high quality areas for control of reed canary grass. Recent studies have shown Intensity One to be particularly effective for control of red canary grass.
Sericea lespedeza	Removal of Ally XP, Escort herbicides from those recommended for use in high quality areas. These herbicides have metsulfuron methyl as the active ingredient and may have residual activity in the soil for up to 22 months.
Smooth brome	Approve use of grass-specific herbicides Fusilade DX, Poast and Poast Plus for use in high quality areas. Currently, prescribed fire is the only recommended treatment for smooth brome in high quality areas.
Smooth sumac	Approve use of broadleaf specific herbicides Tahoe 3A and Garlon 3A for foliar application in high quality areas. Currently, no herbicides are approved for foliar application in high quality areas.
Spotted knapweed	Remove herbicide Five Star from approved use in high quality areas.

	Herbicide label states that addition of another herbicide may be necessary for suppression. If it requires another herbicide to only suppress knapweed, it probably shouldn't be recommended for use at all. Also, approve use of herbicide Stinger for foliar applications in high quality areas. Other herbicides with same formulation are approved for use in high quality areas.
Sweet clover	Approve use of herbicide Stinger for foliar applications in high quality areas. Other herbicides with same formulation are approved for use in high quality areas.
Wild parsnip	Approve broadleaf herbicides Five Star and Savage for foliar applications in high quality areas. Both herbicides are labeled for control of wild parsnip and are approved for use in buffer and disturbed areas. Weedar with the same formulation or similar formulation is approved for high quality areas.

Cells with recommended changes to existing VMG's

Herbicide formulation	Trade Name	Product Description	VMG Approval	Recommended Application	High Quality	Approved for use in Buffer	Disturbed sites	Signal Word	Notes
Dicamba - dimethylamine salt	Banvel	Broadleaf specific	Autumn olive	Foliar	NO	YES	YES	Warning	
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Autumn olive	Foliar	NO	YES	YES	Warning	
Glyphosate - isopropylamine salt	Roundup Pro	Postemergent systemic	Autumn olive	Foliar	NO	YES	YES	Caution	
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Autumn olive	Cut surface	YES	YES	YES	Warning	
Glyphosate - isopropylamine salt	Roundup Pro	Postemergent systemic	Autumn olive	Cut surface	YES	YES	YES	Caution	
Triclopyr - butoxyethyl ester	Garlon 4	Broadleaf specific	Autumn olive	Basal bark	YES	YES	YES	Caution	
Triclopyr - butoxyethyl ester	Garlon 4	Broadleaf specific	Autumn olive	Cut surface	YES	YES	YES	Caution	
Triclopyr - butoxyethyl ester	Garlon 4	Broadleaf specific	Autumn olive	Thin line	YES	YES	YES	Caution	
Triclopyr - butoxyethyl ester	Tahoe 4E	Broadleaf specific	Autumn olive	Basal bark	YES	YES	YES	Caution	
Triclopyr - butoxyethyl ester	Tahoe 4E	Broadleaf specific	Autumn olive	Cut surface	YES	YES	YES	Caution	
Triclopyr - butoxyethyl ester	Tahoe 4E	Broadleaf specific	Autumn olive	Thin line	YES	YES	YES	Caution	
Triclopyr - butoxyethyl ester + 2,4 Dichlorophenoxyacetic acid - butoxyethyl ester	Crossbow	Broadleaf specific	Autumn olive	Foliar	NO	YES	YES	Caution	
Clopyralid - monoethanolamine salt	Transline	Broadleaf specific	Black locust	Foliar	YES	YES	YES	Caution	Not recommended for sandy areas
Fosamine - ammonium salt	Krenite	Broadleaf specific	Black locust	Foliar	NO	YES	YES	Caution	
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Black locust	Cut surface	NO	YES	YES	Warning	
Glyphosate - isopropylamine salt	Roundup Pro	Postemergent systemic	Black locust	Cut surface	NO	YES	YES	Caution	
Imazapyr - Isopropylamine salt	Stalker	Broadleaf specific	Black locust	Foliar	NO	YES	YES	Caution	Approved with caution - May be subject to soil leaching
Triclopyr - butoxyethyl ester	Garlon 4	Broadleaf specific	Black locust	Basal bark	YES	YES	YES	Caution	
Triclopyr - butoxyethyl ester	Garlon 4	Broadleaf specific	Black locust	Cut surface	YES	YES	YES	Caution	
Triclopyr - butoxyethyl ester	Tahoe 4E	Broadleaf specific	Black locust	Basal bark	YES	YES	YES	Caution	
Triclopyr - butoxyethyl ester	Tahoe 4E	Broadleaf specific	Black locust	Cut surface	YES	YES	YES	Caution	
Triclopyr - triethylamine salt	Garlon 3A	Broadleaf specific	Black locust	Foliar	YES	YES	YES	Danger	
Triclopyr - triethylamine salt	Garlon 3A	Broadleaf specific	Black locust	Cut surface	YES	YES	YES	Danger	
Triclopyr - triethylamine salt	Tahoe 3A	Broadleaf specific	Black locust	Foliar	YES	YES	YES	Danger	
Triclopyr - triethylamine salt	Tahoe 3A	Broadleaf specific	Black locust	Cut surface	YES	YES	YES	Danger	
Glyphosate - isopropylamine salt	Accord	Postemergent systemic	Buckthorns	Cut surface	YES	YES	YES	Caution	
Glyphosate - isopropylamine salt	Accord	Postemergent systemic	Buckthorns	Foliar	NO	YES	YES	Caution	Approved for foliar treatments of small re-sprouts followingcut surface treatments
Glyphosate - isopropylamine salt	Rodeo	Postemergent systemic	Buckthorns	Foliar	NO	YES	YES	Caution	Approved for foliar treatments of small re-sprouts followingcut surface treatments
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Buckthorns	Foliar	NO	YES	YES	Warning	Approved for foliar treatments of small re-sprouts followingcut surface treatments
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Buckthorns	Foliar	NO	YES	YES	Warning	Approved for foliar treatments of small re-sprouts followingcut surface treatments
Glyphosate - isopropylamine salt	Roundup Pro	Postemergent systemic	Buckthorns	Foliar	NO	YES	YES	Caution	Approved for foliar treatments of small re-sprouts followingcut surface treatments
Glyphosate - isopropylamine salt	Rodeo	Postemergent systemic	Buckthorns	Cut surface	YES	YES	YES	Caution	
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Buckthorns	Cut surface	YES	YES	YES	Warning	
Glyphosate - monopotassium salt	Touchdown Hi Tech	Postemergent systemic	Buckthorns	Cut surface	YES	YES	YES	Caution	
Glyphosate - monopotassium salt	Touchdown Hi Tech	Postemergent systemic	Buckthorns	Foliar	NO	YES	YES	Caution	Approved for foliar treatments of small re-sprouts followingcut surface treatments
Imazapyr - Isopropylamine salt	Stalker	Broadleaf specific	Buckthorns	Cut surface	NO	YES	YES	Caution	Approved with caution - May be subject to soil leaching
Picloram - potassium salt	Tordon K	Broadleaf specific	Buckthorns	Cut surface	NO	YES	YES	Caution	May be phytotoxic for up to one year and subject to soil leaching
Picloram - triisopropanolamine salt + 2,4 Dichlorophenoxyacetic acid - triisopropanolamine salt	Tordon RTU	Broadleaf specific	Buckthorns	Cut surface	NO	YES	YES	Caution	May be phytotoxic for up to one year and subject to soil leaching
Picloram - triisopropanolamine salt + 2,4 Dichlorophenoxyacetic acid - triisopropanolamine salt	Tordon 101	Broadleaf specific	Buckthorns	Cut surface	NO	YES	YES	Danger	May be phytotoxic for up to one year and subject to soil leaching
Glyphosate - isopropylamine salt	Accord	Postemergent systemic	Bush honeysuckles	Foliar	YES	YES	YES	Caution	Approved when applied in late fall after native plants are dormant
Glyphosate - isopropylamine salt	Accord	Postemergent systemic	Bush honeysuckles	Cut surface	YES	YES	YES	Caution	
Glyphosate - isopropylamine salt	Rodeo	Postemergent systemic	Bush honeysuckles	Foliar	YES	YES	YES	Caution	Approved when applied in late fall after native plants are dormant
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Bush honeysuckles	Foliar	YES	YES	YES	Warning	Approved when applied in late fall after native plants are dormant
Glyphosate - isopropylamine salt	Roundup Pro	Postemergent systemic	Bush honeysuckles	Foliar	YES	YES	YES	Caution	Approved when applied in late fall after native plants are dormant
Glyphosate - isopropylamine salt	Rodeo	Postemergent systemic	Bush honeysuckles	Cut surface	YES	YES	YES	Caution	
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Bush honeysuckles	Cut surface	YES	YES	YES	Warning	
Glyphosate - isopropylamine salt	Roundup Pro	Postemergent systemic	Bush honeysuckles	Cut surface	YES	YES	YES	Caution	
Glyphosate - monopotassium salt	Touchdown Hi Tech	Postemergent systemic	Bush honeysuckles	Foliar	YES	YES	YES	Caution	Approved when applied in late fall after native plants are dormant
Glyphosate - monopotassium salt	Touchdown Hi Tech	Postemergent systemic	Bush honeysuckles	Cut surface	YES	YES	YES	Caution	
Imazapyr - Isopropylamine salt	Arsenal	Broadleaf specific	Bush honeysuckles	Cut surface	NO	YES	YES	Caution	Approved with caution - May be subject to soil leaching
Imazapyr - Isopropylamine salt	Arsenal	Broadleaf specific	Bush honeysuckles	Basal bark	NO	YES	YES	Caution	Approved with caution - May be subject to soil leaching
Imazapyr - Isopropylamine salt	Stalker	Broadleaf specific	Bush honeysuckles	Cut surface	NO	YES	YES	Caution	Approved with caution - May be subject to soil leaching
Imazapyr - Isopropylamine salt	Stalker	Broadleaf specific	Bush honeysuckles	Basal bark	NO	YES	YES	Caution	Approved with caution - May be subject to soil leaching
Triclopyr - butoxyethyl ester	Garlon 4	Broadleaf specific	Bush honeysuckles	Basal bark	YES	YES	YES	Caution	Approved but has since shown to be limited in effectiveness
Triclopyr - butoxyethyl ester	Garlon 4	Broadleaf specific	Bush honeysuckles	Foliar	YES	YES	YES	Caution	Approved but has since shown to be limited in effectiveness
Triclopyr - butoxyethyl ester	Pathfinder II	Broadleaf specific	Bush honeysuckles	Basal bark	YES	YES	YES	Caution	Approved but has since shown to be limited in effectiveness
Triclopyr - butoxyethyl ester	Tahoe 4E	Broadleaf specific	Bush honeysuckles	Basal bark	YES	YES	YES	Caution	Approved but has since shown to be limited in effectiveness
Triclopyr - butoxyethyl ester	Tahoe 4E	Broadleaf specific	Bush honeysuckles	Foliar	YES	YES	YES	Caution	Approved but has since shown to be limited in effectiveness
Triclopyr - triethylamine salt	Renovate	Broadleaf specific	Bush honeysuckles	Foliar	NO	YES	YES	Danger	Approved but has since shown to be limited in effectiveness
2,4 Dichlorophenoxyacetic acid - dimethylamine salt	Platoon	Broadleaf specific	Canada thistle	Foliar	YES	YES	YES	Danger	
Clopyralid - momethanolamine salt + 2,4 Dichlorophenoxyacetic acid	Curtail	Broadleaf specific	Canada thistle	Foliar	YES	YES	YES	Danger	
Clopyralid - monoethanolamine salt	Transline	Broadleaf specific	Canada thistle	Foliar	YES	YES	YES	Caution	Not recommended for sandy areas

Glyphosate - isopropylamine salt	Accord	Postemergent systemic	Canada thistle	Foliar	YES	YES	YES	Caution	In high-quality areas it is only recommended for use in areas with heavy infestations
Glyphosate - isopropylamine salt	Rodeo	Postemergent systemic	Canada thistle	Foliar	YES	YES	YES	Caution	In high-quality areas it is only recommended for use in areas with heavy infestations
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Canada thistle	Foliar	YES	YES	YES	Warning	In high-quality areas it is only recommended for use in areas with heavy infestations
Glyphosate - isopropylamine salt	Roundup Pro	Postemergent systemic	Canada thistle	Foliar	YES	YES	YES	Caution	In high-quality areas it is only recommended for use in areas with heavy infestations
Glyphosate - monopotassium salt	Touchdown Hi Tech	Postemergent systemic	Canada thistle	Foliar	YES	YES	YES	Caution	In high-quality areas it is only recommended for use in areas with heavy infestations
Glyphosate - isopropylamine salt	Accord	Postemergent systemic	Chinese yam	Foliar	YES	YES	YES	Caution	
Glyphosate - isopropylamine salt	Rodeo	Postemergent systemic	Chinese yam	Foliar	YES	YES	YES	Caution	
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Chinese yam	Foliar	YES	YES	YES	Warning	
Glyphosate - isopropylamine salt	Roundup Pro	Postemergent systemic	Chinese yam	Foliar	YES	YES	YES	Caution	
Glyphosate - monopotassium salt	Touchdown Hi Tech	Postemergent systemic	Chinese yam	Foliar	YES	YES	YES	Caution	
Pelargonic acid	Scythe	Postemergent systemic	Chinese yam	Foliar	YES	YES	YES	Warning	Approved with caution - may have residual soil activity for up to 22 months
Triclopyr - butoxyethyl ester + 2,4 Dichlorophenoxyacetic acid - butoxyethyl ester	Crossbow	Broadleaf specific	Chinese yam	Foliar	NO	YES	YES	Caution	
Triclopyr - triethylamine salt	Garlon 3A	Broadleaf specific	Chinese yam	Foliar	YES	YES	YES	Danger	
Triclopyr - triethylamine salt	Tahoe 3A	Broadleaf specific	Chinese yam	Foliar	YES	YES	YES	Danger	
2,4 Dichlorophenoxyacetic acid - dimethylamine salt	Platoon	Broadleaf specific	Crown vetch	Foliar	YES	YES	YES	Danger	
2,4 Dichlorophenoxyacetic acid - dimethylamine salt + mecprop-p acid - dimethylamine salt + dicamba	Weed-b-Gon	Broadleaf specific	Crown vetch	Foliar	NO	YES	YES	Caution	
Clopyralid - monoethanolamine salt	Transline	Broadleaf specific	Crown vetch	Foliar	YES	YES	YES	Caution	Not recommended for sandy areas
Glyphosate - isopropylamine salt	Accord	Postemergent systemic	Crown vetch	Foliar	NO	YES	YES	Caution	
Glyphosate - isopropylamine salt	Rodeo	Postemergent systemic	Crown vetch	Foliar	NO	YES	YES	Caution	
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Crown vetch	Foliar	NO	YES	YES	Warning	
Glyphosate - isopropylamine salt	Roundup Pro	Postemergent systemic	Crown vetch	Foliar	NO	YES	YES	Caution	
Glyphosate - monopotassium salt	Touchdown Hi Tech	Postemergent systemic	Crown vetch	Foliar	NO	YES	YES	Caution	
Triclopyr - butoxyethyl ester + 2,4 Dichlorophenoxyacetic acid - butoxyethyl ester	Crossbow	Broadleaf specific	Crown vetch	Foliar	NO	YES	YES	Caution	
Triclopyr - triethylamine salt	Garlon 3A	Broadleaf specific	Crown vetch	Foliar	YES	YES	YES	Danger	
Triclopyr - triethylamine salt	Tahoe 3A	Broadleaf specific	Crown vetch	Foliar	YES	YES	YES	Danger	
Glyphosate - isopropylamine salt	Accord	Postemergent systemic	Fescue	Foliar	YES	YES	YES	Caution	
Glyphosate - isopropylamine salt	Rodeo	Postemergent systemic	Fescue	Foliar	YES	YES	YES	Caution	
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Fescue	Foliar	YES	YES	YES	Warning	
Glyphosate - isopropylamine salt	Roundup Pro	Postemergent systemic	Fescue	Foliar	YES	YES	YES	Caution	
Glyphosate - monopotassium salt	Touchdown Hi Tech	Postemergent systemic	Fescue	Foliar	YES	YES	YES	Caution	
Imazapic - ammonium salt	Plateau	Broadleaf and select grasses	Fescue	Foliar	Yes	YES	YES	Caution	Needs to be mixed with methylated seed oil
Glyphosate - isopropylamine salt	Accord	Postemergent systemic	Garlic mustard	Foliar	YES	YES	YES	Caution	Approved for high quality areas but only in areas with heavy infestations
Glyphosate - isopropylamine salt	Rodeo	Postemergent systemic	Garlic mustard	Foliar	YES	YES	YES	Caution	Approved for high quality areas but only in areas with heavy infestations
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Garlic mustard	Foliar	YES	YES	YES	Warning	Approved for high quality areas but only in areas with heavy infestations
Glyphosate - isopropylamine salt	Roundup Pro	Postemergent systemic	Garlic mustard	Foliar	YES	YES	YES	Caution	Approved for high quality areas but only in areas with heavy infestations
Glyphosate - monopotassium salt	Touchdown Hi Tech	Postemergent systemic	Garlic mustard	Foliar	YES	YES	YES	Caution	Approved for high quality areas but only in areas with heavy infestations
Triclopyr - triethylamine salt	Garlon 3A	Broadleaf specific	Garlic mustard	Foliar	YES	YES	YES	Danger	
Triclopyr - triethylamine salt	Tahoe 3A	Broadleaf specific	Garlic mustard	Foliar	YES	YES	YES	Danger	
Fosamine - ammonium salt	Krenite	Broadleaf specific	Gray dogwood	Basal bark	NO	YES	YES	Caution	
Glyphosate - isopropylamine salt	Accord	Postemergent systemic	Gray dogwood	Cut surface	YES	YES	YES	Caution	
Glyphosate - isopropylamine salt	Rodeo	Postemergent systemic	Gray dogwood	Cut surface	YES	YES	YES	Caution	
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Gray dogwood	Cut surface	YES	YES	YES	Warning	
Glyphosate - isopropylamine salt	Roundup Pro	Postemergent systemic	Gray dogwood	Cut surface	YES	YES	YES	Caution	
Glyphosate - monopotassium salt	Touchdown Hi Tech	Postemergent systemic	Gray dogwood	Cut surface	YES	YES	YES	Caution	
Triclopyr - butoxyethyl ester	Garlon 4	Broadleaf specific	Gray dogwood	Cut surface	YES	YES	YES	Caution	
Triclopyr - butoxyethyl ester	Garlon 4	Broadleaf specific	Gray dogwood	Basal bark	YES	YES	YES	Caution	
Triclopyr - butoxyethyl ester	Garlon 4	Broadleaf specific	Gray dogwood	Weed wick	YES	YES	YES	Caution	
Triclopyr - butoxyethyl ester	Pathfinder II	Broadleaf specific	Gray dogwood	Basal bark	YES	YES	YES	Caution	
Triclopyr - butoxyethyl ester	Tahoe 4E	Broadleaf specific	Gray dogwood	Cut surface	YES	YES	YES	Caution	
Triclopyr - butoxyethyl ester	Tahoe 4E	Broadleaf specific	Gray dogwood	Basal bark	YES	YES	YES	Caution	
Triclopyr - butoxyethyl ester	Tahoe 4E	Broadleaf specific	Gray dogwood	Weed wick	YES	YES	YES	Caution	
Triclopyr - triethylamine salt	Garlon 3A	Broadleaf specific	Gray dogwood	Cut surface	YES	YES	YES	Danger	
Triclopyr - triethylamine salt	Garlon 3A	Broadleaf specific	Gray dogwood	Foliar	YES	YES	YES	Danger	
Triclopyr - triethylamine salt	Tahoe 3A	Broadleaf specific	Gray dogwood	Cut surface	YES	YES	YES	Danger	
Triclopyr - triethylamine salt	Tahoe 3A	Broadleaf specific	Gray dogwood	Foliar	NO	YES	YES	Danger	
Glyphosate - isopropylamine salt	Accord	Postemergent systemic	Honey locust	Cut surface	YES	YES	YES	Caution	
Glyphosate - isopropylamine salt	Accord	Postemergent systemic	Honey locust	Foliar	NO	YES	YES	Caution	
Glyphosate - isopropylamine salt	Rodeo	Postemergent systemic	Honey locust	Foliar	NO	YES	YES	Caution	
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Honey locust	Foliar	NO	YES	YES	Warning	
Glyphosate - isopropylamine salt	Roundup Pro	Postemergent systemic	Honey locust	Foliar	NO	YES	YES	Caution	
Glyphosate - isopropylamine salt	Rodeo	Postemergent systemic	Honey locust	Cut surface	YES	YES	YES	Caution	
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Honey locust	Cut surface	YES	YES	YES	Warning	
Glyphosate - isopropylamine salt	Roundup Pro	Postemergent systemic	Honey locust	Cut surface	YES	YES	YES	Caution	
Glyphosate - monopotassium salt	Touchdown Hi Tech	Postemergent systemic	Honey locust	Cut surface	YES	YES	YES	Caution	
Glyphosate - monopotassium salt	Touchdown Hi Tech	Postemergent systemic	Honey locust	Foliar	NO	YES	YES	Caution	
Triclopyr - butoxyethyl ester	Garlon 4	Broadleaf specific	Honey locust	Basal bark	YES	YES	YES	Caution	

Triclopyr - butoxyethyl ester	Tahoe 4E	Broadleaf specific	Honey locust	Basal bark	YES	YES	YES	Caution	
Triclopyr - triethylamine salt	Garlon 3A	Broadleaf specific	Honey locust	Cut surface	YES	YES	YES	Danger	
Triclopyr - triethylamine salt	Tahoe 3A	Broadleaf specific	Honey locust	Cut surface	YES	YES	YES	Danger	
Glyphosate - isopropylamine salt	Accord	Postemergent systemic	Japanese honeysuckle	Foliar	YES	YES	YES	Caution	Approved for high quality areas but only in areas with heavy infestations
Glyphosate - isopropylamine salt	Rodeo	Postemergent systemic	Japanese honeysuckle	Foliar	YES	YES	YES	Caution	Approved for high quality areas but only in areas with heavy infestations
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Japanese honeysuckle	Foliar	YES	YES	YES	Warning	Approved for high quality areas but only in areas with heavy infestations
Glyphosate - isopropylamine salt	Roundup Pro	Postemergent systemic	Japanese honeysuckle	Foliar	YES	YES	YES	Caution	Approved for high quality areas but only in areas with heavy infestations
Glyphosate - monopotassium salt	Touchdown Hi Tech	Postemergent systemic	Japanese honeysuckle	Foliar	YES	YES	YES	Caution	
Triclopyr - butoxyethyl ester	Garlon 4	Broadleaf specific	Japanese honeysuckle	Foliar	YES	YES	YES	Caution	
Triclopyr - butoxyethyl ester	Tahoe 4E	Broadleaf specific	Japanese honeysuckle	Foliar	YES	YES	YES	Caution	
Triclopyr - triethylamine salt	Garlon 3A	Broadleaf specific	Japanese honeysuckle	Foliar	YES	YES	YES	Danger	
Triclopyr - triethylamine salt	Tahoe 3A	Broadleaf specific	Japanese honeysuckle	Foliar	YES	YES	YES	Danger	
Glyphosate - isopropylamine salt	Accord	Postemergent systemic	Japanese hops	Foliar	NO	YES	YES	Caution	
Glyphosate - isopropylamine salt	Rodeo	Postemergent systemic	Japanese hops	Foliar	NO	YES	YES	Caution	
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Japanese hops	Foliar	NO	YES	YES	Warning	
Glyphosate - isopropylamine salt	Roundup Pro	Postemergent systemic	Japanese hops	Foliar	NO	YES	YES	Caution	
Glyphosate - monopotassium salt	Touchdown Hi Tech	Postemergent systemic	Japanese hops	Foliar	NO	YES	YES	Caution	
Triclopyr - triethylamine salt	Garlon 3A	Broadleaf specific	Japanese hops	Foliar	YES	YES	YES	Danger	
Triclopyr - triethylamine salt	Tahoe 3A	Broadleaf specific	Japanese hops	Foliar	YES	YES	YES	Danger	
Clethodim	Envoy	Poast emergent grasses	Japanese stiltgrass	Foliar	YES	YES	YES	Warning	
Dithiopyr	Preen	Pre or post emergent grasses	Japanese stiltgrass	Broadcast	NO	YES	YES	Caution	May not be effective if post-emergent grasses are more than a few inches tall
Fenoxaprop-p-ethyl	Acclaim Extra	Poast emergent grasses	Japanese stiltgrass	Foliar	YES	YES	YES	Caution	
Fluazifop-P-butyl	Fusilade DX	Poast emergent grasses	Japanese stiltgrass	Foliar	YES	YES	YES	Caution	
Fluazifop-P-butyl + Fenoxaprop-P-ethyl	Fusion	Poast emergent grasses	Japanese stiltgrass	Foliar	YES	YES	YES	Caution	
Glyphosate - isopropylamine salt	Accord	Postemergent systemic	Japanese stiltgrass	Foliar	NO	YES	YES	Caution	
Glyphosate - isopropylamine salt	Rodeo	Postemergent systemic	Japanese stiltgrass	Foliar	NO	YES	YES	Caution	
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Japanese stiltgrass	Foliar	NO	YES	YES	Warning	
Glyphosate - isopropylamine salt	Roundup Pro	Postemergent systemic	Japanese stiltgrass	Foliar	NO	YES	YES	Caution	
Glyphosate - monopotassium salt	Touchdown Hi Tech	Postemergent systemic	Japanese stiltgrass	Foliar	NO	YES	YES	Caution	
Sethoxydim	Poast	Poast emergent grasses	Japanese stiltgrass	Foliar	YES	YES	YES	Warning	
Sethoxydim	Poast Plus	Poast emergent grasses	Japanese stiltgrass	Foliar	YES	YES	YES	Caution	
Clethodim	Envoy	Post emergent grasses	Johnson grass	Foliar	YES	YES	YES	Warning	Provides suppression only
Glyphosate - isopropylamine salt	Accord	Postemergent systemic	Johnson grass	Foliar	YES	YES	YES	Caution	
Glyphosate - isopropylamine salt	Rodeo	Postemergent systemic	Johnson grass	Foliar	YES	YES	YES	Caution	
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Johnson grass	Foliar	YES	YES	YES	Warning	
Glyphosate - isopropylamine salt	Roundup Pro	Postemergent systemic	Johnson grass	Foliar	YES	YES	YES	Caution	
Glyphosate - monopotassium salt	Touchdown Hi Tech	Postemergent systemic	Johnson grass	Foliar	YES	YES	YES	Caution	
Sethoxydim	Poast	Post emergent grasses	Johnson grass	Foliar	YES	YES	YES	Warning	Provide suppression only
Sethoxydim	Poast Plus	Post emergent grasses	Johnson grass	Foliar	YES	YES	YES	Caution	Provide suppression only
Clethodim	Envoy	Post emergent grasses	Kentucky bluegrass	Foliar	YES	YES	YES	Warning	Control may be enhanced with addition of ammonium sulfate
Fenoxaprop-p-ethyl	Acclaim Extra	Post emergent grasses	Kentucky bluegrass	Foliar	NO	YES	YES	Caution	Not effective on Kentcky bluegrass
Fluazifop-P-butyl	Fusilade DX	Post emergent grasses	Kentucky bluegrass	Foliar	YES	YES	YES	Caution	Control may be enhanced with addition of ammonium sulfate
Fluazifop-P-butyl + Fenoxaprop-P-ethyl	Fusion	Post emergent grasses	Kentucky bluegrass	Foliar	YES	YES	YES	Caution	Control may be enhanced with addition of ammonium sulfate
Glyphosate - isopropylamine salt	Accord	Postemergent systemic	Kentucky bluegrass	Foliar	NO	YES	YES	Caution	
Glyphosate - isopropylamine salt	Glyphomax	Postemergent systemic	Kentucky bluegrass	Foliar	NO	YES	YES	Caution	
Glyphosate - isopropylamine salt	Rodeo	Postemergent systemic	Kentucky bluegrass	Foliar	NO	YES	YES	Caution	
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Kentucky bluegrass	Foliar	NO	YES	YES	Warning	
Glyphosate - isopropylamine salt	Roundup Pro	Postemergent systemic	Kentucky bluegrass	Foliar	NO	YES	YES	Caution	
Glyphosate - monopotassium salt	Touchdown Hi Tech	Postemergent systemic	Kentucky bluegrass	Foliar	NO	YES	YES	Caution	
Sethoxydim	Poast	Post emergent grasses	Kentucky bluegrass	Foliar	YES	YES	YES	Warning	VMG recommends only spring burning for control in high quality areas
Sethoxydim	Poast Plus	Post emergent grasses	Kentucky bluegrass	Foliar	YES	YES	YES	Caution	VMG recommends only spring burning for control in high quality areas
2,4 Dichlorophenoxyacetic acid - dimethylamine salt + Dicamba - dimethylamine salt	Veteran 720	Broadleaf specific	Kudzu	Foliar	YES	YES	YES	Danger	
Clopyralid - monoethanolamine salt	Transline	Broadleaf specific	Kudzu	Foliar	YES	YES	YES	Caution	Not recommended for sandy areas
Glyphosate - isopropylamine salt	Rodeo	Postemergent systemic	Kudzu	Foliar	YES	YES	YES	Caution	
Triclopyr - butoxyethyl ester	Garlon 4	Broadleaf specific	Kudzu	Foliar	YES	YES	YES	Caution	
Triclopyr - butoxyethyl ester	Tahoe 4E	Broadleaf specific	Kudzu	Foliar	YES	YES	YES	Caution	
Triclopyr - triethylamine salt	Garlon 3A	Broadleaf specific	Kudzu	Foliar	YES	YES	YES	Danger	
Triclopyr - triethylamine salt	Tahoe 3A	Broadleaf specific	Kudzu	Foliar	YES	YES	YES	Danger	
Glyphosate - isopropylamine salt	Accord	Postemergent systemic	Leafy spurge	Foliar	NO	YES	YES	Caution	
Glyphosate - isopropylamine salt	Glyphomax	Postemergent systemic	Leafy spurge	Foliar	NO	YES	YES	Caution	
Glyphosate - isopropylamine salt	Rodeo	Postemergent systemic	Leafy spurge	Foliar	NO	YES	YES	Caution	
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Leafy spurge	Foliar	NO	YES	YES	Warning	
Glyphosate - isopropylamine salt	Roundup Pro	Postemergent systemic	Leafy spurge	Foliar	NO	YES	YES	Caution	
Glyphosate - monopotassium salt	Touchdown Hi Tech	Postemergent systemic	Leafy spurge	Foliar	NO	YES	YES	Caution	
Imazapic - ammonium salt	Plateau	Broadleaf and select grasses	Leafy spurge	Foliar	YES	YES	YES	Caution	
Imazapic + Glyphosate - isopropylamine salt	Journey	Postemergent systemic	Leafy spurge	Foliar	YES	YES	YES	Caution	
Picloram - potassium salt	Tordon K	Broadleaf specific	Leafy spurge	Foliar	NO	YES	YES	Caution	May be phytotoxic for up to one year and subject to soil leaching

Picloram - triisopropanolamine salt + 2,4 Dichlorophenoxyacetic acid - triisopropanolamine salt	Tordon RTU	Broadleaf specific	Leafy spurge	Foliar	NO	YES	YES	Caution	May be phytotoxic for up to one year and subject to soil leaching
Picloram - triisopropanolamine salt + 2,4 Dichlorophenoxyacetic acid - triisopropanolamine salt	Tordon 101	Broadleaf specific	Leafy spurge	Foliar	NO	YES	YES	Danger	May be phytotoxic for up to one year and subject to soil leaching
Triclopyr - triethylamine salt	Garlon 3A	Broadleaf specific	Leafy spurge	Foliar	YES	YES	YES	Danger	
Triclopyr - triethylamine salt	Tahoe 3A	Broadleaf specific	Leafy spurge	Foliar	YES	YES	YES	Danger	
Dicamba - dimethylamine salt	Banvel	Broadleaf specific	Multiflora rose	Cut surface	NO	YES	YES	Warning	
Fosamine - ammonium salt	Krenite	Broadleaf specific	Multiflora rose	Cut surface	NO	YES	YES	Caution	
Glyphosate - isopropylamine salt	Accord	Postemergent systemic	Multiflora rose	Cut surface	YES	YES	YES	Caution	
Glyphosate - isopropylamine salt	Glyphomax	Postemergent systemic	Multiflora rose	Cut surface	YES	YES	YES	Caution	
Glyphosate - isopropylamine salt	Rodeo	Postemergent systemic	Multiflora rose	Cut surface	YES	YES	YES	Caution	
Glyphosate - isopropylamine salt	Roundup Pro	Postemergent systemic	Multiflora rose	Cut surface	YES	YES	YES	Caution	
Glyphosate - isopropylamine salt	Accord	Postemergent systemic	Multiflora rose	Foliar	NO	YES	YES	Caution	
Glyphosate - isopropylamine salt	Glyphomax	Postemergent systemic	Multiflora rose	Foliar	NO	YES	YES	Caution	
Glyphosate - isopropylamine salt	Rodeo	Postemergent systemic	Multiflora rose	Foliar	NO	YES	YES	Caution	
Glyphosate - isopropylamine salt	Roundup Pro	Postemergent systemic	Multiflora rose	Foliar	NO	YES	YES	Caution	
Glyphosate - monopotassium salt	Touchdown Hi Tech	Postemergent systemic	Multiflora rose	Cut surface	YES	YES	YES	Caution	
Glyphosate - monopotassium salt	Touchdown Hi Tech	Postemergent systemic	Multiflora rose	Foliar	NO	YES	YES	Caution	
Triclopyr - butoxyethyl ester	Garlon 4	Broadleaf specific	Multiflora rose	Cut surface	YES	YES	YES	Caution	
Triclopyr - butoxyethyl ester	Tahoe 4E	Broadleaf specific	Multiflora rose	Cut surface	YES	YES	YES	Caution	
Triclopyr - triethylamine salt	Garlon 3A	Broadleaf specific	Multiflora rose	Cut surface	YES	YES	YES	Danger	
Triclopyr - triethylamine salt	Tahoe 3A	Broadleaf specific	Multiflora rose	Cut surface	YES	YES	YES	Danger	
2,4 Dichlorophenoxyacetic acid - dimethylamine salt	Savage CA	Broadleaf specific	Musk thistle	Foliar	YES	YES	YES	Danger	May require repeated treatments of application at the higher label rate even under ideal conditions for application
2,4 Dichlorophenoxyacetic acid - dimethylamine salt	Weedar 64	Broadleaf specific	Musk thistle	Foliar	YES	YES	YES	Danger	May require repeated treatments of application at the higher label rate even under ideal conditions for application
2,4 Dichlorophenoxyacetic acid - ethylhexyl ester	Barrage HF	Broadleaf specific	Musk thistle	Foliar	YES	YES	YES	Caution	May require repeated treatments of application at the higher label rate even under ideal conditions for application
2,4 Dichlorophenoxyacetic acid + 2,4 Dichlorophenoxyacetic acid - butoxyethyl ester	Weedone 638	Broadleaf specific	Musk thistle	Foliar	YES	YES	YES	Warning	May require application at highest recommended rate for control
Clopyralid - momethanolamine salt + 2,4 Dichlorophenoxyacetic acid	Curtail	Broadleaf specific	Musk thistle	Foliar	YES	YES	YES	Danger	
Glyphosate - isopropylamine salt	Accord	Postemergent systemic	Musk thistle	Foliar	YES	YES	YES	Caution	
Glyphosate - isopropylamine salt	Glyphomax	Postemergent systemic	Musk thistle	Foliar	YES	YES	YES	Caution	
Glyphosate - isopropylamine salt	Rodeo	Postemergent systemic	Musk thistle	Foliar	YES	YES	YES	Caution	
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Musk thistle	Foliar	YES	YES	YES	Warning	
Glyphosate - isopropylamine salt	Roundup Pro	Postemergent systemic	Musk thistle	Foliar	YES	YES	YES	Caution	
Glyphosate - monopotassium salt	Touchdown Hi Tech	Postemergent systemic	Musk thistle	Foliar	YES	YES	YES	Caution	
Triclopyr - butoxyethyl ester + 2,4 Dichlorophenoxyacetic acid - butoxyethyl ester	Crossbow	Broadleaf specific	Musk thistle	Foliar	NO	YES	YES	Caution	
Triclopyr - triethylamine salt	Garlon 3A	Broadleaf specific	Musk thistle	Foliar	YES	YES	YES	Danger	
Triclopyr - triethylamine salt	Tahoe 3A	Broadleaf specific	Musk thistle	Foliar	YES	YES	YES	Danger	
Glyphosate - isopropylamine salt	Accord	Postemergent systemic	Oriental bittersweet	Cut surface	YES	YES	YES	Caution	
Glyphosate - isopropylamine salt	Glyphomax	Postemergent systemic	Oriental bittersweet	Cut surface	YES	YES	YES	Caution	
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Oriental bittersweet	Cut surface	YES	YES	YES	Warning	
Glyphosate - isopropylamine salt	Roundup Pro	Postemergent systemic	Oriental bittersweet	Cut surface	YES	YES	YES	Caution	
Glyphosate - monopotassium salt	Touchdown Hi Tech	Postemergent systemic	Oriental bittersweet	Cut surface	YES	YES	YES	Caution	
Triclopyr - butoxyethyl ester + 2,4 Dichlorophenoxyacetic acid - butoxyethyl ester	Crossbow	Broadleaf specific	Oriental bittersweet	Cut surface	NO	YES	YES	Caution	
Fosamine - ammonium salt	Krenite	Broadleaf specific	Osage orange	Foliar	NO	YES	YES	Caution	
Picloram - triisopropanolamine salt + floroxypyr methylheptyl ester	Surmount	Broadleaf specific	Osage orange	Foliar	NO	YES	YES	Danger	
Triclopyr - butoxyethyl ester	Garlon 4	Broadleaf specific	Osage orange	Cut surface	YES	YES	YES	Caution	
Triclopyr - butoxyethyl ester	Tahoe 4E	Broadleaf specific	Osage orange	Cut surface	YES	YES	YES	Caution	
Triclopyr - triethylamine salt	Garlon 3A	Broadleaf specific	Osage orange	Cut surface	YES	YES	YES	Danger	
Triclopyr - triethylamine salt	Tahoe 3A	Broadleaf specific	Osage orange	Cut surface	YES	YES	YES	Danger	
Glyphosate - isopropylamine salt	Accord	Postemergent systemic	Phragmites	Foliar	YES	YES	YES	Caution	
Glyphosate - isopropylamine salt	Glyphomax	Postemergent systemic	Phragmites	Foliar	YES	YES	YES	Caution	
Glyphosate - isopropylamine salt	Rodeo	Postemergent systemic	Phragmites	Foliar	YES	YES	YES	Caution	
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Phragmites	Foliar	YES	YES	YES	Warning	
Glyphosate - isopropylamine salt	Roundup Pro	Postemergent systemic	Phragmites	Foliar	YES	YES	YES	Caution	
Glyphosate - monopotassium salt	Touchdown Hi Tech	Postemergent systemic	Phragmites	Foliar	YES	YES	YES	Caution	
Imazapyr - isopropylamine salt	Habitat	Broadleaf specific	Phragmites	Foliar	YES	YES	YES	Caution	Label specifies use is limited to non-native species or those nuisance at state or federal level
Fosamine - ammonium salt	Krenite	Broadleaf specific	Purple loosestrife	Foliar	NO	YES	YES	Caution	
Glyphosate - isopropylamine salt	Accord	Postemergent systemic	Purple loosestrife	Foliar	NO	YES	YES	Caution	
Glyphosate - isopropylamine salt	Glyphomax	Postemergent systemic	Purple loosestrife	Foliar	NO	YES	YES	Caution	
Glyphosate - isopropylamine salt	Pondmaster	Postemergent systemic	Purple loosestrife	Foliar	NO	YES	YES	Caution	
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Purple loosestrife	Foliar	NO	YES	YES	Warning	
Glyphosate - isopropylamine salt	Roundup Pro	Postemergent systemic	Purple loosestrife	Foliar	NO	YES	YES	Caution	
Glyphosate - monopotassium salt	Touchdown Hi Tech	Postemergent systemic	Purple loosestrife	Foliar	NO	YES	YES	Caution	
Imazapyr - Isopropylamine salt	Arsenal	Broadleaf specific	Purple loosestrife	Foliar	NO	YES	YES	Caution	Approved with caution - May be subject to soil leaching
Imazapyr - Isopropylamine salt	Chopper	Broadleaf specific	Purple loosestrife	Foliar	NO	YES	YES	Caution	

Imazapyr - isopropylamine salt	Habitat	Broadleaf specific	Purple loosestrife	Foliar	YES	YES	YES	Caution	Label specifies use is limited to non-native species or those nuisance at state or federal level
Imazapyr - Isopropylamine salt	Stalker	Broadleaf specific	Purple loosestrife	Foliar	NO	YES	YES	Caution	Approved with caution - May be subject to soil leaching
Metsulfuron methyl	Ally XP	Broadleaf specific	Purple loosestrife	Foliar	NO	YES	YES	Caution	Approved with caution - may have residual soil activity for up to 22 months
Metsulfuron methyl	Escort	Broadleaf specific	Purple loosestrife	Foliar	NO	YES	YES	Caution	Approved with caution - may have residual soil activity for up to 22 months
Triclopyr - triethylamine salt	Garlon 3A	Broadleaf specific	Purple loosestrife	Foliar	YES	YES	YES	Danger	
Triclopyr - triethylamine salt	Tahoe 3A	Broadleaf specific	Purple loosestrife	Foliar	YES	YES	YES	Danger	
2,4 Dichlorophenoxyacetic acid - dimethylamine salt	Savage CA	Broadleaf specific	Purple rocket	Foliar	YES	YES	YES	Danger	
2,4 Dichlorophenoxyacetic acid - dimethylamine salt	Weedar 64	Broadleaf specific	Purple rocket	Foliar	YES	YES	YES	Danger	
2,4 Dichlorophenoxyacetic acid - ethylhexyl ester	Barrage HF	Broadleaf specific	Purple rocket	Foliar	YES	YES	YES	Caution	
2,4 Dichlorophenoxyacetic acid + 2,4 Dichlorophenoxyacetic acid - butoxyethyl ester	Weedone 638	Broadleaf specific	Purple rocket	Foliar	YES	YES	YES	Warning	
Clopyralid - momethanolamine salt + 2,4 Dichlorophenoxyacetic acid	Curtail	Broadleaf specific	Purple rocket	Foliar	YES	YES	YES	Danger	
Glyphosate - isopropylamine salt	Accord	Postemergent systemic	Purple rocket	Foliar	NO	YES	YES	Caution	
Glyphosate - isopropylamine salt	Glyphomax	Postemergent systemic	Purple rocket	Foliar	NO	YES	YES	Caution	
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Purple rocket	Foliar	NO	YES	YES	Warning	
Glyphosate - isopropylamine salt	Roundup Pro	Postemergent systemic	Purple rocket	Foliar	NO	YES	YES	Caution	
Glyphosate - monopotassium salt	Touchdown Hi Tech	Postemergent systemic	Purple rocket	Foliar	NO	YES	YES	Caution	
Triclopyr - butoxyethyl ester + 2,4 Dichlorophenoxyacetic acid - butoxyethyl ester	Crossbow	Broadleaf specific	Purple rocket	Foliar	YES	YES	YES	Caution	
Triclopyr - triethylamine salt	Garlon 3A	Broadleaf specific	Purple rocket	Foliar	YES	YES	YES	Danger	
Triclopyr - triethylamine salt	Ortho Brush-B-Gon	Broadleaf specific	Purple rocket	Foliar	YES	YES	YES	Caution	
Triclopyr - triethylamine salt	Tahoe 3A	Broadleaf specific	Purple rocket	Foliar	YES	YES	YES	Danger	
Fosamine - ammonium salt	Krenite	Broadleaf specific	Quaking aspen	Foliar	NO	YES	YES	Caution	
Glyphosate - isopropylamine salt	Accord	Postemergent systemic	Quaking aspen	Rope wick	NO	YES	YES	Caution	
Glyphosate - isopropylamine salt	Glyphomax	Postemergent systemic	Quaking aspen	Rope wick	NO	YES	YES	Caution	
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Quaking aspen	Rope wick	NO	YES	YES	Warning	
Glyphosate - isopropylamine salt	Roundup Pro	Postemergent systemic	Quaking aspen	Rope wick	NO	YES	YES	Caution	
Glyphosate - monopotassium salt	Touchdown Hi Tech	Postemergent systemic	Quaking aspen	Rope wick	NO	YES	YES	Caution	
Triclopyr - butoxyethyl ester	Garlon 4	Broadleaf specific	Quaking aspen	Cut surface	YES	YES	YES	Caution	
Triclopyr - butoxyethyl ester	Tahoe 4E	Broadleaf specific	Quaking aspen	Cut surface	YES	YES	YES	Caution	
Triclopyr - triethylamine salt	Garlon 3A	Broadleaf specific	Quaking aspen	Cut surface	YES	YES	YES	Danger	
Triclopyr - triethylamine salt	Tahoe 3A	Broadleaf specific	Quaking aspen	Cut surface	YES	YES	YES	Danger	
Clethodim	Intensity One	Post emergent grasses	Reed canary grass	Foliar	YES	YES	YES	Caution	
Glyphosate - isopropylamine salt	Accord	Postemergent systemic	Reed canary grass	Foliar	NO	YES	YES	Caution	
Glyphosate - isopropylamine salt	Glyphomax	Postemergent systemic	Reed canary grass	Foliar	NO	YES	YES	Caution	
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Reed canary grass	Foliar	NO	YES	YES	Warning	
Glyphosate - isopropylamine salt	Roundup Pro	Postemergent systemic	Reed canary grass	Foliar	NO	YES	YES	Caution	
Glyphosate - monopotassium salt	Touchdown Hi Tech	Postemergent systemic	Reed canary grass	Foliar	NO	YES	YES	Caution	
Sethoxydim	Poast	Post emergent grasses	Reed canary grass	Foliar	YES	YES	YES	Warning	
Sethoxydim	Poast Plus	Post emergent grasses	Reed canary grass	Foliar	YES	YES	YES	Caution	
Clopyralid - monoethanolamine salt	Transline	Broadleaf specific	Sericea lespedeza	Foliar	YES	YES	YES	Caution	Not recommended for sandy areas
Glyphosate - isopropylamine salt	Accord	Postemergent systemic	Sericea lespedeza	Foliar	YES	YES	YES	Caution	Approved for high quality areas but only in areas with heavy infestations
Glyphosate - isopropylamine salt	Glyphomax	Postemergent systemic	Sericea lespedeza	Foliar	YES	YES	YES	Caution	Approved for high quality areas but only in areas with heavy infestations
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Sericea lespedeza	Foliar	YES	YES	YES	Warning	Approved for high quality areas but only in areas with heavy infestations
Glyphosate - isopropylamine salt	Roundup Pro	Postemergent systemic	Sericea lespedeza	Foliar	YES	YES	YES	Caution	Approved for high quality areas but only in areas with heavy infestations
Glyphosate - monopotassium salt	Touchdown Hi Tech	Postemergent systemic	Sericea lespedeza	Foliar	YES	YES	YES	Caution	
Metsulfuron methyl	Ally XP	Broadleaf specific	Sericea lespedeza	Foliar	NO	YES	YES	Caution	Approved with caution - may have residual soil activity for up to 22 months
Metsulfuron methyl	Escort	Broadleaf specific	Sericea lespedeza	Foliar	NO	YES	YES	Caution	Approved with caution - may have residual soil activity for up to 22 months
Triclopyr - butoxyethyl ester	Remedy	Broadleaf specific	Sericea lespedeza	Foliar	YES	YES	YES	Caution	
Glyphosate - isopropylamine salt	Accord	Postemergent systemic	Siberian elm	Cut surface	YES	YES	YES	Caution	
Glyphosate - isopropylamine salt	Glyphomax	Postemergent systemic	Siberian elm	Cut surface	YES	YES	YES	Caution	
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Siberian elm	Cut surface	YES	YES	YES	Warning	
Glyphosate - isopropylamine salt	Roundup Pro	Postemergent systemic	Siberian elm	Cut surface	YES	YES	YES	Caution	
Glyphosate - monopotassium salt	Touchdown Hi Tech	Postemergent systemic	Siberian elm	Cut surface	YES	YES	YES	Caution	
Triclopyr - butoxyethyl ester	Garlon 4	Broadleaf specific	Siberian elm	Cut surface	YES	YES	YES	Caution	
Triclopyr - butoxyethyl ester	Garlon 4	Broadleaf specific	Siberian elm	Basal bark	YES	YES	YES	Caution	
Triclopyr - butoxyethyl ester	Tahoe 4E	Broadleaf specific	Siberian elm	Cut surface	YES	YES	YES	Caution	
Triclopyr - butoxyethyl ester	Tahoe 4E	Broadleaf specific	Siberian elm	Basal bark	YES	YES	YES	Caution	
Fluazifop-P-butyl	Fusilade DX	Post emergent grasses	Smooth brome	Foliar	YES	YES	YES	Caution	May only provide suppression of smooth brome
Glyphosate - isopropylamine salt	Accord	Postemergent systemic	Smooth brome	Foliar	NO	YES	YES	Caution	
Clethodim	Intensity One	Post emergent grasses	Smooth brome	Foliar	YES	YES	YES	Caution	
Clethodim	Envoy	Post emergent grasses	Smooth brome	Foliar	YES	YES	YES	Warning	
Glyphosate - isopropylamine salt	Glyphomax	Postemergent systemic	Smooth brome	Foliar	NO	YES	YES	Caution	
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Smooth brome	Foliar	NO	YES	YES	Warning	
Glyphosate - isopropylamine salt	Roundup Pro	Postemergent systemic	Smooth brome	Foliar	NO	YES	YES	Caution	
Glyphosate - monopotassium salt	Touchdown Hi Tech	Postemergent systemic	Smooth brome	Foliar	NO	YES	YES	Caution	
Sethoxydim	Poast	Post emergent grasses	Smooth brome	Foliar	NO	YES	YES	Warning	
Sethoxydim	Poast Plus	Post emergent grasses	Smooth brome	Foliar	NO	YES	YES	Caution	

Glyphosate - isopropylamine salt	Accord	Postemergent systemic	Smooth sumac	Cut surface	YES	YES	YES	Caution	
Glyphosate - isopropylamine salt	Glyphomax	Postemergent systemic	Smooth sumac	Cut surface	YES	YES	YES	Caution	
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Smooth sumac	Cut surface	YES	YES	YES	Warning	
Glyphosate - isopropylamine salt	Roundup Pro	Postemergent systemic	Smooth sumac	Cut surface	YES	YES	YES	Caution	
Glyphosate - monopotassium salt	Touchdown Hi Tech	Postemergent systemic	Smooth sumac	Cut surface	YES	YES	YES	Caution	
Triclopyr - butoxyethyl ester	Garlon 4	Broadleaf specific	Smooth sumac	Cut surface	YES	YES	YES	Caution	
Triclopyr - butoxyethyl ester	Tahoe 4E	Broadleaf specific	Smooth sumac	Cut surface	NO	YES	YES	Caution	
Triclopyr - triethylamine salt	Garlon 3A	Broadleaf specific	Smooth sumac	Foliar	YES	YES	YES	Danger	
Triclopyr - triethylamine salt	Tahoe 3A	Broadleaf specific	Smooth sumac	Foliar	YES	YES	YES	Danger	
2,4 Dichlorophenoxyacetic acid - dimethylamine salt + triisopropanolamine salt	Formula 40	Broadleaf specific	Spotted knapweed	Foliar	YES	YES	YES	Danger	
2,4 Dichlorophenoxyacetic acid - isooctyl ester	Five Star	Broadleaf specific	Spotted knapweed	Foliar	NO	NO	NO	Caution	May require addition of another labeled herbicide to suppress knapweed.
2,4 Dichlorophenoxyacetic acid + 2,4 Dichlorophenoxyacetic acid - butoxyethyl ester	Weedone 638	Broadleaf specific	Spotted knapweed	Foliar	YES	YES	YES	Warning	May require application at highest recommended rate for control
Clopyralid - momethanolamine salt + 2,4 Dichlorophenoxyacetic acid	Curtail	Broadleaf specific	Spotted knapweed	Foliar	YES	YES	YES	Danger	
Clopyralid - monoethanolamine salt	Stinger	Broadleaf specific	Spotted knapweed	Foliar	YES	YES	YES	Caution	Not recommended for sandy areas
Clopyralid - monoethanolamine salt	Transline	Broadleaf specific	Spotted knapweed	Foliar	YES	YES	YES	Caution	Not recommended for sandy areas
Dicamba - dimethylamine salt	Banvel	Broadleaf specific	Spotted knapweed	Foliar	NO	YES	YES	Warning	
Picloram - potassium salt	Tordon K	Broadleaf specific	Spotted knapweed	Foliar	NO	YES	YES	Caution	
Picloram - triisopropanolamine salt+ 2,4 Dichlorophenoxyacetic acid - triisopropanolamine salt + Dicamba	Trooper Extra	Broadleaf specific	Spotted knapweed	Foliar	NO	YES	YES	Warning	
Triclopyr - triethylamine salt	Garlon 3A	Broadleaf specific	Spotted knapweed	Foliar	YES	YES	YES	Danger	
Triclopyr - triethylamine salt	Renovate	Broadleaf specific	Spotted knapweed	Foliar	YES	YES	YES	Danger	
Triclopyr - triethylamine salt	Tahoe 3A	Broadleaf specific	Spotted knapweed	Foliar	YES	YES	YES	Danger	
Clopyralid - monoethanolamine salt	Stinger	Broadleaf specific	Sweet clover	Foliar	YES	YES	YES	Caution	Not recommended for sandy areas
Clopyralid - monoethanolamine salt	Transline	Broadleaf specific	Sweet clover	Foliar	YES	YES	YES	Caution	Not recommended for sandy areas
Glyphosate - isopropylamine salt	Accord	Postemergent systemic	Sweet clover	Foliar	NO	YES	YES	Caution	
Glyphosate - isopropylamine salt	Glyphomax	Postemergent systemic	Sweet clover	Foliar	NO	YES	YES	Caution	
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Sweet clover	Foliar	NO	YES	YES	Warning	
Glyphosate - isopropylamine salt	Roundup Pro	Postemergent systemic	Sweet clover	Foliar	NO	YES	YES	Caution	
Glyphosate - monopotassium salt	Touchdown Hi Tech	Postemergent systemic	Sweet clover	Foliar	NO	YES	YES	Caution	
Triclopyr - triethylamine salt	Garlon 3A	Broadleaf specific	Sweet clover	Foliar	YES	YES	YES	Danger	
Triclopyr - triethylamine salt	Tahoe 3A	Broadleaf specific	Sweet clover	Foliar	YES	YES	YES	Danger	
2,4 Dichlorophenoxyacetic acid - dimethylamine salt	Platoon	Broadleaf specific	Teasels	Foliar	YES	YES	YES	Danger	
2,4 Dichlorophenoxyacetic acid - dimethylamine salt	Savage CA	Broadleaf specific	Teasels	Foliar	YES	YES	YES	Danger	
2,4 Dichlorophenoxyacetic acid - dimethylamine salt	Weedar 64	Broadleaf specific	Teasels	Foliar	YES	YES	YES	Danger	
Clopyralid - monoethanolamine salt	Stinger	Broadleaf specific	Teasels	Foliar	YES	YES	YES	Caution	Not recommended for sandy areas
Clopyralid - monoethanolamine salt	Transline	Broadleaf specific	Teasels	Foliar	YES	YES	YES	Caution	Not recommended for sandy areas
Glyphosate - isopropylamine salt	Accord	Postemergent systemic	Teasels	Foliar	YES	YES	YES	Caution	Only wick or wet sponge for spot treatment of very small infestations in high quality areas
Glyphosate - isopropylamine salt	Glyphomax	Postemergent systemic	Teasels	Foliar	YES	YES	YES	Caution	Only wick or wet sponge for spot treatment of very small infestations in high quality areas
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Teasels	Foliar	YES	YES	YES	Warning	Only wick or wet sponge for spot treatment of very small infestations in high quality areas
Glyphosate - isopropylamine salt	Roundup Pro	Postemergent systemic	Teasels	Foliar	YES	YES	YES	Caution	Only wick or wet sponge for spot treatment of very small infestations in high quality areas
Glyphosate - monopotassium salt	Touchdown Hi Tech	Postemergent systemic	Teasels	Foliar	YES	YES	YES	Caution	Only wick or wet sponge for spot treatment of very small infestations in high quality areas
Triclopyr - triethylamine salt	Garlon 3A	Broadleaf specific	Teasels	Foliar	YES	YES	YES	Danger	
Triclopyr - triethylamine salt	Tahoe 3A	Broadleaf specific	Teasels	Foliar	YES	YES	YES	Danger	
Glyphosate - isopropylamine salt	Accord	Postemergent systemic	Tree of heaven	Cut surface	YES	YES	YES	Caution	
Glyphosate - isopropylamine salt	Glyphomax	Postemergent systemic	Tree of heaven	Cut surface	YES	YES	YES	Caution	
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Tree of heaven	Cut surface	YES	YES	YES	Warning	
Glyphosate - isopropylamine salt	Roundup Pro	Postemergent systemic	Tree of heaven	Cut surface	YES	YES	YES	Caution	
Glyphosate - monopotassium salt	Touchdown Hi Tech	Postemergent systemic	Tree of heaven	Cut surface	YES	YES	YES	Caution	
Triclopyr - butoxyethyl ester	Garlon 4	Broadleaf specific	Tree of heaven	Basal bark	YES	YES	YES	Caution	
Triclopyr - butoxyethyl ester	Tahoe 4E	Broadleaf specific	Tree of heaven	Basal bark	YES	YES	YES	Caution	
Triclopyr - triethylamine salt	Garlon 3A	Broadleaf specific	Tree of heaven	Cut surface	YES	YES	YES	Danger	
Triclopyr - triethylamine salt	Tahoe 3A	Broadleaf specific	Tree of heaven	Cut surface	YES	YES	YES	Danger	
Triclopyr - butoxyethyl ester	Garlon 4	Broadleaf specific	White mulberry	Basal bark	YES	YES	YES	Caution	
Triclopyr - butoxyethyl ester	Tahoe 4E	Broadleaf specific	White mulberry	Basal bark	YES	YES	YES	Caution	
Triclopyr - triethylamine salt	Garlon 3A	Broadleaf specific	White mulberry	Cut surface	YES	YES	YES	Danger	
Triclopyr - triethylamine salt	Tahoe 3A	Broadleaf specific	White mulberry	Cut surface	YES	YES	YES	Danger	
Glyphosate - isopropylamine salt	Accord	Postemergent systemic	White poplar	Foliar	NO	YES	YES	Caution	
Glyphosate - isopropylamine salt	Glyphomax	Postemergent systemic	White poplar	Foliar	NO	YES	YES	Caution	
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	White poplar	Foliar	NO	YES	YES	Warning	
Glyphosate - isopropylamine salt	Roundup Pro	Postemergent systemic	White poplar	Foliar	NO	YES	YES	Caution	
Glyphosate - monopotassium salt	Touchdown Hi Tech	Postemergent systemic	White poplar	Foliar	NO	YES	YES	Caution	
Metsulfuron methyl	Ally XP	Broadleaf specific	White poplar	Foliar	NO	YES	YES	Caution	Approved with caution - may have residual soil activity for up to 22 months
Metsulfuron methyl	Escort	Broadleaf specific	White poplar	Foliar	NO	YES	YES	Caution	Approved with caution - may have residual soil activity for up to 22 months
Triclopyr - butoxyethyl ester	Garlon 4	Broadleaf specific	White poplar	Cut surface	YES	YES	YES	Caution	
Triclopyr - butoxyethyl ester	Garlon 4	Broadleaf specific	White poplar	Basal bark	YES	YES	YES	Caution	

Triclopyr - butoxyethyl ester	Remedy	Broadleaf specific	White poplar	Cut surface	YES	YES	YES	Caution	
Triclopyr - butoxyethyl ester	Remedy	Broadleaf specific	White poplar	Basal bark	YES	YES	YES	Caution	
Triclopyr - butoxyethyl ester	Tahoe 4E	Broadleaf specific	White poplar	Cut surface	YES	YES	YES	Caution	
Triclopyr - butoxyethyl ester	Tahoe 4E	Broadleaf specific	White poplar	Basal bark	YES	YES	YES	Caution	
Triclopyr - triethylamine salt	Garlon 3A	Broadleaf specific	White poplar	Cut surface	YES	YES	YES	Danger	
Triclopyr - triethylamine salt	Renovate	Broadleaf specific	White poplar	Cut surface	YES	YES	YES	Danger	
Triclopyr - triethylamine salt	Tahoe 3A	Broadleaf specific	White poplar	Cut surface	YES	YES	YES	Danger	
2,4 Dichlorophenoxyacetic acid - dimethylamine salt	Savage CA	Broadleaf specific	Wild parsnip	Foliar	YES	YES	YES	Danger	
2,4 Dichlorophenoxyacetic acid - dimethylamine salt	Weedar 64	Broadleaf specific	Wild parsnip	Foliar	YES	YES	YES	Danger	
2,4 Dichlorophenoxyacetic acid - isooctyl ester	Five Star	Broadleaf specific	Wild parsnip	Foliar	YES	YES	YES	Caution	
Glyphosate - isopropylamine salt	Accord	Postemergent systemic	Wild parsnip	Foliar	NO	YES	YES	Caution	
Glyphosate - isopropylamine salt	Glyphomax	Postemergent systemic	Wild parsnip	Foliar	NO	YES	YES	Caution	
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Wild parsnip	Foliar	NO	YES	YES	Warning	
Glyphosate - isopropylamine salt	Roundup Pro	Postemergent systemic	Wild parsnip	Foliar	NO	YES	YES	Caution	
Glyphosate - monopotassium salt	Touchdown Hi Tech	Postemergent systemic	Wild parsnip	Foliar	NO	YES	YES	Caution	
Triclopyr - triethylamine salt	Garlon 3A	Broadleaf specific	Wild parsnip	Foliar	YES	YES	YES	Danger	
Triclopyr - triethylamine salt	Tahoe 3A	Broadleaf specific	Wild parsnip	Foliar	YES	YES	YES	Danger	
Glyphosate - isopropylamine salt	Accord	Postemergent systemic	Wintercreeper	Foliar	YES	YES	YES	Caution	Approved for high quality areas but only in areas with heavy infestations
Glyphosate - isopropylamine salt	Glyphomax	Postemergent systemic	Wintercreeper	Foliar	YES	YES	YES	Caution	Approved for high quality areas but only in areas with heavy infestations
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Wintercreeper	Foliar	YES	YES	YES	Warning	Approved for high quality areas but only in areas with heavy infestations
Glyphosate - isopropylamine salt	Roundup Pro	Postemergent systemic	Wintercreeper	Foliar	YES	YES	YES	Caution	Approved for high quality areas but only in areas with heavy infestations
Glyphosate - monopotassium salt	Touchdown Hi Tech	Postemergent systemic	Wintercreeper	Foliar	YES	YES	YES	Caution	
Triclopyr - triethylamine salt	Garlon 3A	Broadleaf specific	Wintercreeper	Foliar	YES	YES	YES	Danger	
Triclopyr - triethylamine salt	Tahoe 3A	Broadleaf specific	Wintercreeper	Foliar	YES	YES	YES	Danger	

Vegetation Management

Guideline Updates

What are they

- 5-7 page document targeting a species or species group
  - Description of target and similar species
  - Distribution
  - Habitat
  - Life history
  - Effect of natural areas
  - Status (noxious, exotic weed)
  - Recommended control measures
    - High quality and buffer and disturbed sites
  - Failed or ineffective practices
  - References
  - Line drawing

Purpose

- Provide sound advice for management of troublesome species
- Aid staff in development and review of management plans
- Provide policy guidance
  - All control measures are not appropriate everywhere

History

- First 12 guidelines were approved at the Commission's 125th meeting on November 1989
- By 2000, number of guidelines had increased to 23
- 2002 began update/revise existing guidelines and added 17 new ones bringing total to 40

Approval process

- INPC, DNH, INHS, FS researched, wrote/revised VMG's
  - 25 different authors for latest revisions
- Drafts sent to project coordinator for initial review
- Forwarded to selected consultants, advisors, land managers
- Comments received incorporated into drafts
- Formatting/layout finalized by project coordinator
- Brought before Commission for approval

Result

40 very good documents

Issues

- Revision process was long
  - Took 1+ year to get VMG through approval
  - Some needed revision before project was completed
  - Problem since the first VMG's were developed

Issues

Individually good, collectively several inconsistencies

- Roundup approved for use in 25 VMG's but not for autumn olive in buffer disturbed areas
- Prescribed fire is only recommended control measure for Kentucky bluegrass in high quality areas
- Applications rates and solution mixes inconsistent
  - % active ingredient, pints a.i./acre, pounds a.e./acre
- no way to cross reference approved herbicides

How to Address Issues

- Develop/maintain database to track approved herbicide formulations, trade names, applications methods, etc.
- Staff is recommending minor changes to 14 VMG's as outlined in agenda packet
- Allow staff to make future minor revisions without sending VMG's to consultants and advisors.

	A	B	C	D	E	F	G	H	I	J	K	L
1	Cells with recommended changes to existing VMG's						Oil = plant-based or	Approved for use in				
2	Active Ingredient	Trade Name	Product Description	VMG Target species	Recommended Application	Percent Active Ingredient in final solution	Carri	High Quali	Buffe	Disturbed sites	Signal Wc	Notes
3	Dicamba - dimethylamine salt	Banvel	Broadleaf specific	Autumn olive	Foliar	0.9	Water	NO	YES	YES	Warning	
4	Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Autumn olive	Foliar	2.0	Water	NO	YES	YES	Warning	
5	Glyphosate - isopropylamine salt	Roundup Pro	Postemergent systemic	Autumn olive	Foliar	2.0	Water	NO	YES	YES	Caution	
6	Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Autumn olive	Cut surface	20.0	Water	YES	YES	YES	Warning	
7	Glyphosate - isopropylamine salt	Roundup Pro	Postemergent systemic	Autumn olive	Cut surface	20.0	Water	YES	YES	YES	Caution	
8	Triclopyr - butoxyethyl ester	Garlon 4	Broadleaf specific	Autumn olive	Basal bark	10.0	Oil	YES	YES	YES	Caution	
9	Triclopyr - butoxyethyl ester	Garlon 4	Broadleaf specific	Autumn olive	Cut surface	10.0	Oil	YES	YES	YES	Caution	
10	Triclopyr - butoxyethyl ester	Garlon 4	Broadleaf specific	Autumn olive	Thin line	50.0	Oil	YES	YES	YES	Caution	
11	Triclopyr - butoxyethyl ester	Tahoe 4E	Broadleaf specific	Autumn olive	Basal bark	10.0	Oil	YES	YES	YES	Caution	
12	Triclopyr - butoxyethyl ester	Tahoe 4E	Broadleaf specific	Autumn olive	Cut surface	10.0	Oil	YES	YES	YES	Caution	
13	Triclopyr - butoxyethyl ester	Tahoe 4E	Broadleaf specific	Autumn olive	Thin line	50.0	Oil	YES	YES	YES	Caution	
14	Triclopyr - butoxyethyl ester + 2,4 Dichlorophenoxyacetic acid - butoxyethyl ester	Crossbow	Broadleaf specific	Autumn olive	Foliar	1.5	Water	NO	YES	YES	Caution	
15	Clopyralid - monoethanolamine salt	Transline	Broadleaf specific	Black locust	Foliar	0.4	Water	YES	YES	YES	Caution	Not recommended for sandy areas
16	Fosamine - ammonium salt	Krenite	Broadleaf specific	Black locust	Foliar	1.0	Water	NO	YES	YES	Caution	
17	Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Black locust	Cut surface	16.6	Water	NO	YES	YES	Warning	
18	Glyphosate - isopropylamine salt	Roundup Pro	Postemergent systemic	Black locust	Cut surface	16.6	Water	NO	YES	YES	Caution	
19	Imazapyr - Isopropylamine salt	Stalker	Broadleaf specific	Black locust	Basal bark	2.0	Water	YES	YES	YES	Caution	Approved with caution - May be subject to soil leaching
20	Triclopyr - butoxyethyl ester	Garlon 4	Broadleaf specific	Black locust	Basal bark	10.0	Oil	YES	YES	YES	Caution	
21	Triclopyr - butoxyethyl ester	Garlon 4	Broadleaf specific	Black locust	Cut surface	10.0	Oil	YES	YES	YES	Caution	
22	Triclopyr - butoxyethyl ester	Tahoe 4E	Broadleaf specific	Black locust	Basal bark	10.0	Oil	YES	YES	YES	Caution	
23	Triclopyr - butoxyethyl ester	Tahoe 4E	Broadleaf specific	Black locust	Cut surface	10.0	Oil	YES	YES	YES	Caution	
24	Triclopyr - triethylamine salt	Garlon 3A	Broadleaf specific	Black locust	Foliar	1.3	Water	YES	YES	YES	Danger	
25	Triclopyr - triethylamine salt	Garlon 3A	Broadleaf specific	Black locust	Cut surface	22.0	Water	YES	YES	YES	Danger	
26	Triclopyr - triethylamine salt	Tahoe 3A	Broadleaf specific	Black locust	Foliar	1.3	Water	YES	YES	YES	Danger	
27	Triclopyr - triethylamine salt	Tahoe 3A	Broadleaf specific	Black locust	Cut surface	50.0	Water	YES	YES	YES	Danger	
28	Glyphosate - isopropylamine salt	Accord	Postemergent systemic	Buckthorns	Cut surface	25.0	Water	YES	YES	YES	Caution	
29	Glyphosate - isopropylamine salt	Accord	Postemergent systemic	Buckthorns	Foliar	1.5	Water	NO	YES	YES	Caution	Approved for foliar treatments of small re-sprouts followingcut surface treatmer
30	Glyphosate - isopropylamine salt	Rodeo	Postemergent systemic	Buckthorns	Foliar	1.5	Water	NO	YES	YES	Caution	Approved for foliar treatments of small re-sprouts followingcut surface treatmer
31	Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Buckthorns	Foliar	1.5	Water	NO	YES	YES	Warning	Approved for foliar treatments of small re-sprouts followingcut surface treatmer
32	Glyphosate - isopropylamine salt	Roundup Pro	Postemergent systemic	Buckthorns	Foliar	1.5	Water	NO	YES	YES	Caution	Approved for foliar treatments of small re-sprouts followingcut surface treatmer
33	Glyphosate - isopropylamine salt	Rodeo	Postemergent systemic	Buckthorns	Cut surface	25.0	Water	YES	YES	YES	Caution	

VGM-Herbicide data | Herbicide concentrate needed

INPC_Approved_Herbicides_Final.xlsx - Microsoft Excel

L19 | Approved with caution - May be subject to soil leaching

Cells with recommended changes to existing VMG's

Active Ingredient	Trade Name	Product Description	Recommended Application	Percent Active Ingredient in final solution	Carrier (Oil = plant-based or mineral)	Hig Qua
Dicamba - dimethylamine salt	Banvel	Broadleaf specific	Foliar	0.9	Water	NO
Glyphosate - isopropylamine salt	Roundup	Postemergent syste	Foliar	2.0	Water	NO
Glyphosate - isopropylamine salt	Roundup Pro	Postemergent syste	Foliar	2.0	Water	NO
Glyphosate - isopropylamine salt	Roundup	Postemergent syste	Cut surface	20.0	Water	YES
Glyphosate - isopropylamine salt	Roundup Pro	Postemergent syste	Cut surface	20.0	Water	YES
Triclopyr - butoxyethyl ester	Garlon 4	Broadleaf specific	Basal bark	10.0	Oil	YES
Triclopyr - butoxyethyl ester	Garlon 4	Broadleaf specific	Cut surface	10.0	Oil	YES
Triclopyr - butoxyethyl ester	Garlon 4	Broadleaf specific	Thin line	50.0	Oil	YES
Triclopyr - butoxyethyl ester	Tahoe 4E	Broadleaf specific	Basal bark	10.0	Oil	YES
Triclopyr - butoxyethyl ester	Tahoe 4E	Broadleaf specific	Cut surface	10.0	Oil	YES
Triclopyr - butoxyethyl ester	Tahoe 4E	Broadleaf specific	Thin line	50.0	Oil	YES
Triclopyr - butoxyethyl ester + 2,4 Dichlorophenoxyacetic acid - butoxyethyl ester	Crossbow	Broadleaf specific	Foliar	1.5	Water	NO
Clopyralid - monoethanolamine salt	Transline	Broadleaf specific	Foliar	0.4	Water	YES
Fosamine - ammonium salt	Krenite	Broadleaf specific	Foliar	1.0	Water	NO
Glyphosate - isopropylamine salt	Roundup	Postemergent syste	Cut surface	16.6	Water	NO
Glyphosate - isopropylamine salt	Roundup Pro	Postemergent syste	Cut surface	16.6	Water	NO

Sort A to Z
Sort Z to A
Sort by Color
Clear Filter From "VMG Target species"
Filter by Color
Text Filters
Search
(Select All)
Autumn olive
Black locust
Buckthorns
Bush honeysuckles
Canada thistle
Chinese yam
Crown vetch
Fescue
Garlic mustard
OK
Cancel

VGM-Herbicide data | Herbicide concentrate needed

Ready | Count: 5 | 100%

5:58 AM 5/9/2017

INPC_Approved_Herbicides_Final.xlsx - Microsoft Excel

File | Home | Insert | Page Layout | Formulas | Data | Review | View

L19: Approved with caution - May be subject to soil leaching

Cells with recommended changes to existing VMG's

Active Ingredient	Trade Name	Product Description	Recommended Application	Percent Active Ingredient in final solution	Carrier (Oil = plant-based or mineral)	Hig Qua
Dicamba - dimethylamine salt	Banvel	Broadleaf specific	Foliar	0.9	Water	NO
Glyphosate - isopropylamine salt	Roundup	Postemergent syste	Foliar	2.0	Water	NO
Glyphosate - isopropylamine salt	Roundup Pro	Postemergent syste	Foliar	2.0	Water	NO
Glyphosate - isopropylamine salt	Roundup	Postemergent syste	Cut surface	20.0	Water	YES
Glyphosate - isopropylamine salt	Roundup Pro	Postemergent syste	Cut surface	20.0	Water	YES
Triclopyr - butoxyethyl ester	Garlon 4	Broadleaf specific	Basal bark	10.0	Oil	YES
Triclopyr - butoxyethyl ester	Garlon 4	Broadleaf specific	Cut surface	10.0	Oil	YES
Triclopyr - butoxyethyl ester	Garlon 4	Broadleaf specific	Thin line	50.0	Oil	YES
Triclopyr - butoxyethyl ester	Tahoe 4E	Broadleaf specific	Basal bark	10.0	Oil	YES
Triclopyr - butoxyethyl ester	Tahoe 4E	Broadleaf specific	Cut surface	10.0	Oil	YES
Triclopyr - butoxyethyl ester	Tahoe 4E	Broadleaf specific	Thin line	50.0	Oil	YES
Triclopyr - butoxyethyl ester + 2,4 Dichlorophenoxyacetic acid - butoxyethyl ester	Crossbow	Broadleaf specific	Foliar	1.5	Water	NO
Clopyralid - monoethanolamine salt	Transline	Broadleaf specific	Foliar	0.4	Water	YES
Fosamine - ammonium salt	Krenite	Broadleaf specific	Foliar	1.0	Water	NO
Glyphosate - isopropylamine salt	Roundup	Postemergent syste	Cut surface	16.6	Water	NO
Glyphosate - isopropylamine salt	Roundup Pro	Postemergent syste	Cut surface	16.6	Water	NO

Sort A to Z
Sort Z to A
Sort by Color
Clear Filter From "VMG Target species"
Filter by Color
Text Filters
Search
(Select All)
Autumn olive
Black locust
Buckthorns
bush honeysuckles
Canada thistle
Chinese yam
Crown vetch
Fescue
Garlic mustard
OK | Cancel

VGM-Herbicide data | Herbicide concentrate needed

Ready | Count: 5 | 100%

6:00 AM 5/9/2017

Vegetation Management Guideline Updates.pptx - Microsoft PowerPoint

INPC_Approved_Herbicides_Final.xlsx - Microsoft Excel

Cells with recommended changes to existing VMG's

	Active Ingredient	Trade Name	Product Description	VMG Target species	Recommended Application	Percent Active Ingredient in final solution	Oil = plant-based or Carri	Approved for use in High Qual	Buffe	Disturbed sites	Signal Wc	Notes
41	Glyphosate - isopropylamine salt	Accord	Postemergent systemic	Bush honeysuckles	Foliar	4.0	Water	YES	YES	YES	Caution	Approved when applied in late fall after native plants are dormant
42	Glyphosate - isopropylamine salt	Accord	Postemergent systemic	Bush honeysuckles	Cut surface	25.0	Water	YES	YES	YES	Caution	
43	Glyphosate - isopropylamine salt	Rodeo	Postemergent systemic	Bush honeysuckles	Foliar	4.0	Water	YES	YES	YES	Caution	Approved when applied in late fall after native plants are dormant
44	Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Bush honeysuckles	Foliar	4.0	Water	YES	YES	YES	Warning	Approved when applied in late fall after native plants are dormant
45	Glyphosate - isopropylamine salt	Roundup Pro	Postemergent systemic	Bush honeysuckles	Foliar	4.0	Water	YES	YES	YES	Caution	Approved when applied in late fall after native plants are dormant
46	Glyphosate - isopropylamine salt	Rodeo	Postemergent systemic	Bush honeysuckles	Cut surface	25.0	Water	YES	YES	YES	Caution	
47	Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Bush honeysuckles	Cut surface	25.0	Water	YES	YES	YES	Warning	
48	Glyphosate - isopropylamine salt	Roundup Pro	Postemergent systemic	Bush honeysuckles	Cut surface	25.0	Water	YES	YES	YES	Caution	
49	Glyphosate - monopotassium salt	Touchdown Hi Tech	Postemergent systemic	Bush honeysuckles	Foliar	4.0	Water	YES	YES	YES	Caution	Approved when applied in late fall after native plants are dormant
50	Glyphosate - monopotassium salt	Touchdown Hi Tech	Postemergent systemic	Bush honeysuckles	Cut surface	25.0	Water	YES	YES	YES	Caution	
51	Imazapyr - Isopropylamine salt	Arsenal	Broadleaf specific	Bush honeysuckles	Cut surface	2.5	Water	NO	YES	YES	Caution	
52	Imazapyr - Isopropylamine salt	Arsenal	Broadleaf specific	Bush honeysuckles	Basal bark	2.5	Water	NO	YES	YES	Caution	Approved with caution - May be subject to soil leaching
53	Imazapyr - Isopropylamine salt	Stalker	Broadleaf specific	Bush honeysuckles	Cut surface	2.0	Water	NO	YES	YES	Caution	Approved with caution - May be subject to soil leaching
54	Imazapyr - Isopropylamine salt	Stalker	Broadleaf specific	Bush honeysuckles	Basal bark	2.0	Oil	NO	YES	YES	Caution	Approved with caution - May be subject to soil leaching
55	Triclopyr - butoxyethyl ester	Garlon 4	Broadleaf specific	Bush honeysuckles	Basal bark	10.0	Oil	YES	YES	YES	Caution	Approved but has since shown to be limited in effectiveness
56	Triclopyr - butoxyethyl ester	Garlon 4	Broadleaf specific	Bush honeysuckles	Foliar	2.0	Water	YES	YES	YES	Caution	Approved but has since shown to be limited in effectiveness
57	Triclopyr - butoxyethyl ester	Pathfinder II (RTU)	Broadleaf specific	Bush honeysuckles	Basal bark	13.0	N/A	YES	YES	YES	Caution	Approved but has since shown to be limited in effectiveness
58	Triclopyr - butoxyethyl ester	Tahoe 4E	Broadleaf specific	Bush honeysuckles	Basal bark	10.0	Oil	YES	YES	YES	Caution	Approved but has since shown to be limited in effectiveness
59	Triclopyr - butoxyethyl ester	Tahoe 4E	Broadleaf specific	Bush honeysuckles	Foliar	2.0	Water	YES	YES	YES	Caution	Approved but has since shown to be limited in effectiveness
60	Triclopyr - triethylamine salt	Renovate	Broadleaf specific	Bush honeysuckles	Foliar	2.0	Water	NO	YES	YES	Danger	Approved but has since shown to be limited in effectiveness

VGM-Herbicide data | Herbicide concentrate needed

Ready 20 of 413 records found

12:26 PM 5/7/2017

INPC_Approved_Herbicides_Final.xlsx - Microsoft Excel

File | Home | Insert | Page Layout | Formulas | Data | Review | View

Normal | Page Layout | Page Break Preview | Custom Views | Full Screen | Workbook Views

Ruler | Formula Bar | Gridlines | Headings | Show

Zoom | 100% | Zoom to Selection | Zoom

New Window | Arrange All | Freeze Panes | Split | Hide | Unhide | View Side by Side | Synchronous Scrolling | Reset Window Position | Window

Save Workspace | Switch Windows | Macros

L19 | Approved with caution - May be subject to soil leaching

Cells with recommended changes to existing VMG's

	A	B	C	D	E	F	G
1	Cells with recommended changes to existing VMG's						Oil = plant-based or mineral
2	Active Ingredient	Trade Name	Product Description	VMG Tar	Recommended	Percent Active Ingredient in final solution	Carrier	Hig Qua
3	Dicamba - dimethylamine salt	Banvel	Broadleaf specific	Autumn		0.9	Water	NO
4	Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Autumn		2.0	Water	NO
5	Glyphosate - isopropylamine salt	Roundup Pro	Postemergent systemic	Autumn		2.0	Water	NO
6	Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Autumn		20.0	Water	YES
7	Glyphosate - isopropylamine salt	Roundup Pro	Postemergent systemic	Autumn		20.0	Water	YES
8	Triclopyr - butoxyethyl ester	Garlon 4	Broadleaf specific	Autumn		10.0	Oil	YES
9	Triclopyr - butoxyethyl ester	Garlon 4	Broadleaf specific	Autumn		10.0	Oil	YES
10	Triclopyr - butoxyethyl ester	Garlon 4	Broadleaf specific	Autumn		50.0	Oil	YES
11	Triclopyr - butoxyethyl ester	Tahoe 4E	Broadleaf specific	Autumn		10.0	Oil	YES
12	Triclopyr - butoxyethyl ester	Tahoe 4E	Broadleaf specific	Autumn		10.0	Oil	YES
13	Triclopyr - butoxyethyl ester	Tahoe 4E	Broadleaf specific	Autumn		50.0	Oil	YES
14	Triclopyr - butoxyethyl ester + 2,4 Dichlorophenoxyacetic acid - butoxyethyl ester	Crossbow	Broadleaf specific	Autumn		1.5	Water	NO
15	Clopyralid - monoethanolamine salt	Transline	Broadleaf specific	Black loc		0.4	Water	YES
16	Fosamine - ammonium salt	Krenite	Broadleaf specific	Black loc		1.0	Water	NO
17	Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Black loc		16.6	Water	NO
18	Glyphosate - isopropylamine salt	Roundup Pro	Postemergent systemic	Black loc		16.6	Water	NO

Sort A to Z
Sort Z to A
Sort by Color
Clear Filter From "Recommended Appli..."
Filter by Color
Text Filters
Search
(Select All)
Basal bark
Broadcast
Cut surface
Foliar
Rope wick
Thin line
Weed wick
OK | Cancel

VGM-Herbicide data | Herbicide concentrate needed

Ready | Count: 5 | 100%

6:03 AM 5/9/2017

Vegetation Management Guideline Updates.pptx - Microsoft PowerPoint

INPC_Approved_Herbicides_Final.xlsx - Microsoft Excel

Cells with recommended changes to existing VMG's

Active Ingredient	Trade Name	Product Description	VMG Target species	Recommended Application	Percent Active Ingredient in final solution	Oil = plant-based or Carri	Approved for use in High Quali	Buffe	Disturbed sites	Signal Wo	Notes
Glyphosate - isopropylamine salt	Accord	Postemergent systemic	Bush honeysuckles	Foliar	4.0	Water	YES	YES	YES	Caution	Approved when applied in late fall after native plants are dormant
Glyphosate - isopropylamine salt	Rodeo	Postemergent systemic	Bush honeysuckles	Foliar	4.0	Water	YES	YES	YES	Caution	Approved when applied in late fall after native plants are dormant
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Bush honeysuckles	Foliar	4.0	Water	YES	YES	YES	Warning	Approved when applied in late fall after native plants are dormant
Glyphosate - isopropylamine salt	Roundup Pro	Postemergent systemic	Bush honeysuckles	Foliar	4.0	Water	YES	YES	YES	Caution	Approved when applied in late fall after native plants are dormant
Glyphosate - monopotassium salt	Touchdown Hi Tech	Postemergent systemic	Bush honeysuckles	Foliar	4.0	Water	YES	YES	YES	Caution	Approved when applied in late fall after native plants are dormant
Triclopyr - butoxyethyl ester	Garlon 4	Broadleaf specific	Bush honeysuckles	Foliar	2.0	Water	YES	YES	YES	Caution	Approved but has since shown to be limited in effectiveness
Triclopyr - butoxyethyl ester	Tahoe 4E	Broadleaf specific	Bush honeysuckles	Foliar	2.0	Water	YES	YES	YES	Caution	Approved but has since shown to be limited in effectiveness
Triclopyr - triethylamine salt	Renovate	Broadleaf specific	Bush honeysuckles	Foliar	2.0	Water	NO	YES	YES	Danger	Approved but has since shown to be limited in effectiveness

VGM-Herbicide data | Herbicide concentrate needed

Ready 8 of 413 records found

12:28 PM 5/7/2017

Vegetation Management Guideline Updates.pptx - Microsoft PowerPoint

INPC_Approved_Herbicides_Final.xlsx - Microsoft Excel

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Ruler | Formula Bar | Gridlines | Headings | Show

Zoom | 100% | Zoom to Selection | Zoom

New Window | Arrange All | Freeze Panes | Split | Hide | Unhide | View Side by Side | Synchronous Scrolling | Reset Window Position | Window

Save Workspace | Switch Windows | Macros

A427

Cells with recommended changes to existing VMG's

Sort A to Z
Sort Z to A
Sort by Color
Clear Filter From "Trade Name"
Filter by Color
Text Filters
Search
(Select All)
Acclaim Extra
Accord
Ally XP
Arsenal
Banvel
Barrage HF
Chopper
Crossbow
Curtail
OK | Cancel

	A	B	C	D	E	F	G	H	I	J	K	L
1	Cells with recommended changes to existing VMG's						Oil = plant-based or	Approved for use in				
2	Active Ingredient	Trade Name	Product Description	VMG Target species	Recommended Application	Percent Active Ingredient in final solution	Carri	High Quali	Buffe	Disturbed sites	Signal Wc	Notes
3	Dicamba - dime		Broadleaf specific	Autumn olive	Foliar	0.9	Water	NO	YES	YES	Warning	
4	Glyphosate - is		Postemergent systemic	Autumn olive	Foliar	2.0	Water	NO	YES	YES	Warning	
5	Glyphosate - is		Postemergent systemic	Autumn olive	Foliar	2.0	Water	NO	YES	YES	Caution	
6	Glyphosate - is		Postemergent systemic	Autumn olive	Cut surface	20.0	Water	YES	YES	YES	Warning	
7	Glyphosate - is		Postemergent systemic	Autumn olive	Cut surface	20.0	Water	YES	YES	YES	Caution	
8	Triclopyr - buto		Broadleaf specific	Autumn olive	Basal bark	10.0	Oil	YES	YES	YES	Caution	
9	Triclopyr - buto		Broadleaf specific	Autumn olive	Cut surface	10.0	Oil	YES	YES	YES	Caution	
10	Triclopyr - buto		Broadleaf specific	Autumn olive	Thin line	50.0	Oil	YES	YES	YES	Caution	
11	Triclopyr - buto		Broadleaf specific	Autumn olive	Basal bark	10.0	Oil	YES	YES	YES	Caution	
12	Triclopyr - buto		Broadleaf specific	Autumn olive	Cut surface	10.0	Oil	YES	YES	YES	Caution	
13	Triclopyr - buto		Broadleaf specific	Autumn olive	Thin line	50.0	Oil	YES	YES	YES	Caution	
	Triclopyr - buto											
14	Dichloropheno		Broadleaf specific	Autumn olive	Foliar	1.5	Water	NO	YES	YES	Caution	
15	Clopyralid - mo		Broadleaf specific	Black locust	Foliar	0.4	Water	YES	YES	YES	Caution	Not recommended for sandy areas
16	Fosamine - am		Broadleaf specific	Black locust	Foliar	1.0	Water	NO	YES	YES	Caution	
17	Glyphosate - is		Postemergent systemic	Black locust	Cut surface	16.6	Water	NO	YES	YES	Warning	
18	Glyphosate - is		Postemergent systemic	Black locust	Cut surface	16.6	Water	NO	YES	YES	Caution	
19	Imazapyr - Isopr		Broadleaf specific	Black locust	Basal bark	2.0	Water	YES	YES	YES	Caution	Approved with caution - May be subject to soil leaching
20	Triclopyr - buto		Broadleaf specific	Black locust	Basal bark	10.0	Oil	YES	YES	YES	Caution	
21	Triclopyr - buto		Broadleaf specific	Black locust	Cut surface	10.0	Oil	YES	YES	YES	Caution	
22	Triclopyr - buto		Broadleaf specific	Black locust	Basal bark	10.0	Oil	YES	YES	YES	Caution	
23	Triclopyr - buto		Broadleaf specific	Black locust	Cut surface	10.0	Oil	YES	YES	YES	Caution	
24	Triclopyr - trieth		Broadleaf specific	Black locust	Foliar	1.3	Water	YES	YES	YES	Danger	
25	Triclopyr - trieth		Broadleaf specific	Black locust	Cut surface	22.0	Water	YES	YES	YES	Danger	
26	Triclopyr - trieth		Broadleaf specific	Black locust	Foliar	1.3	Water	YES	YES	YES	Danger	
27	Triclopyr - trieth		Broadleaf specific	Black locust	Cut surface	50.0	Water	YES	YES	YES	Danger	
28	Glyphosate - is		Postemergent systemic	Buckthorns	Cut surface	25.0	Water	YES	YES	YES	Caution	
29	Glyphosate - is		Postemergent systemic	Buckthorns	Foliar	1.5	Water	NO	YES	YES	Caution	Approved for foliar treatments of small re-sprouts followingcut surface treatments
30	Glyphosate - is		Postemergent systemic	Buckthorns	Foliar	1.5	Water	NO	YES	YES	Caution	Approved for foliar treatments of small re-sprouts followingcut surface treatments
31	Glyphosate - is		Postemergent systemic	Buckthorns	Foliar	1.5	Water	NO	YES	YES	Warning	Approved for foliar treatments of small re-sprouts followingcut surface treatments
32	Glyphosate - is		Postemergent systemic	Buckthorns	Foliar	1.5	Water	NO	YES	YES	Caution	Approved for foliar treatments of small re-sprouts followingcut surface treatments
33	Glyphosate - is		Postemergent systemic	Buckthorns	Cut surface	25.0	Water	YES	YES	YES	Caution	

VGM-Herbicide data | Herbicide concentrate needed

Ready | 60%

12:29 PM
5/7/2017

INPC_Approved_Herbicides_Final.xlsx - Microsoft Excel

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Ruler | Formula Bar | Gridlines | Headings | Show
Zoom | 100% | Zoom to Selection | Zoom
New Window | Arrange All | Freeze Panes | Split | Hide | Unhide | View Side by Side | Synchronous Scrolling | Reset Window Position | Window
Save Workspace | Switch Windows | Macros

L19 | Approved with caution - May be subject to soil leaching

Cells with recommended changes to existing VMG's

	A	B	C	D	E	F	G
1	Cells with recommended changes to existing VMG's						Oil = plant-based or mineral
2	Active Ingredient		Product Description	VMG Target species	Recommended Application	Percent Active Ingredient in final solution	Carrier	Hig Qua
59	Triclopyr - butoxyethyl ester		Broadleaf specific	Bush honeysuckles	Foliar	2.0	Water	YES
60	Triclopyr - triethylamine salt		Broadleaf specific	Bush honeysuckles	Foliar	2.0	Water	NO
61	2,4 Dichlorophenoxyacetic acid - dimethylar		Broadleaf specific	Canada thistle	Foliar	0.5	Water	YES
62	Clopyralid - monoethanolamine salt + 2,4 Dichlorophenoxyacetic acid		Broadleaf specific	Canada thistle	Foliar	0.2	Water	YES
63	Clopyralid - monoethanolamine salt		Broadleaf specific	Canada thistle	Foliar	0.08	Water	YES
64	Glyphosate - isopropylamine salt		Postemergent systemic	Canada thistle	Foliar	2.5	Water	YES
65	Glyphosate - isopropylamine salt		Postemergent systemic	Canada thistle	Foliar	2.5	Water	YES
66	Glyphosate - isopropylamine salt		Postemergent systemic	Canada thistle	Foliar	2.5	Water	YES
67	Glyphosate - isopropylamine salt		Postemergent systemic	Canada thistle	Foliar	2.5	Water	YES
68	Glyphosate - monopotassium salt		Postemergent systemic	Canada thistle	Foliar	2.5	Water	YES
69	Glyphosate - isopropylamine salt		Postemergent systemic	Chinese yam	Foliar	5.0	Water	YES
70	Glyphosate - isopropylamine salt		Postemergent systemic	Chinese yam	Foliar	5.0	Water	YES
71	Glyphosate - isopropylamine salt		Postemergent systemic	Chinese yam	Foliar	5.0	Water	YES
72	Glyphosate - isopropylamine salt		Postemergent systemic	Chinese yam	Foliar	5.0	Water	YES
73	Glyphosate - monopotassium salt		Postemergent systemic	Chinese yam	Foliar	1.3	Water	YES
74	Pelargonic acid		Postemergent systemic	Chinese yam	Foliar	10.0	Water	YES

Sort A to Z
Sort Z to A
Sort by Color
Clear Filter From "Trade Name"
Filter by Color
Text Filters
Search
- Tordon 101
- Tordon K
- Tordon RTU
- Touchdown Hi Tech
- Transline
- Trooper Extra
- Veteran 720
- Weedar 64
- Weed-b-Gon
- Weedone 638

OK | Cancel

VGM-Herbicide data | Herbicide conc

Ready | Count: 5 | 100%

6:08 AM 5/9/2017

INPC_Approved_Herbicides_Final.xlsx - Microsoft Excel

File | Home | Insert | Page Layout | Formulas | Data | Review | View

Normal | Page Layout | Page Break Preview | Custom Views | Full Screen | Workbook Views
Ruler | Formula Bar | Gridlines | Headings | Show
Zoom | 100% | Zoom to Selection | Zoom
New Window | Arrange All | Freeze Panes | Split | Hide | Unhide | View Side by Side | Synchronous Scrolling | Reset Window Position | Window
Save Workspace | Switch Windows | Macros

L19 | Approved with caution - May be subject to soil leaching

Cells with recommended changes to existing VMG's

Active Ingredier	Trade Name	Product Description	VMG Target species	Recommended Application	Percent Active Ingredient in final solution	Carrier	Oil = plant-based or mineral Hig Qua
Dicamba - dimet	Banvel	Broadleaf specific	Autumn olive	Foliar	0.9	Water	NO
Glyphosate - iso	Roundup	Postemergent systemic	Autumn olive	Foliar	2.0	Water	NO
Glyphosate - iso	Roundup Pro	Postemergent systemic	Autumn olive	Foliar	2.0	Water	NO
Glyphosate - iso	Roundup	Postemergent systemic	Autumn olive	Cut surface	20.0	Water	YES
Glyphosate - iso	Roundup Pro	Postemergent systemic	Autumn olive	Cut surface	20.0	Water	YES
Triclopyr - butox	Garlon 4	Broadleaf specific	Autumn olive	Basal bark	10.0	Oil	YES
Triclopyr - butox	Garlon 4	Broadleaf specific	Autumn olive	Cut surface	10.0	Oil	YES
Triclopyr - butox	Garlon 4	Broadleaf specific	Autumn olive	Thin line	50.0	Oil	YES
Triclopyr - butox	Tahoe 4E	Broadleaf specific	Autumn olive	Basal bark	10.0	Oil	YES
Triclopyr - butox	Tahoe 4E	Broadleaf specific	Autumn olive	Cut surface	10.0	Oil	YES
Triclopyr - butox	Tahoe 4E	Broadleaf specific	Autumn olive	Thin line	50.0	Oil	YES
Triclopyr - butox butoxyethyl est	Crossbow	Broadleaf specific	Autumn olive	Foliar	1.5	Water	NO
Clopyralid - mor	Transline	Broadleaf specific	Black locust	Foliar	0.4	Water	YES
Fosamine - amm	Krenite	Broadleaf specific	Black locust	Foliar	1.0	Water	NO
Glyphosate - iso	Roundup	Postemergent systemic	Black locust	Cut surface	16.6	Water	NO
Glyphosate - iso	Roundup Pro	Postemergent systemic	Black locust	Cut surface	16.6	Water	NO

Sort A to Z
Sort Z to A
Sort by Color
Clear Filter From "Active Ingredient"
Filter by Color
Text Filters
Search
- Metsulfuron methyl
- Pelargonic acid
- Picloram - potassium salt
- Picloram - triisopropanolamine salt +
- Picloram - triisopropanolamine salt +
- Picloram - triisopropanolamine salt +
- Sethoxydim
- Triclopyr - butoxyethyl ester
- Triclopyr - butoxyethyl ester + 2,4 D

OK | Cancel

VGM-Her

Ready | Count: 5 | 100%

6:12 AM 5/9/2017

INPC_Approved_Herbicides_Final.xlsx - Microsoft Excel

L19: Approved with caution - May be subject to soil leaching

Cells with recommended changes to existing VMG's

	Active Ingredient	Trade Name	Product Description	VMG Target species	Recommended Application	Percent Active Ingredient in final solution	Carrier (Oil = plant-based or mineral)	High Quality (Approved for use in)	Buffer (Approved for use in)	Disturbed sites (Approved for use in)	Signal Word	Notes
159	Sethoxydim	Poast	Poast emergent grasses	Japanese stiltgrass	Foliar	0.08	Water	YES	YES	YES	Warning	
160	Sethoxydim	Poast Plus	Poast emergent grasses	Japanese stiltgrass	Foliar	0.08	Water	YES	YES	YES	Caution	
168	Sethoxydim	Poast	Post emergent grasses	Johnson grass	Foliar	0.08	Water	YES	YES	YES	Warning	Provide suppression
169	Sethoxydim	Poast Plus	Post emergent grasses	Johnson grass	Foliar	0.08	Water	YES	YES	YES	Caution	Provide suppression
180	Sethoxydim	Poast	Post emergent grasses	Kentucky bluegrass	Foliar	0.08	Water	YES	YES	YES	Warning	VMG recommends o
181	Sethoxydim	Poast Plus	Post emergent grasses	Kentucky bluegrass	Foliar	0.08	Water	YES	YES	YES	Caution	VMG recommends o
298	Sethoxydim	Poast	Post emergent grasses	Reed canary grass	Foliar	0.08	Water	YES	YES	YES	Warning	
299	Sethoxydim	Poast Plus	Post emergent grasses	Reed canary grass	Foliar	0.08	Water	YES	YES	YES	Caution	
326	Sethoxydim	Poast	Post emergent grasses	Smooth brome	Foliar	0.08	Water	NO	YES	YES	Warning	
327	Sethoxydim	Poast Plus	Post emergent grasses	Smooth brome	Foliar	0.08	Water	NO	YES	YES	Caution	

VGM-Herbicide data | Herbicide concentrate needed

Ready 10 of 413 records found

Count: 0 75%

6:26 AM 5/9/2017

Vegetation Management Guideline Updates.pptx - Microsoft PowerPoint

Picture Tools

INPC_Approved_Herbicides_Final.xlsx - Microsoft Excel

File | Home | Insert | Page Layout | Formulas | Data | Review | View

Normal | Page Layout | Page Break Preview | Custom Views | Full Screen — Workbook Views

Ruler | Formula Bar | Gridlines | Headings — Show

Zoom | 100% | Zoom to Selection — Zoom

New Window | Arrange All | Freeze Panes | Split | Hide | Unhide | View Side by Side | Synchronous Scrolling | Reset Window Position — Window

Save Workspace | Switch Windows | Macros — Macros

A427

Cells with recommended changes to existing VMG's

Active Ingredient	Trade Name	Product Description	VMG Target species	Recommended Application	Percent Active Ingredient in final solution	Oil = plant-based or Carri	Approved for use in High Quali	Buffe	Disturbed sites	Signal Wo	Notes
Dicamba - dime		Broadleaf specific	Autumn olive	Foliar	0.9	Water	NO	YES	YES	Warning	
Glyphosate - is		Postemergent systemic	Autumn olive	Foliar	2.0	Water	NO	YES	YES	Warning	
Glyphosate - is		Postemergent systemic	Autumn olive	Foliar	2.0	Water	NO	YES	YES	Caution	
Glyphosate - is		Postemergent systemic	Autumn olive	Cut surface	20.0	Water	YES	YES	YES	Warning	
Glyphosate - is		Postemergent systemic	Autumn olive	Cut surface	20.0	Water	YES	YES	YES	Caution	
Triclopyr - buto		Broadleaf specific	Autumn olive	Basal bark	10.0	Oil	YES	YES	YES	Caution	
Triclopyr - buto		Broadleaf specific	Autumn olive	Cut surface	10.0	Oil	YES	YES	YES	Caution	
Triclopyr - buto		Broadleaf specific	Autumn olive	Thin line	50.0	Oil	YES	YES	YES	Caution	
Triclopyr - buto		Broadleaf specific	Autumn olive	Basal bark	10.0	Oil	YES	YES	YES	Caution	
Triclopyr - buto		Broadleaf specific	Autumn olive	Cut surface	10.0	Oil	YES	YES	YES	Caution	
Triclopyr - buto		Broadleaf specific	Autumn olive	Thin line	50.0	Oil	YES	YES	YES	Caution	
Triclopyr - buto											
Dichloropheno		Broadleaf specific	Autumn olive	Foliar	1.5	Water	NO	YES	YES	Caution	
Clopyralid - mo		Broadleaf specific	Black locust	Foliar	0.4	Water	YES	YES	YES	Caution	Not recommended for sandy areas
Fosamine - am		Broadleaf specific	Black locust	Foliar	1.0	Water	NO	YES	YES	Caution	
Glyphosate - is		Postemergent systemic	Black locust	Cut surface	16.6	Water	NO	YES	YES	Warning	
Glyphosate - is		Postemergent systemic	Black locust	Cut surface	16.6	Water	NO	YES	YES	Caution	
Imazapyr - Isopr		Broadleaf specific	Black locust	Basal bark	2.0	Water	YES	YES	YES	Caution	Approved with caution - May be subject to soil leaching
Triclopyr - buto		Broadleaf specific	Black locust	Basal bark	10.0	Oil	YES	YES	YES	Caution	
Triclopyr - buto		Broadleaf specific	Black locust	Cut surface	10.0	Oil	YES	YES	YES	Caution	
Triclopyr - buto		Broadleaf specific	Black locust	Basal bark	10.0	Oil	YES	YES	YES	Caution	
Triclopyr - buto		Broadleaf specific	Black locust	Cut surface	10.0	Oil	YES	YES	YES	Caution	
Triclopyr - trieth		Broadleaf specific	Black locust	Foliar	1.3	Water	YES	YES	YES	Danger	
Triclopyr - trieth		Broadleaf specific	Black locust	Cut surface	22.0	Water	YES	YES	YES	Danger	
Triclopyr - trieth		Broadleaf specific	Black locust	Foliar	1.3	Water	YES	YES	YES	Danger	
Triclopyr - trieth		Broadleaf specific	Black locust	Cut surface	50.0	Water	YES	YES	YES	Danger	
Glyphosate - is		Postemergent systemic	Buckthorns	Cut surface	25.0	Water	YES	YES	YES	Caution	
Glyphosate - is		Postemergent systemic	Buckthorns	Foliar	1.5	Water	NO	YES	YES	Caution	Approved for foliar treatments of small re-sprouts followingcut surface treatments
Glyphosate - is		Postemergent systemic	Buckthorns	Foliar	1.5	Water	NO	YES	YES	Caution	Approved for foliar treatments of small re-sprouts followingcut surface treatments
Glyphosate - is		Postemergent systemic	Buckthorns	Foliar	1.5	Water	NO	YES	YES	Warning	Approved for foliar treatments of small re-sprouts followingcut surface treatments
Glyphosate - is		Postemergent systemic	Buckthorns	Foliar	1.5	Water	NO	YES	YES	Caution	Approved for foliar treatments of small re-sprouts followingcut surface treatments
Glyphosate - is		Postemergent systemic	Buckthorns	Cut surface	25.0	Water	YES	YES	YES	Caution	

Sort A to Z
Sort Z to A
Sort by Color
Clear Filter From "Trade Name"
Filter by Color
Text Filters
Search
(Select All)
Acclaim Extra
Accord
Ally XP
Arsenal
Banvel
Barrage HF
Chopper
Crossbow
Curtail
OK | Cancel

VGM-Herbicide data | Herbicide concentrate needed

Ready | 60%

12:30 PM
5/7/2017

Vegetation Management Guideline Updates.pptx - Microsoft PowerPoint

INPC_Approved_Herbicides_Final.xlsx - Microsoft Excel

File | Home | Insert | Page Layout | Formulas | Data | Review | View

Normal | Page Layout | Page Break Preview | Custom Views | Full Screen | Workbook Views

Ruler | Formula Bar | Gridlines | Headings | Show

Zoom | 100% | Zoom to Selection | Zoom

New Window | Arrange All | Freeze Panes | Split | Hide | Unhide | View Side by Side | Synchronous Scrolling | Reset Window Position | Window

Save Workspace | Switch Windows | Macros

A427

Cells with recommended changes to existing VMG's

Active Ingredient	Trade Name	Product Description	VMG Target species	Recommended Application	Percent Active Ingredient in final solution	Oil = plant-based or Carri	Approved for use in High Quali	Buffe	Disturbed sites	Signal Wc	Notes
Glyphosate - is		Postemergent systemic	Autumn olive	Foliar	2.0	Water	NO	YES	YES	Warning	
Glyphosate - is		Postemergent systemic	Autumn olive	Cut surface	20.0	Water	YES	YES	YES	Warning	
Glyphosate - is		Postemergent systemic	Black locust	Cut surface	16.6	Water	NO	YES	YES	Warning	
Glyphosate - is		Postemergent systemic	Buckthorns	Foliar	1.5	Water	NO	YES	YES	Warning	Approved for foliar treatments of small re-sprouts followingcut surface treatments
Glyphosate - is		Postemergent systemic	Buckthorns	Cut surface	25.0	Water	YES	YES	YES	Warning	
Glyphosate - is		Postemergent systemic	Bush honeysuckles	Foliar	4.0	Water	YES	YES	YES	Warning	Approved when applied in late fall after native plants are dormant
Glyphosate - is		Postemergent systemic	Bush honeysuckles	Cut surface	25.0	Water	YES	YES	YES	Warning	
Glyphosate - is		Postemergent systemic	Canada thistle	Foliar	2.5	Water	YES	YES	YES	Warning	In high-quality areas it is only recommended for use in areas with heavy infestations
Glyphosate - is		Postemergent systemic	Chinese yam	Foliar	5.0	Water	YES	YES	YES	Warning	
Glyphosate - is		Postemergent systemic	Crown vetch	Foliar	1.0	Water	NO	YES	YES	Warning	
Glyphosate - is		Postemergent systemic	Fescue	Foliar	2.0	Water	YES	YES	YES	Warning	
Glyphosate - is		Postemergent systemic	Garlic mustard	Foliar	2.0	Water	YES	YES	YES	Warning	Approved for high quality areas but only in areas with heavy infestations
Glyphosate - is		Postemergent systemic	Gray dogwood	Cut surface	25.0	Water	YES	YES	YES	Warning	
Glyphosate - is		Postemergent systemic	Honey locust	Foliar	2.0	Water	NO	YES	YES	Warning	
Glyphosate - is		Postemergent systemic	Honey locust	Cut surface	25.0	Water	YES	YES	YES	Warning	
Glyphosate - is		Postemergent systemic	Japanese honeysuckle	Foliar	2.0	Water	YES	YES	YES	Warning	Approved for high quality areas but only in areas with heavy infestations
Glyphosate - is		Postemergent systemic	Japanese hops	Foliar	2.0	Water	NO	YES	YES	Warning	
Glyphosate - is		Postemergent systemic	Japanese stiltgrass	Foliar	1.0	Water	NO	YES	YES	Warning	
Glyphosate - is		Postemergent systemic	Johnson grass	Foliar	2.0	Water	YES	YES	YES	Warning	
Glyphosate - is		Postemergent systemic	Kentucky bluegrass	Foliar	1.0	Water	NO	YES	YES	Warning	
Glyphosate - is		Postemergent systemic	Leafy spurge	Foliar	5.0	Water	NO	YES	YES	Warning	
Glyphosate - is		Postemergent systemic	Musk thistle	Foliar	2.0	Water	YES	YES	YES	Warning	
Glyphosate - is		Postemergent systemic	Round-leaved bittersweet	Cut surface	50.0	Water	YES	YES	YES	Warning	
Glyphosate - is		Postemergent systemic	Phragmites	Foliar	1.5	Water	YES	YES	YES	Warning	
Glyphosate - is		Postemergent systemic	Purple loosestrife	Foliar	2.5	Water	NO	YES	YES	Warning	
Glyphosate - is		Postemergent systemic	Purple rocket	Foliar	1.5	Water	NO	YES	YES	Warning	
Glyphosate - is		Postemergent systemic	Quaking aspen	Rope wick	33.0	Water	NO	YES	YES	Warning	
Glyphosate - is		Postemergent systemic	Reed canary grass	Foliar	5.0	Water	NO	YES	YES	Warning	
Glyphosate - is		Postemergent systemic	Sericea lespedeza	Foliar	1.5	Water	YES	YES	YES	Warning	Approved for high quality areas but only in areas with heavy infestations
Glyphosate - is		Postemergent systemic	Siberian elm	Cut surface	25.0	Water	YES	YES	YES	Warning	
Glyphosate - is		Postemergent systemic	Smooth brome	Foliar	1.0	Water	NO	YES	YES	Warning	
Glyphosate - is		Postemergent systemic	Smooth sumac	Cut surface	25.0	Water	YES	YES	YES	Warning	

Sort A to Z
Sort Z to A
Sort by Color
Clear Filter From "Trade Name"
Filter by Color
Text Filters
Search
- Preen
- Remedy
- Renovate
- Rodeo
- Roundup
- Roundup Pro
- Savage CA
- Scythe
- Stalker
- Stinger

OK | Cancel

VGM-Herbicide data | Herbicide concentrate needed

Ready 38 of 413 records found

60%

1:04 PM
5/7/2017

Vegetation Management Guideline Updates.pptx - Microsoft PowerPoint

INPC_Approved_Herbicides_Final.xlsx - Microsoft Excel

Cells with recommended changes to existing VMG's

Active Ingredient	Trade Name	Product Description	VMG Target species	Recommended Application	Percent Active Ingredient in final solution	Oil = plant-based or Carri	Approved for use in High Quali	Buffe	Disturbed sites	Signal Wo	Notes
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Autumn olive	Foliar	2.0	Water	NO	YES	YES	Warning	
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Autumn olive	Cut surface	20.0	Water	YES	YES	YES	Warning	
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Black locust	Cut surface	16.6	Water	NO	YES	YES	Warning	
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Buckthorns	Foliar	1.5	Water	NO	YES	YES	Warning	Approved for foliar treatments of small re-sprouts followingcut surface treatments
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Buckthorns	Cut surface	25.0	Water	YES	YES	YES	Warning	
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Bush honeysuckles	Foliar	4.0	Water	YES	YES	YES	Warning	Approved when applied in late fall after native plants are dormant
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Bush honeysuckles	Cut surface	25.0	Water	YES	YES	YES	Warning	
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Canada thistle	Foliar	2.5	Water	YES	YES	YES	Warning	In high-quality areas it is only recommended for use in areas with heavy infestations
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Chinese yam	Foliar	5.0	Water	YES	YES	YES	Warning	
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Crown vetch	Foliar	1.0	Water	NO	YES	YES	Warning	
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Fescue	Foliar	2.0	Water	YES	YES	YES	Warning	
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Garlic mustard	Foliar	2.0	Water	YES	YES	YES	Warning	Approved for high quality areas but only in areas with heavy infestations
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Gray dogwood	Cut surface	25.0	Water	YES	YES	YES	Warning	
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Honey locust	Foliar	2.0	Water	NO	YES	YES	Warning	
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Honey locust	Cut surface	25.0	Water	YES	YES	YES	Warning	
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Japanese honeysuckle	Foliar	2.0	Water	YES	YES	YES	Warning	Approved for high quality areas but only in areas with heavy infestations
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Japanese hops	Foliar	2.0	Water	NO	YES	YES	Warning	
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Japanese stiltgrass	Foliar	1.0	Water	NO	YES	YES	Warning	
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Johnson grass	Foliar	2.0	Water	YES	YES	YES	Warning	
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Kentucky bluegrass	Foliar	1.0	Water	NO	YES	YES	Warning	
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Leafy spurge	Foliar	5.0	Water	NO	YES	YES	Warning	
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Musk thistle	Foliar	2.0	Water	YES	YES	YES	Warning	
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Round-leaved bittersweet	Cut surface	50.0	Water	YES	YES	YES	Warning	
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Phragmites	Foliar	1.5	Water	YES	YES	YES	Warning	
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Purple loosestrife	Foliar	2.5	Water	NO	YES	YES	Warning	
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Purple rocket	Foliar	1.5	Water	NO	YES	YES	Warning	
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Quaking aspen	Rope wick	33.0	Water	NO	YES	YES	Warning	
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Reed canary grass	Foliar	5.0	Water	NO	YES	YES	Warning	
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Sericea lespedeza	Foliar	1.5	Water	YES	YES	YES	Warning	Approved for high quality areas but only in areas with heavy infestations
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Siberian elm	Cut surface	25.0	Water	YES	YES	YES	Warning	
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Smooth brome	Foliar	1.0	Water	NO	YES	YES	Warning	
Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Smooth sumac	Cut surface	25.0	Water	YES	YES	YES	Warning	

VGM-Herbicide data | Herbicide concentrate needed

Ready 38 of 413 records found

12:31 PM 5/7/2017

Vegetation Management Guideline Updates.pptx - Microsoft PowerPoint

INPC_Approved_Herbicides_Final.xlsx - Microsoft Excel

Cells with recommended changes to existing VMG's

	Active Ingredient	Trade Name	Product Description	VMG Target species	Recommended Application	Percent Active Ingredient in final solution	Oil = plant-based or Carri	Approved for use in High Quali	Buffe	Disturbed sites	Signal Wo	Notes
4	Glyphosate - isopropylamine salt	Roundup	Postemergent systemic				Water	NO	YES	YES	Warning	
6	Glyphosate - isopropylamine salt	Roundup	Postemergent systemic				Water	YES	YES	YES	Warning	
17	Glyphosate - isopropylamine salt	Roundup	Postemergent systemic				Water	NO	YES	YES	Warning	
31	Glyphosate - isopropylamine salt	Roundup	Postemergent systemic				Water	NO	YES	YES	Warning	Approved for foliar treatments of small re-sprouts followingout surface treatments
34	Glyphosate - isopropylamine salt	Roundup	Postemergent systemic				Water	YES	YES	YES	Warning	
44	Glyphosate - isopropylamine salt	Roundup	Postemergent systemic				Water	YES	YES	YES	Warning	Approved when applied in late fall after native plants are dormant
47	Glyphosate - isopropylamine salt	Roundup	Postemergent systemic				Water	YES	YES	YES	Warning	
66	Glyphosate - isopropylamine salt	Roundup	Postemergent systemic				Water	YES	YES	YES	Warning	In high-quality areas it is only recommended for use in areas with heavy infestations
71	Glyphosate - isopropylamine salt	Roundup	Postemergent systemic				Water	YES	YES	YES	Warning	
83	Glyphosate - isopropylamine salt	Roundup	Postemergent systemic				Water	NO	YES	YES	Warning	
91	Glyphosate - isopropylamine salt	Roundup	Postemergent systemic				Water	YES	YES	YES	Warning	
97	Glyphosate - isopropylamine salt	Roundup	Postemergent systemic				Water	YES	YES	YES	Warning	Approved for high quality areas but only in areas with heavy infestations
105	Glyphosate - isopropylamine salt	Roundup	Postemergent systemic				Water	YES	YES	YES	Warning	
122	Glyphosate - isopropylamine salt	Roundup	Postemergent systemic				Water	NO	YES	YES	Warning	
125	Glyphosate - isopropylamine salt	Roundup	Postemergent systemic				Water	YES	YES	YES	Warning	
135	Glyphosate - isopropylamine salt	Roundup	Postemergent systemic				Water	YES	YES	YES	Warning	Approved for high quality areas but only in areas with heavy infestations
144	Glyphosate - isopropylamine salt	Roundup	Postemergent systemic				Water	NO	YES	YES	Warning	
156	Glyphosate - isopropylamine salt	Roundup	Postemergent systemic				Water	NO	YES	YES	Warning	
164	Glyphosate - isopropylamine salt	Roundup	Postemergent systemic				Water	YES	YES	YES	Warning	
177	Glyphosate - isopropylamine salt	Roundup	Postemergent systemic				Water	NO	YES	YES	Warning	
194	Glyphosate - isopropylamine salt	Roundup	Postemergent systemic				Water	NO	YES	YES	Warning	
228	Glyphosate - isopropylamine salt	Roundup	Postemergent systemic				Water	YES	YES	YES	Warning	
236	Glyphosate - isopropylamine salt	Roundup	Postemergent systemic				Water	YES	YES	YES	Warning	
249	Glyphosate - isopropylamine salt	Roundup	Postemergent systemic				Water	YES	YES	YES	Warning	
257	Glyphosate - isopropylamine salt	Roundup	Postemergent systemic				Water	NO	YES	YES	Warning	
275	Glyphosate - isopropylamine salt	Roundup	Postemergent systemic				Water	NO	YES	YES	Warning	
285	Glyphosate - isopropylamine salt	Roundup	Postemergent systemic				Water	NO	YES	YES	Warning	
295	Glyphosate - isopropylamine salt	Roundup	Postemergent systemic				Water	NO	YES	YES	Warning	
303	Glyphosate - isopropylamine salt	Roundup	Postemergent systemic				Water	YES	YES	YES	Warning	Approved for high quality areas but only in areas with heavy infestations
311	Glyphosate - isopropylamine salt	Roundup	Postemergent systemic				Water	YES	YES	YES	Warning	
323	Glyphosate - isopropylamine salt	Roundup	Postemergent systemic				Water	NO	YES	YES	Warning	
330	Glyphosate - isopropylamine salt	Roundup	Postemergent systemic				Water	YES	YES	YES	Warning	

Sort Smallest to Largest
Sort Largest to Smallest
Sort by Color
Clear Filter From "Percent Active In..."
Filter by Color
Number Filters
Search
(Select All)
1.0
1.5
2.0
2.5
4.0
5.0
16.6
20.0
25.0
OK
Cancel

VGM-Herbicide data | Herbicide concentrate needed

Ready 38 of 413 records found

12:32 PM 5/7/2017

Vegetation Management Guideline Updates.pptx - Microsoft PowerPoint

INPC_Approved_Herbicides_Final.xlsx - Microsoft Excel

Cells with recommended changes to existing VMG's

	Active Ingredient	Trade Name	Product Description	VMG Target species	Recommended Application	Percent Active Ingredient in final solution	Oil = plant-based or Carri	Approved for use in High Quali	Buffe	Disturbed sites	Signal Wc	Notes
4	Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Autumn olive	Foliar	2.0	Water	NO	YES	YES	Warning	
91	Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Fescue	Foliar	2.0	Water	YES	YES	YES	Warning	
97	Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Garlic mustard	Foliar	2.0	Water	YES	YES	YES	Warning	Approved for high quality areas but only in areas with heavy infestations
122	Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Honey locust	Foliar	2.0	Water	NO	YES	YES	Warning	
135	Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Japanese honeysuckle	Foliar	2.0	Water	YES	YES	YES	Warning	Approved for high quality areas but only in areas with heavy infestations
144	Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Japanese hops	Foliar	2.0	Water	NO	YES	YES	Warning	
164	Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Johnson grass	Foliar	2.0	Water	YES	YES	YES	Warning	
228	Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Musk thistle	Foliar	2.0	Water	YES	YES	YES	Warning	
365	Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Teasels	Foliar	2.0	Water	YES	YES	YES	Warning	Only wick or wet sponge for spot treatment of very small infestations in high quality
385	Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	White poplar	Foliar	2.0	Water	NO	YES	YES	Warning	
404	Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Wild parsnip	Foliar	2.0	Water	NO	YES	YES	Warning	
411	Glyphosate - isopropylamine salt	Roundup	Postemergent systemic	Wintercreeper	Foliar	2.0	Water	YES	YES	YES	Warning	Approved for high quality areas but only in areas with heavy infestations

VGM-Herbicide data | Herbicide concentrate needed

Ready 12 of 413 records found

12:33 PM 5/7/2017

Vegetation Management Guideline Updates.pptx - Microsoft PowerPoint

INPC_Approved_Herbicides_Final.xlsx - Microsoft Excel

C2 | 1

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1		To determine amount of herbicide concentrate needed for a desired volume of solution, enter appropriate data in cells C2, C3, and C4. Cell C6 are locked to protect the formula.														
2		Final volume of solution needed (gallons)	1													
3		Percent active ingredient needed	1													
4		% active ingredient from herbicide label	1.00													
5		Ounces of herbicide concentrate needed in final volume	128.0													
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																
17																
18																
19																
20																

VGM-Herbicide data | Herbicide concentrate needed

Ready

12:36 PM
5/7/2017

Control fescue using Plateau

- 20 gallons of final solution
- Guidelines specifies 0.05% active ingredient in final solution
- I have Plateau that is 23.6% active ingredient (from label)

To get 0.05% ai, need to add 5.4 ounces of 23.6% Plateau concentrate with water to = 20 gallons

	A	B	C	D
1		To determine amount of herbicide concentrate needed for a desired volume of solution, enter appropriate data in cells C2, C3, and C4. Cell C6 are locked to protect the formula.		
2		Final volume of solution needed (gallons)	20	
3		Percent active ingredient needed	0.05	
4		% active ingredient from herbicide label	23.60	
5		Ounces of herbicide concentrate needed in final volume	5.4	
6				
7				
8				
9				
10				

Control crown vetch using Platoon

- 3 gallons of final solution
- Guidelines specifies 0.5% active ingredient in final solution
- I have Platoon that is 47.3% active ingredient (from label)

To get 0.5% ai, need to add 4.1 ounces of 43.7% Platoon concentrate with water to = 3 gallons

	A	B	C	D
1		To determine amount of herbicide concentrate needed for a desired volume of solution, enter appropriate data in cells C2, C3, and C4. Cell C6 are locked to protect the formula.		
2		Final volume of solution needed (gallons)	3	
3		Percent active ingredient needed	0.5	
4		% active ingredient from herbicide label	47.30	
5		Ounces of herbicide concentrate needed in final volume	4.1	
6				
7				
8				
9				
10				