Yearly Operational Plan 2024

Holyoke Gas & Electric Department

Holyoke, Massachusetts

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Project No. 2000727.A85

1550 Main Street, Suite 400

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Note: Species-specific maps are not included in the redacted version of the YOP. For further information contact Lauren Glorioso at the Natural Heritage and Endangered Species Program at (508) 389-6362 or lauren.glorioso@state.ma.us.

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1 Introduction

This Yearly Operational Plan (YOP) has been prepared in accordance with 333 CMR 11.00, Rights of Way Management. The YOP is based on the Vegetation Management Plan (VMP) prepared for the period 2024-2028, which is attached to this document as *Appendix A*. This 1-year plan provides a detailed program for vegetation management for the calendar year 2024 for the Rights-of-Way (ROWs) associated with the hydroelectric, gas, and electric utility operations of the City of Holyoke Gas and Electric Department (hereafter referred to as "HG&E") and ROWs associated with pathways in Lower Riverside Park and Gatehouse Park, which are recreational parks owned and maintained by HG&E.

A YOP must be submitted to the Massachusetts Department of Agricultural Resources (MDAR) every year that herbicides are intended for use to maintain ROWs. The MDAR publishes a notice of receipt of the YOP in the *Environmental Monitor* (http://www.env.state.ma.us/mepa/emonitor.aspx). The applicant, HG&E, must provide the notice that appeared in the *Environmental Monitor* to the Boards of Health, the Conservation Commissions, and the chief elected officials for the City of Holyoke, the City of Chicopee, and the Town of South Hadley. This YOP is also posted on the Holyoke Gas & Electric Website as allowed in 333 CMR 11.06(3).

Public notice of actual herbicide application in the ROWs is made at least 21 days in advance of the planned application. Notice is sent to the MDAR, the Boards of Health, the Conservation Commissions, and the chief elected officials for the City of Holyoke, the City of Chicopee, and the Town of South Hadley. In addition, notice of the herbicide application will be published in at least one newspaper of general circulation in Holyoke, Chicopee, and South Hadley at least 48 hours prior to the herbicide application. The notice will appear in the "local section" of the newspaper and will measure at least 4 inches by 5 inches in size. This published notice will include information regarding:

- The method and location of herbicide application.

- The approximate dates on which herbicide application will begin and conclude, but the application will commence not more than 10 days before nor conclude more than 10 days after the approximate dates published.
- A list of the potential herbicides to be used.
- A description of the purpose of the application.
- The name, title, business address and telephone number of a designated contact person that can be contacted for information about the herbicide application.

2 Location of Rights of Way

The majority of ROWs included in this YOP are located within the City of Holyoke, with some electric transmission/distribution lines located in the adjacent City of Chicopee and the ROWs associated with Lower Riverside Park and Gatehouse Park located across the Connecticut River in South Hadley. The ROWs can be divided into five categories:

1. ROWs associated with the HG&E electrical system.
    - These consist of electrical transmission and distribution lines located within the City of Holyoke, with a limited amount of lines extending into the adjacent City of Chicopee. Vegetation management activities, including removal of invasive species, will also occur adjacent to the North Canal substation. The locations of the lines included in this YOP are shown in the mapping in *Appendix B* and are listed in *Table 1*.

2. ROWs associated with above-ground portions of gas distribution vaults.
    - Areas to be maintained consist of locations within a 10-foot radius of the above-ground structures. They are shown as point locations in the mapping in *Appendix B* and are listed in *Table 1* by street location. All are located within the City of Holyoke.

3. ROWs adjacent to the canal system owned and operated by HG&E (*Appendix C*).
    - Areas to be maintained consist of ROWs located on either side of the canals that are fenced in most locations. The three-level canal system extends through the southeastern areas of the City of Holyoke and provides water for industrial and hydropower generation. The canal ROWs total approximately 8 miles in length.

4. ROWs associated with public access pathways in Lower Riverside Park.

- Areas subject to 333 CMR 11.00 include the pathways that provide public and emergency vehicle access to the park (*Appendix M*). The ROW area is approximately 1,300 linear feet. Other vegetation management activities outside of the ROWs, but within the park may occur. These include removal of invasive species, removal of woody species threatening the structural integrity of stone masonry walls, and vista pruning to create viewsheds of the Connecticut River and Holyoke Dam.

5. ROWs associated with public access pathways in Gatehouse Park.

   - Areas subject to 333 CMR 11.00 include the pathways that provide public and emergency vehicle access to the park (*Appendix N*). The ROW area is approximately 250 linear feet. Only trimming and mowing of vegetation will occur to manage vegetation in this park.

Table 1 – Gas Electric Transmission/Distribution ROW Locations Potentially Scheduled for Herbicide Treatment in 2024

ROW Type	Location
Gas Distribution Vaults ***(Appendix B)***	• Apremont Highway at Dupuis Road • Hampden Street at Lincoln Street • Lincoln Street • Nick Cosmos Way at Essex Street • Appleton Street at First Level Canal • Gatehouse Road near Flood Control Locks • Arbor Way in Polaski Park • South Canal Street at South Bridge Street • Beaulieu Street at Main Street • Garfield Street • Peltiah Street at Main Street • Whiting Farms Road at Northampton Street • Bobala Road at Whitney Avenue • Homestead Road at Westfield Road • Old Jarvis Avenue near Bassett Road • Hampden Street at Northampton Street • Apremont Highway at Rock Valley Road • Mueller Road • County Road at Weiser Drive • Northampton Street at Vadnais Street

ROW Type	Location
Electric Transmission/ Distribution Lines ***(Appendix B)***	• Pioneer Valley Railroad line from Papineau St. to Lower Westfield Road near Ashley Reservoir. • From Front Street/railroad line to Race Street, across from end of Hampshire Street, except over canals. Includes connection to substation between First and Second Level Canals. • Along Race Street from approximately Hamilton Street to just beyond Appleton Street. • Along Appleton Street from Race Street to North Canal Street. • Along North Canal Street from Appleton Street approximately 1200 feet northeast. • Near North Canal substation • Near Prospect Street Substation approximately 800 feet northwest of Buckley Boulevard (Chicopee). • Approximately 100 feet southeast of Water Street, parallel to Water Street, from Appleton Street and northeast approximately 1100 feet. • Rock Valley Road to Apremont Highway • An interval of approximately 600 feet where a distribution line deviates from Mountain Road approximately 600 feet south of Cherry Street. • Along Apremont Highway to Westfield Road near the High Service Reservoir, east along Westfield Road for approximately 400 feet, then south, cross country, to access road (Dailey's Road) west of Ashley Reservoir (these areas are MOW ONLY). • From the end of Mount Tom Ski Road, up Mount Tom, to telecommunications infrastructure located at the Mount Tom summit (approximately 5,200 feet).

3 Identification of Sensitive Areas and Flagging Methods to Designate Sensitive Areas on the ROW

Sensitive areas defined in 333 CMR 11.04 are identified as public groundwater supplies, public surface water supplies, private drinking water supplies, surface waters, wetlands, stated-listed species habitat, inhabited areas and agricultural areas. For the purpose of identification, sensitive areas can be separated into two categories:

- Areas not readily identifiable in the field; and
- Areas that are readily identifiable in the field.

It is the intent of HG&E to use only herbicides and application methods recommended for use in sensitive areas, as per 333 CMR 11.04 (d), on the full length and width of all ROW areas it shall treat. The operational effect of this policy is that outer limits of sensitive areas need not be identified in the field by treatment crews.

Each sensitive area has a defined limit for special protection to further minimize environmental and public health risks. Within most sensitive areas, there is an area in which herbicide use is prohibited (no spray area). Within those portions of the sensitive area where herbicide application is allowed (i.e., limited spray areas), the use of herbicides and application methods recommended jointly by the MDAR and Massachusetts Department of Environmental Protection (DEP) is required. The general characteristics of the sensitive area herbicides are: low toxicity to humans and other animal species; short term soil persistence; biodegradation of active ingredients; and low soil mobility. Details on these characteristics are discussed in the MDAR Herbicide Fact Sheets included in *Appendix D*.

The following is a description of how the sensitive areas will be identified for required protection:

- Consult the appropriate reference materials and sources to determine the precise location of these areas.
- Place the boundaries of these sensitive areas on US Geological Survey (USGS) topographical maps or other HG&E mapping.
- Prior to commencement of herbicide application operations, the treatment crew will be provided the marked-up mapping with which to mark boundaries of these sensitive areas.
- The treatment crew will deploy a cutting crew or point person in advance of the main herbicide application operation to locate and mark these.

Sensitive areas readily identifiable in the field include surface waters, inhabited areas, wetlands, agricultural areas and major road crossings. The method utilized to identify these sensitive areas will be as follows:

- Consult USGS topographic maps to locate any of these sensitive areas that may already be identified on these maps.
- Consult MassGIS spatial data to locate any of these sensitive areas that may already be identified on these maps.
- Prior to commencement of herbicide application operations, the treatment crew will be provided the marked mapping.
- The treatment crew will visually survey the area to be treated for any sensitive areas.
- Appropriate distances will be measured from sensitive areas to identify no herbicide treatment areas and limited herbicide treatment areas.

Table 2 – Sensitive Area Restriction Guide (333 CMR 11.04)

Sensitive Area	No Spray Area	Limited Spray Area	Where Identified
Wetlands and Water Over Wetlands	Within 10 feet (unless provisions of 333 CMR 11.04(4)(c) are followed)	10 – 100 feet; 12 months must elapse between applications; Selective low pressure, using foliar techniques or basal or cut-stump applications	YOP Maps[1] and identify on site[2]
Certified Vernal Pool	Within 10 feet	10 feet to the outer boundary of any Certified Vernal Pool Habitat; 12 months must elapse between applications; Selective low pressure, using foliar techniques or basal or cut-stump applications	YOP Maps[1] and identify on site[2]
Public Ground Water Supply	Within 400 feet (Zone I)	Zone II or IWPA (Primary Recharge Area); 24 months must elapse between applications; Selective low pressure, using foliar techniques or basal or cut-stump applications	YOP Maps[1]

[1]Maps are located in *Appendices B and C*

[2] Methods are shown in *Appendix E*

Sensitive Area	No Spray Area	Limited Spray Area	Where Identified
Public Surface Water Supply	Within 100 feet of any Class A public surface water source	100 feet to the outer boundary of the Zone A; 24 months must elapse between applications; Selective low pressure, using foliar techniques or basal or cut-stump applications	YOP Maps[1]

Public Surface Water Supply	Within 10 feet of any tributary or associated surface water body located outside of the Zone A	10 feet to the outer boundary of the Zone A; 24 months must elapse between applications; Selective low pressure, using foliar techniques or basal or cut-stump applications	
	Within 100 feet of any tributary or associated surface water body located within the Zone A of a Class A public surface water source		
	Within a lateral distance of 100 feet for 400 feet upstream of any Class B Drinking Water Intake	Within a lateral distance of between 100 -200 feet for 400 feet upstream of intake; 24 months must elapse between applications; Selective low pressure, using foliar techniques or basal or cut-stump applications	
Private Water Supply	Within 50 feet	50 – 100 feet; 24 months must elapse between applications;	In YOP well list[3] and identify on site[2]

[3] Well list is contained in *Appendix K*.

		Selective low pressure, using foliar techniques or basal or cut-stump applications	
Surface Waters	Within 10 feet from mean annual high-water line	10 feet from the mean annual high water line and the outer boundary of the Riverfront Area; 12 months must elapse between applications; Selective low pressure, using foliar techniques or basal or cut-stump applications	YOP Maps[1] and identify on site[2]
Agricultural and Inhabited Areas	N/A	0 – 100 feet 12 months must elapse between application; Selective low pressure, using foliar techniques or basal or cut-stump applications.	Identify on site[2]

State-listed Species Habitat	No application within habitat area except in accordance with a Yearly Operational Plan approved in writing by the Division of Fisheries and Wildlife	YOP Maps[1]

Flagging Methods to Mark Sensitive Areas

As shown in the diagrams in *Appendix E*, RED flagging will identify the outer boundary of the NO HERBICDE TREATMENT AREA surrounding surface waters, private water supplies, and public surface and groundwater supplies. If the herbicide treatment to be used is different within the LIMITED SPRAY AREA than in the adjacent non-sensitive area, then YELLOW flagging will be used to mark the outer boundary of the LIMITED SPRAY AREA. If herbicides approved for use in sensitive areas are to be used in adjacent non-sensitive areas, no flagging of the outer boundary of the LIMITED SPRAY AREA is necessary.

If herbicide treatment on or within 10 feet of a wetland will be used in the adjacent LIMITED SPRAY AREA, the 10 feet boundary from the wetland will be flagged RED and YELLOW. If the adjacent LIMITED SPRAY AREA and non-sensitive area will be treated as a wetland, then no flagging is necessary.

4 Vegetation Management Activities in Priority Habitat Areas

The Massachusetts Endangered Species Act (MESA) (M.G.L. c. 131A) and regulations found at 321 CMR 10.00 protect rare species and their habitats by prohibiting the "take" of any plant or animal listed as Endangered, Threatened or of Special Concern by the Massachusetts Department of Fisheries and Wildlife (DFW). The regulations require that work in the areas mapped as Priority Habitats (PHs) be subject to review and approval by DFW. Portions of the HG&E rights-of-way are located within areas identified as Priority Habitat areas by the Natural Heritage Endangered Species Program (NHESP) of the DFW.

The following notification requirements to NHESP must be observed:

- Prior to work within ROWs containing PH areas, NHESP shall be provided in writing the names and phone numbers of key contacts who will know where work is happening at any given time.
- Within one (1) year from the date of the NHESP approval letter, a written summary (and/or shapefile) of activities which occurred within PH, including locations, dates, a description of vegetation management techniques, and the BMPs which were implemented, shall be submitted to the NHESP.
- Should vegetation management be necessary in areas that are not shown in the YOP mapping, NHESP must be provided with a minimum 72 hour notice.
- Emergency maintenance and repair activities within PHs may be conducted without prior notification, but NHESP must be notified within 24 hours of the onset of such activities through the submission of an "Emergency ROW Work within Priority Habitat" in *Appendix J*. If possible, NHESP should be notified in advance of emergency activities. Note that mitigation may be required for damage done to state-listed species habitat due to emergency activities.

The following procedures must be incorporated for vegetation management within PHs and within portions of the ROWs indicated in the mapping in *Figures 1, 2, 3, 4, 5, 6, 6a, 6b,* and *6c* and *Appendices B and C*:

1. Avoid cutting or applying herbicide to shrubs species (e.g. scrub oak) less than 8 feet tall where possible. Shrubs may be managed:
    a. within a 30-foot diameter area surrounding electrical towers and pole structures
    b. within an existing vehicle access road
    c. to manage taller species growing within a shrub area
    d. to improve access to a work site after review and approval by NHESP
    e. if the shrub species is considered to be an invasive species (see http://www.mass.gov/eea/agencies/dfg/dfw/natural-heritage/land-

protection-and-management/invasive-species/invasive-plants.html for more information on invasive species in Massachusetts)

2. Avoid cutting or applying herbicide to areas dominated by low-growing native shrub species (e.g., lowbush blueberry, huckleberry, sheep laurel, New Jersey tea, sweet-fern).

3. A subset of ROW areas proposed for vegetation management activities are mapped, in part, for the presence of **state-listed snake species**. ***Crew members should be aware that any snakes observed during vegetation management activities may be state-listed and protected species. Direct harm to or capture of these species without a permit from the Division of Fisheries and Wildlife is considered an unauthorized "taking" of a state-listed species and may be punishable by fines or imprisonment (321 CMR 10.06).*** These areas are shown in *Figure 2* as areas with "State Listed Snake Species Habitat", but also include any work around as vaults. Work crews should familiarize themselves with the management requirements in *Appendix I* and *Figure 2*, including:

    f. Mowing shall be avoided in these areas between April 1st and November 1st. If mowing *must* occur between April 1st and November 1st, raising the height of mower blades to greater than 8 inches above the ground will reduce the likelihood of snake mortality, if the mower does not have a weighted stability bar mounted behind the blades.

    g. Maintenance conducted between November 2nd and March 31st poses minimal risk to state-listed snakes and can proceed as described elsewhere in this document.

    h. Any snakes encountered should be avoided by vehicles or heavy equipment.

    i. Crew members should be aware that any snakes observed during vegetation management activities may be state-listed and protected species. Direct harm to or capture of these species without a permit from the Division of Fisheries and Wildlife is considered an unauthorized "taking" of a state-listed species and may be punishable by fines or imprisonment (321 CMR 10.06).

A subset of ROW areas proposed for vegetation management activities in 2024 are mapped, in part, for the presence of **"Data Sensitive Species."** These species are highly susceptible to collection and are therefore of high concern to Natural Heritage. **Information about these species (including presence/absence) cannot be released to anyone else (especially including release to third parties or published) unless such release is agreed to in writing by the Natural Heritage Program (See Massachusetts Public Records law: M.G.L. chapter 66 section 17D).** These include the snake species [redacted].

4. A subset of ROW areas proposed for vegetation management activities are mapped, in part, for the presence of **state-listed reptile and amphibian species** *(Figures 3 and 4)*. These include turtle species ([redacted]) and salamander species ([redacted]). Within areas labeled as "Turtle Habitat" the Best Management Practices (BMPs) described in the document "ROW Vegetation Management in State-listed Turtle Habitat" shall be implemented *(Appendix I)*. These recommendations for turtles include:

    j. Avoiding such areas between April 1st and October 31st. In general, activities associated with vegetation management that are conducted between November 1st and March 31st will pose minimal or no risk to state-listed turtles.

    k. No special conditions are required for hand-cutting target vegetation or for herbicide applications.

    l. Mandatory training for staff conducting vegetation management work within Turtle Habitat from April 1st and October 31st.

    m. For work between April 1st and October 31st, each work crew conducting vegetation management activities with mapped turtle habitat areas must have a designated and NHESP-approved turtle "Team Leader" as described in *Appendix I*.

    n. If at all possible, avoid work between May 25th and July 5th, the prime nesting season for most state-listed turtle species.

    o. If mowing is to occur between April 1st and October 31st, raising the height of mower blades 10 to 12 inches above the ground will reduce the likelihood of

turtle mortality. Preferably, if possible, mow from the center of the utility ROW out toward the forested edges.

p. Immediately prior to mowing, the use of large mechanical operational equipment or driving large equipment off existing roads, visual "turtle sweeps" must be conducted in the work area by trained personnel under the supervision of the turtle "Team Leader" as described in *Appendix I*. Any turtles encountered must be moved a safe distance from the path of the vehicles or heavy equipment in the direction the turtle was oriented when observed and outside of the limit of work (e.g. 250 - 500 feet).

Work within areas labeled as "VP Habitat" shall implement the BMPs described in the document "ROW Vegetation Management in Vernal Pool Habitat" included in *Appendix I.* Specific recommendations include:

a. Work within vernal pools should be avoided if at all possible.

b. Year-round practices include:

    i. Diving of equipment (e.g. trucks and ATVs) is allowed along existing access roads.

    ii. Do not conduct fueling activities within VP Habitat Areas. Chainsaws (and other handheld equipment) may be fueled within the VP Habitat Areas, provided they are fueled down-gradient and at least ten (10) feet away from wetlands areas.

    iii. When possible, avoid running machinery through wetland areas, even during dry periods, to avoid changing the hydrology.

    iv. Avoid adding slash material resulting from vegetation management activities to the wetland areas. Where significant amounts of slash fall into the wetland areas, remove it by hand or some other low-impact method.

    v. Herbicide applications must follow the restrictions in 333 CMR 11.00, Rights of Way Regulations.

c. Vegetation Management conducted between December 1st and February 28th:

i. In general, maintenance activities associated with VMPs that are conducted between December 1st and February 28th will pose minimal or no risk to state-listed amphibians.

d. Vegetation Management conducted between March 1st and November 30th:

i. No mowing or operation of heavy equipment shall occur within the delineated boundaries of wetland areas (hand-cutting and trimming is permitted).

ii. Do not alter or otherwise disturb (e.g. drive over with heavy equipment) existing piles of slash.

Any state-listed reptiles and amphibians that are encountered shall be photographed and reported to the NHESP on "NHESP Animal Observation Form," available at www.nhesp.org and included in *Appendix J*. A Scientific Collection Permit is required to handle state-listed species, and appropriate training of crews will be required if mowing in state-listed turtle habitat will occur without raising the mower blades. Previous experience searching for turtles or appropriate hands-on training with such an experienced person will be required.

5. A subset of ROW areas proposed for vegetation management activities are mapped, in part, for the presence of **state-listed lepidoptera (moth and butterfly) species**. Many state-listed lepidoptera are host-specific, feeding on very specific host plants as caterpillars. Within these ROW areas, extra care should be taken to avoid direct impacts to state-listed plants and lepidoptera by following the recommendations provided in the attached document in *Appendix I*, "Vegetation Management of Existing Right-of-Ways (ROW) in State-listed Plant, Lepidoptera, and Bird Priority Habitats". Vegetation management activities, excluding the broadcast application of herbicides, occurring within these areas between November 2nd and April 14th will pose minimal or no risk to the state-listed plants, moths and butterflies identified in *Figure 5*. For all operation and maintenance activities occurring between April 15th and November 1st within these ROW areas, extra care should be taken to avoid direct impacts to rare plants or moth and butterfly host plants by following the

recommendations presented in the attached document (*Appendix I*) and mapping, including:

q. No herbicides shall be applied to the host plants in Priority Habitat areas identified in the YOP mapping, nor shall herbicides be allowed to reach the host plants when targeting other species. Herbicide application shall avoid grasses/sedges, ferns, or forbs.

r. Mowing of host plants shall be avoided from April 1st to November 15th.

s. Treat as necessary in ROW – where plants important to Lepidoptera do not interfere with the regular maintenance of the ROW, they should not be cut or treated.

t. On a case by case basis, the NHESP may request that Holyoke Gas & Electric employ a trained botanist to survey work areas identified as rare plant or rare moth/butterfly habitat. Botanical surveys shall focus on the state-listed plant species or host plants for state-listed moths/butterflies identified within portions of ROW, but any and all rare plant species found shall be identified, reported, and flagged by the botanist and avoided by the work crews.

6. A subset of ROW areas proposed for vegetation management activities are mapped, in part, for the presence of **state-listed plant species**. In general, vegetation management activities, excluding broadcast application of herbicides, occurring between November 2nd and April 14th pose minimal or no risk to state-listed plant species and can proceed as described elsewhere in this YOP. For activities between April 15th and November 1st, care must be taken to avoid harm to state-listed plant species. Work crews must carefully review the information in *Appendix I* and *Figures 6, 6a, 6b,* and *6c*. Management requirements for these areas include:

    u. Delineate population and avoid – Requires delineation by NHESP-approved botanist and NHESP approval prior to any vegetation management activities

    v. Avoid herbicide on grasses/sedges, ferns or forbs

    w. Avoid herbicide on grasses/sedges, ferns, forbs or vines

    x. Leave unmowed during sensitive dates – April 1 to November 15

A subset of ROW areas proposed for vegetation management activities in 2024 are mapped, in part, for the presence of "Data Sensitive Species." These species are highly susceptible to collection and are therefore of high concern to Natural Heritage. **Information about these species (including presence/absence) cannot be released to anyone else (especially including release to third parties or published) unless such release is agreed to in writing by the Natural Heritage Program (See Massachusetts Public Records law: M.G.L. chapter 66 section 17D).** These species include the vascular plants [redacted].

7. A subset of ROW areas are mapped, in part, for the presence of known [redacted] nesting sites (*Figure 1)*. Within these ROW areas, extra care should be taken to avoid disturbing breeding birds by following the following recommendations:

    y. Avoid work during breeding season, January 1st through August 15th. The breeding season for [redacted] in Massachusetts begins with courtship during late fall or early winter. The entire breeding cycle, from nest construction to fledging of young, lasts 6–8 months.

8. Reporting requirements – NHESP requires the following reporting requirements:

    a. Within one (1) year from the date of the NHESP approval letter, a written summary (and/or shapefile) of activities which occurred within PH, including locations, dates, a description of vegetation management techniques, and the BMPs which were implemented, shall be submitted to the NHESP.

        i. The summary shall include a written summary of the vegetation management activities which occurred within turtle habitat and vernal pool habitat, including dates, approximate work area boundaries, description of vegetation management techniques at each work site, and information on any vernal pools identified, and the BMPs which were implemented by the end of the treatment year.

    b. Observations of state-listed turtles shall be reported within 30 days of each observation.

c. All observed state-listed plants must be identified, reported, and mapped following the guidelines in *Appendix I*.

The following activities that may be related to vegetation management for utility ROWs are exempt from the review requirements outlined in 321 CMR 10.18 through 10.23:

- Observations of state-listed turtles shall be reported within 30 days of each observation.
- Installation, repair, replacement, and maintenance of utility lines (gas, water, sewer, phone, electrical) for which all associated work is within ten feet from the edge of existing paved roads.
- The maintenance or replacement but not the expansion of existing lawns and landscaped areas.

The following activities that may be related to vegetation management for pathway ROWs are exempt from the review requirements outlined in 321 CMR 10.18 through 10.23:

- The maintenance or replacement but not the expansion of existing lawns and landscaped areas.
- Performance of customary land surveying activities, wetland resource area delineations, environmental assessments and investigations performed in accordance with M.G.L. c. 21E, and other customary preliminary site investigations.
- The active management of State-listed Species habitat, including but not limited to mowing, cutting, burning, or pruning of vegetation, or removing exotic or invasive species, for the purpose of maintaining or enhancing the habitat for the benefit of rare species, provided that the management is carried out in accordance with a habitat management plan approved in writing by the Division of Fisheries and Wildlife.

5 Herbicides Proposed Including Application Rates, Carriers, and Adjuvants

Herbicides that may be used on the ROWs during the calendar year 2024 are limited to the following:

Table 3 – Herbicides Proposed for Use

Trade Name	EPA Reg.	Active Ingredient(s)	Application Method	Carrier/ Adjuvant*	Percent Solution	Application Rates
Polaris Herbicide	228-570	Imazapyr	Foliar	Nonionic surfactant	0.05–5%	Manufacturer label recommendations, not to exceed 3 pints/acre every 3rd year OR 2 pints/acre every other year
Rodeo	62719-324	Glyphosate	Foliar	Nonionic surfactant	0.75-10%	Manufacturer's label recommendations; lowest labeled rates
Rodeo	62719-324	Glyphosate	Cut Stump	None (mix with water only)	50-100%	Manufacturer's label recommendations; lowest labeled rates
Escort	352-439	Metsulfuron-methyl	Foliar	Surfactant	0.25%-2%	Manufacturer's label recommendations;

Trade Name	EPA Reg.	Active Ingredient(s)	Application Method	Carrier/ Adjuvant*	Percent Solution	Application Rates
						lowest labeled rates
Garlon 4	62719-40	Triclopyr, butoxyethyl ester	Foliar & Cut Stump	Surfactant	0.25–50%	Manufacturer's label recommendations, Lowest of the following rates: lowest labeled rate or 0.5 pints/acre between 10 – 50 feet of resource; Lowest labeled rate or 3.0 pints/acre between 50 feet and boundary of spray area
Garlon 4 Ultra	62719-527	Triclopyr, butoxyethyl ester	Foliar & Cut Stump	Surfactant	0.25–50%	Manufacturer's label recommendations, Lowest of the following rates: lowest labeled rate or 0.5 pints/acre between 10 – 50 feet of resource; Lowest labeled rate or 3.0 pints/acre between 50 feet

Trade Name	EPA Reg.	Active Ingredient(s)	Application Method	Carrier/ Adjuvant*	Percent Solution	Application Rates
						and boundary of spray area
Cambistat	74779-3	Paclobutrazol	Soil Injection & Basal Drench	None (mix with water only) Non-ionic, organosilicone surfactant for high clay content or compacted soils	8.33%	Manufacturer's label recommendations; lowest labeled rates

*Adjuvants and drift control agents may be included in application mixtures according to label requirements.

6 Herbicide Application Techniques and Alternative Control Procedures Proposed

Vegetation along the ROWs will involve IPM, including mechanical control methods (e.g., hand cutting, mowing, and selective trimming) and chemical control (e.g., foliar herbicide treatments and cut stump treatments). The method chosen for a given vegetation problem will attempt to achieve a long-term, low maintenance vegetation management program through the encouragement of a stable herbaceous community.

Hand Cutting

Hand cutting consists of the mechanical cutting of target species using chain saws or brush cutters. Target species are cut as close to the ground as practical with stump heights usually not exceeding three inches. Hand cutting is used in order to protect environmentally sensitive sites or on target vegetation greater than twelve feet tall where herbicide use is prohibited by regulation. Hand cutting is used on those restricted sites where terrain, site size, or sensitivity renders mowing impossible or impractical. Hand cutting may be used at any time of the year.

Mowing

Mowing consists of the mechanical cutting of target vegetation using machines. Depending upon the resources available, mechanical cutting may be made using a consumer-type push mower, a large self-propelled or rider mower, brush hog, edgers, and "Weed Whackers". Selection of specific equipment is based on terrain, target vegetation size and equipment availability. Mowing is used on sites where herbicide use is prohibited by regulation, where a large number of target species stems have exceeded maximum control heights, or where access is inhibited by high woody vegetation density and that access is required in the short term. The use of mowing as a treatment method is restricted by steep slopes, rocky terrain, and wet sites with deep soft soils. Mowing shall be used in most areas where terrain, site size and sensitivity permit efficient use of the equipment. Mowing may be used at any time of the year except when snow precludes operations.

Selective Trimming

Selective trimming consists of the mechanical pruning of the tops or encroaching limbs of trees. This trimming will be accomplished using aerial lifts mounted on trucks or tractors or, if terrain or obstructions prevent equipment access, climbing crews.

Foliar Treatments

Foliar treatments involve the selective application of an herbicide diluted in water to the foliage of target vegetation. The two types of equipment used for foliar treatments are the hand-held pump sprayers and motorized truck-mounted sprayer. Both treatments use low pressure (i.e., below 60 psi at the nozzle) for application. Foliar treatments with hand-held pump sprayers are used on low-density target vegetation. Motorized application equipment is used on higher density target vegetation. Truck-mounted hydraulic sprayers are used to apply the herbicide solution to lightly wet the target plant.

Foliar treatments are used on woody plants, grasses, weeds and conifer species. Only hardwood species less than 12 feet in height will be foliar herbicide treated. Treatments will take place when plants are in full leaf and actively growing, or in accordance with the manufacturer's recommendations. Foliar treatments are incorporated into the VMP because, when used according to the HG&E application program, they are an effective and

efficient method to control the whole target plant. Controlling the whole target plant reduces competition from sprout growth.

Cut Stump Treatment

Cut stump treatments consist of mechanical cutting of target species using chain saws immediately followed by a herbicide treatment applied with a squirt bottle or painted on the freshly cut surface of the stump within 2 hours after cutting. The herbicide is limited to the freshly cut surface of the remaining stump. The cutting procedure is identical to the outlined in Hand Cutting. Hardwoods greater than 12 feet tall will be cut stump treated. Cut stump application is preferred during the dormant period.

Soil Injection

Soil injection is the injection of herbicide into sites at the base of the tree. The number of injection sites is based on manufacturer's instructions. The required dose is divided evenly among injection sites and spaced uniformly around the base of the tree close to the point of contact between the soil and the tree. The number of injection sites, depth of injection, volume of herbicide and pressure used for application should follow manufacturer's directions.

Basal Drench

Basal drench is the application of herbicide into a small trench at the based on the target tree. The tree and soil should be inspected and treatment should not occur if severe trunk injury or significant girdling of roots are present. If the soil is saturated with water, treatment should be delayed until soil dries out. Tree species need to be accurately identified in order to determine dosage based on manufacturer's directions. For application, a small trench is excavated around base of the tree that is a minimum of 4 inches deep and 3 inches wide; deeper if there is a potential of herbicide moving to other plants, or if the soil is a heavy clay or is compacted. Excavated soil should be kept on the outside of the trench. The proper herbicide dose should applied slowly and evenly around the whole tree. After the herbicide is completely absorbed into the soil, excavated soil should be firmly packed down in the trench to prevent runoff.

Vista Pruning

Vista pruning, as defined in 310 CMR 10.04, is the selective thinning of tree branches of understory shrubs to establish a specific "window" to improve visibility. Vista pruning does not include the cutting of trees which would reduce the leaf canopy to less than 90% of the existing crown cover and does not include the mowing or removal of understory brush. Vista pruning activities in the Lower Riverside Park will be conducted from the bottom of the slope. Cutting will be minimized by evaluating the visual effects of cutting practices as work is conducted.

7 Companies which will Perform Herbicide Treatment

One or more of the following companies will apply herbicides, under contract to HG&E. All applicators will be appropriately licensed and will be supervised on site by personnel possessing a ROW category license (Cat.40). The specific company or companies will be identified in the notification given at least 21 days prior to herbicide treatment, in accordance with 333 CMR 11.07, Public Notification.

Asplundh Tree Expert Co.

P.O. Box 207 (1044 Main Street)

East Windsor, CT 06088

(860) 292-8700

Northern Tree Service

1290 Park

Palmer, MA 01069

(413) 596-6132

Mountain View Landscape

67 Old James Avenue

Chicopee, MA 01020

(413) 536-7555

All Reliable Services, Inc.

159 Hampton Point Drive

Lewis Tree Service, Inc.

89 Brookfield Rd.

Brookfield, MA 01010

(413) 245-6166

Contact: Walt Dodge

CMS Landscaping

175 Suffolk Street,

Holyoke, MA 01040

(413) 533-3300

Contact: Bob Cameron

B&J's Lawn Care

14 Ernest Lane,

Holyoke, MA 01040

(413) 532-8355

Contact: Bob McKenzie

St. Augustine, FL 32092

(267) 648-3653

8 Identification of Target Vegetation

For the purpose of this plan, plant species are divided into two groups, undesirable species that have the potential to impede access to public pathways or fault overhead conductors on the ROW or are capable of damaging or interfering with physical and visual access to above-ground lines and equipment for inspection, maintenance and repair, and desirable species which cannot. It is the responsibility of the vegetation control contractor to be knowledgeable about and to instruct crews in the identification of desirable and undesirable species and the various herbicide control techniques necessary for integrated vegetation management. In general, undesirable species include trees, tall maturing shrubs, and vines. This includes, but is not limited to the following species:

Common Name	Scientific Name
Grape Vines	*Vitis* spp.
Virginia creeper	*Parthenocissus quinquefolia*
Poison ivy	*Toxicodendron radicans*
Mulberry	*Morus* spp.
Staghorn sumac	*Rhus hirta*
White ash	*Fraxinus americana*
Cottonwood	*Populus deltoides*
Poplar	*Populus* spp.
Silver maple	*Acer saccharinum*
Red oak	*Quercus rubra*
American elm	*Ulmus americana*
Russian olive	*Elaeagnus angustifolia*
Box elder	*Acer negundo*
Black cherry	*Prunus serotina*
Black birch	*Betula lenta*
Japanese bamboo	*Polygonum cuspidatum*
Dogwood	*Swida* spp.
Black Locust	*Robinia pseudoacacia*
Norway maple	*Acer platanoides*
Northern catalpa	*Catalpa speciosa*
Tree of Heaven	*Ailanthus altissima*

Common Name	Scientific Name
Autumn olive	*Elaeagnus umbellata*
Japanese barberry	*Berberis thunbergii*
Exotic bush honeysuckle	*Lonicera* spp.
Oriental bittersweet	*Celastrus orbiculata*

Control of woody species is critical because they have the potential to short circuit overhead electrical conductors on the ROWs. Removal of other invasive species is necessary to facilitate physical and visual access to the ROW for inspection, maintenance and repair.

Desirable species in the ROWs typically include low maturing shrubs (less than 12 feet), ferns, grasses, herbs, and wildflowers. In the 10-foot radius surrounding the gas distribution vaults, only low-growing grasses are desirable.

9 Individuals Representing Applicant Supervising YOP

The applicant is represented by Fuss & O'Neill, Inc. The contact person at Fuss & O'Neill is:

Matthew Kissane

Senior Geologist

Fuss & O'Neill, Inc.

1550 Main Street, Suite 400

Springfield, MA 01103

Telephone: 413-333-5472

mkissane@FandO.com

The individual responsible for supervision of the YOP implementation is:

Christopher Perry

Environmental, Health and Safety Coordinator

Holyoke Gas & Electric Department

102 Cabot Street

Holyoke, MA 01040

Cell: 413-563-9818

Office: 413-322-1575

Fax: 413-536-9315

Email: CPerry@hged.com

10 Procedures and Locations for Handling, Mixing, and Loading Herbicide Concentrates

No herbicide concentrates shall be handled, mixed or loaded on a ROW within 100 feet of a sensitive area. The following guidance is provided for the handling, mixing and loading of herbicide concentrates.

1. Follow all manufacturers' label directions.
2. Wear protective clothing as specified on the manufacturer's label, i.e., rubber gloves, hat, respirator, goggles, face shield.
3. Immediately change clothes if herbicide concentrate is spilled or splashed on clothing.
4. Have soap and water available for cleanup.
5. While pouring herbicides, keep head above the container opening and positioned so that winds do not carry concentrate onto face or body.
6. Do not overfill sprayer.
7. Triple rinse empty containers and use the rinsings when possible.

In order to minimize the potential for spills of herbicide concentrate and mitigate the impact of any accidental spills, the following procedures will be followed.

Only the amount of herbicide necessary to carry out the vegetation control, based on the monitoring results, will ensure that there will be no waste and minimize potential problems. Any vehicle carrying out a spray operation will be equipped with a bag of adsorbent, activated charcoal, leak-proof containers, a broom, and a shovel in case of minor spills. A clipboard log of the herbicides will be kept on the vehicle. Herbicide labels and fact sheets should be carried on-site by the applicator.

As soon as any spill is observed, immediate action will be taken to contain the spill and protect the spill area. The cause of the spill must be identified and secured. Spill containment will be accomplished by covering the spill with adsorptive clay or other adsorptive material or, for large spills, building clay or soil dikes to impede spill progress. Until completely clean, protection of the spill area will be accomplished by placing barriers, flagging or a crewmember at strategic locations. If a fire is involved, care will be taken to avoid breathing fumes from any burning chemicals.

EMERGENCY CONTACTS

In the event of a spill or emergency, information on safety precautions and cleanup procedures may be gathered from the following sources:

Source	**Telephone Number**
Herbicide Label	See *Appendix F*
Herbicide Fact Sheet	See *Appendix D*
Herbicide Material Safety Data Sheet	See *Appendix F*
Herbicide Manufacturer	
Dow AgroSciences (Rodeo and Garlon 4)	(800) 992-5994
DuPont (Escort)	(800) 441-3637
NuFarm Americas Inc. (Polaris Herbicide)	(800) 345-3330
Rainbow Treecare Scientific Advancements (Cambistat)	(877) 272-6747
Holyoke, Chicopee, and South Hadley Fire and/or Police Departments	911
Holyoke Gas & Electric Department (EH&S Coordinator)	(413) 563-9818
Holyoke Board of Health	(413) 322-5595
Holyoke Conservation Commission	(413) 322-5615
Chicopee Health Department	(413) 594-1660
Chicopee Conservation Commission (Planning Dept.)	(413) 594-1515
South Hadley Board of Health	(413) 538-5017 ext. 204
South Hadley Conservation Commission	(413) 538-5017 ext. 208
Holyoke Medical Center	(413) 534-2500
Massachusetts Pesticide Program	(617) 626-1784
Massachusetts Dept. of Environmental Protection (DEP)	(413) 784-1100
Massachusetts Dept. of Public Health, Environmental Toxicology Program	(617) 624-5757
Massachusetts Poison Control Center	(800) 222-1222

CHEMTREC	(800) 262-8200
US Environmental Protection Agency (EPA)	
National Pesticide Information Center	(800) 858-7378

Figures

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Appendix A

Vegetation Management Plan 2024-2028

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Appendix B

Gas & Electrical Transmission/Distribution ROW Maps

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Appendix C

Canal Right of Way Map

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Appendix D

Herbicide Fact Sheets

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Appendix E

Methods for Flagging in Sensitive Areas

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Appendix F

Herbicide Labels and SDSs

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Appendix G

HG&E Summary of Canal Wall Maintenance Responsibilities

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Appendix H

Endangered and Threatened Species Protection Plan

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Appendix I

NHESP Management Recommendations

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Appendix J

NHESP Species Observation Forms and Emergency Work Form

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Appendix K

Well Area/List

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Appendix L

Public Notice and MDAR YOP Approval Letter

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Appendix M

Lower Riverside Park ROW Map

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Appendix N

Gatehouse Park ROW Map