



KYTC District 4 Pesticide Discharge Management Plan

2015

for KPDES Permit KYG99



Developed by:
Kentucky Transportation Cabinet,
Division of Maintenance
and the Division of
Environmental Analysis



Pesticide Discharge Management Plan (PDMP)

For KPDES KYG99

KYTC District 4

State Maintained Highways and Rights-of-Way in Breckinridge, Grayson, Green, Hardin, Hart,
Larue, Marion, Meade, Nelson, Taylor, and Washington Counties

634 East Dixie Highway
Elizabethtown, KY 42701

Decision-maker(s):

KYTC District 4

Patty Blain Dunaway, Chief District Engineer

634 East Dixie Highway
Elizabethtown, KY 42701
270-766-5066

PDMP Contact(s):

KYTC District 4

Bennie Warren, Roadside Environment District Administrator

634 East Dixie Highway
Elizabethtown, KY 42701
270-766-5066

PDMP Preparation Date:

November 2015

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SECTION 1: OPERATOR INFORMATION

1. Provide a brief description of the Pest Management Area(s).

The Pest Management Areas for District Four are the state maintained highways and rights-of-way in Breckinridge, Grayson, Green, Hardin, Hart, Larue, Marion, Meade, Nelson, Taylor, and Washington Counties.

These are shown in **Exhibit 1, *Map of Kentucky*** and **Exhibit 2, *District Map***.

2. Identify the Pesticide Use Patterns for this Pest Management Area that triggers the requirement to develop a Pesticide Discharge Management Plan. (Check all that apply).

NOTE: Decision-makers, that are a large entity, are required to develop a PDMP.

- | | | | |
|-------------------------------------|--|--------------------------|---------------------|
| <input type="checkbox"/> | Mosquitoes and Other Flying Insect Pests | <input type="checkbox"/> | Animal Pests |
| <input checked="" type="checkbox"/> | Weeds and Algae | <input type="checkbox"/> | Forest Canopy Pests |

3. Operator Type (check one):

- Federal government
- State government
- Local government
- Mosquito control district (or similar)
- Irrigation control district (or similar)
- Weed control district (or similar)
- Other (provide brief description of type of Operator):

SECTION 2: PDMP TEAM

1. **Decision-maker:** *Any entity with control over the decision to perform pesticide applications including the ability to modify those decisions.*

Company or Organization Name: KYTC District 4
Name: Patty Blain Dunaway
Address: 634 East Dixie Highway

City, State, Zip Code: Elizabethtown, KY 42701

Telephone Number: 270-766-5066
Email Address: Patty.Dunaway@ky.gov
Fax Number: 270-766-5069
Area of Control (if more than one Operator at site):

2. **PDMP Contact:** *Person(s) who should be contacted regarding PDMP questions.*

Company or Organization Name: KYTC District 4
Name: Bennie Warren
Address: 634 East Dixie Highway
City, State, Zip Code: Elizabethtown, KY 42701
Telephone Number: 270-766-5066
Email Address: Bennie.Warren@ky.gov
Fax Number: 270-766-5069
Area of Control (if more than one Operator at site):

See District PDMPs.

3. **PDMP Preparer:** *Person(s) responsible for developing and revising the PDMP.*

Company or Organization Name: KYTC Division of Maintenance and Division of Environmental Analysis
Name: Mike A. Smith, Roadside Environment State Administrator
Address: 200 Mero Street
City, State, Zip Code: Frankfort, KY 40622
Telephone Number: 502-564-4556
Email Address: MikeA.Smith@ky.gov
Fax Number: 502-564-3532
Area of Control (if more than one Operator at site):

See District PDMPs.

SECTION 2: PDMP TEAM

4. Please include any additional team members and their responsibilities.

Team Member Name(s)	Individual Responsibilities
Bennie Warren	Roadside Environmental District Administrator
Paul Hayse	Agronomy Special Crew Superintendent
Joe Ferguson	Environmental Coordinator
Steve Hall	Engineering Support Branch Manager
Roadside Environmental District Administrator (REDA)	Assures compliance with permits is maintained during all aspects of selection, storage, handling and application of pesticides.
Central Office (CO) Division of Environmental Analysis	Produces the <u><i>KYTC Environmental Handbook for Maintenance of Highways and Transportation Facilities (Environmental Handbook)</i></u> that contains basic information regarding pesticide storage and handling at facilities and guidance in the event of a spill and fact sheets for proper storing, handling, delivery and use of pesticides.
CO Division of Maintenance Roadside Environment Branch	Develops statewide roadside vegetation management programs, develops contracts for pesticide materials and pesticide application services, develops specifications for pesticide application equipment, supervises the UK Vegetation Management Research Program, conducts pesticide test trials, and provides pesticide recommendations and other technical expertise for the REDAs.
David Cornett	Assistant Director of Maintenance and State Roadside Manager; supervises District Liaisons.
Roadside State Administrator	Responsible for establishing guidelines and procedures for storing, handling and using pesticides for Vegetation Management (See

SECTION 2: PDMP TEAM

the Kentucky Transportation Cabinet (KYTC) Pesticide Manual and Maintenance Manual).

Mike A. Smith

Roadside Environment Branch District Liaison for Districts 5, 6, 10 and 12.

John Mucci

Roadside Environment Branch District Liaison for Districts 3, 4, 7, and 9.

Steve Kempf

Roadside Environment Branch District Liaison for Districts 1, 2, 8, and 11.

Exhibit 1 shows a map of Kentucky with the 12 district offices and their counties and depicts how the KYTC is organized geographically. **Exhibit 2** is a map of the district being addressed in this particular PDMP and more clearly shows the counties and the significant roadways.

SECTION 3: PROBLEM IDENTIFICATION

3.1 PEST PROBLEM DESCRIPTION

1. Provide a brief summary of the pest problem in the table.

SUMMARY OF THE PEST PROBLEM		
TARGET PEST(S) <i>Note: Use Common Name</i>	SOURCE OF THE PEST PROBLEM	DATA SOURCE <i>(e.g. Survey Conducted in 2010)</i>
Noxious Weeds Nuisance Weeds Exotic Invasive Plants Trees and Brush	Statutory Requirement Highway Safety Highway Construction and Maintenance Highway Beautification	Historical Pests Integrated Roadside Vegetation Management Plans (IRVM) Pesticide Field Reports Windshield Surveys Citizen Complaints Exotic Plant Invasions Early Detection & Distribution (EDD) Maps

2. Provide a brief description of the pest problem.

Noxious weeds, nuisance weeds, exotic invasive plants, and trees and brush are all pests targeted by the Kentucky Transportation Cabinet. The Noxious Weed Law [KRS 176.051](#) requires KYTC to control the following eleven designated weed species on highway rights-of-way:

- Nodding (Musk) Thistle
- Canada Thistle
- Johnson Grass
- Giant Foxtail
- Multi-Flora Rose
- Poison Hemlock
- Maretail
- Kudzu
- Japanese Knotweed
- Amur Honeysuckle
- Common Teasel

Nuisance weeds are defined as any plant species whose presence is incompatible with the right-of-way vegetation management zone where it is located. Since it is theoretically possible for any plant species to be considered a nuisance weed in a given setting, it would not be practical to list all nuisance weeds.

Exotic invasive plants are not native to Kentucky. They have been documented to reproduce and spread aggressively into both natural and disturbed areas including highway rights-of-way where they invade and displace desirable vegetation and whose presence is a threat to biological diversity and environmental quality. See **Exhibit 3**, the official [***Kentucky Exotic Pest Plant List***](#).

SECTION 3: PROBLEM IDENTIFICATION

3.1 PEST PROBLEM DESCRIPTION

Trees and brush encroaching onto highway rights-of-way reduce motorist visibility, may become hazardous and fall into the roadway, damage bridges and embankments, limit the effectiveness of deicing chemicals, and are obstacles in roadway recovery zones.

Since there are hundreds of species of trees and brush that can encroach on highway rights-of-way, it is not practical to list the species.

Guidelines for weed & brush control are shown in **Exhibit 4, MAIN-703, Roadside Agronomy Program**.

SECTION 3: PROBLEM IDENTIFICATION

3.2 ACTION THRESHOLD(S)

1. Provide a brief summary of the action threshold(s) in the table.

SUMMARY OF ACTION THRESHOLD(S)	
TARGET PEST(S)	ACTION THRESHOLD(S)
Noxious Weeds Nuisance Weeds Exotic Invasive Plants Trees and Brush	These are based upon prior surveys and experience to properly maintain the KYTC maintained highways for safety, usability & aesthetics.

2. Provide a brief description of the action threshold(s).

- **Pest Management Objective:** Safety, highway usability and aesthetics.
- **Target Pest:** See the list in **Section 3.1**.
- **Action Threshold:** See statement in table above.
- **Basis for the action threshold:** Line of sight is one basis for vegetation along roadside and rights-of-way.
- **Method to determine when the action threshold has been met:** Test drive the road to confirm line of sight improvement and compliance.

SECTION 3: PROBLEM IDENTIFICATION

3.3 GENERAL LOCATION MAP

A general location map for District Four is presented in **Exhibit 1, *Map of Kentucky*** and **Exhibit 2, *District Map***.

SECTION 3: PROBLEM IDENTIFICATION

3.4 WATER QUALITY STANDARDS

There are five Tier 3 Waters per our review of the Environmental Protection Agency (EPA) provided listing. Kentucky has Special Use Waters that must be protected from all pollution including pesticides. Both Tier 3 Waters and Special Use Waters of the Commonwealth are delineated in [401KAR 10:026](#) and [10:030](#).

There are no waters of the Commonwealth that are impaired for the pesticides used or their degradates.

The location of the waters of the Commonwealth, including wetlands that could reasonably be impacted by our application of pesticides as depicted in **Sections 3 and 4** are illustrated in **Exhibit 5, Hardin County Pesticide PDMP Waterways Map** and are stored electronically for each of the counties at the following KYTC location:

S:\Projects\Enviro\DEA_Share\PesticidePermit\COUNTIES.

These Waters are also shown in Projectwise which may be accessed at:

ProjectwiseExplorer>KYTC-Main>Documents>CentralOffice>EnvironmentalAnalysis>KYDPES KYG99>CountyMaps>District 1-12.

Central office and district team members may request electronic access to the location maps through the [CO Division of Environmental Analysis](#).

Location maps for Outstanding National Resource Waters, Outstanding State Resource Waters (OSRW) and other Special Use Waters may also be found on the [Kentucky Division of Water website](#).

SECTION 4: PEST MANAGEMENT OPTIONS EVALUATION

1. **Provide a brief description of the pest management options (include impact to water quality, impact to non-target organisms, feasibility, cost effectiveness and any relevant previous Pest Management Measures).**

- **Target Pest:** Noxious Weeds, Nuisance Weeds, Exotic Invasive Plants, Trees and Brush
- **No Action:** Due to the statutory requirement, this is not an option regarding noxious weeds, but there are circumstances where no action is taken to control nuisance weeds, exotic invasive plants, and trees and brush. Factors which may influence this decision are availability of effective controls, funding, staffing, local acceptance of pesticide use, target species prioritization, traffic control requirements, and level of infestation. The impact to water quality and non-target organisms of taking no action is not necessarily nominal. Uncontrolled spread of noxious weeds, nuisance weeds, and exotic invasive plants may completely alter the ecosystem to the point where soil erosion may occur and critical habitat is lost. This option may be feasible in the short-term for these species, but much greater costs will be incurred in future years once infestations are established. There are examples of such experiences in the history of KYTC where a short-term pause in vegetation management had detrimental effects.

Policies governing the KYTC roadside vegetation maintenance program including the pesticide, mowing, tree and brush, and pesticide training programs and sprayer equipment operation are covered in **MAIN-700**.

KYTC Districts are required to submit an annual plan for maintenance of all vegetation. See **MAIN-702, *Vegetation Management: Planning* (Exhibit 6)** and ***Sample Vegetation Management Plan* (Attachment A)**.

- **Prevention:** This is an important component of KYTC's integrated roadside vegetation management program which includes several measures to prevent the spread of noxious weeds, nuisance weeds, exotic invasive plants, trees and brush. Proper maintenance of a healthy roadside turf through the use of timely mowing, fertilization, seeding, and herbicide application is the best prevention for spread of noxious weeds, nuisance weeds, exotic invasive plants, trees and brush. Contract mowing sanitation requirements, use of cellulose fiber mulches instead of straw, use of pre-emergence herbicides, and use of high quality seed for vegetation establishment are all preventative controls used by the Department. Preventative measures can be very cost effective with little to no impact on water quality and non-target organisms and have historically been successful.
- **Mechanical/Physical Methods:** Right-of-way mowing is KYTC's primary mechanical method of weed control. Tillage and cultivation are used to a very limited extent, but only on wildflower establishment sites. Mechanical methods such as right-of-way mowing are the most expensive, may encourage soil erosion, disrupt both plant and animal non-target organisms and are the least sustainable of all control methods.

SECTION 4: PEST MANAGEMENT OPTIONS EVALUATION

- **Cultural Methods:** The use of KY 31 Tall Fescue, a vigorous and aggressive turfgrass species along with a good fertilization program is KYTC's primary cultural control method. Cultural methods have moderate impact on water quality, non-target species, are moderately expensive and have a long history of success.
- **Biological Control Agents:** KYTC has facilitated the release of insect biological agents for both nodding thistle and purple loosestrife. The effectiveness of these varies from location to location, but they have made a significant impact on reducing nodding thistle populations. These are very low cost methods that have a low impact on non-target species with no impact on water quality and a history of good success.
- **Pesticides:** Pesticides are a moderately expensive, cost-effective control method that when used properly have minimal impact on water quality and non-target species with a history of good success. Guidance on the administration, use, and application of pesticides and MSDS sheets for all pesticides KYTC utilizes in its vegetation management program may be found at on the [CO Division of Maintenance Roadside Environment Branch website](#).

2. Provide a summary of Pest Management Measures that will be or are implemented to meet the technology-based effluent limitations.

Target Pest: Noxious Weeds

Pest Management Measures: The use of strategically-timed mechanical mowing, mowing equipment sanitation, use of weed-free seed in turfgrass establishment, insect biological control, mechanical ditch maintenance, and policies are all measures utilized by KYTC to minimize the need for herbicide applications.

Target Pest: Nuisance Weeds

Pest Management Measures: The use of strategically-timed mechanical mowing, mowing equipment sanitation, use of weed-free seed in turfgrass establishment, insect biological control, mechanical ditch maintenance, and policies are all measures utilized by KYTC to minimize the need for herbicide applications.

Target Pest: Exotic Invasive Plants

Pest Management Measures: The use of strategically-timed mechanical mowing, mowing equipment sanitation, use of weed-free seed in turfgrass establishment, insect biological control, mechanical ditch maintenance, and policies are all measures utilized by KYTC to minimize the need for herbicide applications.

SECTION 4: PEST MANAGEMENT OPTIONS EVALUATION

Target Pest: Trees and Brush

Pest Management Measures: The use of strategically-timed mechanical mowing, mechanical removal methods, mowing equipment sanitation, use of weed-free seed in turfgrass establishment, insect biological control, mechanical ditch maintenance, proper right-of-way tree species selection, and policies are all measures utilized by KYTC to minimize the need for herbicide applications.

SECTION 5: RESPONSE PROCEDURES

5.1 SPILL RESPONSE PROCEDURES

Spill Containment

Spill containment shall follow the procedures as prescribed in the KYTC Environmental Handbook, MAIN-700 of the Maintenance Guidance Manual and **Exhibit 7, *Spill Response Plan*** includes parts (A), ***Pesticide Spill Emergency Contacts List***, (B) ***Spill Response Fact Sheets***, and (C) ***Spill or Pollution Documentation and Reporting***.

KYTC applicators are properly trained and certified in compliance with the [Federal Insecticide Fungicide, and Rodenticide Act \(FIFRA\)](#). Pesticide manufacturer labels as well as the Material Safety Data Sheets (MSDS) are used to determine proper use of personal protective equipment (PPE) and apparel, how to properly apply the pesticide, how to detect a spill or Adverse Incident (AI), and how to apply the absorbent materials provided in our spill kits to mitigate any environmental damage due to a spill. Spill response and cleanup would be contracted out to qualified contractors if the Office of Safety and Health Administration (OSHA) trained HazMat responders are required to handle pesticides with hazardous “active ingredients” listed. In general, the following thresholds shall be used to determine when a HazMat spill cleanup contractor that meets all applicable regulatory requirements, including the OSHA 29CFR1910.120 training requirements, should be called in to cleanup a pesticide spill. These thresholds are: (1) All pesticide tank mix spills greater than 25 gallons, and (2) all pesticide concentrate spills greater than 5 gallons. As always, the information provided in the Label and MSDS for each pesticide should be followed prior to responding to a spill to prevent it’s discharging into the Waters of the Commonwealth and prior to cleanup and remediation of the contaminated materials associated with the spill.

The Spill Response Team will consist of the applicator, County Superintendent I or II, REDA, Section Supervisor (or designee) and the Section Engineer. Each district has a Facility Maintenance Environmental Coordinator (FMEC) that may be appointed to this team. Each district Section Supervisor has three to four counties within their district. The ***Spill Response Plan*** for each district will incorporate the procedures set forth in the above referenced documents (**Exhibit 7**). The Applicators that apply various pesticides under the auspices of the Section Supervisor and the REDA are trained on how to and when not to respond when OSHA trained HazMat responders are required. Notification and containment procedures should be specific to how the pesticide operation in each county is organized and how this fits into the overall organization of the district and how the districts are organized in KYTC Department of Highways.

All of the critical elements for spill response procedures and a description of our pesticide spill kits are included in one of the KYTC training programs entitled ***Pesticide Spill Response*** (**Exhibit 8**).

Spill Notification

Districts should use the ***Pesticide Spill Emergency Contacts List, Exhibit 7 (A)*** to notify personnel of pesticide spills. Each district shall follow the guidelines shown in **Exhibit 7 (B), *Spill Response Fact Sheets*** (5.1, 2005 edition and 5.3, 2008 edition) of the KYTC Environmental Handbook.

For pesticide spills exceeding reportable quantities (See 40 CFR 302 and the ***Pesticides Reportable Quantities List, Exhibit 9***) or into or next to the Waters of the Commonwealth, the Applicator (or witness) will first attempt to prevent or minimize the spill’s entrance to or impact on the waterway, if

SECTION 5: RESPONSE PROCEDURES

5.1 SPILL RESPONSE PROCEDURES

they can safely do so then immediately contact the Spill Response Team to provide the details of the spill as well as other information required by FIFRA.

SECTION 5: RESPONSE PROCEDURES

5.2 ADVERSE INCIDENT RESPONSE PROCEDURES

Responding to an Adverse Incident

An Adverse Incident (AI) is defined as a spill that includes toxic or adverse effects on non-target species due to improper application of a pesticide or an accidental incident.

An AI involving the toxic or adverse impact on the surface waters shall follow the same procedures as described in **Section 5.1**.

All AIs shall be documented and reported in accordance with the FIFRA, Section 6(a) (2), Clean Water Act (CWA), and 40CFR part 159. All AIs shall be submitted to the appropriate Kentucky Division of Water (KDOW) Regional Office within thirty days of the incident.

Notification of an Adverse Incident

Notification of an Adverse Incident (AI) shall follow the procedure as described in **Section 5.1**. (See **Exhibit 7(A), Pesticide Spill Emergency Contacts List**).

SECTION 6: DOCUMENTATION TO SUPPORT ELIGIBILITY CONSIDERATIONS UNDER OTHER FEDERAL LAWS

This is not required by the Kentucky Division of Water (KDOW) Kentucky General Permit (KYG99). (See Attachment B, *KYG99 Pesticide KPDES Permit*)

SECTION 7: SIGNATURE REQUIREMENTS

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the application of pesticides, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: _____ Title: _____
Signature: _____ Date: _____

See Delegation of Authority (Attachment C) and Subcontractor Certification (Attachment D).

SECTION 8: PDMP PLAN MODIFICATIONS

Please see **Exhibit 10, *Annual Reports and Other Record Keeping***, **Exhibit 11, *Corrective Action Log*** and **Exhibit 12, *PDMP Amendment Log***.

SECTION 9: PDMP AVAILABILITY

The Pesticide Discharge Management Plan is available by contacting the Roadside Administrator and Environmental Coordinator in the District Office or the Division of Maintenance and the Department of Environmental Analysis in Central Office.

TABLE OF EXHIBITS

<u>Exhibit Number</u>	<u>Exhibit Title</u>	<u>Plan Reference (pg. #)</u>
Exhibit 1	Map of Kentucky (12 Districts)	3, 6, 10
Exhibit 2	District Map	3, 6, 10
Exhibit 3	KY Exotic Pest Plant List	7
Exhibit 4	MAIN-703, <i>Vegetation Management: Roadside Agronomy Program</i>	8
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Exhibit 6	MAIN-702, <i>Vegetation Management: Planning</i>	12
Exhibit 7	Spill Response Plan (A) Pesticide Spill Emergency Contacts List	15, 16
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ATTACHMENTS

Attachment A..... D-4 Vegetation Management Plan

Attachment B..... KYG99 Pesticide KPDES Permit

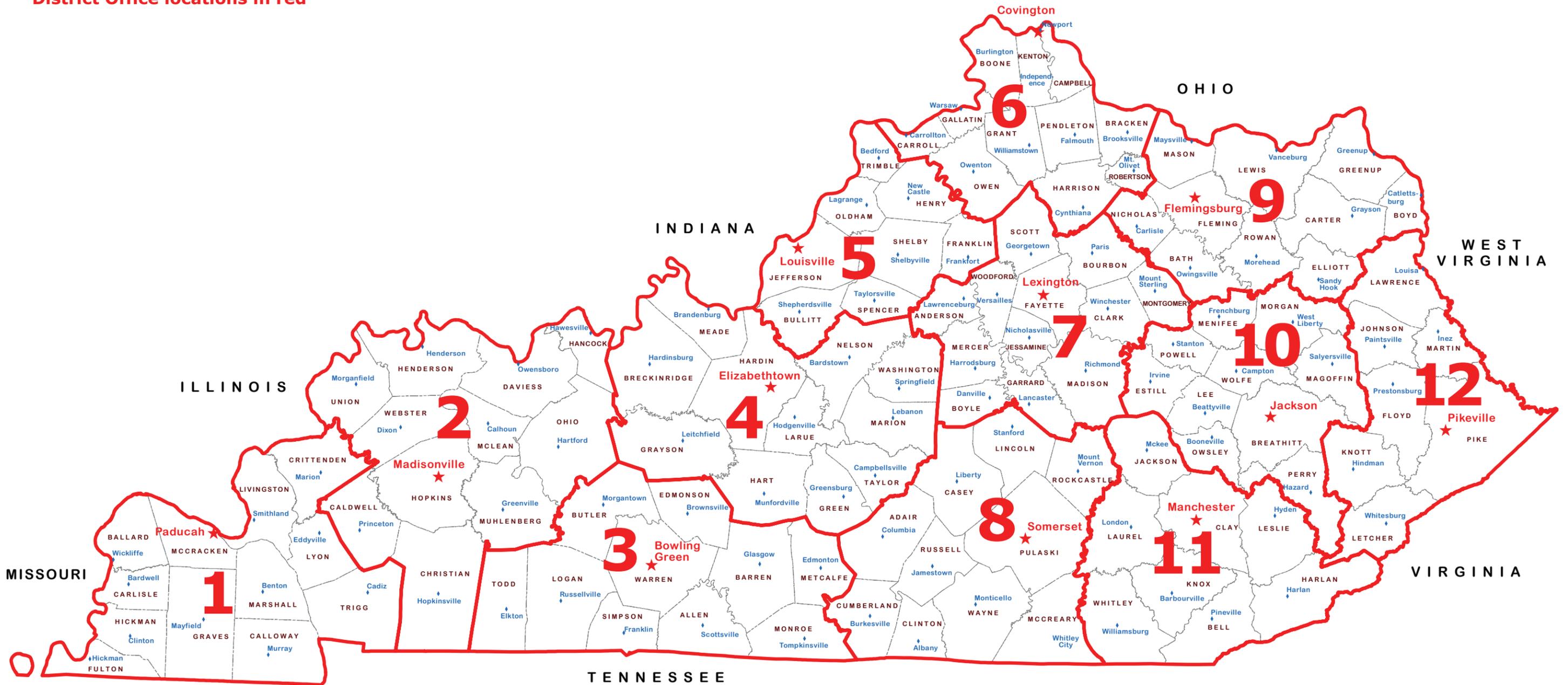
Attachment C..... Delegation of Authority

Attachment D Subcontractor Certification

KENTUCKY TRANSPORTATION CABINET HIGHWAY DISTRICTS



District Office locations in red



Division of Planning

EXHIBIT 2: DISTRICT MAP



- Functional Classification**
- Rural Interstate
 - Rural Principal Arterial
 - Rural Minor Arterial
 - Rural Major Collector
 - Rural Minor Collector
 - Urban Interstate
 - Urban Freeways & Expressways
 - Urban Principal Arterial
 - Urban Minor Arterial Street
 - Urban Collector Street
 - Rural & Urban Local
 - CS-0000 Functionally Classified Road No.
 - Bridge
 - Railroad
 - Stream
 - City/Town
 - Federal Aid Urbanized Area 2000
 - Incorporated Area
 - Lake
 - State Park
 - National Park or Recreation Area
 - Defense Facility
 - Wildlife Area
 - Geological Area
 - State, National, or Private Forest

The Kentucky Transportation Cabinet does not warrant that the information contained on this map is accurate or complete. The Kentucky Transportation Cabinet states that all attempts are made to insure the correctness of road network portrayal and it is based on the best available information at a given time but disclaims any and all representations and/or warranties made with respect to this map by any contributing source as to its contents, whether expressed, implied, or statutory, including, but not limited to, warranties of title, merchantability, and fitness for a particular purpose. Incorporated area boundaries are based on KRS 81A.470 filings recorded in the Kentucky Secretary of State's Office.

**Functional Classification
HIGHWAY DISTRICT 4**

4 2 0 4 8 Miles

Last map revision: AUGUST 2012
 Road centerlines collected using GPS technology
 Kentucky State Plane Coordinate System (NAD83)
transportation.ky.gov/planning





(New additions and changes are in bold)

1. Severe Threat

Exotic plant species which possess characteristics of invasive species and spread easily into native plant communities and displace native vegetation; includes species which are or could become widespread in Kentucky.

Achyranthes japonica - Japanese chaff flower

Ailanthus altissima - tree-of-heaven

Alliaria petiolata - garlic mustard

Ampelopsis brevipedunculata - porcelain berry

Arthraxon hispidus - hairy jointgrass (moved from 2)

Carduus nutans - musk thistle

Celastrus orbiculatus - oriental bittersweet

Cirsium arvense - Canada thistle (moved from 2)

Clematis terniflora - leatherleaf clematis

Conium maculatum - poison hemlock

Coronilla varia (= *Securigera varia*) - crown vetch

Dioscorea polystachya - Chinese yam

Elaeagnus umbellata - autumn olive

Euonymus alatus - burning bush

Euonymus fortunei - wintercreeper

Festuca arundinacea (= *Lolium arundinaceum*) - Kentucky 31 fescue

Glechoma hederacea - ground ivy (moved from 2)

Lespedeza cuneata - sericea lespedeza

Lespedeza stipulacea (= *Kummerowia*) - Korean lespedeza (moved from 2)

Ligustrum sinense, *L. vulgare* - privet

Lonicera japonica - Japanese honeysuckle

Lonicera maackii, ***L. fragrantissima***, ***L. standishii*** - bush honeysuckles

Lysimachia nummularia - moneywort

Lythrum salicaria - purple loosestrife

Melilotus alba - white sweet clover

Melilotus officinalis - yellow sweet clover

Microstegium vimineum - Japanese stiltgrass

Miscanthus sinensis - Chinese silver grass

Paulownia tomentosa - princess tree

Phragmites australis - common reed

Polygonum cuspidatum - Japanese knotweed
Pyrus calleryana - callery pear
Pueraria lobata - kudzu
***Ranunculus ficaria* - lesser celandine**
***Rhamnus cathartica* - European buckthorn**
Rosa multiflora - multiflora rose
Sorghum halepense - Johnson grass
Stellaria media - chickweed

2. Significant Threat

Exotic plant species which possess some invasive characteristics, but have less impact on native plant communities; may have the capacity to invade natural communities along disturbance corridors, or to spread from stands in disturbed sites into undisturbed areas, but have fewer characteristics of invasive species than #1 rank.

***Agrostis stolonifera* - weeping love grass**
Akebia quinata - akebia
Albizia julibrissin - mimosa
***Alternanthera philoxeroides* - alligatorweed**
Berberis thunbergii - Japanese barberry
Bromus inermis - smooth brome
***Bromus tectorum*, *B. japonicus* - cheat grass**
***Cardiospermum halicacabum* - balloon vine**
Centaurea biebersteinii - spotted knapweed
Chrysanthemum leucanthemum - ox-eye daisy
***Cirsium vulgare* - bull thistle**
Daucus carota - Queen Anne's lace
Dipsacus sylvestris, ***D. laciniata* - common teasel, cutleaf teasel**
***Echinochloa crus-galli* - barnyard grass (moved from 3)**
Eleusine indica - goose grass
***Galium pedemontanum* - cleavers (moved from 3)**
Hedera helix - English ivy
***Hemerocallis fulva* - day-lily (moved from 3)**
***Humulus japonicus* - Japanese hops**
***Hydrilla verticillata* - hydrilla**
Lespedeza bicolor, ***Lespedeza thunbergii* (moved from 3) - bicolor lespedeza and shrubby lespedeza**
Lespedeza striata (= *Kummerowia*) - Kobe lespedeza
***Medicago lupulina* - black medic (moved from 3)**
Mentha x piperata - peppermint
Morus alba - white mulberry
Mosla dianthera - miniature beefsteak
***Najas minor* - water nymph**
Ornithogalum umbellatum - star-of-Bethlehem

***Pastinaca sativa* - wild parsnip**
***Perilla frutescens* - beefsteak**
***Poa compressa* - Canada bluegrass (moved from 3)**
Poa pratensis - Kentucky bluegrass
Polygonum cespitosum - bunchy knotweed
Polygonum persicaria - lady's thumb
Populus alba - white poplar
***Potamogeton crispus* - curlyleaf pondweed**
***Rhodotypos scandens* - jetbead**
Rorippa nasturtium-aquaticum - water-cress
***Rubus phoenicolasius* - wineberry**
***Schedonorus pratensis* - meadow fescue**
Setaria faberi - giant foxtail
Setaria viridis - green foxtail
Spiraea japonica - Japanese spiraea
***Thlaspi alliaceum* - garlic peppergrass (moved from 3)**
***Tussilago farfara* - coltsfoot**
***Typha xglacua* - cattail**
***Ulmus pumila* - Siberian elm**
***Verbascum thapsus* - common mullein**
Vinca minor - lesser periwinkle

3. Moderate Threat

Exotic plant species which seem to principally spread and remain in disturbed corridors, not readily invading natural areas; also some agronomic weeds.

***Agropyron repens* - quack grass**
***Allium vineale* - field garlic**
***Arctium minus* - common burdock (moved from 2)**
Arenaria serpyllifolia - thyme-leaf sandwort
Barbarea vulgaris - yellow rocket
***Bromus arvensis*, *B. catharticus*, *B. hordeaceus*, *B. racemosus* - field bromes**
***Buddleja davidii* - orange-eye butterfly bush**
***Carduus acathoides* - spiny plumeless thistle**
***Chenopodium album* - lamb's quarters**
Cichorium intybus - chicory
Commelina communis - dayflower
Convolvulus arvensis - field bindweed
Duchesnea indica - Indian strawberry
***Duetzia scabra* - fuzzy deutzia**
***Elaeagnus angustifolia*, Russian olive**
***Eleusine indica* - goose grass**
***Fatoua villosa* - hairy crabweed**
***Hesperis matronalis* - Dame's rocket**

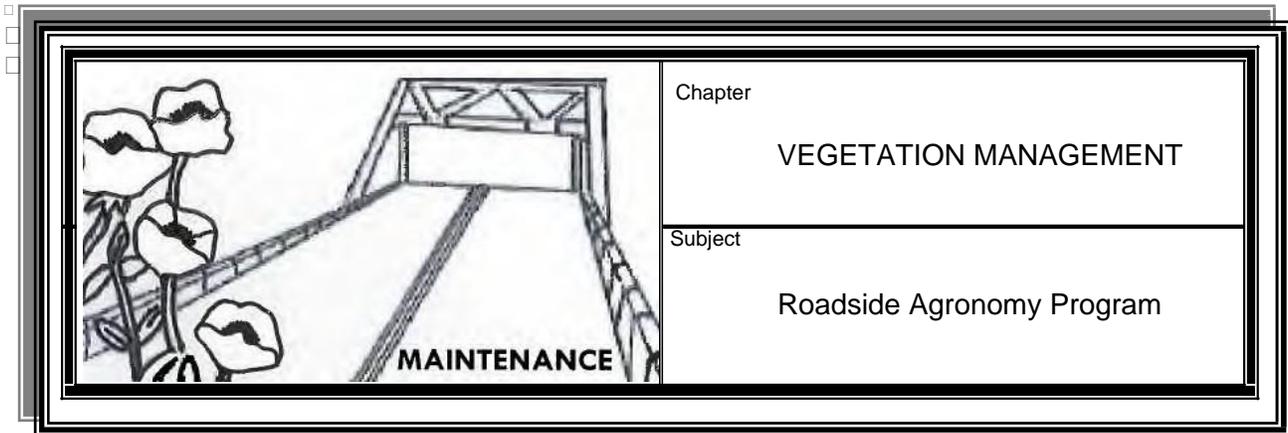
Holcus lanatus - velvet grass
Hypericum perforatum - common St. John's-wort
***Ipomoea hederacea* - ivy-leaved morning-glory (moved from 2)**
***Ipomoea purpurea* - purple morning-glory (moved from 2)**
Iris pseudoacorus - pale yellow iris
***Lamium purpureum* - purple deadnettle**
Lamium amplexicaule - henbit
Lithospermum arvense - corn-gromwell
Lolium multiflorum - Italian rye
***Lonicera xbella*, *L. morrowii*, *L. tartarica* - bush honeysuckle (New- bella, moved from 1 - morrowii and tartarica)**
***Lotus corniculatus* - birdsfoot trefoil**
***Mahonia bealei* - leatherleaf mahonia**
***Mentha spicata* - spearmint**
Nepeta cataria - catnip
Oxalis stricta (= *O. europea*) - common yellow wood-sorrel
***Paspalum dilatatum* - dallisgrass**
***Phyllostachys aurea* - golden bamboo**
Poa annua - speargrass
Potentilla recta - sulphur five-fingers
***Prunus mahalab* - Mahalab cherry**
Ranunculus bulbosus - bulbous buttercup
Rumex acetosella - sheep sorrel
Solanum dulcamara - bitter nightshade
Thlaspi perfoliatum - field cress
***Torillis arvensis*, *T. japonica* - hedge parsley**
***Wisteria sinensis*, *W. floribunda*, *W. xformosa* - exotic wisterias**

4. Watch List

Exotic plant species that have either not been observed or well-documented in Kentucky, but have invaded native plant communities in neighboring states.

Acer platanoides - Norway maple
Allium sativum - garlic
Alnus glutinosa - European alder
Artemisia vulgaris - mugwort
Arundo donax - giant reed
Broussonetia papyrifera - paper mulberry
Didymosphenia geminata - rock snot
Egeria densa - Brazilian elodea
Eichhornia crassipes - water hyacinth
Eragrostis cilianensis - lovegrass (moved from 3)
Eragrostis curvula - weeping lovegrass

Euphorbia esula - leafy spurge
Hibiscus syriacus - rose of Sharon
Koelreuteria paniculata - golden raintree
Lactuca saligna - willowleaf lettuce (moved from 3)
Lamium maculata - spotted deadnettle
Nandina domestica - heavenly bamboo
Phellodendron amurense - Amur corktree
Polygonum perfoliatum - mile-a-minute vine
Polygonum sachalinense - giant knotweed
Quercus acutissima - sawtooth oak
Rhamnus frangula - alder buckthorn
Rubus bifrons - Himalayan berry
Setaria verticillata - bur-foxtail
Sonchus asper - spiny sowthistle
Sonchus oleraceus - annual sowthistle
Trifolium campestre, *T. pratense*, *T. repens* - clovers
Ulmus parvifolia - lacebark elm
Viburnum opulus var. *opulus* - European highbush cranberry
Vicia cracca - bird vetch
Vicia sativa - common vetch
Vicia villosa subsp. *Villosa* (= *V. dasycarpa*) - winter vetch
Zelkova serrata - zelkova



LANDSCAPE PLANT MAINTENANCE

The Department of Highways shall maintain landscape plantings on all roads that are the responsibility of the Department.

Any landscape plantings placed on the right of way through a permit shall be the responsibility of the permittee.

A landscape maintenance program shall include the following:

- Designation of areas where work will be performed and approximate time work will be done
- Determination of type work to be performed
- Selection of pesticides, if needed
- Determination of equipment needs and availability

Landscape plants shall be periodically fertilized. The Division of Maintenance may recommend the proper rates of fertilizer and approximate times of application.

All pesticides used by the Department shall be approved by the Division of Maintenance before use in the districts. The Division of Maintenance will provide the districts with proper recommendations on specific pesticides before actual application. The following pesticides may be used:

- Insecticides—In areas where insects are damaging plants, insecticides shall be applied for control.
- Fungicides—In areas where fungus diseases are damaging landscape plants, fungicides shall be applied for proper control.
- Herbicides—Where applicable, herbicides may be used around plants and in shrub beds to control weed growth. Personnel shall carefully observe proper chemical application rates so as to not injure landscape plants.

**LANDSCAPE PLANT
MAINTENANCE
(CONT.)**

Where practical, mulching material may be used around landscape plants, so as to retard weed growth and preserve soil moisture.

All tree stakes shall be removed during the second year of establishment. Dead plants on all projects accepted for maintenance should be removed as soon as possible.

Plants should be pruned, where needed, to ensure proper growth and development. Proper pruning techniques shall be applied as recommended by the Division of Maintenance.

**SEEDING,
PROTECTION,
& FERTILIZATION**

The Department shall perform proper seeding and protection techniques on roadside areas where grass or other vegetative ground cover is lacking and the potential for soil erosion is imminent. The Department may also perform proper maintenance practices to provide adequate fertility for established grass turf and other vegetative ground cover.

These seeding and protection techniques and the application of fertilizers to roadsides shall comply with the Kentucky Department of Highways' "Seeding and Protection and Fertilization Program Chart" ([Exhibit MAIN 9033](#)).

**WILDFLOWERS &
NATIVE GRASSES**

The Department may choose to seed wildflowers or native grasses at selected locations on highway roadsides to enhance the aesthetic value of the roadside landscape and promote habitat for pollinator species.

All wildflower and native grass species shall be approved by the Division of Maintenance before planting or seeding.

**WEED & BRUSH
CONTROL**

The Department shall use Integrated Roadside Vegetation Management (IRVM) to control weeds and brush on highway rights-of-way.

Once the target pest has been identified, all methods of control to include mechanical (mowing), cultural (seeding and fertilization), biological, and pesticides shall be considered. The use of pesticides shall comply with the [Federal Insecticide, Fungicide, and Rodenticide Act](#) (FIFRA); with the Kentucky Department of Agriculture Pesticide Use and Application Act ([KRS 217B](#)); with the Clean Water Act (CWA) and Endangered Species Act (ESA); and as dictated by the Kentucky Department of Highways' "Pesticide Program Chart".

Each division shall coordinate the application of pesticide products to highway roadsides with mowing operations scheduled to be performed on the same areas.

When using pesticides to control roadside brush, maintenance personnel shall take care to allow for a minimum of discoloration. Excessive discoloration of brush should be avoided.

**NOXIOUS WEED
CONTROL**

The Department shall perform proper techniques to control the following noxious weeds on all highway rights-of-way in accordance with [KRS 176.051](#):

- Nodding (Musk) Thistle
- Canada Thistle
- Johnson Grass
- Giant Foxtail
- Multi-Flora Rose
- Japanese Knotweed
- Common Teasel
- Kudzu
- Amur Honeysuckle
- Poison Hemlock
- Marestalk

Upon written request from abutting property owners engaged in the eradication of these noxious weeds, the Department will cooperate with such abutting property owners by controlling such noxious weeds from abutting state rights-of-way.

Also, in accordance with [KRS 176.051](#), the Department shall no later than the first week in March of each year advertise in each county, pursuant to the provisions of [KRS Chapter 424](#), that the noxious weed control program is available. The Department shall stipulate in these advertisements the place and manner in which an interested property owner may make a written request for inclusion in the noxious weed control program.

Upon notice that a county fiscal court declares their specific county a thistle eradication area, the Department, in accordance with [KRS 249.183](#), shall comply with the [Department of Agriculture](#) by eradicating the thistle from the highway rights-of-way in that county.

**SELECTION OF
PESTICIDES**

The Division of Maintenance shall select and recommend approved pesticides for each type of application as noted in the Kentucky Department of Highways' "Pesticide Program Chart." The Division of Maintenance will provide the districts with an updated copy of the "Pesticide Program Chart" as needed.

The Division of Maintenance will prepare a [Pesticide Manual](#) available to all maintenance personnel trained in the use and handling of pesticides.

**SELECTION OF
PESTICIDES
(CONT.)**

Maintenance employees involved in the storage, handling, use, and disposal of all pesticides and their containers shall retrieve the Label and Material Safety Data Sheet (MSDS) of each approved pesticide product from the Roadside Environment Branch website:

<http://transportation.ky.gov/Maintenance/Pages/Pesticide-Labels.aspx>

The storage, use, handling, and disposal of pesticides and their containers shall conform to the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) and to KRS 217B.

**RESTRICTIONS OF
PESTICIDE USE**

Maintenance personnel shall not apply pesticides (used for control of weeds and brush on roadsides) to the following:

- Fence rows not on state right of way
- National forest areas, unless by permit from the [National Forest Service](#)
- Areas adjacent to susceptible crops
- Areas of standing or moving water

**APPLICATION OF
PESTICIDES**

Pesticide applications shall comply with federal label regulations and shall not be made until the personnel actually doing the spraying have been well informed as to the pesticide product, its mode of action, and the correct method of its application.

Before applying pesticides, the district shall adequately plan each application to assure effective control giving consideration to the stages of vegetative growth and types of vegetation present. The district shall use the "Pesticide Program Chart" to select pesticides to be used and to determine the method, rate, and timing of applications.

Maintenance personnel shall not apply pesticides when wind velocity would move the product off target.

Each division shall coordinate spraying operations with mowing activities when both are to be performed on the same area during the year. Before undertaking mowing operations, maintenance personnel shall allow sufficient time following pesticide applications for the pesticide to be effective. If the proper amount of time cannot be allowed following an application, maintenance personnel shall mow the area first and apply the pesticide product to the vegetative regrowth when adequate growth is present.

**APPLICATION OF
PESTICIDES (CONT.)**

Bare ground product applications shall not deviate from the "Pesticide Program Chart" as to rates and application. Maintenance personnel shall keep the use of hand applicators to a minimum. When using hand applicators, maintenance personnel shall take care when applying to areas such as pavements, sealed shoulders, sealed traffic islands, and sign posts to prevent the product from moving off target through other applications.

Maintenance personnel shall apply pesticides for weed control as directed by the "Pesticide Program Chart". Pesticides can control woody vegetation that is 30 inches or less in height in accordance with procedures outlined in the "Pesticide Program Chart" under the Broadleaf Weed Control Section.

The control of brush with the application of selective pesticides shall be limited to those areas where brush encroachment on roadsides creates a safety sight distance problem or impedes roadside drainage. Maintenance personnel can make these applications between August 1 and the time of normal leaf drop in the fall.

Caution will be taken in the selection and application of pesticides for a minimum discoloration of brush. Excessive discoloration of brush shall be avoided.

In areas where brush is removed from roadsides by mechanical or hand cutting methods, maintenance personnel shall treat stumps with the pesticide product recommended by the "Pesticide Program Chart" to prevent resprouting.

**GROWTH REGULATOR
PESTICIDES**

Maintenance personnel shall apply plant growth regulators:

- In selected areas for height control of grasses and to prevent the emergence of a seed head on those grasses
- In the spring when the grasses are in an active stage of growth prior to the time of seed head emergence
- On well established grasses and not to newly seeded grass areas
- Only one time to any area during any one growing season

Areas to be considered when applying plant growth regulators are:

- Vegetative areas 10—15 feet behind guardrails where mowing is difficult or unsafe
- Vegetative shoulder areas between pavement and guardrails
- Narrow vegetated raised medians

**GROWTH REGULATOR
PESTICIDES (CONT.)**

- Slopes where grass height needs to be controlled and the areas are difficult or unsafe to mow
- Areas heavily landscaped where mowing is difficult
- Interchange ramps, islands, and other areas where mowing is difficult or unsafe and grass height must be controlled
- Under guardrails where the use of bare ground products is not available.

PESTICIDE REPORTS

The crew superintendent shall:

- Complete daily a TC 71-108 form, Pesticide Field Report ([Exhibit MAIN-9021](#))
- Sign and date the TC 71-108
- Submit the TC 71-108 to the Division of Maintenance where it will be filed

The Operations Management System (OMS) maintains a monthly inventory of pesticide materials in stock.

PESTICIDE LABEL The pesticide label is the legal document dictated by federal and state laws and regulations that specifies the proper and correct method for storing, using, and disposing of a pesticide and its container.

Maintenance personnel shall adhere to label directions at all times. Maintenance personnel shall contact the [National Pesticide Information Center](#) (NPIC) if they cannot locate a label for a pesticide.

**STORAGE OF
PESTICIDES**

Maintenance personnel shall store pesticides:

- In an area separate from the office and from seed and fertilizer storage areas

Note: A sign shall be posted on the storage building stating “Pesticide Storage”.

- In their original container as labeled

Note: If a pesticide product’s packaging becomes deteriorated due to shipping damage or extended storage life, maintenance personnel shall contact the [Division of Environmental Services](#) in the Department of Agriculture.

**STORAGE OF
PESTICIDES (CONT.)**

Their instructions on repackaging the pesticide product and any necessary cleanup shall be followed explicitly.

**MIXING OF
PESTICIDES**

Maintenance personnel shall mix pesticides in accordance with label directions. The Kentucky Department of Highways’ [Pesticide Manual](#) includes specific directions for mixing pesticides.

Maintenance personnel shall wear the following protective equipment when mixing a pesticide:

- Chemical resistant gloves
- Chemical resistant hat
- Goggles or face shield to protect the eyes
- Chemical resistant apron

**DISPOSAL OF
PESTICIDE
CONTAINERS**

Maintenance personnel shall:

- Triple rinse empty pesticide containers with the rinse solution (rinsate) being poured into the spray tank
- Crush or puncture the containers
- Recycle the containers through the KDA Rinse & Return Program

PESTICIDE SPILLS

A pesticide spill is an accidental release of a pesticide product concentrate or tank mix outside of its intended container.

Always follow the Pesticide Discharge Management Plan (PDMP).

- **Minor Spill**—Condition where 5 gallons or less of a pesticide concentrate or 25 gallons or less of a tank mix have been spilled. Non-Hazardous pesticides may be cleaned up by using spill kit absorbent materials, but Hazardous pesticides should be cleaned up by the designated spill response contractor .
- **Major Spill**—Condition where quantities of pesticide spilled exceed a minor spill. In the event of a spill of this type, onsite district personnel shall:
 1. Keep people away.
 2. If possible, take steps to safely stop or contain the spill.
 3. Call 911.
 4. Contact the Roadside Environment District Administrator.
 5. Contact the Division of Maintenance's Roadside Environmental Branch staff.
 6. Contact the designated spill response contractor.
 7. Report the spill to the Kentucky Division of Water.
 8. Monitor the site for adverse incidents.

**INSECTICIDE
APPLICATION**

The Division of Maintenance shall preapprove all insecticides applied on highway rights-of-way including rest areas.

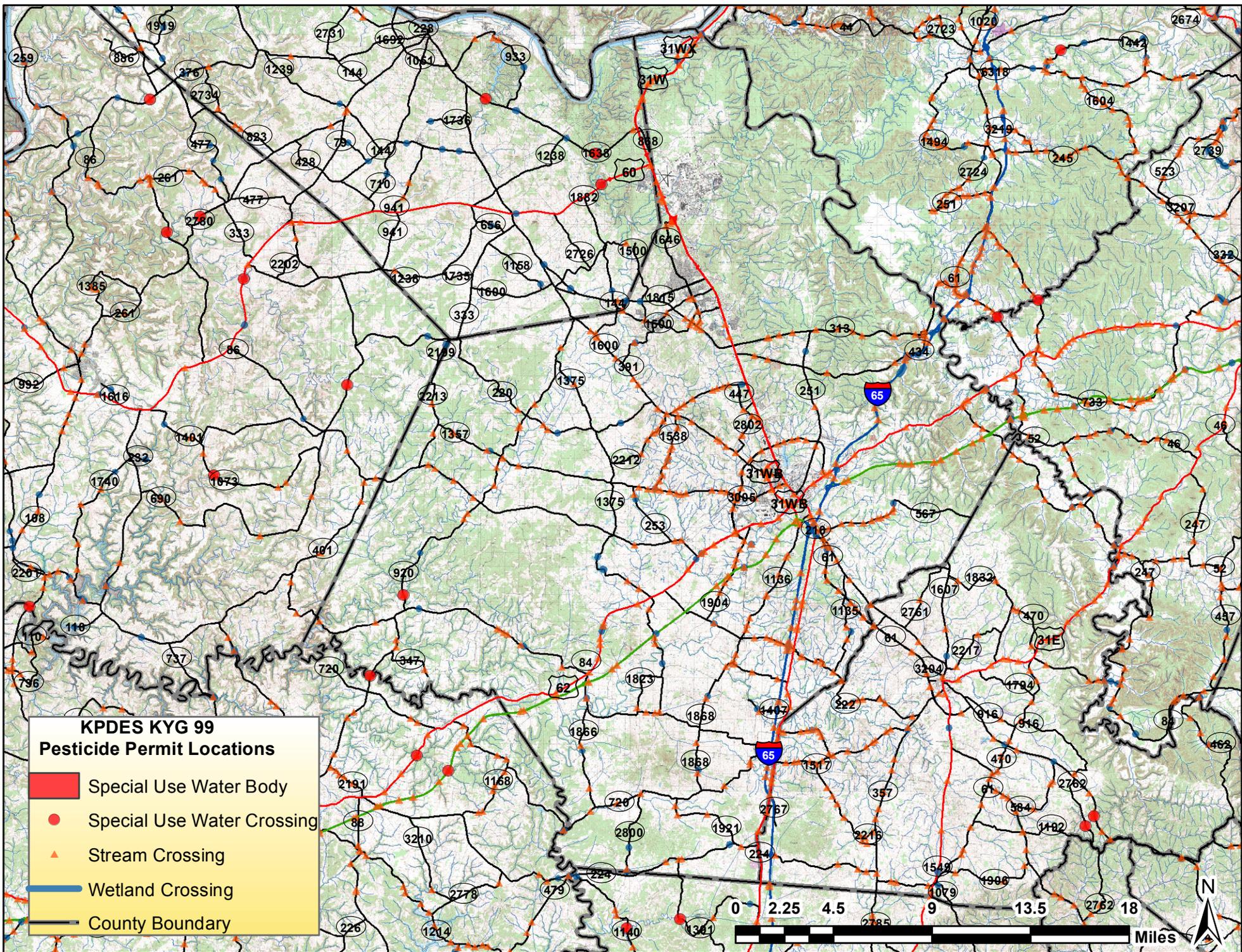
The method and rate of application of the insecticide shall conform to the pesticide label.

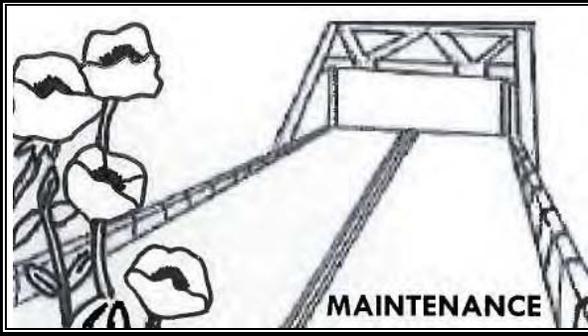
When applying an insecticide, the Materials Safety Data Sheet shall be available to and in the presence of the applicator.

Also the applicator shall wear all personal protective equipment required by the Label.

Before applying an insecticide, the applicator shall refer to the [Pesticide Manual](#) concerning pesticide overexposure.





	<p><i>Chapter</i></p> <p>VEGETATION MANAGEMENT</p>
	<p><i>Subject</i></p> <p>Planning</p>

POLICY

The roadside environment district administrator (REDA) for each district shall develop an annual planned program for the management of vegetation along the highway roadsides. This plan shall include, but not be limited to:

- Mowing
- Landscape plant maintenance
- Seeding and protection
- Fertilization
- Weed and brush control
- Planting and maintaining wildflowers
- Hazardous tree removal

A copy of the plan shall be submitted to the Division of Maintenance for review.

In order to have an effective program, the REDA shall:

- Make a survey of the vegetation of all areas
- Determine approximate time for work activities to be performed
- Determine the types and amounts of materials needed
- Determine equipment needs
- Determine the type and number of personnel required



Exhibit 7 (A)

SPILL RESPONSE PLAN: PESTICIDE SPILL EMERGENCY CONTACTS LIST

District No. 4
District Name Elizabethtown – Breckinridge County

FACILITY PERSONNEL

District Engineer	Patty Dunaway	Office	270.766.5066
		Mobile	270.401.5353
Section Engineer	Brian Gregory	Office	270.257.0196
		Mobile	270.316.9756
Operations Manager	Allen Wamble	Office	270.756.5206
		Mobile	270.316.6460

ENVIRONMENTAL ANALYSIS

DEA Facility Environmental Coordinator	Ed McCracken, PE	Office	502.564.7250
		Mobile	859.333.1339
District Environmental Coordinator	Joseph Ferguson	Office	270.766.5066
		Mobile	270.312.6211
Emergency Spill Response Contractor	Evergreen AES	Office 24-hr	502.633.3939 888.625.5434

AGENCY PERSONNEL

Fire Department		Emergency	911
		Non-Emergency	
County Local Emergency Planning Committee (LEPC)	Eric Vertrees	Day	270.580.4766
		24-hr	270.617.0628
KY Environmental Response Team		24-hr Emergency Spill Hotline	(800) 928-2380
National Response Center		24-hr Hotline	(800) 424-8802

Exhibit 7 (A)

SPILL RESPONSE PLAN: PESTICIDE SPILL EMERGENCY CONTACTS LIST

District No. 4
District Name Elizabethtown – Grayson County

FACILITY PERSONNEL

District Engineer	Patty Dunaway	Office	270.766.5066
		Mobile	270.401.5353
Section Engineer	Brian Gregory	Office	270.257.0196
		Mobile	270.316.9756
Operations Manager	Ashley Higdon	Office	270.259.4602
		Mobile	270.723.7328

ENVIRONMENTAL ANALYSIS

DEA Facility Environmental Coordinator	Ed McCracken, PE	Office	502.564.7250
		Mobile	859.333.1339
District Environmental Coordinator	Joseph Ferguson	Office	270.766.5066
		Mobile	270.312.6211
Emergency Spill Response Contractor	Evergreen AES	Office	502.633.3939
		24-hr	888.625.5434

AGENCY PERSONNEL

Fire Department		Emergency	911
		Non-Emergency	
County Local Emergency Planning Committee (LEPC)	Ernie Perkins	Day	270.259.0096
		24-hr	
KY Environmental Response Team		24-hr Emergency	(800) 928-2380
National Response Center		Spill Hotline	
		24-hr Hotline	(800) 424-8802

Exhibit 7 (A)

SPILL RESPONSE PLAN: PESTICIDE SPILL EMERGENCY CONTACTS LIST

District No. 4
District Name Elizabethtown – Green County

FACILITY PERSONNEL

District Engineer	Patty Dunaway	Office	270.766.5066
		Mobile	270.401.5353
Section Engineer	Bow Warren	Office	270.465.4291
		Mobile	270.723.7422
Operations Manager	Jeff Bradshaw	Office	270.932.4351
		Mobile	270.405.1831

ENVIRONMENTAL ANALYSIS

DEA Facility Environmental Coordinator	Ed McCracken, PE	Office	502.564.7250
		Mobile	859.333.1339
District Environmental Coordinator	Joseph Ferguson	Office	270.766.5066
		Mobile	270.312.6211
Spill Response Contractors	Evergreen AES Environmental	Office	502.633.3939
		24-hr	888.625.5434

AGENCY PERSONNEL

Fire Department		Emergency	911
		Non-Emergency	
County Local Emergency Planning Committee (LEPC)	Bill Matney	Day	270.932.4097
		24-hr	
KY Environmental Response Team		24-hr Emergency	(800) 928-2380
		Spill Hotline	
National Response Center		24-hr Hotline	(800) 424-8802

Exhibit 7 (A)

SPILL RESPONSE PLAN: PESTICIDE SPILL EMERGENCY CONTACTS LIST

District No. 4
District Name Elizabethtown – Hardin County

FACILITY PERSONNEL

District Engineer	Patty Dunaway	Office	270.766.5066
		Mobile	270.401.5353
Section Engineer	Brandon Bagby	Office	270.766.5033
		Mobile	270.401.6593
Operations Manager	Jamie Watkins	Office	270.766.5146
		Mobile	270.872.6738

ENVIRONMENTAL ANALYSIS

DEA Facility Environmental Coordinator	Ed McCracken, PE	Office	502.564.7250
		Mobile	859.333.1339
District Environmental Coordinator	Joseph Ferguson	Office	270.766.5066
		Mobile	270.312.6211
Emergency Spill Response Contractor	Evergreen AES Environmental	Office 24-hr	502.633.3939 888.625.5434

AGENCY PERSONNEL

Fire Department		Emergency	911
		Non-Emergency	
County Local Emergency Planning Committee (LEPC)	Doug Finley	Day	270.872.3530
	Olivia Berry	24hr	270.505.3512
		24-hr	911
KY Emergency Response Team		24-hr Emergency Spill Hotline	(800) 928-2380
National Response Center		24-hr Hotline	(800) 424-8802

Exhibit 7 (A)

SPILL RESPONSE PLAN: PESTICIDE SPILL EMERGENCY CONTACTS LIST

District No. 4
District Name Elizabethtown – Hart County

FACILITY PERSONNEL

District Engineer	Patty Dunaway	Office	270.766.5066
		Mobile	270.401.5353
Section Engineer	Brandon Bagby	Office	270.766.5033
		Mobile	270.401.6593
Operations Manager	Stuart Gentry	Office	270.524.4421
		Mobile	270.528.6997

ENVIRONMENTAL ANALYSIS

DEA Facility Environmental Coordinator	Ed McCracken, PE	Office	502.564.7250
		Mobile	859.333.1339
District Environmental Coordinator	Joseph Ferguson	Office	270.766.5066
		Mobile	270.312.6211
Emergency Spill Response Contractors	Evergreen AES Environmental	Office	502.633.3939
		24-hr	888.625.5434

AGENCY PERSONNEL

Fire Department		Emergency	911
		Non-Emergency	
County Local Emergency Planning Committee (LEPC)	Kerry McDaniel	Day	270.524.2832
		24-hr	911
KY Environmental Response Team		24-hr Emergency Spill Hotline	(800) 928-2380
National Response Center		24-hr Hotline	(800) 424-8802

Exhibit 7 (A)

SPILL RESPONSE PLAN: PESTICIDE SPILL EMERGENCY CONTACTS LIST

District No. 4
District Name Elizabethtown – Larue County

FACILITY PERSONNEL

District Engineer	Patty Dunaway	Office	270.766.5066
		Mobile	270.401.5353
Section Engineer	Chad Filiatreau	Office	502.348.5866
		Mobile	270.723.2418
Operations Manager	Steven Peace	Office	270.358.3502
		Mobile	270.401.1205

ENVIRONMENTAL ANALYSIS

DEA Facility Environmental Coordinator	Ed McCracken, PE	Office	502.564.7250
		Mobile	859.333.1339
District Environmental Coordinator	Joseph Ferguson	Office	270.766.5066
		Mobile	270.312.6211
Emergency Spill Response Contractors	Evergreen AES Environmental	Office 24-hr	502.633.3939 888.625.5434

AGENCY PERSONNEL

Fire Department		Emergency	911
		Non-Emergency	
County Local Emergency Planning Committee (LEPC)	Dennis Wells	Day	270.358.9903
		24-hr	
KY Environmental Response Team		24-hr Emergency Spill Hotline	(800) 928-2380
National Response Center		24-hr Hotline	(800) 424-8802

Exhibit 7 (A)

SPILL RESPONSE PLAN: PESTICIDE SPILL EMERGENCY CONTACTS LIST

District No. 4
District Name Elizabethtown – Marion County

FACILITY PERSONNEL

District Engineer	Patty Dunaway	Office	270.766.5066
		Mobile	270.401.5353
Section Engineer	Bow Warren	Office	270.465.4291
		Mobile	270.723.7422
Operations Manager	Steve Thompson	Office	270.692.2991
		Mobile	270.723.7374

ENVIRONMENTAL ANALYSIS

DEA Facility Environmental Coordinator	Ed McCracken, PE	Office	502.564.7250
		Mobile	859.333.1339
District Environmental Coordinator	Joseph Ferguson	Office	270.766.5066
		Mobile	270.312.6211
Emergency Spill Response Contractors	Evergreen AES Environmental	Office	502.633.3939
		24-hr	888.625.5434

AGENCY PERSONNEL

Fire Department		Emergency	911
		Non-Emergency	
County Local Emergency Planning Committee (LEPC)	Hayden Johnson	Day	270.692.0491
		24-hr	
KY Environmental Response Team		24-hr Emergency Spill Hotline	(800) 928-2380
National Response Center		24-hr Hotline	(800) 424-8802

Exhibit 7 (A)

SPILL RESPONSE PLAN: PESTICIDE SPILL EMERGENCY CONTACTS LIST

District No. 4
District Name Elizabethtown – Meade County

FACILITY PERSONNEL

District Engineer	Patty Dunaway	Office	270.766.5066
		Mobile	270.401.5353
Section Engineer	Brian Gregory	Office	270.257.0196
		Mobile	270.316.9756
Operations Manager	Tim Embry	Office	270.422.3234
		Mobile	270.980.0215

ENVIRONMENTAL ANALYSIS

Ed McCracken, PE		Office	502.564.7250
		Mobile	859.333.1339
District Environmental Coordinator	Joseph Ferguson	Office	270.766.5066
		Mobile	270.312.6211
Emergency Spill Response Contractors	Evergreen AES Environmental	Office	502.633.3939
		24-hr	888.625.5434

AGENCY PERSONNEL

Fire Department		Emergency	911
		Non-Emergency	
County Local Emergency Planning Committee (LEPC)	Ron Dodson	Day	270.422.2776
		24-hr	911
KY Emergency Response Team		24-hr Emergency Spill Hotline	(800) 928-2380
National Response Center		24-hr Hotline	(800) 424-8802

Exhibit 7 (A)

SPILL RESPONSE PLAN: PESTICIDE SPILL EMERGENCY CONTACTS LIST

District No. 4
District Name Elizabethtown – Nelson County

FACILITY PERSONNEL

District Engineer	Patty Dunaway	Office	270.766.5066
		Mobile	270.401.5353
Section Engineer	Chad Filiatreau	Office	502.348.5866
		Mobile	270.723.2418
Operations Manager	Joe Lamar	Office	502.348.3448
		Mobile	270.307.5657

ENVIRONMENTAL ANALYSIS

DEA Facility Environmental Coordinator	Ed McCracken, PE	Office	502.564.7250
		Mobile	859.333.1339
District Environmental Coordinator	Joseph Ferguson	Office	270.766.5066
		Mobile	270.312.6211
Emergency Spill Response Contractors	Evergreen AES Environmental	Office	502.633.3939
		24-hr	888.625.5434

AGENCY PERSONNEL

Fire Department		Emergency	911
		Non-Emergency	
County Local Emergency Planning Committee (LEPC)	Joe Prewitt	Day	502.348.4929
		24-hr	
KY Environmental Response Team		24-hr Emergency Spill Hotline	(800) 928-2380
National Response Center		24-hr Hotline	(800) 424-8802

Exhibit 7 (A)

SPILL RESPONSE PLAN: PESTICIDE SPILL EMERGENCY CONTACTS LIST

District No. 4
District Name Elizabethtown – Taylor County

FACILITY PERSONNEL

District Engineer	Patty Dunaway	Office	270.766.5066
		Mobile	270.401.5353
Section Engineer	Bow Warren	Office	270.465.4291
		Mobile	270.723.7422
Operations Manager	Kit Davis	Office	270.465.4883
		Mobile	270.403.5797

ENVIRONMENTAL ANALYSIS

DEA Facility Environmental Coordinator	Ed McCracken, PE	Office	502.564.7250
		Mobile	859.333.1339
District Environmental Coordinator	Joseph Ferguson	Office	270.766.5066
		Mobile	270.312.6211
Emergency Spill Response Contractors	Evergreen AES Environmental	Office	502.633.3939
		24-hr	888.625.5434

AGENCY PERSONNEL

Fire Department		Emergency	911
		Non-Emergency	
County Local Emergency Planning Committee (LEPC)	George Wilson	Day	270.465.4131
		24-hr	
KY Environmental Response Team		24-hr Emergency Spill Hotline	(800) 928-2380
National Response Center		24-hr Hotline	(800) 424-8802

Exhibit 7 (A)

SPILL RESPONSE PLAN: PESTICIDE SPILL EMERGENCY CONTACTS LIST

District No. 4
District Name Elizabethtown – Washington County

FACILITY PERSONNEL

District Engineer	Patty Dunaway	Office	270.766.5066
		Mobile	270.401.5353
Section Engineer	Chad Filiatreau	Office	502.348.5866
		Mobile	270.723.2418
Operations Manager	Dennis Curtsinger	Office	859.336.7170
		Mobile	270.723.7387

ENVIRONMENTAL ANALYSIS

DEA Facility Environmental Coordinator	Ed McCracken, PE	Office	502.564.7250
		Mobile	859.333.1339
District Environmental Coordinator	Joseph Ferguson	Office	270.766.5066
		Mobile	270.312.6211
Spill Response Contractors	Evergreen AES Environmental	Office	502.633.3939
		Emergency No.	888.625.5434

AGENCY PERSONNEL

Fire Department		Emergency	911
		Non-Emergency	
County Local Emergency Planning Committee (LEPC)	Kevin Devine	Day	859.336.0746
		24-hr	
KY Emergency Response Team		24-hr Emergency Spill Hotline	(800) 928-2380
National Response Center		24-hr Hotline	(800) 424-8802

5.1. KYTC SPILL RESPONSES



Do

- ✓ Treat spills of products or wastes that are flammable, toxic, reactive or corrosive as hazardous spills.
- ✓ Refer to the Material Safety Data Sheet (MSDS) for spill response procedures and personal protective equipment needs.
- ✓ Isolate the area.
- ✓ Safely **stop the release** if possible and protect streams, sewers and other waterways.
- ✓ **Report all releases** that are larger than a routine spill to DEA; call **911 or local emergency responders when warranted.**
- ✓ If the spill exceeds reportable quantities on the “List of Lists” (40 CFR 302) or enters a Water of the Commonwealth, call the Environmental Response Team **(800) 928-2380** or **(502) 564-2380** and call the National Response Center.
- ✓ **Clean up** the spilled material.
- ✓ **KyTC personnel** - Coordinate any cleanup involving removal of soil with DEA.
- ✓ **Local government** should use an environmental consultant to oversee clean up of spills involving removal of soil.
- ✓ **Manage the waste**- store absorbent in drums and conduct a waste determination if a hazardous spill is known or suspected.
- ✓ Use appropriate absorbent pads or socks for cleanup – oil only for oil or universal for non-oil.
- ✓ Review emergency response actions after an incident to highlight appropriate responses and needed improvements.
- ✓ Fill out the spill form and make reports

Don't

- ✗ Don't risk injury to yourself or co-workers.
- ✗ Don't panic, respond calmly and quickly.
- ✗ Don't stop the release if it is hazardous to do so.

Materials & Waste Management

- ▲ Store contaminated materials so they do not further contaminate the environment.
- ▲ Dispose in accordance with the waste determination.

Relevant Environmental Programs

- Air Quality
- 401/404/WQC
- KPDES
- Facilities Pride
- GWPP
- Pesticides
- SPCC
- Waste Mgt



The spill kit contains protective equipment and absorbent materials for emergency use. Locate spill kits near where materials are stored and used.

Factsheet Checklist

- Check product and waste storage areas for leaks, spills and housekeeping **WEEKLY.**
- Check hazardous waste storage areas for leaks, spills and housekeeping **WEEKLY.**
- Check spill kits **QUARTERLY** and promptly restock after use.
- Check spill response and cleanup procedures **ANNUALLY.**
- Check for the presence of copies of MSDS sheets for all products handled at the facility **ANNUALLY.**

Tips & Tricks

- ! Reportable quantities are 25 gallons or more of a petroleum product within a 24-hour period and 75 gallons or more of diesel fuel in a 24-hour period or any amount that creates a visible sheen released to a stream or lake.
- ! EPA's “List of Lists” document, which identifies reportable chemicals, can be downloaded from: <http://yosemite.epa.gov/oswer/lol.nsf/homepage>
- ! Wring oil absorbent pads into a bucket to collect spilled material for reuse or disposal.

If...Then

- If the materials that are cleaned up can be reused, place them in a suitable container and label them.

Training: 1 per Year **Season:** Winter

Review All MSDS sheets as part of this training

KYTC FOG Reference M140

5.3. HAZARDOUS OR UNKNOWN WASTES OR SPILLS ON THE RIGHT-OF-WAY (ROW)



Do

- ✓ **Immediately call 911 or local emergency response team** if the waste is known or suspected to be hazardous, petroleum spill or any leaking materials due to an accident. (See **Appendix 9**).
- ✓ Then call the Environmental Response Team **(800) 928-2380** or **(502) 564-2380**.
- ✓ Report any unknown wastes found in the right of way (ROW) to the Environmental Response Team.
- ✓ Request that the emergency responders move the materials from the driving lane and place it behind a guardrail or barrier for traffic safety.
- ✓ Only trained, directly authorized KyTC personnel may investigate and handle hazardous or unknown materials on the ROW.



Don't

- ✗ Don't approach or come into contact with hazardous or unknown materials on the ROW.

This spill requires immediate attention!

If...Then

- If necessary and directed by an emergency responder, the facility may provide:
 - A crew to provide traffic control until the area is safe.
 - Sand and/or equipment.
 - If the owner or responsible party is unknown or if immediate cleanup is needed, provide the name of person who discovered the waste, route number, mile point, type of container, markings or labels, contents and source of drum or spill to the Operations Engineer, District Environmental Coordinator, Central Office Division of Operations and Division of Environmental Analysis.
- The Environmental Coordinator will contact the Division of Waste Management's Superfund Branch to investigate the incident and arrange for cleanup.
- If the District Maintenance Engineer cannot be reached, the Superintendent may call the Environmental Response Team directly.

Materials & Waste Management

- ▲ If the material is confirmed non-hazardous, contact the Division of Environmental Analysis for disposal instructions.

Factsheet Checklist

- Ensure that staff are adequately trained regarding emergency procedures.

Tips & Tricks

- ! After the emergency is over, the responsible party is required to obtain traffic encroachment permits to complete the cleanup and restoration.
- ! As a last resort, the foreman may call a Waste removal company before approval has been given by the area engineer.
- ! If emergency response is required and the response unit exceeds the district's authorization level for expenditure, the Division of Purchases must be contacted as soon as possible for emergency guidance.

Relevant Environmental Programs	<input type="radio"/> Air Quality	<input type="radio"/> GWPP
	<input type="radio"/> 401/404/WQC	<input type="radio"/> Pesticides
	<input type="radio"/> KPDES	<input type="radio"/> SPCC
	<input type="radio"/> Facilities Pride	<input checked="" type="radio"/> Waste Mgt

Training: 1 per Year **Season:** Winter

KYTC FOG Reference M140

Exhibit 7 (C)

SPILL RESPONSE PLAN: SPILL OR POLLUTION DOCUMENTATION & REPORTING

LOCATION	FACILITY NAME AND NUMBER or HIGHWAY ROUTE AND MP		DATE	TIME		AM PM	
	NEAREST CITY		COUNTY				
	DISTRICT		TELEPHONE NUMBER AT FACILITY				
Fire was involved	DATE AND TIME OF INCIDENT						
	TYPE OF MATERIAL DISCHARGED, IF A PESTICIDE, LIST THE TANK MIX						
	ESTIMATED QUANTITY OF DISCHARGED MATERIAL						
	SOURCE OF DISCHARGE						
	EXTENT OF THE SPILL: CHECK ALL THAT APPLY <input type="checkbox"/> IT OCCURRED ONLY ON PAVEMENT OR CONCRETE (AN IMPERVIOUS SURFACE) <input type="checkbox"/> IT OCCURRED ON OR IMPACTED SOIL OR GRAVEL, <input type="checkbox"/> IT IMPACTED A STREAM OR LAKE <input type="checkbox"/> IT DISCHARGED INTO A CITY SEWER <input type="checkbox"/> IT IS BEYOND KYTC PROPERTY <input type="checkbox"/> IT IMPACTED A STORM SEWER OR DRAINAGE DITCH <input type="checkbox"/> THERE WAS A FIRE AS PART OF THIS SPILL Make a sketch of the site and approximate limits of the spill on the back of this form.						
	CAUSE OF THE DISCHARGE						
	ANY DAMAGE OR INJURY						
	ACTIONS USED TO STOP OR REMOVE AND MITIGATE EFFECTS OF THE DISCHARGE						
	EVACUATION NECESSARY (EXPLAIN)						
	<input type="checkbox"/> SUPERVISOR NOTIFIED		DATE TIME	<input type="checkbox"/> DIST. BRANCH MGR NOTIFIED		DATE TIME	<input type="checkbox"/> CDE NOTIFIED
<input type="checkbox"/> ENVIRON. COORDINATOR NOTIFIED		DATE TIME	NAME OF INDIVIDUAL TAKING REPORT				DATE TIME
Local Fire Dept. Notified	NAME OF FIRE DEPT.		NAME OF INDIVIDUAL TAKING REPORT		Rept.#	Date	Time
GOVT. AGENCIES NOTIFIED (when applicable)	NATIONAL RESPONSE CENTER (1-800-424-8802)		NAME OF INDIVIDUAL TAKING REPORT		Rept #	Date	Time
	STATE ERT (1-800-928-2380)		NAME OF INDIVIDUAL TAKING REPORT		Rept #	Date	Time
	<input type="checkbox"/> City <input type="checkbox"/> COUNTY <input type="checkbox"/> SEWER AUTHORITY		NAME OF INDIVIDUAL TAKING REPORT		Rept #	Date	Time
Incident Description, Action Taken, General Comments							
Prepared by			TITLE	DATE	PHONE		

Note: Follow the guidance from the material(s) MSD Sheet for appropriate action, personal protection and handling of spill materials. Copy this report to: KYTC Division of Environmental Analysis.

Revised: 11/21/2008

EXHIBIT 8 □ □

PESTICIDE SPILL RESPONSE

TRAINING

EDWARD MCCRACKEN

KYTC

DIV. ENVIRONMENTAL ANALYSIS

PESTICIDE SPILLS

- **SMALL SPILLS**
- **MEDIUM SPILLS**
- **LARGE SPILLS**

CONTINGENCY SPILL PLAN

- **PROBABLE SPILLS**
- **PRIORITIZED ACTIONS**
- **PREPARATION TO BE READY**
 - **SAFETY ISSUES**
- **REGULATORY COMPLIANCE**
 - **COST EFFECTIVENESS**

PROBABLE SPILLS

- **TRUCK ACCIDENTS**
- **POLY-TANK FAILURES**
 - **HUMAN ERRORS**
 - **OVER FILLING**
- **INTENTIONAL DUMPING**

PRIORITIZED ACTIONS

- **DISCOVERY AND NOTIFICATION**
- **IMMEDIATE RESPONSE ACTIONS**
- **SECONDARY ACTIONS**
- **CLEANUP AND DECON ACTIONS**
- **CONTAINERS AND DISPOSAL**
- **DOCUMENTATION AND COSTS**

PREPARATIONS TO BE READY

- **TRAINING FOR HANDLERS/DRIVERS**
 - **PERSONAL PROTECTIVE GEAR**
 - **KNOW YOUR PRODUCT: MSDS**
 - **WRITTEN ACTIONS PAGE**
 - **KNOW YOUR SPILL KIT**
 - **KNOW WHAT NOT TO DO**
 - **COMMUNICATION MEANS**

SAFETY ISSUES

- **TRAINED RESPONDERS ONLY**
- **KNOW YOUR POTENTIAL HAZARDS**
 - **BE CALM AND BE SAFE**
 - **FIRST DON SAFETY APPAREL**
 - **ALWAYS USE BUDDY SYSTEM**
 - **ALWAYS APPROACH UP-WIND**
- **DUFFING AND HYGIENE WINDUP**

REGULATORY COMPLIANCE

- FIFRA IS THE MAIN REGULATION**
- OSHA 29CFR1910.120 MAY ENTER**
- KY REGULATIONS MAY CONTROL**
- EPA 40CFR260's FOR HW SPILLS**
- PESTICIDE COMPONENTS ARE OILS**
- OTHER LOCAL, STATE, FED. REGS.**
- WILLFUL VIOLATIONS ARE SERIOUS**

COST EFFECTIVENESS

- **IMPORTANT BUT NOT #1**
- **COST CONSIDERED AT ALL STEPS**
- **PREPLANNING SAVES BIG BUCKS**
- **CHOOSE EFFECTIVE SPILL KITS**
- **SAFETY SAVES LIVES & MONEY**
 - **COMPLIANCE AVOIDS FINES**

BASIC SPILL RESPONSE STEPS

- **PROPER SPILL NOTIFICATION**
- **CORDON SPILL: CONES & TAPE**
- **IF RESPONSE, DON PPE & SAFETY**
- **APPROACH UP-WIND: STOP LEAKS**
- **APPLY SPILL KIT ABSORBENTS**
- **USE SOILS TO HELP DAM SPILL**
- **CALL FOR BACKUP CLEANUP CO.**

MORE CLEANUP STEPS

- PROTECT RUNOFF RECEPTACLES**
- SPENT SORBENTS IN DISP. BAGS**
- MEDIUM/LARGE SPILL AMELIORATE**
 - LEAVE SITE CLEAN & SAFE**
- DOCUMENT THOROUGHLY: RECORD**
- MEDICALLY EXAMINE EXPOSURES**





RIGHT TO KNOW
INFORMATION
STATION

MATERIAL
DATA

SAFETY
SHEETS

FOR

HAZARDOUS MATERIALS







DESPERDICIOS
CONTAMINADOS

MANUFACTURED BY: G. C. W. INC.



CAUTION:



CONTAMINATED
DISPOSABLES

DESPERDICIOS
CONTAMINADOS

2004
Emergency
Response
Guidebook

STORAGE

SPILL

Response Kit



JUSTRITE®
OVERPAC
28001
② 1H2/Y/318/S/USA/M4339
SALVAGE DRUM









Exhibit 9

PESTICIDES REPORTABLE QUANTITIES

COMMON NAME	ACTIVE INGREDIENT	REPORTBLE QUANTITY	REPORTABLE PRODUCT AMOUNT
2, 4-D AMINE	DI-METHYLAMINE	100 POUNDS	26 GALLONS
2, 4-D IVM DRY	DI-METHYLAMINE SALT	100 POUNDS	103 POUNDS
POLARIS AC COMPLETE	IMAZAPYR	NONE	
BASIL OIL PREMIX	TRICLOPYR ESTER, IMAZAPYR		CALL DEA
DORMANT STEM PREMIX	2, 4-D ESTER; 2-4 DP ESTER; DICAMBA; T	100 POUNDS	163 GALLONS
ENDURANCE	PRODIAME	NONE	
ESCORT	METSULFURON	NONE	
FUSION	FLUAZIFOP & FENOXAPROP	100 POUNDS	1,300 POUNDS
GARLON 3A	TRICLOPYR (AMINE)	5,000 POUNDS	
GARLON 4 ULTRA	TRICLOPYR (ESTER)	NONE	
KRENITE S	FOSAMINE SALT	NONE	
MILESTONE	AMINOPYRALID	NONE	NONE
MSMA	METHANEARSONATE	1 POUND	4.5 POUNDS
OUTRIDER	SULFOSULFURON	NONE	
OVERDRIVE	SALTS OF DIFLUFENZOPYR & DICAMBA	1,000 POUNDS	2,000 POUNDS
PAYLOAD	FLUMIOXAZIN	NONE	
PENDULUM (WDG)	PENDIMETHALIN	NONE	
PLATEAU	PYDINECARBOXYLIC	NONE	
ROUNDUP PRO	GLYPHOSATE SALT	NONE	
SAHARA	IMAZAPYR & DIURON	100 POUNDS	161 POUNDS
STRONGHOLD	AMMONIUM SALT OF IMAZETHAPYR, IMAZA	NONE	
TELAR DF	CHLORSULFURON	NONE	
TRANSLINE	CLOPYRALID	NONE	
OUST EXTRA	SULFOMETURON & METSULFURON	NONE	
PERSPECTIVE	AMNOCYCROPYRACHLOR & CHLORSULFURON	NONE	
STREAMLINE	AMNOCYCROPYRACHLOR & METSULFORON	NONE	
VIEWPOINT	AMNOCYCROPYRACHLOR & METSULFORON & IMAZAPHYR	NONE	
OPENSIGHT	AMINOPYRAUD & METSULFURON	NONE	

Master Code	District	Admin Unit	Material	Usage
M31051 (gallons)		BRECKINRIDGE	Pendulum Aqua Cap (gallons)	-640.00
M31051 (gallons)		D4 ROADSIDE	Pendulum Aqua Cap (gallons)	-992.00
M31051 (gallons)		GRAYSON	Pendulum Aqua Cap (gallons)	-640.00
M31051 (gallons)		GREEN	Pendulum Aqua Cap (gallons)	-13.50
M31051 (gallons)		HARDIN	Pendulum Aqua Cap (gallons)	-10.00
M31051 (gallons)		HART	Pendulum Aqua Cap (gallons)	-2.50
M31051 (gallons)		LARUE	Pendulum Aqua Cap (gallons)	-2.50
M31051 (gallons)		MARION	Pendulum Aqua Cap (gallons)	-336.75
M31051 (gallons)		MEADE	Pendulum Aqua Cap (gallons)	-640.00
M31051 (gallons)		NELSON	Pendulum Aqua Cap (gallons)	-10.00
M31051 (gallons)		TAYLOR	Pendulum Aqua Cap (gallons)	-7.50
M31051 (gallons)		WASHINGTON	Pendulum Aqua Cap (gallons)	-325.00
M31051 (gallons)	4		Pendulum Aqua Cap (gallons)	-3619.75
M34001 (ounces)		BRECKINRIDGE	Escort (ounces)	-262.00
M34001 (ounces)		D4 ROADSIDE	Escort (ounces)	-113.75
M34001 (ounces)		GRAYSON	Escort (ounces)	-343.50
M34001 (ounces)		GREEN	Escort (ounces)	-82.00
M34001 (ounces)		HARDIN	Escort (ounces)	-158.00
M34001 (ounces)		HART	Escort (ounces)	-216.00
M34001 (ounces)		LARUE	Escort (ounces)	-60.00
M34001 (ounces)		MARION	Escort (ounces)	-268.25
M34001 (ounces)		MEADE	Escort (ounces)	-137.00
M34001 (ounces)		NELSON	Escort (ounces)	-192.00
M34001 (ounces)		TAYLOR	Escort (ounces)	-50.00
M34001 (ounces)		WASHINGTON	Escort (ounces)	-360.00
M34001 (ounces)	4		Escort (ounces)	-2242.50
M34007 (gallons)	4	D4 ROADSIDE	Garlon 3A (gallons)	-337.28
M34008 (gallons)	4	D4 ROADSIDE	Garlon 4 (gallons)	-15.00
M34011 (gallons)	4	D4 ROADSIDE	MSMA (gallons)	-67.50
M34012 (ounces)	4	D4 ROADSIDE	Oust (ounces)	-34.00
M34014 (gallons)	4	D4 ROADSIDE	Plateau (gallons)	-1.33
M34016X (gallons)		BRECKINRIDGE	Roundup ProMax (gallons)	-133.01
M34016X (gallons)		D4 ROADSIDE	Roundup ProMax (gallons)	-2419.14
M34016X (gallons)		GRAYSON	Roundup ProMax (gallons)	-3.34
M34016X (gallons)		GREEN	Roundup ProMax (gallons)	-19.03
M34016X (gallons)		HARDIN	Roundup ProMax (gallons)	-13.19
M34016X (gallons)		HART	Roundup ProMax (gallons)	-1.67
M34016X (gallons)		LARUE	Roundup ProMax (gallons)	-5.67
M34016X (gallons)		MARION	Roundup ProMax (gallons)	-1070.20
M34016X (gallons)		MEADE	Roundup ProMax (gallons)	-3.34
M34016X (gallons)		NELSON	Roundup ProMax (gallons)	-6.68
M34016X (gallons)		TAYLOR	Roundup ProMax (gallons)	-5.01
M34016X (gallons)		WASHINGTON	Roundup ProMax (gallons)	-5.01
M34016X (gallons)	4		Roundup ProMax (gallons)	-3685.29
M34019 (gallons)	4	D4 ROADSIDE	Strong Hold (gallons)	-2.00
M34020 (ounces)	4	D4 ROADSIDE	Telar (ounces)	-56.00

M34032 (ounces)	4	D4 ROADSIDE	Overdrive (ounces)	-678.75
M34033 (ounces)	4	D4 ROADSIDE	Milestone (ounces)	-1536.00
M34036 (ounces)		BRECKINRIDGE	Element 3A (ounces)	-32000.00
M34036 (ounces)		D4 ROADSIDE	Element 3A (ounces)	-1660.50
M34036 (ounces)		GRAYSON	Element 3A (ounces)	-46080.00
M34036 (ounces)		GREEN	Element 3A (ounces)	-6144.00
M34036 (ounces)		HARDIN	Element 3A (ounces)	-16152.00
M34036 (ounces)		HART	Element 3A (ounces)	-21504.00
M34036 (ounces)		MARION	Element 3A (ounces)	-18840.00
M34036 (ounces)		MEADE	Element 3A (ounces)	-3748.00
M34036 (ounces)		NELSON	Element 3A (ounces)	-9216.00
M34036 (ounces)		TAYLOR	Element 3A (ounces)	-6400.00
M34036 (ounces)		WASHINGTON	Element 3A (ounces)	-24576.00
M34036 (ounces)	4		Element 3A (ounces)	-186320.50
M34042 (gallons)	4	D4 ROADSIDE	AC Complete Herbicide (gallons)	-4.50
M34043 (pound)	4	D4 ROADSIDE	Streamline - DF Herbicide (pound)	-391.00
M34049 (gallons)		D4 ROADSIDE	Element 4 (gallons)	-35.00
M34049 (gallons)		HARDIN	Element 4 (gallons)	-10.00
M34049 (gallons)	4		Element 4 (gallons)	-45.00
M34052 (ounces)		BRECKINRIDGE	Defoamer (ounces)	-298.00
M34052 (ounces)		D4 ROADSIDE	Defoamer (ounces)	-436.00
M34052 (ounces)		GRAYSON	Defoamer (ounces)	-120.00
M34052 (ounces)		GREEN	Defoamer (ounces)	-143.50
M34052 (ounces)		HARDIN	Defoamer (ounces)	-40.00
M34052 (ounces)		HART	Defoamer (ounces)	-318.50
M34052 (ounces)		MARION	Defoamer (ounces)	-373.00
M34052 (ounces)		MEADE	Defoamer (ounces)	-266.00
M34052 (ounces)		NELSON	Defoamer (ounces)	-252.00
M34052 (ounces)		TAYLOR	Defoamer (ounces)	-34.00
M34052 (ounces)		WASHINGTON	Defoamer (ounces)	-276.00
M34052 (ounces)	4		Defoamer (ounces)	-2557.00
M34058 (ounces)		BRECKINRIDGE	Surfactant (ounces)	-9416.00
M34058 (ounces)		D4 ROADSIDE	Surfactant (ounces)	-24491.25
M34058 (ounces)		GRAYSON	Surfactant (ounces)	-12720.00
M34058 (ounces)		GREEN	Surfactant (ounces)	-4918.00
M34058 (ounces)		HARDIN	Surfactant (ounces)	-4035.75
M34058 (ounces)		HART	Surfactant (ounces)	-10112.00
M34058 (ounces)		LARUE	Surfactant (ounces)	-3842.00
M34058 (ounces)		MARION	Surfactant (ounces)	-8952.00
M34058 (ounces)		MEADE	Surfactant (ounces)	-9472.00
M34058 (ounces)		NELSON	Surfactant (ounces)	-8451.00
M34058 (ounces)		TAYLOR	Surfactant (ounces)	-1344.00
M34058 (ounces)		WASHINGTON	Surfactant (ounces)	-14208.00
M34058 (ounces)	4		Surfactant (ounces)	-111962.00
M34059 (ounces)		BRECKINRIDGE	Drift Retardant (ounces)	-9448.00
M34059 (ounces)		D4 ROADSIDE	Drift Retardant (ounces)	-2298.00
M34059 (ounces)		GRAYSON	Drift Retardant (ounces)	-12720.00

M34059 (ounces)		GREEN	Drift Retardant (ounces)	-4928.00
M34059 (ounces)		HARDIN	Drift Retardant (ounces)	-2169.00
M34059 (ounces)		HART	Drift Retardant (ounces)	-10112.00
M34059 (ounces)		LARUE	Drift Retardant (ounces)	-3842.00
M34059 (ounces)		MARION	Drift Retardant (ounces)	-8144.00
M34059 (ounces)		MEADE	Drift Retardant (ounces)	-9488.00
M34059 (ounces)		NELSON	Drift Retardant (ounces)	-8832.00
M34059 (ounces)		TAYLOR	Drift Retardant (ounces)	-1344.00
M34059 (ounces)		WASHINGTON	Drift Retardant (ounces)	-14208.00
M34059 (ounces)	4		Drift Retardant (ounces)	-87533.00
M34060 (ounces)	4	D4 ROADSIDE	Arsenal (ounces)	-400.00
M34061 (ounces)		BRECKINRIDGE	Payload (ounces)	-192.00
M34061 (ounces)		D4 ROADSIDE	Payload (ounces)	-1104.00
M34061 (ounces)		GRAYSON	Payload (ounces)	-192.00
M34061 (ounces)		GREEN	Payload (ounces)	-518.40
M34061 (ounces)		HARDIN	Payload (ounces)	-384.00
M34061 (ounces)		HART	Payload (ounces)	-96.00
M34061 (ounces)		LARUE	Payload (ounces)	-96.00
M34061 (ounces)		MARION	Payload (ounces)	-816.00
M34061 (ounces)		MEADE	Payload (ounces)	-192.00
M34061 (ounces)		NELSON	Payload (ounces)	-384.00
M34061 (ounces)		TAYLOR	Payload (ounces)	-288.00
M34061 (ounces)		WASHINGTON	Payload (ounces)	-288.00
M34061 (ounces)	4		Payload (ounces)	-288.00
M34064 (ounces)		BRECKINRIDGE	Fusion (ounces)	-6240.00
M34064 (ounces)		D4 ROADSIDE	Fusion (ounces)	-3897.50
M34064 (ounces)		GRAYSON	Fusion (ounces)	-8496.00
M34064 (ounces)		GREEN	Fusion (ounces)	-3840.00
M34064 (ounces)		HARDIN	Fusion (ounces)	-1920.00
M34064 (ounces)		HART	Fusion (ounces)	-7360.00
M34064 (ounces)		LARUE	Fusion (ounces)	-2400.00
M34064 (ounces)		MARION	Fusion (ounces)	-3448.00
M34064 (ounces)		MEADE	Fusion (ounces)	-7680.00
M34064 (ounces)		NELSON	Fusion (ounces)	-4800.00
M34064 (ounces)		TAYLOR	Fusion (ounces)	-640.00
M34064 (ounces)		WASHINGTON	Fusion (ounces)	-7200.00
M34064 (ounces)	4		Fusion (ounces)	-57921.50
M34068 (gallons)		BRECKINRIDGE	Platoon (gallons)	-921.00
M34068 (gallons)		D4 ROADSIDE	Platoon (gallons)	-3238.72
M34068 (gallons)		GRAYSON	Platoon (gallons)	-655.00
M34068 (gallons)		GREEN	Platoon (gallons)	-81.50
M34068 (gallons)		HARDIN	Platoon (gallons)	-10.00
M34068 (gallons)		HART	Platoon (gallons)	-98.50
M34068 (gallons)		LARUE	Platoon (gallons)	-122.50
M34068 (gallons)		MARION	Platoon (gallons)	-2618.06
M34068 (gallons)		MEADE	Platoon (gallons)	-12976.00
M34068 (gallons)		NELSON	Platoon (gallons)	-248.00

M34068 (gallons)		TAYLOR	Platoon (gallons)	-9.50
M34068 (gallons)		WASHINGTON	Platoon (gallons)	-661.00
M34068 (gallons)	4		Platoon (gallons)	-21639.78
M35100 (gallons)	4	D4 ROADSIDE	Basil Bark Stump Herbicide Treatment (gallons)	-10.00
M35201 (gallons)	4	D4 ROADSIDE	Acclaim (gallons)	-424.72
M35202 (gallons)	4	D4 ROADSIDE	Fusilade II (gallons)	-2458.00
M42030 (pound)	4	D4 ROADSIDE	Pro Clipse (pound)	-125.00

DISTRICT 4

HERBICIDE

PROGRAM

SPRAY PLAN

HERBICIDE SPRAYING

District 4 has 8 certified herbicide spray applicators on the 218 (Special Spray Crew). The 218 crew will be responsible for all spraying on I-65, BGP, WKP and special spray requests received from each county.

Each of the 11 counties, in D-4, have certified spray applicators, which are supervised by each county superintendent, to do herbicide spray control work, within their county. Each county is responsible for spraying their guardrails, broadleaf weeds (mainly thistles), Johnson grass, areas they want total vegetation control (total kill), and brush spraying. These are areas in the county not sprayed by the 218 crew. I give the counties instructions (prior to spray season) for mixing, applying and reporting herbicides. The herbicides, that D-4 will be using this year, and instructions are attached.

D-4's counties (all except Hardin Co.) have a 1200 gallon spray unit that they use to spray herbicides (they are also used for anti-icing). The 218 crew has 1300 gallon, 1200 gallon and 500 gallon spray units used to apply herbicides. The county units are powered by 5 HP motors, and equipped with a Spray Mate rate controller with GPS speed sensor. They are equipped with OC nozzles (for herbicide spraying) and can switch to a spray bar (for salt brine, anti-icing applications). The OC nozzles can spray up to 18 feet. The anti-icing spray bar is 12 feet. There are 8--- 300 gallon tanks that can be used for hand gunning spray applications. These units are shared by the Counties.

After each herbicide application, the spray applicator (who does the spraying within the county) fills out a hand written Pesticide Field Report Form and faxes it to their sections offices. There the Administrative Specialists checks and enters this information onto an electronic Pesticide Field Report Form and e-mails the completed form to the Agronomy office (Special Crew, Janet Graham), and back to the county which sent them the report. They also enter the herbicide usage into OMS. In our office the Administrative Specialist (Janet Graham) checks and files all Pesticide Field Report Forms (PFRF). Information is compared

to the information entered into OMS. Any discrepancies are reported to and corrected by the Administrative Specialists within the section offices. A PFRF is completed for all spraying done by the 218 crew. It is checked and filed by Janet. She also enters our herbicide usage information into OMS.

There is a file kept within each county containing both their hand written and typed PFRF (sent to them from the section offices). There is no file kept in the section offices for the PFRF for their counties. We maintain a file within our district office containing all PFRF for all herbicide applications made within D-4.

In 2013, D-4 plans to apply herbicide, to control vegetation, on all our guardrails (see attached locations). We plan to spray the guardrail between March 18 and April 15. We plan to start thistle spraying April 1st and continue until June 30. Fall spraying (to plant rosettes) will be conducted all during October (see attached thistle spray control locations). Our Johnson grass spraying will begin June 1st and continue thru August (see attached Johnson grass spray control locations). The roads listed in each Counties spray control location plan will not be sprayed in a solid broadcast from start to finish. Areas will be sprayed, along each listed route, where the invasive weeds are established. Our brush spraying will begin in the middle of July and continue thru September. The brush spray locations will be determined by the County Superintendents, and their assessment of the greatest need. Our plan is to utilize each day that weather and circumstances permits and spray during the appropriate season to maximize the vegetation that can be sprayed and controlled.

HERBICIDES FOR GUARDRAIL SPRAYING

To report on the Pesticide Field Report Form
and for reporting materials in OMS
Spray Rate of 25 Gallons per Acre

2013

Guardrails can only be sprayed one time this year using this spray formulation!

<u>Water, Gallons</u>	<u>Proclipse, Pounds</u>	<u>Roundup Pro Max, gallons</u>	<u>2,4-D, Fluid ozs.</u>
25	2	0.167 (21.333 fluid ozs.)	32
50	4	0.334 (42.666 fluid ozs.)	64
75	6	0.501 (64 fluid ozs.)	96
100	8	0.668 (85.333 fluid ozs.)	128 (1 gal.)
125	10 (2 jugs)	0.835 (106.666 fluid ozs.)	160
150	12	1.002 (128 fluid ozs.)	192
175	14	1.169 (149.333 fluid ozs.)	224
200	16	1.336 (170.666 fluid ozs.)	256 (2 gal.)
225	18	1.503 (192 fluid ozs.)	288
<u>250</u>	<u>20 (4 jugs)</u>	<u>1.67 (1 full jug)</u>	<u>320 (2.5 gal. jug)</u>
275	22	1.837 (1 full jug & 21.333 fluid ozs.)	352
300	24	2.004 (1 full jug & 42.666 fluid ozs.)	384 (3 gal.)

MIXING HERBICIDES FOR GUARDRAIL

WEED CONTROL

1. ADD WATER (1/3 TOTAL)
2. START AGITATION
3. ADD DEFOAMER (1 LIQUID OUNCE IN EACH 100 GALLONS)
4. ADD PROCLIPSE
5. ADD 2,4-D
6. ADD ROUNDUP PRO-MAX
7. FINISH FILLING WITH WATER
8. ADD DRIFT CONTROL AGENT,IF NEEDED (1QUART IN EACH 100 GALLONS)

HERBICIDES FOR THISTLE SPRAYING

TO REPORT ON THE PESTICIDE FIELD REPORT FORM

AND FOR REPORTING MATERIALS IN OMS

Spray Rate of 25 Gallons per Acre 2013

<u>Water, Gallons</u>	<u>Escort XP dry ozs.</u>	<u>2,4-D liquid ozs.</u>	<u>Surfactant, liquid ozs.</u>
25	0.25	64	8 1 cup
50	0.5	128 1 gal.	16 1 pint
75	0.75	192	24
100	1	256 2 gals.	32 1 qt.
125	1.25	320	40
150	1.5	384 3 gals.	48
175	1.75	448	56
200	2	512 4 gals.	64 2 qts.
225	2.25	576	72
250	2.5	640 5 gals.	80
275	2.75	704	88
300	3	768 6 gals.	96 3 qts.
325	3.25	832	104
350	3.5	896 7 gals.	112
375	3.75	960	120
400	4	1024 8 gals.	128 1 gal.
425	4.25	1088	136
450	4.5	1152 9 gals.	144
475	4.75	1216	152
500	5	1280 10 gals.	160
525	5.25	1344	168
550	5.5	1408 11 gals.	176
575	5.75	1472	184
600	6	1536 12 gals.	192
625	6.25	1600	200
650	6.5	1664 13 gals.	208
675	6.75	1728	216
700	7	1792 14 gals.	224
725	7.25	1856	232
750	7.5	1920 15 gals.	240
775	7.75	1984	248
800	8	2048 16 gals.	256 2 gals.
825	8.25	2112	264
850	8.5	2176 17 gals.	272
875	8.75	2240	280
900	9	2304 18 gals.	288
925	9.25	2368	296
950	9.5	2432 19 gals.	304
975	9.75	2496	312
1000	10	2560 20 gals.	320
1025	10.25	2624	328
1050	10.5	2688 21 gals.	336
1075	10.75	2752	344
1100	11	2816 22 gals.	352
1125	11.25	2880	360
1150	11.5	2944 23 gals.	368
1175	11.75	3008	376
1200	12	3072 24 gals.	384 3 gals.

MIXING HERBICIDES FOR THISTLE AND BROADLEAF WEED CONTROL

1. ADD WATER (1/3 TOTAL)
2. START AGITATION
3. ADD DEFOAMER (1 LIQUID OUNCE IN EACH 100 GALLONS)
4. ADD ESCORT XP
5. ADD SURFACTANT
6. ADD 2,4-D
7. FINISH FILLING WITH WATER
8. ADD DRIFT CONTROL AGENT, IF NEEDED(1 QUART IN EACH 100 GALLONS)

JOHNSONGRASS SPRAYING

2013

AT THE SPRAY RATE OF 25 GALLONS PER ACRE
 TO REPORT ON THE PESTICIDE FIELD REPORT FORM
 AND FOR REPORTING MATERIALS ON O.M.S.

<u>WATER, GALLONS</u>	<u>FUSION, LIQUID OZS.</u>	<u>SURFACTANT, LIQ. OZS.</u>
25	10	8
50	20	16 1 Pint
75	30	24
100	40	32 1 Quart
125	50	40
150	60	48
175	70	56
200	80	64 .5 Gal.
225	90	72
250	100	80
275	110	88
300	120	96 3 Quarts
325	130	104
350	140	112
375	150	120
400	160	128 1 Gal.
425	170	136
450	180	144
475	190	152
500	200	160
525	210	168
550	220	176
575	230	184
600	240	192
625	250	200
650	260	208
675	270	216
700	280	224
725	290	232
750	300	240
775	310	248
800	320	256 2 Gal.
825	330	264
850	340	272
875	350	280
900	360	288
925	370	296
950	380	304
975	390	312
1000	400	320
1025	410	328
1050	420	336
1075	430	344
1100	440	352
1125	450	360
1150	460	368
1175	470	376
1200	480 3 Gal. 3Qts.	384 3 Gal.

MIXING JOHNSON GRASS SPRAY SOLUTION

1. ADD WATER (1/3 TOTAL)
2. START AGITATION
3. ADD DEFOAMER (1 LIQUID OUNCE IN EACH 100 GALLONS)
4. ADD SURFACTANT
5. ADD FUSION
6. FINISH FILLING WITH WATER
7. ADD DRIFT CONTROL AGENT, IF NEEDED (1 QUART IN EACH 100 GALLONS)

GLYPHOSATE (ROUNDUP PRO-MAX) FOR TOTAL HERBICIDE CONTROL
SPRAY RATE OF 25 GALLONS PER ACRE----- 2013
TO REPORT ON THE PESTICIDE FIELD REPORT FORM
AND FOR REPORTING MATERIALS ON O.M.S.

<u>GALLONS, WATER</u>	<u>OUNCES, GLYPHOSATE</u>		<u>1.67 Gallon Jug (214 ozs.)</u>
25	32		
50	64		
75	96		
100	128	1 gal.	
125	160		
150	192		1 jug (214 ozs.)
175	224		
200	256	2 gal.	
225	288		
250	320		
275	352		
300	384	3 gal.	
325	416		2 jugs (428 ozs.)
350	448		
375	480		
400	512	4 gal.	
425	544		
450	576		
475	608		
500	640	5 gal.	3 jugs (642 ozs.)
525	672		
550	704		
575	736		
600	768	6 gal.	
625	800		
650	832		4 jugs (856 ozs.)
675	864		
700	896	7 gal.	
725	928		
750	960		
775	992		
800	1024	8 gal.	
825	1056		5 jugs (1070 ozs.)
850	1088		
875	1120		
900	1152	9 gal.	
925	1184		
950	1216		
975	1248		
1000	1280	10 gal.	6 jugs (1284 ozs.)
1025	1312		
1050	1344		
1075	1376		
1100	1408	11 gal.	
1125	1440		
1150	1472		7 jugs (1498 ozs.)
1175	1504		
1200	1536	12 gal.	
			8 jugs (1712 ozs.)

MIXING HERBICIDES FOR
TOTAL VEGETATION CONTROL

1. ADD WATER (1/3 TOTAL)
2. START AGITATION
3. ADD DEFOAMER (1 LIQUID OUNCE IN EACH 100 GALLONS)
4. ADD ROUNDUP PRO-MAX
5. FINISH FILLING WITH WATER
6. ADD DRIFT CONTROL AGENT, IF NEEDED (1 QUART IN EACH 100 GALLONS)

HERBICIDES FOR BRUSH SPRAYING

SPRAY RATE OF 25 GALLONS PER ACRE

2013

TO REPORT ON THE PESTICIDE FIELD REPORT FORM

AND FOR REPORTING MATERIALS ON OMS

<u>GALLONS, WATER</u>	<u>TRICLOPYR, LIQ. OZS.</u>	<u>ESCORT, DRY OZS.</u>	<u>SURFACTANT, LIQ. OZS.</u>
25	64	0.5	8
50	128 1 Gal.	1	16
75	192	1.5	24
100	256 2 Gal.	2	32 1 Quart
125	320	2.5	40
150	384 3 Gal.	3	48
175	448	3.5	56
200	512 4 Gal.	4	64 .5 Gal.
225	576	4.5	72
250	640 5 Gal.	5	80
275	704	5.5	88
300	768 6 Gal.	6	96 3 Quarts
325	832	6.5	104
350	896 7 Gal.	7	112
375	960	7.5	120
400	1024 8 Gal.	8	128 1 Gal.
425	1088	8.5	136
450	1152 9 Gal.	9	144
475	1216	9.5	152
500	1280 10 Gal.	10	160
525	1344	10.5	168
550	1408 11 Gal.	11	176
575	1472	11.5	184
600	1536 12 Gal.	12	192
625	1600	12.5	200
650	1664 13 Gal.	13	208
675	1728	13.5	216
700	1792 14 Gal.	14	224
725	1856	14.5	232
750	1920 15 Gal.	15	240
775	1984	15.5	248
800	2048 16 Gal.	16	256 2 Gal.
825	2112	16.5	264
850	2176 17 Gal.	17	272
875	2240	17.5	280
900	2304 18 Gal.	18	288
925	2368	18.5	296
950	2432 19 Gal.	19	304
975	2496	19.5	312
1000	2560 20 Gal.	20	320
1025	2624	20.5	328
1050	2688 21 Gal.	21	336
1075	2752	21.5	344
1100	2816 22 Gal.	22	352
1125	2880	22.5	360
1150	2944 23 Gal.	23	368
1175	3008	23.5	376
1200	3072 24 Gal.	24	384 3 Gal.

MIXING HERBICIDES FOR BRUSH CONTROL

1. ADD WATER (1/3 TOTAL)
2. START AGITATION
3. ADD DEFOAMER (1 LIQUID OUNCE IN EACH 100 GALLONS)
4. ADD ESCORT
5. ADD SURFACTANT
6. ADD GARLON 3A
7. FINISH FILLING WITH WATER
8. ADD DRIFT CONTROL AGENT, IF NEEDED (1 QUART IN EACH 100 GALLONS)

BRECKINRIDGE COUNTY JOHNSON GRASS CONTROL PLAN

<u>ROAD</u>	<u>MP</u>
US 60	0-31.8
KY 79	0-15
KY 84	0-3
KY 86	15-26
KY 105	0-18
KY 108	0-6
KY 110	5-6.8
KY 144	0-21
KY 259	0-32
KY 261	0-32
KY 333	0-15.8
KY 376	0-0.92
KY 401	0-10
KY 447	0-9.9
KY 629	0-15.9
KY 690	0-18.9
KY 737	0-3
KY 886	0-2
KY 941	0-0.08
KY 992	0-14
KY 1073	0-7.8
KY 1238	0-2
KY 1385	0-4.9
KY 1401	0-10
KY 1616	0-1
KY 1740	0-7
KY 2199	0-1
KY 2201	0-1.8
KY 2202	0-3
KY 2779	0-6
KY 2780	0-3
KY 2781	0-1

BRECKINRIDGE COUNTY THISTLE CONTROL PLAN

<u>ROAD</u>	<u>MP</u>
US 60	0-31
KY 79	0-15
KY 110	4.9-6

Grayson County Johnson Grass Control Plan

Ky 54 0-18.4
Ky 79 0-19.8
Ky 88 0-14.5
Ky 110 0-1
Ky 185 0-8.3
Ky 187 0-11
KY 224 0-11.5
KY 226 0-1.3
KY 259 0-21.4
Ky 411 0-7.4
Ky 479 0-8.1
Ky 631 0-7.7
Ky720 0-14
Ky 736 0-19
Ky 737 0-6
Ky 878 0-4
Ky 889 0-2.8
Ky 920 0-7.8
Ky 1133 0-9
Ky 1168 0-3.4
Ky 1214 0-14.8
Ky 1356 0-28
Ky 1655 0-23
Ky 1777 0-2.4
Ky 2067 0-3
Ky 2191 0-2.3
Ky 2193 0-2.3
Ky 2766 0-6
Ky 2777 0-1.1
Ky 2778 0-4.1
Ky 2804 0-5.3
KY 3155 0-4.6
KY 3210 0-4.7
us 62 0-33.5

Thistle Control Plan

US 62 21-33
KY 88 0-14.5
Ky 185 0-8.3
Ky 187 0-11
Ky 224 0-11.5
Ky 226 0-1.3
Ky 259 0-21.4
Ky 411 0-7.4
Ky 479 0-8.1
Ky 720 0-14
Ky 737 0-6
Ky 889 0-2.8
Ky 920 0-7.8
Ky 1133 0-9
Ky 1168 0-3.4
Ky 1214 0-14.8
Ky 1356 0-3
Ky 1777 0-3.4
Ky 2766 0-6
Ky 2778 0-4.1
Ky 3155 0-4.6
Ky 3210 0-4.7

Green County Thistle control plan

KY 61	0-24.3
Ky 88	0-11
Ky 218	0-9.5
Ky 323	0-14
Ky 565	0-6.1
Ky 566	0-11.8
Ky 569	0-9.6
Ky 767	0-1
Ky 1048	0-3.2
Ky 1079	0-.9
Ky 2762	0-3.8
US 68	0-18

Johnson Grass control plan

Ky 61	0-24.3
KY 88	0-11
KY 218	0-9.5
KY 323	0-14.
KY 417	0-3
KY 424	0-4.2
KY 487	0-9.9
KY 565	0-6.1
KY 566	0-11.8
KY 569	0-9.6
KY 729	0-5.2
KY 745	0-3.7
KY 793	0-9.1
KY 936	0-1.4
KY 1048	0-3.2
KY 1079	0-.9
KY 1464	0-6.7
KY 1913	0-4.7
KY 2762	0-3.8
KY 2763	0-2.7
KY 2765	0-4.5
KY 3535	0-.7
US 68	0-18

Hart County Thistle Spray Plan

ROAD	M.P.
KY 88	0-30.4
KY 218	0-18
KY 224	0-3.2
KY 335	0-6.5
KY 357	0-13
KY 436	0-5.6
KY 566	0-4.7
KY 569	0-10.6
KY 570	0-5.4
KY 571	0-8
KY 572	0-16
KY 677	0-12.8
KY 728	0-24
KY 936	0-8.2
KY 1015	0-1.5
KY 1079	0-5.3
KY 1140	0-13.7
KY 1141	0-2.5
KY 1214	0-2.6
KY 1391	0-6.3
KY 1572	0-6.1
KY 1573	0-1.6
KY 1656	0-4.1
KY 1827	0-3.6
KY 1846	0-3.8
KY 1854	0-3.7
KY 2185	0-5
KY 2754	0-1.6
KY 2756	0-1.5
KY 2785	0-2.6
KY 2786	0-7.2
US 31E	0-21.5
US 31W	0-22.6

Johnson Grass Spray Plan

ROAD	M.P.
KY 88	0-30.4
KY 218	0-18
KY 224	0-3.2
KY 335	0-6.5
KY 357	0-13
KY 436	0-5.6
KY 566	0-4.7
KY 569	0-10.6
KY 570	0-5.4
KY 571	0-8
KY 572	0-16
KY 677	0-12.8
KY 728	0-24
KY 936	0-8.2
KY 1015	0-1.5
KY 1079	0-5.3
KY 1140	0-13.7
KY 1141	0-2.5
KY 1214	0-2.6
KY 1391	0-6.3
KY 1572	0-6.1
KY 1573	0-1.6
KY 1656	0-4.1
KY 1827	0-3.6
KY 1846	0-3.8
KY 1854	0-3.7
KY 2185	0-5
KY 2754	0-1.6
KY 2756	0-1.5
KY 2785	0-2.6
KY 2786	0-7.2
US 31E	0-21.5
US 31W	0-22.6

LARUE COUNTY THISTLE SPRAY PLAN

ROAD	M.P.
Ky 52	0-3
KY 84	0-12
KY 210	0-5
KY 224	0-5.8
KY 357	0-7.7
KY 462	0-9.7
KY 470	0-14.2
KY 583	0-5.2
KY 584	0-3.6
KY 916	0-7.7
KY 1079	0-4.1
KY 1192	0-8
KY 1517	0-8.2
KY 1607	0-4
KY 1794	0-3
KY 1832	0-6.9
KY 1906	0-4
KY 2217	0-3
KY 2761	0-3
KY 2762	0-3
KY 2767	0-1
US 31E	0-20

LARUE COUNTY JOHNSON GRASS PLAN

ROAD	M.P.
KY 52	0-3
KY 61	0-6
KY 84	0-12
KY 210	0-16
KY 222	0-5
KY 224	0-5.8
KY 357	0-7
KY 462	0-8
KY 470	0-14
KY 583	0-5
KY 584	0-3.5
KY 916	0-7
KY 1079	0-4
KY 1192	0-8
KY 1517	0-8
KY 1607	0-4
KY 1794	0-3
KY 1832	0-1
KY 1906	0-5
KY 2216	0-.7
KY 2217	0-3
KY 2760	0-.7
KY 2761	0-3.9
KY 2762	0-3
KY 2767	0-1.6
US 31E	0-20

MARION COUNTY

THISTLE CONTROL SPRAY PLAN

<u>ROAD</u>	<u>M.P.</u>
KY 208	0-11.1
KY 429	0-5.3
KY 1157	0-5.9
KY 1195	0-6
KY 1404	0-4
KY 2154	0-6.5
KY 2744	0-3
US 68	0-23.7

JOHNSON GRASS CONTROL SPRAY PLAN

<u>ROAD</u>	<u>M.P.</u>
KY 49	0-34.3
KY 52	0-9
KY 55	0-4.6
KY 84	0-15
KY 152	0-2.2
KY 208	0-11.1
KY 327	0-1.6
KY 289	0-5.6
KY 337	0-12.5
KY 412	0-13.3
KY 426	0-3.3
KY 429	0-5.3
KY 527	0-15.6
KY 634	0-1
KY 1183	0-2.7
KY 1195	0-6
KY 1404	0-4
KY 2154	0-6.5
KY 2740	0-4.5
KY 2741	0-4.9
KY 2744	0-3
US 68	0-9

MEADE COUNTY

THISTLE CONTROL SPRAY PLAN

<u>ROAD</u>	<u>M.P.</u>
KY 79	0-9.9
KY 144	0-29
KY 228	0-23.8
KY 230	0-4.7
KY 261	0-4
KY 333	0-6.5
KY 376	0-4.6
KY 428	0-3
KY 448	0-7.5
KY 710	0-8.2
KY 823	0-3.7
KY 933	0-7.3
KY 941	0-6.3
KY 1047	0-10.1
KY 1158	0-3.4
KY 1238	0-6
KY 1239	0-4.7
KY 1500	0-1.4
KY 1600	0-5.6
KY 1638	0-9
KY 1692	0-4.3
KY 1736	0-1.9
KY 1816	0-4.8
KY 1844	0-4
KY 1882	0-5.7
KY 1919	0-4
KY 2726	0-3
KY 2731	0-3
KY 2734	0-2.3
KY 3139	0-2

JOHNSON GRASS SPRAY CONTROL PLAN

<u>ROAD</u>	<u>M.P.</u>
KY 79	0-9.9
KY 144	0-35.9
KY 228	0-23.8
KY 230	0-4.7
KY 259	0-1
KY 261	0-4
KY 333	0-6.5
KY 376	0-4.6
KY 428	0-5.4
KY 448	0-7.5
KY 477	0-1
KY 656	0-1.4
KY 710	0-8.2
KY 823	0-3.7
KY 868	0-1.3
KY 886	0-2.3
KY 933	0-7.3
KY 941	0-6.3
KY 1047	0-10.1
KY 1051	0-2
KY 1158	0-3.4
KY 1238	0-12.3
KY 1239	0-4.7
KY 1500	0-1.4
KY 1600	0-5.6
KY 1638	0-9
KY 1692	0-4.3
KY 1726	0-1.6
KY 1735	0-1.4
KY 1736	0-1.9
KY 1816	0-4.8
KY 1844	0-4
KY 1882	0-5.7
KY 1919	0-4
KY 2726	0-3
KY 2727	0-2.3
KY 2731	0-3
KY 2734	0-2.3
KY 3139	0-2
US 31W	0-3.5
US60	0-14.9

NELSON COUNTY

THISTLE CONTROL SPRAY PLAN

<u>ROAD</u>	<u>M.P.</u>
KY 46	0-7
KY 48	0-6.5
KY 52	0-8
KY 55	0-6.9
KY 162	0-8.1
KY 245	0-11.5
KY 458	0-6.9
KY 480	0-1.7
KY 509	0-9.7
KY 523	0-7.8
KY 605	0-10.5
KY 652	0-.4
KY 733	0-13.5
KY 1066	0-6
KY 1430	0-2.2
KY 1754	0-1.4
KY 1858	0-4
KY 1873	0-3
KY 2230	0-.4
KY 2737	0-3.8
KY 2738	0-3.8
KY 2739	0-5.3
KY 3207	0-1.1
US 31E	15-27.1
US 62	0-37.1
US 150	0-7.6

JOHNSON GRASS CONTROL SPRAY PLAN

<u>ROAD</u>	<u>M.P.</u>
KY 46	0-11.2
KY 48	0-6.5
KY 49	0-9.4
KY 52	0-16.2
KY 55	0-6.9
KY 61	0-2.2
KY 84	0-9
KY 162	0-8.1
KY 245	0-12.2
KY 247	7.6-12
KY 332	0-3.1
KY 457	0-5.2
KY 458	0-6.9
KY 480	0-1.7
KY 523	0-7.8
KY 605	0-10.5
KY 652	0-.4
KY 733	0-13.5
KY 1066	0-6
KY 1430	0-2.2
KY 1754	0-1.4
KY 1858	0-4.2
KY 1873	0-3
KY 2230	0-.4
KY 2735	0-8.8
KY 2737	0-3.8
KY 2738	0-3.8
KY 2739	0-5.3
KY 2775	0-2
KY 3207	0-1.1
US 31E	0-27.1
US 62	0-37.1
US 150	0-7.6

TAYLOR COUNTY

JOHNSON GRASS CONTROL SPRAY PLAN

<u>ROAD</u>	<u>M.P.</u>
KY 55	0-10.2
KY 70	0-13.9
KY 210	0-16.6
KY 323	0-8.8
KY 337	0-6.7
KY 658	0-2.8
KY 1799	0-4.1
KY 1834	0-1.1
KY 2222	0-.5
KY 3098	0-3
KY 3350	0-2.6
US 68	0-13.5

WASHINGTON COUNTY

THISTLE CONTROL SPRAY PLAN

<u>ROAD</u>	<u>M.P.</u>
KY 53	0-11
KY 55	0-16.1
KY 152	0-22.3
KY 390	0-1.5
KY 429	0-3.6
KY 433	6-13.9
KY 438	0-11.9
KY 442	0-6.6
KY 458	0-6.1
KY 528	0-7.1
KY 529	0-1.8
KY 555	0-15.7
KY 605	0-1.3
KY 1030	0-2.7
KY 1183	0-7
KY 1195	0-2
KY 1404	0-3.3
KY 1584	0-1.2
KY 1586	0-9.9
KY 1724	0-1.8
KY 1754	0-7.9
KY 1796	0-7.8
KY 1872	0-4.7
KY 2234	0-2.2
KY 2758	0-3.1
US 150	0-21.1
US 150X	0-4.5

JOHNSON GRASS CONTROL SPRAY PLAN

<u>ROAD</u>	<u>M.P.</u>
KY 53	0-11
KY 55	0-16.1
KY 152	0-22.3
KY 390	0-1.5
KY 429	0-3.6
KY 433	0-13.9
KY 438	0-11.9
KY 442	0-6.6
KY 458	0-6.1
KY 528	0-7.1
KY 529	0-1.8
KY 555	0-15.7
KY 605	0-1.3
KY 1030	0-2.7
KY 1183	0-7
KY 1195	0-2
KY 1404	0-3.3
KY 1584	0-1.2
KY 1586	0-9.9
KY 1724	0-1.8
KY 1754	0-7.9
KY 1796	0-7.8
KY 1872	0-4.7
KY 1920	0-6
KY 2234	0-2.2
KY 2758	0-3.1
KY 3164	0-6
KY 3165	0-8
KY 3488	0-3
US 150	0-21.1
US 150X	0-4.5

GREEN COUNTY GUARDRAIL

ROAD	M.P.
KY 61	0-24.3
KY 88	0-11.2
KY 218	0-9.5
KY 417	0-3
KY 487	0-7
KY 565	0-6.1
KY 569	0-9.6
KY 793	0-9.1
KY 1913	0-4
KY 3535	0-7
US 68	0-18.4

MARION COUNTY GUARDRAIL

ROAD	M.P.
KY 49	0-15
KY 55	0-2
KY 84	0-15
KY 208	0-11.1
KY 289	0-5.6
KY 337	0-12.5
KY 412	0-13.2
KY 527	0-15.6
KY 2154	0-6.5
KY 2741	0-4.9
KY 2744	0-3
US 68	0-23.7

TAYLOR COUNTY GUARDRAIL

ROAD	M.P.
KY 55	0-10.2
KY 70	0-13.9
KY 76	0-7
KY 210	0-16.6
KY 289	0-9.4
KY 323	0-8.8
KY 337	0-6.7
KY 424	0-1.9
KY 527	0-11.3
KY 658	0-2.8
KY 744	0-7
KY 1798	0-1
KY 1799	0-4.1
KY 3350	0-2.6
US 68	0-13.5

WASHINGTON COUNTY GUARDRAIL

ROAD	M.P.
KY 53	0-11
KY 55	0-16
KY 152	0-21
KY 458	0-6
KY 528	0-7
KY 555	0-15.7
KY 1872	0-4.7
US 150	0-21.1
US 150X	0-4.5

NELSON COUNTY GUARDRAILS

ROAD	M.P.
KY 48	0-6.5
KY 49	4-9.4
KY 52	0-16.2
KY 55	0-4
KY 61	0-2.2
KY 84	0-9
KY 245	0-12.2
KY 247	0-12
KY 475	0-5
KY 509	0-9.7
KY 523	0-7.8
KY 605	0-10.5
KY 733	0-13.5
KY 1754	0-1.4
KY 1858	0-4.2
KY 2230	0-.2
KY 2737	0-3.8
KY 2738	0-3.8
KY 2739	0-5.3
KY 2775	0-.2
US 31E	0-27
US 62	0-37.1
US 150	0-7.6

DISTRICT -4, GUARDRAIL LOCATIONS AND MEASUREMENTS

<u>WKP (9001),HARDIN COUNTY</u>	<u>= 49,061 FT.</u>
<u>WKP (9001), GRAYSON COUNTY</u>	<u>= TO BE MEASURED</u>
<u>WKP (9001), DISTRICT 4 TOTAL</u>	<u>= TO BE DETERMINED</u>
<u>BGP (9002), HARDIN COUNTY</u>	<u>= 39,253 FT.</u>
<u>BGP (9002), NELSON COUNTY</u>	<u>= TO BE MEASURED</u>
<u>BGP (9002), WASHINGTON COUNTY</u>	<u>= TO BE MEASURED</u>
<u>BGP (9002), DISTRICT 4 TOTAL</u>	<u>= TO BE DETERMINED</u>
<u>I-65, HARDIN COUNTY</u>	<u>= 62,461 FT.</u>
<u>I-65, LARUE COUNTY</u>	<u>= 4,481 FT.</u>
<u>I-65, HART COUNTY,</u>	<u>= 52,914 FT.</u>
<u>I-65, HART COUNTY, CABLE BARRIER</u>	<u>= 170,693 FT.</u>
<u>I-65, DISTRICT 4 TOTAL</u>	<u>= 290,548 FT.</u>
<u>BRECKINRIDGE COUNTY</u>	<u>= 122,161 FT.</u>
<u>GRAYSON COUNTY</u>	<u>= 90,079 FT.</u>
<u>GREEN COUNTY</u>	<u>= TO BE MEASURED</u>
<u>TAYLOR COUNTY</u>	<u>=TO BE MEASURED</u>
<u>HARDIN COUNTY</u>	<u>= 307,766 FT.</u>
<u>HART COUNTY</u>	<u>= 38,868 FT.</u>
<u>LARUE COUNTY</u>	<u>= 52,346 FT.</u>
<u>MARION COUNTY</u>	<u>= TO BE MEASURED</u>
<u>MEADE COUNTY</u>	<u>=40,079 FT.</u>
<u>NELSON COUNTY</u>	<u>=TO BE MEASURED</u>
<u>WASHINGTON COUNTY</u>	<u>= TO BE MEASURED</u>

HARDIN COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
WK 9001	EAST	119.7	480	YES
WK 9001	EAST	119.9	290	YES
WK 9001	EAST	120.3	502	YES
WK 9001	EAST	120.5	840	YES
WK 9001	EAST	121.4	2941	YES
WK 9001	EAST	121.7	850	YES
WK 9001	EAST	122.1	370	YES
WK 9001	EAST	122.4	253	YES
WK 9001	EAST	122.8	502	YES
WK 9001	EAST	123.4	32	YES
WK 9001	EAST	124	301	YES
WK 9001	EAST	124.2	375	YES
WK 9001	EAST	124.5	1383	YES
WK 9001	EAST	124.9	1193	YES
WK 9001	EAST	125.2	676	YES
WK 9001	EAST	125.6	280	YES
WK 9001	EAST	125.8	391	YES
WK 9001	EAST	126	459	YES
WK 9001	EAST	126.9	480	YES
WK 9001	EAST	127.1	1764	YES
WK 9001	EAST	128.2	317	YES
WK 9001	EAST	128.6	972	YES
WK 9001	EAST	129	243	YES
WK 9001	EAST M	130.9	259	YES
WK 9001	EAST	130.9	211	YES
WK 9001	EAST	130.9	180	YES
WK 9001	EAST	131.3	301	YES
WK 9001	EAST	131.6	290	YES
WK 9001	EAST	131.8	206	YES
WK 9001	EAST	132.3	465	YES
WK 9001	EAST M	132.4	248	YES
WK 9001	EAST	132.5	618	YES
WK 9001	EAST M	132.5	232	YES
WK 9001	EAST	132.6	1088	YES
WK 9001	EAST	133	333	YES
WK 9001	EAST	133.6	708	YES
WK 9001	EAST	134.3	290	YES
WK 9001	EAST	134.5	781	YES
WK 9001	EAST	134.8	338	YES
WK 9001	EAST	135.1	396	YES
WK 9001	EAST	135.3	576	YES
WK 9001	EAST	135.6	417	YES
WK 9001	EAST	135.7	1056	YES
WK 9001	EAST M	136	301	YES
WK 9001	EAST M	136.2	232	YES
WK 9001	EAST	136.2	232	YES
WK 9001	EAST M	136.4	444	YES
WK 9001	EAST M	136.6	343	YES

HARDIN COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
WK 9001	EAST		600	YES
WK 9001	EAST	136.8	364	YES
WK 9001	EAST	136.8	243	YES
WK 9001	EAST		433	YES
WK 9001	EAST		512	YES
WK 9001	EAST		285	YES
WK 9001	EAST		692	<u>YES</u>
			TOTAL = 25514 FT.	

HARDIN COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
WK 9001	WEST M	136.7	470	YES
WK 9001	WEST M	136.5	354	YES
WK 9001	WEST M	136.4	380	YES
WK 9001	WEST	136.4	253	YES
WK 9001	WEST	136.1	201	YES
WK 9001	WEST	135.9	243	YES
WK 9001	WEST	135.9	312	YES
WK 9001	WEST	135.8	264	YES
WK 9001	WEST	135.7	729	YES
WK 9001	WEST	135.7	407	YES
WK 9001	WEST M	135.6	301	YES
WK 9001	WEST	135.6	412	YES
WK 9001	WEST		4240	YES
WK 9001	WEST	135.1	444	YES
WK 9001	WEST	134.9	676	YES
WK 9001	WEST	134.6	201	YES
WK 9001	WEST	134	539	YES
WK 9001	WEST	134.2	153	YES
WK 9001	WEST	134.1	201	YES
WK 9001	WEST	133.8	248	YES
WK 9001	WEST	133.5	692	YES
WK 9001	WEST	132.7	1193	YES
WK 9001	WEST M	132.5	243	YES
WK 9001	WEST	132.4	628	YES
WK 9001	WEST M	132.3	264	YES
WK 9001	WEST	132.2	549	YES
WK 9001	WEST	131.7	243	YES
WK 9001	WEST M	131.7	53	YES
WK 9001	WEST M	131.8	63	YES
WK 9001	WEST	131.6	211	YES
WK 9001	WEST	131.3	275	YES
WK 9001	WEST	131	317	YES
WK 9001	WEST M	130.9	253	YES
WK 9001	WEST	130.9	206	YES
WK 9001	WEST	129.1	227	YES
WK 9001	WEST M	129	79	YES
WK 9001	WEST M	129	42	YES
WK 9001	WEST	128.8	607	YES
WK 9001	WEST	128.2	206	YES
WK 9001	WEST	127.4	1684	YES
WK 9001	WEST M	127.3	69	YES
WK 9001	WEST M	127.3	63	YES
WK 9001	WEST	127	766	YES
WK 9001	WEST	126.1	655	YES
WK 9001	WEST	125.8	195	YES
WK 9001	WEST	125.4	507	YES
WK 9001	WEST	125.1	190	YES
WK 9001	WEST	124.9	190	YES

HARDIN COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
WK 9001	WEST	124.8	259	YES
WK 9001	WEST	124	375	YES
WK 9001	WEST	123.8	253	YES
WK 9001	WEST	123.4	238	YES
WK 9001	WEST M	123.4	63	YES
WK 9001	WEST M	123.4	58	YES
WK 9001	WEST	122.1	428	YES
WK 9001	WEST	121.8	539	YES
WK 9001	WEST	121.4	919	YES
WK 9001	WEST	121.1	1399	YES
WK 9001	WEST M	120.9	63	YES
WK 9001	WEST M	120.9	53	YES
WK 9001	WEST	120.4	845	YES
WK 9001	WEST	120.2	486	YES
WK 9001	WEST	119.9	1563	<u>YES</u>
			TOTAL = 23547 FT.	

HARDIN COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
BG 9002	EAST	0.176	359	YES
BG 9002	EAST	0.7	639	YES
BG 9002	EAST	1	560	YES
BG 9002	EAST	1.2	264	YES
BG 9002	EAST	1.4	312	YES
BG 9002	EAST	1.9	887	YES
BG 9002	EAST	2.3	385	YES
BG 9002	EAST	2.5	876	YES
BG 9002	EAST	3.1	1077	YES
BG 9002	EAST	3.4	2925	YES
BG 9002	EAST	4.2	486	YES
BG 9002	EAST	4.8	808	YES
BG 9002	EAST	5.2	359	YES
BG 9002	EAST	5.8	253	YES
BG 9002	EAST	6.1	253	YES
BG 9002	EAST	6.9	253	YES
BG 9002	EAST	7.3	312	YES
BG 9002	EAST	7.5	296	YES
BG 9002	EAST	7.8	380	YES
BG 9002	EAST	7.9	385	YES
BG 9002	EAST	8.3	829	YES
BG 9002	EAST	8.5	2397	YES
BG 9002	EAST	8.9	269	<u>YES</u>

TOTAL = 15564 FT.

HARDIN COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
BG 9002	WEST	8.8	1700	YES
BG 9002	WEST	8.4	465	YES
BG 9002	WEST M	7.9	422	YES
BG 9002	WEST	7.9	243	YES
BG 9002	WEST	7.5	412	YES
BG 9002	WEST	7.4	422	YES
BG 9002	WEST	6.9	248	YES
BG 9002	WEST	6.6	1579	YES
BG 9002	WEST	6.1	259	YES
BG 9002	WEST	5.5	2978	YES
BG 9002	WEST	4.4	4784	YES
BG 9002	WEST	3.4	755	YES
BG 9002	WEST	2.6	1489	YES
BG 9002	WEST	2.1	517	YES
BG 9002	WEST	1.8	797	YES
BG 9002	WEST M	1.4	792	YES
BG 9002	WEST	1.4	855	YES
BG 9002	WEST	1.2	781	YES
BG 9002	WEST	0.902	554	YES
BG 9002	WEST	0.705	290	YES
BG 9002	WEST	0.547	407	YES
BG 9002	WEST M	0.338	327	YES
BG 9002	WEST	0.47	285	YES
BG 9002	WEST	0.343	222	YES
BG 9002	WEST M	0.09	253	YES
BG 9002	WEST	0.086	232	YES
BG 9002	WEST		1621	<u>YES</u>

TOTAL = 23689 FT.

HARDIN COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
			288	YES
I-65	SOUTH	78.8	125	YES
I-65	SOUTH M	78.8	1354	YES
I-65	SOUTH	79.8	115	YES
I-65	SOUTH M	80.5	197	YES
I-65	SOUTH	80.6	110	YES
I-65	SOUTH M	81.7	231	YES
I-65	SOUTH	81.8	690	YES
I-65	SOUTH	82.1	259	YES
I-65	SOUTH	82.8	110	YES
I-65	SOUTH M	82.8	170	YES
I-65	SOUTH M	83.2	320	YES
I-65	SOUTH	83.3	481	YES
I-65	SOUTH	83.8	115	YES
I-65	SOUTH M	84	261	YES
I-65	SOUTH	84	434	YES
I-65	SOUTH	84.6	935	YES
I-65	SOUTH	85.8	130	YES
I-65	SOUTH M	85.8	492	YES
I-65	SOUTH	86.5	978	YES
I-65	SOUTH	87	590	YES
I-65	SOUTH	87.5	974	YES
I-65	SOUTH	87.9	687	YES
I-65	SOUTH	88.4	210	YES
I-65	SOUTH M	88.4	995	YES
I-65	SOUTH	88.7	1158	YES
I-65	SOUTH	89.1	160	NO
I-65	SOUTH M	89.1	641	YES
I-65	SOUTH SM	89.4	297	YES
I-65	SOUTH SM	89.5	249	YES
I-65	SOUTH SM	89.6	1695	YES
I-65	SOUTH	90.2	180	NO
I-65	SOUTH M	90.5	212	YES
I-65	SOUTH M	91	237	NO
I-65	SOUTH M	91.3	213	YES
I-65	SOUTH	91.4	390	NO
I-65	SOUTH M	91.6	782	YES
I-65	SOUTH	91.7	170	NO
I-65	SOUTH M	92.2	1902	YES
I-65	SOUTH	92.3	150	NO
I-65	SOUTH M	92.4	290	YES
I-65	SOUTH	92.6	150	NO
I-65	SOUTH M	92.6	195	YES
I-65	SOUTH M	93.4	1200	YES
I-65	SOUTH	93.7	239	YES
I-65	SOUTH M	94.2	790	YES
I-65	SOUTH	94.4	270	YES
I-65	SOUTH M	94.5	145	YES
I-65	SOUTH M	95.3		

I-65	SOUTH	96.4	584	YES
I-65	SOUTH	96.8	258	YES
I-65	SOUTH	97.6	1460	YES
I-65	SOUTH	97.9	737	YES
I-65	SOUTH M	98.7	220	YES
I-65	SOUTH	98.8	3475	YES
I-65	SOUTH	99.5	180	YES
I-65	SOUTH	100.5	215	YES
I-65	SOUTH M	100.5	513	YES
I-65	SOUTH	100.5	694	YES
I-65	SOUTH	102.1	267	YES
I-65	SOUTH	102.5	357	YES
I-65	SOUTH	102.7	664	YES
I-65	SOUTH	103.3		
			TOTAL = 32590 FT.	

HARDIN COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
I-65	NORTH	78.6	230	YES
I-65	NORTH	79.4	1515	YES
I-65	NORTH	80.4	216	YES
I-65	NORTH	81.6	170	YES
I-65	NORTH	81.8	756	YES
I-65	NORTH	82.6	193	YES
I-65	NORTH	83	160	YES
I-65	NORTH	83.2	240	YES
I-65	NORTH	83.6	300	YES
I-65	NORTH	84	300	YES
I-65	NORTH	84.7	768	YES
I-65	NORTH	85.6	234	YES
I-65	NORTH	86.3	1068	YES
I-65	NORTH	87.7	1020	YES
I-65	NORTH	88.2	450	YES
I-65	NORTH M	88.3	210	NO
I-65	NORTH	88.5	320	YES
I-65	NORTH	88.9	502	YES
I-65	NORTH	89.1	427	YES
I-65	NORTH M	89.1	160	NO
I-65	NORTH	90	729	YES
I-65	NORTH	90.5	160	YES
I-65	NORTH M	90.5	180	NO
I-65	NORTH M	91.2	196	NO
I-65	NORTH M	91.3	245	NO
I-65	NORTH	91.6	845	YES
I-65	NORTH	92	1149	YES
I-65	NORTH M	92.1	190	NO
I-65	NORTH M	92.4	150	NO
I-65	NORTH	92.6	167	YES
I-65	NORTH M	92.6	150	NO
I-65	NORTH	92.7	210	YES
I-65	NORTH M	93	170	NO
I-65	NORTH	93.1	153	YES
I-65	NORTH	93.7	1211	YES
I-65	NORTH	94.7	735	YES
I-65	NORTH	96.4	3930	YES
I-65	NORTH	98.5	1973	YES
I-65	NORTH M	98.7	220	YES
I-65	NORTH	100.4	6900	YES
I-65	NORTH M	100.5	215	YES
I-65	NORTH	102.5	280	YES
I-65	NORTH	103.2	474	YES

TOTAL = 29871 FT.

HART COUNTY I-65

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GRADE
I-65	NORTH	58.9	6562	YES CBLE BARR
I-65	NORTH	60.4	1932	YES CBLE BARR
I-65	NORTH	61.1	7297	YES CBLE BARR
I-65	NORTH	62.8	4446	YES CON BARR
I-65	NORTH	64.1	6504	YES CON BARR
I-65	NORTH	65.5	15655	YES CON BARR
I-65	NORTH	69.1	4868	YES CON BARR
I-65	NORTH	70.3	2384	YES CON BARR
I-65	NORTH	70.8	15351	YES CON BARR
I-65	NORTH	74.3	1361	YES CBLE BARR
I-65	NORTH	74.8	12216	YES CBLE BARR
I-65	NORTH	77.6	5428	YES CBLE BARR
I-65	NORTH	78.6	7729	YES CBLE BARR
I-65	NORTH	80.5	4961	YES CBLE BARR
I-65	NORTH	81.6	4555	YES CBLE BARR
I-65	NORTH	82.7	1735	YES CBLE BARR
I-65	NORTH	83.2	21833	YES CBLE BARR
I-65	NORTH	90.8	2620	YES CBLE BARR
I-65	NORTH	91.6	2395	YES CBLE BARR
I-65	NORTH	92.2	15002	YES CBLE BARR
I-65	NORTH	95.6	9397	YES CBLE BARR
I-65	NORTH	97.8	3480	YES CBLE BARR
I-65	NORTH	98.6	8323	YES CBLE BARR
I-65	NORTH	102.3	4659 CON. MEDIN	NO CON BARR
			TOTAL = 170693 FT.	

LARUE COUNTY I65 MEDIAN RAILS

I-65	SOUTH	78.8	45	NO
I-65	SOUTH	78.8	45	NO
I-65	SOUTH	76.0	45	NO
I-65	SOUTH	76.0	45	NO
			TOTAL = 180 FT.	

LARUE COUNTY I65 OUTSIDE RAILS

I-65	NORTH	76.0	153	YES
I-65	NORTH	76.2	756	YES
I-65	NORTH	77.0	2006	YES
I-65	NORTH	77.7	695	YES
I-65	NORTH	78.7	238	YES
I-65	SOUTH	76.0	157	YES
I-65	SOUTH	78.8	296	YES
			TOTAL = 4301 FT.	

HART COUNTY I-65 MEDIAN GUARDRAILS

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GRADE
I-65	SOUTH	73.9	190	YES
I-65	SOUTH	70.5	45	YES
I-65	SOUTH	70.4	45	YES
I-65	SOUTH	70.4	215	NO
I-65	SOUTH	70.3	215	YES
I-65	SOUTH	64.2	210	NO
I-65	SOUTH	64.1	560	NO
I-65	SOUTH	63.9	221	NO
I-65	SOUTH	61.2	200	NO
I-65	SOUTH	61.0	245	NO
I-65	SOUTH	60.5	45	YES
I-65	SOUTH	60.5	45	YES
I-65	SOUTH	70.4	613	YES
I-65	SOUTH	70.2	1330	YES
I-65	SOUTH	69.7	3025	YES
I-65	SOUTH	68.9	450	YES
I-65	SOUTH	68.7	1464	YES
I-65	SOUTH	68.3	1268	YES
I-65	SOUTH	67.9	567	YES
I-65	SOUTH	67.7	2189	YES
I-65	SOUTH	67.0	860	YES
I-65	SOUTH	66.3	559	YES
I-65	SOUTH	66.0	274	YES
I-65	SOUTH	65.6	891	YES
I-65	SOUTH	65.1	992	YES
I-65	SOUTH	64.3	420	YES
I-65	SOUTH	64.2	604	YES
I-65	SOUTH	64.0	1011	YES
I-65	SOUTH	63.0	226	YES
I-65	SOUTH	61.4	650	YES
I-65	SOUTH	60.0	600	YES

TOTAL = 20229 FT.

HART COUNTY I-65 OUTSIDE GUARDRAILS

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GRADE
I-65	NORTH	59.7	1506	YES
I-65	NORTH	60.5	210	YES
I-65	NORTH	61.0	520	YES
I-65	NORTH	61.2	671	YES
I-65	NORTH	62.5	414	YES
I-65	NORTH	62.9	892	YES
I-65	NORTH	63.7	1582	YES
I-65	NORTH	64.0	600	YES
I-65	NORTH	64.2	227	YES
I-65	NORTH	64.7	1881	YES
I-65	NORTH	65.4	3669	YES
I-65	NORTH	66.7	2918	YES
I-65	NORTH	67.5	397	YES
I-65	NORTH	68.0	492	YES
I-65	NORTH	68.5	705	YES
I-65	NORTH	69.3	1309	YES
I-65	NORTH	70.0	1730	YES
I-65	NORTH	70.5	824	YES
I-65	NORTH	70.7	590	YES
I-65	NORTH	71.2	1135	YES
I-65	NORTH	71.8	2122	YES
I-65	NORTH	72.6	1112	YES
I-65	NORTH	73.1	734	YES
I-65	NORTH	73.4	609	YES
I-65	NORTH	74.6	347	YES
I-65	SOUTH	74.6	253	YES
I-65	SOUTH	73.5	608	YES
I-65	SOUTH	73.1	806	YES
I-65	SOUTH	72.6	1187	YES
I-65	SOUTH	72.1	672	YES
I-65	SOUTH	71.4	1591	YES
I-65	SOUTH	70.8	372	YES

TOTAL = 32685 FT.

BRECKINRIDGE COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GRADE
US 60	WEST	5.7	800	YES
US 60	WEST	7.5	1090	YES
US 60	WEST	7.8	1820	NO
US 60	WEST	8.7	668	NO
US 60	WEST	9.6	380	NO
US 60	WEST	9.8	429	YES
US 60	WEST	11.9	1101	NO
US 60	WEST	17.1	908	YES
US 60	WEST	18.3	1519	YES
US 60	WEST	19.4	783	YES
US 60	WEST	20.6	489	YES
US 60	WEST	21.1	390	YES
US 60	WEST	21.2	2059	YES
US 60	WEST	22.2	1451	YES
US 60	WEST	22.9	761	YES
US 60	WEST	23.6	1305	YES
US 60	WEST	24.0	616	YES
US 60	WEST	24.6	486	YES
US 60	WEST	24.8	2208	YES
US 60	WEST	25.6	615	YES
US 60	WEST	25.8	890	YES
US 60	WEST	26.3	615	YES
US 60	WEST	26.8	624	YES
US 60	WEST	28.8	378	YES
US 60	WEST	28.9	647	YES
US 60	WEST	29.1	1803	NO
US 60	WEST	29.8	659	YES
US 60	WEST	30	1372	YES
US 60	WEST	30.6	1254	YES
US 60	WEST	31.9	1185	YES
US 60	WEST	32.3	1158	YES
US 60	WEST	32.6	2102	YES
US 60	EAST	0.0	3476	YES
US 60	EAST	0.7	676	YES
US 60	EAST	0.8	1281	YES
US 60	EAST	2.1	1278	YES
US 60	EAST	2.6	407	YES
US 60	EAST	2.8	465	YES
US 60	EAST	2.9	624	YES
US 60	EAST	4.2	1914	YES
US 60	EAST	6.0	1343	YES
US 60	EAST	6.3	1195	YES

US 60	EAST	6.8	677	YES
US 60	EAST	7.1	494	YES
US 60	EAST	7.4	254	YES
US 60	EAST	7.5	118	YES
US 60	EAST	8.0	355	YES
US 60	EAST	8.1	239	YES
US 60	EAST	8.9	715	YES
US 60	EAST	10.3	1314	YES
US 60	EAST	11.1	1069	YES
US 60	EAST	11.3	844	YES
US 60	EAST	11.6	652	YES
US 60	EAST	13.2	801	NO
US 60	EAST	14.1	1791	YES
US 60	EAST	20.6	679	YES
US 60	EAST	24.0	706	NO
US 60	EAST	24.6	1187	NO
US 60	EAST	25.3	1398	NO
US 60	EAST	26.5	241	YES
US 60	EAST	26.5	442	NO
US 60	EAST	26.8	614	YES
US 60	EAST	28.5	508	YES
US 60	EAST	28.8	386	YES

TOTAL = 60708 FT.

BRECKINRIDGE COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GRADE
US 60 X	EAST	0.1	339	YES
US 60 X	WEST	0.3	773	NO
US 60 X	WEST	1.6	253	NO
US 60 X	WEST	1.7	319	NO
US 60 X	WEST	2.6	377	YES
US 60 X	WEST	2.7	434	YES

TOTAL= 2495 FT

BRECKINRIDGE COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GRADE
KY 79	NORTH	0.1	185	YES
KY 79	NORTH	0.1	704	YES
KY 79	NORTH	0.4	360	YES
KY 79	NORTH	0.6	243	YES
KY 79	NORTH	1.0	875	YES
KY 79	NORTH	1.6	718	YES
KY 79	NORTH	2.0	717	NO
KY 79	NORTH	2.1	25	YES
KY 79	NORTH	2.5	382	YES
KY 79	NORTH	4.3	253	NO
KY 79	NORTH	4.5	111	YES
KY 79	NORTH	4.6	242	YES
KY 79	NORTH	4.7	486	NO
KY 79	NORTH	6.1	381	YES
KY 79	NORTH	6.3	196	YES
KY 79	NORTH	6.9	165	NO
KY 79	NORTH	7.5	163	NO
KY 79	SOUTH	0.1	389	YES
KY 79	SOUTH	0.6	238	YES
KY 79	SOUTH	0.7	224	YES
KY 79	SOUTH	1.3	496	NO
KY 79	SOUTH	1.3	253	NO
KY 79	SOUTH	1.8	532	YES
KY 79	SOUTH	2.1	422	YES
KY 79	SOUTH	2.1	122	YES
KY 79	SOUTH	2.5	323	YES
KY 79	SOUTH	4.4	1937	YES
KY 79	SOUTH	4.5	121	YES
KY 79	SOUTH	4.7	539	YES
KY 79	SOUTH	6.2	335	NO
KY 79	SOUTH	6.4	292	NO
KY 79	SOUTH	6.7	130	YES
KY 79	SOUTH	7.4	189	NO
KY 79	SOUTH	7.5	283	YES

TOTAL = 13031 FT.

BRECKINRIDGE COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GRADE
KY 86	WEST	26.1	339	NO
KY 86	WEST	24.8	400	NO
KY 86	WEST	23.7	141	NO
KY 86	WEST	18.4	408	NO
KY 86	WEST	18.2	653	YES
KY 86	WEST	18.0	303	NO
KY 86	WEST	17.8	443	NO
KY 86	WEST	17.7	240	YES
KY 86	WEST	17.2	185	NO
KY 86	WEST	16.6	181	NO
KY 86	WEST	16.5	195	NO
KY 86	WEST	16.5	186	NO
KY 86	WEST	17.1	205	NO
KY 86	WEST	17.2	346	NO
KY 86	WEST	17.8	295	NO
KY 86	WEST	17.9	278	NO
KY 86	WEST	23.6	191	NO
			TOTAL = 4989 FT.	

BRECKINRIDGE COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GRADE
KY 105	NORTH	0.1	160	NO
KY 105	NORTH	0.1	163	NO
KY 105	NORTH	0.3	460	NO
KY 105	NORTH	0.6	533	NO
KY 105	NORTH	1.2	207	NO
KY 105	NORTH	1.5	590	NO
KY 105	NORTH	1.8	271	NO
KY 105	NORTH	2.0	192	NO
KY 105	NORTH	2.8	448	NO
KY 105	NORTH	3.2	162	NO
KY 105	NORTH	3.3	297	NO
KY 105	NORTH	3.5	164	NO
KY 105	NORTH	4.8	528	NO
KY 105	NORTH	5.2	186	NO
KY 105	NORTH	5.0	594	NO
KY 105	NORTH	3.7	459	NO
KY 105	SOUTH	2.9	308	NO
KY 105	SOUTH	2.5	271	NO
KY 105	SOUTH	2.2	238	NO
KY 105	SOUTH	2.1	202	NO
KY 105	SOUTH	1.6	465	NO
KY 105	SOUTH	1.3	300	NO
KY 105	SOUTH	0.8	373	NO
KY 105	SOUTH	0.5	232	NO
KY 105	SOUTH	0.2	237	NO
			TOTAL = 8040 FT.	

BRECKINRIDGE COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GRADE
KY 108	NORTH	2.5	83	YES
KY 108	NORTH	2.5	118	YES
KY 108	SOUTH	2.5	85	YES
KY 108	SOUTH	2.5	87	YES
			TOTAL = 373 FT.	

BRECKINRIDGE COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GRADE
KY 110	WEST	5.5	131	NO
KY 110	EAST	5.5	116	NO
			TOTAL = 247 FT.	

BRECKINRIDGE COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GRADE
KY 144	NORTH	3.1	453	NO
KY 144	NORTH	3.3	649	NO
KY 144	NORTH	3.5	236	NO
KY 144	NORTH	3.5	189	NO
KY 144	NORTH	3.6	484	NO
KY 144	SOUTH	4.5	185	NO
KY 144	SOUTH	4.4	411	NO
KY 144	SOUTH	3.9	278	NO
KY 144	SOUTH	3.7	250	YES
KY 144	SOUTH	2.6	529	NO
KY 144	SOUTH	2.5	435	YES
KY 144	SOUTH	2.4	397	YES
KY 144	SOUTH	5.6	473	NO

TOTAL = 4969 FT.

BRECKINRIDGE COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GRADE
KY 259	SOUTH	1.2	236	YES
KY 259	SOUTH	1.1	240	YES
KY 259	SOUTH	0.6	156	NO
KY 259	SOUTH	0.5	252	YES
KY 259	SOUTH	0.1	161	YES
KY 259	SOUTH	0.0	171	YES
KY 259	NORTH	0.0	337	YES
KY 259	NORTH	0.1	164	YES
KY 259	NORTH	0.5	131	YES
KY 259	NORTH	0.7	210	YES
KY 259	NORTH	1.2	150	YES
KY 259	NORTH	11.7	1536	YES
KY 259	NORTH	19.0	211	NO
KY 259	NORTH	19.3	228	NO
KY 259	NORTH	27.1	210	NO
KY 259	NORTH	27.2	237	YES
KY 259	SOUTH	27.2	223	NO
KY 259	SOUTH	27.2	519	NO
KY 259	SOUTH	19.4	227	NO
KY 259	SOUTH	19.3	783	NO
KY 259	SOUTH	12.2	1206	YES
KY 259	SOUTH	16	201	NO
KY 259	SOUTH	8.8	184	NO
KY 259	SOUTH	8.7	817	NO
KY 259	NORTH	8.7	1108	NO
KY 259	NORTH	10.0	350	YES
KY 259	NORTH	11.7	352	YES
			TOTAL = 10600 FT.	

BRECKINRIDGE COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GRADE
KY 261	SOUTH	3.9	404	NO
KY 261	NORTH	3.85	425	NO
			TOTAL = 829 FT.	

BRECKINRIDGE COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GRADE
KY 333	WEST	5.2	265	NO
			TOTAL = 265 FT.	

BRECKINRIDGE COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GRADE
KY 690	EAST	18.0	100	NO
			TOTAL = 100 FT.	

BRECKINRIDGE COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GRADE
KY 737	SOUTH	1.8	386	YES
KY 737	SOUTH	1.5	715	YES
KY 737	SOUTH	1.2	428	YES
KY 737	SOUTH	0.6	393	YES
KY 737	SOUTH	0.4	162	YES
KY 737	SOUTH	0.1	381	YES
KY 737	NORTH	0.0	296	YES
KY 737	NORTH	0.3	162	YES
KY 737	NORTH	1.0	674	YES
			TOTAL = 3597 FT.	

BRECKINRIDGE COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GRADE
KY 992	EAST	1.8	302	YES
KY 992	EAST	2.8	331	NO
KY 992	EAST	4.2	178	YES
KY 992	EAST	4.6	577	NO
KY 992	EAST	11.3	1562	YES
KY 992	EAST	14.7	765	NO
KY 992	WEST	14.7	765	NO
KY 992	WEST	11.3	1562	YES
KY 992	WEST	4.6	577	NO
KY 992	WEST	4.2	178	YES
KY 992	WEST	2.8	331	NO
KY 992	WEST	1.8	302	YES
			TOTAL = 7430 FT.	

BRECKINRIDGE COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GRADE
KY 1385	WEST	1.4	245	NO
KY 1385	EAST	1.4	245	NO
			TOTAL = 490 FT.	

BRECKINRIDGE COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GRADE
KY 1401	EAST	0.0	370 TOTAL = 370 FT.	NO

BRECKINRIDGE COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GRADE
KY 2780	WEST	1.8	112	YES
KY 2780	WEST	1.8	138	YES
KY 2780	EAST	1.8	130	YES
KY 2780	EAST	1.8	93	YES
			TOTAL = 473 FT.	

BRECKINRIDGE COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GRADE
KY 3199	WEST	0.0	730	YES
KY 3199	EAST	0.0	398	YES
KY 3199	EAST	0.9	536	NO
KY 3199	EAST	1.0	1491	NO
			TOTAL = 3155 FT.	

GRAYSON COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GRADE
US 62	EAST	0.6	234	NO
US 62	EAST	4.7	112	NO
US 62	EAST	4.8	359	NO
US 62	EAST	7.1	302	NO
US 62	EAST	9.1	243	NO
US 62	EAST	13.7	397	NO
US 62	EAST	15.2	196	NO
US 62	EAST	16.0	812	YES
US 62	EAST	20.0	299	YES
US 62	EAST	20.0	673	YES
US 62	EAST	28.4	796	NO
US 62	EAST	28.7	214	NO
US 62	WEST	28.8	150	NO
US 62	WEST	28.7	159	NO
US 62	WEST	19.4	732	YES
US 62	WEST	16.4	626	YES
US 62	WEST	15.2	336	NO
US 62	WEST	13.7	376	NO
US 62	WEST	9.0	232	NO
US 62	WEST	7.5	804	NO
US 62	WEST	7.0	302	NO
US 62	WEST	4.9	281	YES
US 62	WEST	4.7	371	NO
US 62	WEST	4.6	380	NO
US 62	WEST	0.6	137	NO
US 62	WEST	0.6	225	NO

TOTAL = 9748 FT.

GRAYSON COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GRADE
KY 54	WEST	3.8	36	NO
KY 54	WEST	3.9	754	NO
KY 54	WEST	3.3	353	YES
KY 54	WEST	3.2	50	YES
KY 54	WEST	0.4	103	YES
KY 54	WEST	0.4	1263	YES
KY 54	WEST	0.0	254	YES
KY 54	WEST	0.0	242	YES
KY 54	WEST	0.2	1057	YES
KY 54	EAST	0.5	96	YES
KY 54	EAST	3.3	27	YES
KY 54	EAST	3.3	371	YES
KY 54	EAST	4.3	576	NO
KY 54	EAST	4.5	234	NO
KY 54	EAST	4.6	183	NO
KY 54	EAST	7.7	35	YES

TOTAL = 5634 FT.

GRAYSON COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GRADE
KY 79	NORTH	0.1	450	NO
KY 79	NORTH	0.3	210	NO
KY 79	NORTH	2.3	183	YES
KY 79	NORTH	3.6	121	YES
KY 79	NORTH	3.7	225	YES
KY 79	NORTH	3.8	89	YES
KY 79	NORTH	4.9	515	NO
KY 79	NORTH	5.0	490	YES
KY 79	NORTH	7.6	373	NO
KY 79	NORTH	10.6	482	YES
KY 79	NORTH	10.7	222	NO
KY 79	NORTH	13.7	310	NO
KY 79	NORTH	14.1	250	NO
KY 79	NORTH	14.2	340	NO
KY 79	NORTH	14.3	331	NO
KY 79	NORTH	14.6	409	NO
KY 79	NORTH	15.0	558	NO
KY 79	NORTH	15.2	428	NO
KY 79	NORTH	15.8	617	NO
KY 79	NORTH	16.0	228	NO
KY 79	NORTH	16.1	324	NO

KY 79	NORTH	16.3	261	NO
KY 79	NORTH	16.4	515	NO
KY 79	NORTH	16.9	338	NO
KY 79	NORTH	17.2	308	NO
KY 79	NORTH	17.5	225	NO
KY 79	NORTH	18.6	395	NO
KY 79	NORTH	18.8	428	NO
KY 79	NORTH	19.6	126	NO
KY 79	NORTH	19.6	125	NO
KY 79	SOUTH	19.8	891	YES
KY 79	SOUTH	19.6	123	NO
KY 79	SOUTH	19.5	123	NO
KY 79	SOUTH	17.3	244	NO
KY 79	SOUTH	17.1	169	NO
KY 79	SOUTH	17.0	360	NO
KY 79	SOUTH	16.8	365	YES
KY 79	SOUTH	16.5	226	NO
KY 79	SOUTH	16.4	248	NO
KY 79	SOUTH	16.3	316	NO
KY 79	SOUTH	16.0	251	NO
KY 79	SOUTH	15.6	215	NO
KY 79	SOUTH	15.2	376	NO
KY 79	SOUTH	14.7	286	NO
KY 79	SOUTH	13.4	271	NO
KY 79	SOUTH	13.1	212	NO
KY 79	SOUTH	12.8	400	NO
KY 79	SOUTH	10.8	1811	YES
KY 79	SOUTH	7.6	312	NO
KY 79	SOUTH	5.0	298	YES
KY 79	SOUTH	5.0	422	YES
KY 79	SOUTH	3.7	250	YES
KY 79	SOUTH	3.6	126	YES
KY 79	SOUTH	2.4	145	YES
KY 79	SOUTH	0.4	355	YES
KY 79	SOUTH	0.2	366	NO

TOTAL = 19037 FT.

GRAYSON COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GRADE
KY 88	EAST	0.6	248	YES
KY 88	EAST	0.7	282	YES
KY 88	EAST	0.8	218	YES
KY 88	EAST	1.0	230	YES
KY 88	EAST	2.1	1264	YES
KY 88	EAST	2.4	384	YES
KY 88	EAST	10.3	436	YES
KY 88	EAST	10.8	214	YES
KY 88	EAST	10.9	953	YES
KY 88	EAST	11.2	31	YES
KY 88	EAST	11.5	169	YES
KY 88	EAST	11.6	474	YES
KY 88	EAST	14.2	1919	YES
KY 88	WEST	14.5	561	YES
KY 88	WEST	14.2	536	YES
KY 88	WEST	13.3	366	YES
KY 88	WEST	11.6	271	YES
KY 88	WEST	11.4	94	YES
KY 88	WEST	11.2	146	YES
KY 88	WEST	11.0	945	YES
KY 88	WEST	10.7	212	YES
KY 88	WEST	10.3	180	YES
KY 88	WEST	2.4	283	YES
KY 88	WEST	2.1	260	YES
KY 88	WEST	0.9	250	YES
KY 88	WEST	0.8	212	YES
KY 88	WEST	0.7	275	YES
			TOTAL = 11413 FT.	

GRAYSON COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GRADE
KY 110	EAST	0.0	82	YES
KY 110	WEST	0.1	192	YES
			TOTAL = 274 FT.	

GRAYSON COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GRADE
KY 185	SOUTH	7.5	165	NO
KY 185	SOUTH	7.4	257	YES
KY 185	SOUTH	7.4	161	NO
KY 185	SOUTH	6.1	276	NO
KY 185	SOUTH	0.7	250	NO
KY 185	NORTH	6.1	300	YES
KY 185	NORTH	7.3	485	YES
KY 185	NORTH	7.5	157	YES
			TOTAL = 2051 FT.	

GRAYSON COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GRADE
KY 187	SOUTH	9.5	243	YES
KY 187	NORTH	9.5	194	YES
			TOTAL = 437 FT.	

GRAYSON COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GRADE
KY 224	WEST	11.5	40	YES
KY 224	WEST	0.8	112	YES
KY 224	WEST	0.7	290	YES
KY 224	EAST	0.6	150	YES
KY 224	EAST	0.7	250	YES
KY 224	EAST	0.8	110	YES
KY 224	EAST	11.5	40	YES
			TOTAL = 992 FT.	

GRAYSON COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GRADE
KY 259	NORTH	8.5	408	YES
KY 259	NORTH	9.3	225	YES
KY 259	NORTH	9.4	382	YES
KY 259	NORTH	9.6	658	YES
KY 259	NORTH	12.0	231	YES
KY 259	NORTH	12.2	70	YES
KY 259	NORTH	12.3	113	YES
KY 259	NORTH	14.4	115	YES
KY 259	NORTH	20.5	711	YES
KY 259	NORTH	20.8	455	YES
KY 259	NORTH	21.1	683	YES
KY 259	NORTH	21.3	532	YES
KY 259	SOUTH	21.4	525	YES
KY 259	SOUTH	21.3	215	YES
KY 259	SOUTH	21.2	370	YES
KY 259	SOUTH	19.8	589	YES
KY 259	SOUTH	12.1	100	YES
KY 259	SOUTH	12.1	71	YES
KY 259	SOUTH	11.9	505	YES
KY 259	SOUTH	9.3	250	YES
KY 259	SOUTH	9.2	130	YES
KY 259	SOUTH	5.7	530	YES
KY 259	SOUTH	6.0	306	YES
KY 259	SOUTH	6.0	237	YES

TOTAL = 8411 FT.

GRAYSON COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GRADE
KY 411	SOUTH	7.0	117	YES
KY 411	NORTH	7.0	226	YES

TOTAL = 343 FT.

GRAYSON COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GRADE
KY 479	SOUTH	4.9	405	YES
KY 479	SOUTH	0.2	125	YES
KY 479	SOUTH	0.1	95	YES
KY 479	NORTH	0.1	77	YES
KY 479	NORTH	0.2	207	YES
KY 479	NORTH	0.4	35	YES
KY 479	NORTH	4.9	404	YES

TOTAL = 1348 FT.

GRAYSON COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GRADE
KY 720	EAST	7.0	150	YES
KY 720	EAST	7.1	329	YES
KY 720	EAST	7.2	367	YES
KY 720	EAST	7.5	554	YES
KY 720	EAST	14.1	445	YES
KY 720	WEST	14.0	394	YES
KY 720	WEST	7.5	684	YES
KY 720	WEST	7.2	926	YES
KY 720	WEST	7.0	118	YES
			TOTAL = 3967 FT.	

GRAYSON COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GRADE
KY 920	NORTH	5.3	1130	YES
KY 920	NORTH	5.6	576	YES
KY 920	NORTH	5.9	120	YES
KY 920	NORTH	6.2	372	YES
KY 920	NORTH	6.4	175	YES
KY 920	NORTH	7.5	87	YES
KY 920	NORTH	7.8	173	YES
KY 920	SOUTH	7.8	230	YES
KY 920	SOUTH	7.5	180	YES
KY 920	SOUTH	6.4	125	YES
KY 920	SOUTH	6.3	330	YES
KY 920	SOUTH	5.9	100	YES
KY 920	SOUTH	5.7	380	YES
KY 920	SOUTH	5.6	1024	YES
KY 920	SOUTH	1.5	252	YES
KY 920	SOUTH	1.4	530	YES
KY 920	SOUTH	1.3	707	YES
			TOTAL = 6491 FT.	

GRAYSON COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GRADE
KY 1133	SOUTH	6.0	1078	YES
KY 1133	NORTH	6.4	885	YES
			TOTAL = 1963 FT.	

GRAYSON COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GRADE
KY 1168	SOUTH	2.3	325	YES
KY 1168	SOUTH	1.2	361	YES
KY 1168	NORTH	1.0	360	YES
KY 1168	NORTH	2.1	282	YES
			TOTAL = 1328 FT.	

GRAYSON COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GRADE
KY 1214	SOUTH	13.4	3000	YES
KY 1214	SOUTH	13.3	871	YES
KY 1214	SOUTH	11.2	210	YES
KY 1214	SOUTH	7.2	243	YES
KY 1214	SOUTH	7.2	93	YES
KY 1214	SOUTH	7.1	153	YES
KY 1214	SOUTH	6.0	227	YES
KY 1214	SOUTH	5.9	374	YES
KY 1214	SOUTH	5.6	347	YES
KY 1214	SOUTH	4.7	483	YES
KY 1214	SOUTH	0.2	20	YES
KY 1214	SOUTH	0.0	25	YES
KY 1214	NORTH	0.0	25	YES
KY 1214	NORTH	0.1	35	YES
KY 1214	NORTH	0.1	60	YES
KY 1214	NORTH	4.4	495	YES
KY 1214	NORTH	5.3	337	YES
KY 1214	NORTH	5.6	291	YES
KY 1214	NORTH	5.8	231	YES
KY 1214	NORTH	6.9	164	YES
KY 1214	NORTH	7.0	123	YES
KY 1214	NORTH	7.0	200	YES
KY 1214	NORTH	11.2	60	YES
KY 1214	NORTH	11.2	117	YES
KY 1214	NORTH	13.0	817	YES
KY 1214	NORTH	13.2	150	YES
			TOTAL = 9151 FT.	

GRAYSON COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GRADE
KY 1356	SOUTH	2.8	710	YES
KY 1356	SOUTH	1.9	187	YES
KY 1356	SOUTH	1.6	185	YES
KY 1356	SOUTH	1.1	351	YES
KY 1356	SOUTH	0.2	536	YES
KY 1356	NORTH	0.4	167	YES
KY 1356	NORTH	0.5	195	YES
KY 1356	NORTH	1.1	361	YES
KY 1356	NORTH	1.6	160	YES
KY 1356	NORTH	2.6	727	YES
			TOTAL = 3579 FT.	

GRAYSON COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GRADE
KY 3155	NORTH	0.4	477	YES
KY 3155	NORTH	2.6	16	YES
KY 3155	NORTH	2.7	16	YES
KY 3155	NORTH	3.5	193	YES
KY 3155	NORTH	4.7	518	YES
KY 3155	SOUTH	4.5	577	YES
KY 3155	SOUTH	3.6	170	YES
KY 3155	SOUTH	2.1	237	YES
KY 3155	SOUTH	1.6	606	YES
KY 3155	SOUTH	1.1	272	YES
KY 3155	SOUTH	0.6	323	YES
			TOTAL = 3405 FT.	

GRAYSON COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GRADE
KY 3210	SOUTH	1.1	121	YES
KY 3210	SOUTH	1.0	128	YES
KY 3210	NORTH	1.0	128	YES
KY 3210	NORTH	1.0	130	YES
			TOTAL = 507 FT.	

HARDIN COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
31W	SOUTH	36.9	232	YES
31W	SOUTH	36.8	164	YES
31W	SOUTH	36.7	206	YES
31W	SOUTH	36.7	185	YES
31W	SOUTH	36.6	275	YES
31W	SOUTH	36.5	929	YES
31W	SOUTH	36.2	755	YES
31W	SOUTH	36.1	2017	YES
31W	SOUTH	35.6	2233	YES
31W	SOUTH	34.1	855	YES
31W	SOUTH	33.8	1626	YES
31W	SOUTH	33	739	YES
31W	SOUTH	32	312	YES
31W	SOUTH	31.9	201	YES
31W	SOUTH	31.8	90	YES
31W	SOUTH	31.7	344	YES
31W	SOUTH	31.1	619	YES
31W	SOUTH	31	270	YES
31W	SOUTH	30.8	323	YES
31W	SOUTH	29.8	1132	YES
31W	SOUTH	29.6	497	YES
31W	SOUTH	28.3		
31W	SOUTH	27.7	206	YES
31W	SOUTH	26.8	407	YES
31W	SOUTH	26.6	444	YES
31W	SOUTH	25.4	1063	YES
31W	SOUTH	24.8	661	YES
31W	SOUTH	24.6	190	YES
31W	SOUTH	24.5	503	YES
31W	SOUTH	24.1	831	YES
31W	SOUTH	23.9	1010	YES
31W	SOUTH	23.2	688	YES
31W	SOUTH	22.7	672	YES
31W	SOUTH	22.4	465	YES
31W	SOUTH	22	269	YES
31W	SOUTH	21.6	259	YES
31W	SOUTH	21.4	444	YES
31W	SOUTH	21.1	602	YES
31W	SOUTH	21	919	YES
31W	SOUTH	2.5	430	YES
31W	SOUTH	2.4	480	YES
31W	SOUTH	6.3	320	YES
31W	SOUTH	6.3	120	<u>YES</u>

TOTAL = 24987 FT. ✓

HARDIN COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF	
31W	NORTH	2.4	403	YES	
31W	NORTH	2.5	395	YES	
31W	NORTH	6.3	138	YES	
31W	NORTH	6.3	275	YES	
31W	NORTH	19.3	227	YES	
31W	NORTH	16.6	16352	YES	
31W	NORTH	19.7	11	YES	
31W	NORTH	20.6	253	YES	
31W	NORTH	20.8	375	YES	
31W	NORTH	20.9	222	YES	
31W	NORTH	21	227	YES	
31W	NORTH	21.4	459	YES	
31W	NORTH	21.6	660	YES	
31W	NORTH	22.1	396	YES	
31W	NORTH	22.6	945	YES	
31W	NORTH	23.1	792	YES	
31W	NORTH	24.4	554	YES	
31W	NORTH	24.7	876	YES	
31W	NORTH	25.3	639	YES	
31W	NORTH	26.2	359	YES	
31W	NORTH	25.6	143	YES	
31W	NORTH	27.2	63	YES	
31W	NORTH	27.5	190	YES	
31W	NORTH	M	28.3	74	YES
31W	NORTH	M	28.3	83	YES
31W	NORTH		29.5	533	YES
31W	NORTH		29.6	238	YES
31W	NORTH		29.8	1088	YES
31W	NORTH		30	206	YES
31W	NORTH		30.5	13253	YES
31W	NORTH		30.7	322	YES
31W	NORTH		31.6	766	YES
31W	NORTH		31.8	227	YES
31W	NORTH		31.9	206	YES
31W	NORTH	M	33	1526	YES
31W	NORTH		33	3004	YES
31W	NORTH		33.7	449	YES
31W	NORTH		34	887	YES
31W	NORTH		34.3	26	YES
31W	NORTH		35.2	4404	YES
31W	NORTH		36.1	37	YES
31W	NORTH		36.1	634	YES
31W	NORTH		36.4	855	YES
31W	NORTH		36.5	1236	YES
31W	NORTH		36.9	195	YES

TOTAL = 55183 FT.

HARDIN COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
31 WBP	SOUTH	3.5	180	YES
31 WBP	SOUTH	2.9	194	YES
31 WBP	SOUTH	1	225	YES
31 WBP	SOUTH	0.9	367	YES
31 WBP	SOUTH	0.8	150	YES
31 WBP	SOUTH	0.3	170	YES
31 WBP	SOUTH	0.2	215	YES
31 WBP	SOUTH	0.1	385	<u>YES</u>
			TOTAL = 1886 FT.	✓

HARDIN COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
31 WBP	NORTH M	1.5	2767	YES
31 WBP	NORTH M	2.3	3548	YES
31 WBP	NORTH	2.9	259	YES
31 WBP	NORTH M	2.9	3194	YES
31 WBP	NORTH	3.5	227	YES
31 WBP	NORTH M	3.5	570	<u>YES</u>
			TOTAL = 10565 FT.	✓

HARDIN COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
KY 61	SOUTH M	0	209	NO
KY 61	SOUTH M	0.2	208	NO
KY 61	SOUTH	0.2	819	YES
KY 61	SOUTH	0.4	620	YES
KY 61	SOUTH	2.4	1205	YES
KY 61	SOUTH	3.2	735	YES
KY 61	SOUTH	3.6	957	YES
KY 61	SOUTH	4.8	250	YES
KY 61	SOUTH	4.9	106	YES
KY 61	NORTH	4.7	470	YES
KY 61	NORTH	4.6	240	YES
KY 61	NORTH	3.4	767	YES
KY 61	NORTH	2.8	1112	YES
KY 61	NORTH	2	1153	YES
KY 61	NORTH	1.8	468	YES
KY 61	NORTH M	0.1	215	NO
KY 61	NORTH	0	818	<u>YES</u>
			TOTAL = 10352 FT.	✓

HARDIN COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
KY 313	SOUTH	0.1	453	YES
KY 313	SOUTH	0.7	1713	YES
KY 313	SOUTH	1.2	1445	YES
KY 313	SOUTH	2	2013	YES
KY 313	SOUTH	5.3	668	YES
KY 313	SOUTH	5.9	1060	YES
KY 313	SOUTH	6.9	1812	YES
KY 313	SOUTH	7	1206	YES
KY 313	SOUTH	7.5	1315	YES
KY 313	SOUTH	8	1003	YES
KY 313	SOUTH	8.4	816	YES
KY 313	SOUTH	8.9	1452	YES
KY 313	SOUTH	9.2	787	YES
KY 313	SOUTH	10	1154	YES
KY 313	SOUTH	13	555	YES
KY 313	SOUTH	14.2	610	YES
KY 313	SOUTH	14.3	591	YES
KY 313	NORTH	0	265	YES
KY 313	NORTH	0.1	1960	YES
KY 313	NORTH	0.8	1450	YES
KY 313	NORTH	1.7	1220	YES
KY 313	NORTH	4.5	583	YES
KY 313	NORTH	6.4	1664	YES
KY 313	NORTH	7	503	YES
KY 313	NORTH	7.7	1037	YES
KY 313	NORTH	8.2	523	YES
KY 313	NORTH	8.5	1440	YES
KY 313	NORTH	9	800	YES
KY 313	NORTH	9.6	1205	YES
KY 313	NORTH	12.8	438	YES
KY 313	NORTH	13.7	1264	<u>YES</u>

TOTAL = 33005 FT. ✓

HARDIN COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
KY 391	SOUTH	1.2	239	NO
KY 391	NORTH	1.2	244	<u>NO</u>

TOTAL = 483 FT. ✓

HARDIN COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
31W	NORTH	2.4	403	YES
31W	NORTH	2.5	395	YES
31W	NORTH	6.3	138	YES
31W	NORTH	6.3	275	YES
31W	NORTH	19.3	227	YES
31W	NORTH	16.6	16352	YES
31W	NORTH	19.7	11	YES
31W	NORTH	20.6	253	YES
31W	NORTH	20.8	375	YES
31W	NORTH	20.9	222	YES
31W	NORTH	21	227	YES
31W	NORTH	21.4	459	YES
31W	NORTH	21.6	660	YES
31W	NORTH	22.1	396	YES
31W	NORTH	22.6	945	YES
31W	NORTH	23.1	792	YES
31W	NORTH	24.4	554	YES
31W	NORTH	24.7	876	YES
31W	NORTH	25.3	639	YES
31W	NORTH	26.2	359	YES
31W	NORTH	25.6	143	YES
31W	NORTH	27.2	63	YES
31W	NORTH	27.5	190	YES
31W	NORTH	28.3	74	YES
31W	NORTH	28.3	63	YES
31W	NORTH	29.5	533	YES
31W	NORTH	29.6	238	YES
31W	NORTH	29.8	1088	YES
31W	NORTH	30	206	YES
31W	NORTH	30.5	13253	YES
31W	NORTH	30.7	322	YES
31W	NORTH	31.6	766	YES
31W	NORTH	31.8	227	YES
31W	NORTH	31.9	206	YES
31W	NORTH	33	1526	YES
31W	NORTH	33	3004	YES
31W	NORTH	33.7	449	YES
31W	NORTH	34	887	YES
31W	NORTH	34.3	26	YES
31W	NORTH	35.2	4404	YES
31W	NORTH	36.1	37	YES
31W	NORTH	36.1	634	YES
31W	NORTH	36.4	855	YES
31W	NORTH	36.5	1236	YES
31W	NORTH	36.9	195	<u>YES</u>

TOTAL = 42252 FT.

HARDIN COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
31W	SOUTH	36.9	232	YES
31W	SOUTH	36.8	164	YES
31W	SOUTH	36.7	206	YES
31W	SOUTH	36.7	185	YES
31W	SOUTH	36.6	275	YES
31W	SOUTH	36.5	929	YES
31W	SOUTH	36.2	755	YES
31W	SOUTH	36.1	2017	YES
31W	SOUTH	35.6	2233	YES
31W	SOUTH	34.1	855	YES
31W	SOUTH	33.8	1626	YES
31W	SOUTH	33	739	YES
31W	SOUTH	32	312	YES
31W	SOUTH	31.9	201	YES
31W	SOUTH	31.8	90	YES
31W	SOUTH	31.7	344	YES
31W	SOUTH	31.1	619	YES
31W	SOUTH	31	270	YES
31W	SOUTH	30.8	323	YES
31W	SOUTH	29.8	1132	YES
31W	SOUTH	29.6	497	YES
31W	SOUTH	28.3		
31W	SOUTH	27.7	206	YES
31W	SOUTH	26.8	407	YES
31W	SOUTH	26.6	444	YES
31W	SOUTH	25.4	1063	YES
31W	SOUTH	24.8	661	YES
31W	SOUTH	24.6	190	YES
31W	SOUTH	24.5	503	YES
31W	SOUTH	24.1	831	YES
31W	SOUTH	23.9	1010	YES
31W	SOUTH	23.2	688	YES
31W	SOUTH	22.7	672	YES
31W	SOUTH	22.4	465	YES
31W	SOUTH	22	269	YES
31W	SOUTH	21.6	259	YES
31W	SOUTH	21.4	444	YES
31W	SOUTH	21.1	602	YES
31W	SOUTH	21	919	YES
31W	SOUTH	2.5	430	YES
31W	SOUTH	2.4	480	YES
31W	SOUTH	6.3	320	YES
31W	SOUTH	6.3	120	<u>YES</u>

TOTAL = 24987 FT.

HARDIN COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
31 WBP	SOUTH	3.5	180	YES
31 WBP	SOUTH	2.9	194	YES
31 WBP	SOUTH	1	225	YES
31 WBP	SOUTH	0.9	367	YES
31 WBP	SOUTH	0.8	150	YES
31 WBP	SOUTH	0.3	170	YES
31 WBP	SOUTH	0.2	215	YES
31 WBP	SOUTH	0.1	385	<u>YES</u>

TOTAL = 1886 FT.

HARDIN COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
31 WBP	NORTH M	1.5	2767	YES
31 WBP	NORTH M	2.3	3548	YES
31 WBP	NORTH	2.9	259	YES
31 WBP	NORTH M	2.9	3194	YES
31 WBP	NORTH	3.5	227	YES
31 WBP	NORTH M	3.5	570	<u>YES</u>
			TOTAL = 10565 FT.	

HARDIN COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
US 62	EAST	1	394	YES
US 62	EAST	1.8	288	YES
US 62	EAST	2	478	YES
US 62	EAST	11.1	955	YES
US 62	EAST	11.6	736	YES
US 62	EAST	14.2	159	YES
US 62	EAST	14.4	381	YES
US 62	EAST	15.5	867	NO
US 62	EAST	15.8	283	NO
US 62	EAST	16.6	200	NO
US 62	EAST	16.6	159	YES
US 62	EAST	17.3	237	YES
US 62	EAST	19.1	265	YES
US 62	EAST	19.5	80	YES
US 62	EAST	19.6	130	YES
US 62	EAST	19.7	190	YES
US 62	EAST	20	110	YES
US 62	EAST	20	160	YES
US 62	EAST	20.1	270	YES
US 62	EAST	25.8	360	YES
US 62	EAST	27.9	180	YES
US 62	EAST	28	265	YES
US 62	WEST	28	269	YES
US 62	WEST	27.9	177	YES
US 62	WEST	20.4	150	NO
US 62	WEST	20	155	YES
US 62	WEST	19.7	140	NO
US 62	WEST	19.6	143	NO
US 62	WEST	19.5	80	NO
US 62	WEST	17.5	271	NO
US 62	WEST	16.9	162	YES
US 62	WEST	16.9	44	YES
US 62	WEST	15.7	74	YES
US 62	WEST	15.7	603	YES
US 62	WEST	14.6	150	YES
US 62	WEST	14.5	143	YES
US 62	WEST	14.4	238	YES
US 62	WEST	11.9	489	YES
US 62	WEST	6.8	654	YES
US 62	WEST	2.3	226	YES
US 62	WEST	1.1	290	YES

TOTAL = 11605 FT

HARDIN COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
US 62	EAST	1	394	YES
US 62	EAST	1.8	288	YES
US 62	EAST	2	478	YES
US 62	EAST	11.1	955	YES
US 62	EAST	11.6	736	YES
US 62	EAST	14.2	159	YES
US 62	EAST	14.4	381	YES
US 62	EAST	15.5	867	NO
US 62	EAST	15.8	283	NO
US 62	EAST	16.6	200	NO
US 62	EAST	16.6	159	YES
US 62	EAST	17.3	237	YES
US 62	EAST	19.1	265	YES
US 62	EAST	19.5	80	YES
US 62	EAST	19.6	130	YES
US 62	EAST	19.7	190	YES
US 62	EAST	20	110	YES
US 62	EAST	20	160	YES
US 62	EAST	20.1	270	YES
US 62	EAST	25.8	360	YES
US 62	EAST	27.9	180	YES
US 62	EAST	28	265	YES
US 62	WEST	28	269	YES
US 62	WEST	27.9	177	YES
US 62	WEST	20.4	150	NO
US 62	WEST	20	155	YES
US 62	WEST	19.7	140	NO
US 62	WEST	19.6	143	NO
US 62	WEST	19.5	80	NO
US 62	WEST	17.5	271	NO
US 62	WEST	16.9	162	YES
US 62	WEST	16.9	44	YES
US 62	WEST	15.7	74	YES
US 62	WEST	15.7	603	YES
US 62	WEST	14.6	150	YES
US 62	WEST	14.5	143	YES
US 62	WEST	14.4	238	YES
US 62	WEST	11.9	489	YES
US 62	WEST	6.8	654	YES
US 62	WEST	2.3	226	YES
US 62	WEST	1.1	290	<u>YES</u>

TOTAL = 11609 FT.

HARDIN COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
KY 84	EAST	0.3	58	YES
KY 84	EAST	0.4	446	YES
KY 84	EAST	0.7	819	YES
KY 84	EAST	1.1	594	YES
KY 84	EAST	10.5	160	NO
KY 84	EAST	10.6	188	YES
KY 84	EAST	14.8	283	NO
KY 84	EAST	14.8	290	YES
KY 84	EAST	15.5	67	NO
KY 84	EAST	15.5	190	YES
KY 84	EAST	25.7	242	YES
KY 84	EAST	25.8	150	YES
KY 84	WEST	0.4	447	YES
KY 84	WEST	0.5	159	YES
KY 84	WEST	10.7	160	YES
KY 84	WEST	14.8	290	NO
KY 84	WEST	14.8	40	YES
KY 84	WEST	14.9	70	NO
KY 84	WEST	15.5	74	YES
KY 84	WEST	15.6	186	YES
KY 84	WEST	25.7	145	YES
KY 84	WEST	25.8	110	YES

TOTAL = 5168 FT.

HARDIN COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
KY 86	EAST	0.8	122	YES
KY 86	EAST	1.3	478	YES
KY 86	EAST	2	124	YES
KY 86	EAST	2.2	159	YES
KY 86	EAST	2.6	403	YES
KY 86	EAST	3.6	171	YES
KY 86	EAST	4.8	445	YES
KY 86	WEST	0.8	231	YES
KY 86	WEST	2.3	1109	YES
KY 86	WEST	2.7	386	YES
KY 86	WEST	3.6	164	YES
KY 86	WEST	4.8	449	YES
KY 86	WEST	14.8	323	NO
KY 86	WEST	14.8	397	NO
KY 86	WEST	15.1	283	NO
KY 86	WEST	15.1	261	NO

TOTAL = 5505 FT.

HARDIN COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
KY 144	EAST	0	30	YES
KY 144	EAST	2.4	142	YES
KY 144	WEST	0	30	YES
KY 144	WEST	1.2	1025	YES
KY 144	WEST	2.4	107	<u>YES</u>
			TOTAL = 1334 FT.	✓

HARDIN COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
KY 210	EAST	0.9	515	YES
KY 210	EAST	2.4	27	NO
KY 210	EAST	4.2	100	YES
KY 210	WEST	0.9	180	YES
KY 210	WEST	2.4	27	NO
KY 210	WEST	4.2	110	<u>YES</u>
			TOTAL = 959 FT.	✓

HARDIN COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
KY 220	EAST	7	280	YES
KY 220	EAST	7.5	344	NO
KY 220	EAST	14.7	190	YES
KY 220	WEST	7.5	424	NO
KY 220	WEST	14.7	218	<u>YES</u>
			TOTAL = 1456 FT.	✓

HARDIN COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
KY 222	EAST	1.1	735	YES
KY 222	EAST	1.3	375	YES
KY 222	EAST	6.4	300	YES
KY 222	EAST	6.5	325	YES
KY 222	EAST	8.4	155	NO
KY 222	EAST	9.7	611	YES
KY 222	WEST	1.4	370	YES
KY 222	WEST	1.5	275	YES
KY 222	WEST	2.6	94	NO
KY 222	WEST	6.3	313	YES
KY 222	WEST	6.4	318	YES
KY 222	WEST	8.3	155	NO
KY 222	WEST	9.9	571	<u>YES</u>

TOTAL = 4597 FT. ✓

HARDIN COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
KY 224	WEST	4.5	215	<u>YES</u>

TOTAL = 215 FT. ✓

HARDIN COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
KY 251	NORTH	4.9	67	NO
KY 251	NORTH	5.2	250	YES
KY 251	NORTH	5.4	250	YES
KY 251	NORTH	5.5	400	YES
KY 251	SOUTH	6	232	YES
KY 251	SOUTH	5.8	210	NO
KY 251	SOUTH	5.7	200	YES
KY 251	SOUTH	5.6	255	YES
KY 251	SOUTH	5.4	326	YES
KY 251	SOUTH	5.3	280	NO
KY 251	SOUTH	5.1	320	<u>YES</u>
			TOTAL = 2790 FT.	✓

HARDIN COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
KY 583	NORTH	1	336	YES
KY 583	NORTH	1.1	180	YES
KY 583	NORTH	1.4	230	YES
KY 583	NORTH	1.5	1643	YES
KY 583	SOUTH	1.2	178	YES
KY 583	SOUTH	1.3	448	YES
KY 583	SOUTH	1.7	145	YES
KY 583	SOUTH	2.1	1729	<u>YES</u>
			TOTAL = 4889 FT.	

HARDIN COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
KY 434	EAST	1.4	167	YES
KY 434	EAST	1.6	790	YES
KY 434	EAST	10	390	YES
KY 434	WEST	1.4	300	YES
KY 434	WEST	10	400	<u>YES</u>
TOTAL = 2047 FT.				✓

HARDIN COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
KY 567	EAST	0.1	85	YES
KY 567	EAST	0.6	430	YES
KY 567	EAST	1	752	YES
KY 567	WEST	0.1	56	YES
KY 567	WEST	0.9	486	YES
KY 567	WEST	1.2	743	<u>YES</u>
TOTAL = 2552 FT.				✓

HARDIN COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
KY 720	EAST	0	465	YES
KY 720	WEST	0.1	432	YES
KY 720	WEST	0.3	580	<u>YES</u>
TOTAL = 1477 FT.				✓

HARDIN COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
KY 920	SOUTH	0.1	190	YES
KY 920	SOUTH	2.2	288	YES
KY 920	SOUTH	3.9	123	YES
KY 920	SOUTH	4.1	247	YES
KY 920	SOUTH	4.3	187	YES
KY 920	SOUTH	8.8	139	NO
KY 920	NORTH	0	198	YES
KY 920	NORTH	2	449	YES
KY 920	NORTH	3.9	1262	YES
KY 920	NORTH	4.1	269	YES
KY 920	NORTH	4.3	160	YES
KY 920	NORTH	4.4	473	YES
KY 920	NORTH	8.8	181	<u>YES</u>

TOTAL = 4166 FT.

HARDIN COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
KY 1136	SOUTH	10.2	57	YES
KY 1136	SOUTH	10.2	470	YES
KY 1136	NORTH	9.8	1478	YES
KY 1136	NORTH	10.2	242	<u>YES</u>

TOTAL = 2247 FT.

HARDIN COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
KY 1357	WEST	1	162	NO
KY 1357	WEST	7.2	580	YES
KY 1357	WEST	8.9	729	YES
KY 1357	WEST	15.4	373	YES
KY 1357	EAST	1	92	NO
KY 1357	EAST	7.1	451	YES
KY 1357	EAST	8.6	765	YES
KY 1357	EAST	15.3	365	<u>YES</u>

TOTAL = 3517 FT.

HARDIN COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
KY 1375	NORTH	3.4	85	YES
KY 1375	NORTH	3.4	65	YES
KY 1375	NORTH	3.7	835	NO
KY 1375	NORTH	4	285	NO
KY 1375	NORTH	10.5	284	NO
KY 1375	SOUTH	3.5	230	YES
KY 1375	SOUTH	3.6	40	NO
KY 1375	SOUTH	4	560	NO
KY 1375	SOUTH	4.1	285	<u>NO</u>
			TOTAL = 2669 FT.	✓

HARDIN COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
KY 1407	WEST	0.8	246	NO
KY 1407	WEST	1.6	225	YES
KY 1407	WEST	1.8	541	NO
KY 1407	EAST	1.6	180	YES
KY 1407	EAST	1.7	544	<u>YES</u>
			TOTAL = 1736 FT.	✓

HARDIN COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
KY 1500	WEST	0.2	1638	YES
KY 1500	WEST	1.9	222	YES
KY 1500	WEST	2.4	160	NO
KY 1500	EAST	0.1	164	YES
KY 1500	EAST	0.4	194	YES
KY 1500	EAST	0.7	285	YES
KY 1500	EAST	1.7	205	YES
KY 1500	EAST	2.4	239	NO
KY 1500	EAST	4.2	375	NO
KY 1500	EAST	5.9	108	<u>NO</u>
			TOTAL = 3590 FT.	

HARDIN COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
KY 1538	NORTH	3.8	240	<u>YES</u>
			TOTAL = 240 FT. ✓	

HARDIN COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
KY 1600	NORTH	0.8	155	YES
KY 1600	NORTH	0.9	270	YES
KY 1600	NORTH	1	248	YES
KY 1600	NORTH	4.5	230	YES
KY 1600	NORTH	4.5	324	YES
KY 1600	NORTH	5.8	208	NO
KY 1600	NORTH	8.8	770	YES
KY 1600	SOUTH	0.9	78	YES
KY 1600	SOUTH	1.1	598	YES
KY 1600	SOUTH	2.8	132	YES
KY 1600	SOUTH	4.2	278	NO
KY 1600	SOUTH	4.5	298	YES
KY 1600	SOUTH	4.5	230	YES
KY 1600	SOUTH	5.5	166	YES
KY 1600	SOUTH	5.8	269	NO
KY 1600	SOUTH	8.8	450	<u>NO</u>
			TOTAL = 4704 FT. ✓	

HARDIN COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
KY 1646	NORTH	4.3	827	NO
KY 1646	NORTH	4.7	863	NO
KY 1646	NORTH	5.6	169	YES
KY 1646	NORTH	5.6	101	YES
KY 1646	SOUTH	4	530	NO
KY 1646	SOUTH	4.4	130	NO
KY 1646	SOUTH	4.7	997	NO
KY 1646	SOUTH	4.9	732	NO
KY 1646	SOUTH	5.6	100	YES
KY 1646	SOUTH	5.6	164	<u>YES</u>
			TOTAL = 4613 FT. ✓	

HARDIN COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
KY 1815	NORTH	0.4	870	YES
KY 1815	SOUTH	0.6	886	<u>YES</u>
TOTAL = 1756 FT.				✓

HARDIN COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
KY 1868	SOUTH	6.3	388	NO
KY 1868	SOUTH	6.4	463	NO
KY 1868	NORTH	6.3	392	NO
KY 1868	NORTH	6.4	310	<u>NO</u>
TOTAL = 1553 FT.				✓

HARDIN COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
KY 1882	SOUTH	0.5	473	YES
KY 1882	NORTH	0.4	359	<u>YES</u>
TOTAL = 832 FT.				✓

HARDIN COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
KY 1904	NORTH	2.3	421	YES
KY 1904	NORTH	2.4	396	YES
KY 1904	SOUTH	2.3	391	YES
KY 1904	SOUTH	2.4	371	<u>YES</u>
TOTAL = 1579 FT.				✓

HARDIN COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
KY 2212	WEST	1.1	196	NO
KY 2212	EAST	1.1	196	<u>NO</u>
TOTAL = 392 FT.				✓

HARDIN COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
KY 2800	SOUTH	3.6	150	YES
KY 2800	NORTH	3.6	150	<u>YES</u>
			TOTAL = 300 FT.	✓

HARDIN COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
KY 3005	WEST	2.1	422	NO
KY 3005	WEST	2.1	160	NO
KY 3005	EAST	2.1	240	NO
KY 3005	EAST	2.1	696	<u>NO</u>
			TOTAL = 1518 FT.	✓

HART COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GRADE
US 31E	SOUTH	13.4	106	YES
US 31E	SOUTH	13.2	177	YES
US 31E	NORTH	13.1	184	YES
US 31E	NORTH	13.4	139	YES
			TOTAL = 606 FT.	

HART COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GRADE
US 31W	SOUTH	17.5	494	NO
US 31W	SOUTH	12.0	596	YES
US 31W	SOUTH	10.1	281	YES
US 31W	SOUTH	9.8	100	NO
US 31W	NORTH	9.8	205	NO
US 31W	NORTH	10.1	45	NO
US 31W	NORTH	12.0	609	YES
US 31W	NORTH	17.6	332	NO
US 31W	NORTH	19.5	97	YES
			TOTAL = 2759 FT.	

HART COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GRADE
KY 88	EAST	0.1	134	YES
KY 88	EAST	12.6	458	YES
KY 88	EAST	15.6	544	NO
KY 88	EAST	16.6	95	NO
KY 88	EAST	16.7	166	NO
KY 88	EAST	26.2	376	NO
KY 88	WEST	16.7	167	YES
KY 88	WEST	16.6	90	YES
KY 88	WEST	15.7	519	YES
KY 88	WEST	3.4	416	YES
KY 88	WEST	0.1	102	YES
			TOTAL = 3067 FT.	

HART COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GRADE
KY 218	EAST	1.1	443	YES
KY 218	EAST	1.9	461	YES ORG.FARM
KY 218	EAST	5.2	196	YES
KY 218	EAST	5.3	200	YES
KY 218	EAST	5.3	600	YES
KY 218	EAST	5.8	492	YES
KY 218	EAST	6.0	209	YES
KY 218	EAST	6.0	165	YES
KY 218	EAST	6.3	147	YES
KY 218	EAST	6.4	295	YES
KY 218	EAST	6.5	297	YES
KY 218	EAST	6.7	468	YES
KY 218	EAST	13.6	161	NO
KY 218	EAST	13.7	160	NO
KY 218	WEST	13.6	160	NO
KY 218	WEST	13.5	156	NO
KY 218	WEST	6.8	515	YES
KY 218	WEST	5.9	100	YES
KY 218	WEST	5.3	210	YES
KY 218	WEST	5.3	275	YES
KY 218	WEST	5.2	200	YES
KY 218	WEST	5.1	193	YES
KY 218	WEST	5.0	279	YES
KY 218	WEST	2.0	553	YES
KY 218	WEST	1.8	509	YES
KY 218	WEST	1.0	513	YES
			TOTAL = 7957 FT.	

HART COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GRADE
KY 224	EAST	0.0	404	NO
KY 224	WEST	0.1	587	YES
			TOTAL= 991 FT.	

HART COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GRADE
KY 335	SOUTH	6.5	50	YES
KY 335	NORTH	2.5	100	YES
			TOTAL = 150 FT.	

HART COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GRADE
KY 566	NORTH	2.9	486	YES
KY 566	SOUTH	3.1	498	YES
			TOTAL = 984 FT.	
KY 569	EAST	9.2	163	YES
KY 569	EAST	9.3	62	YES
KY 569	WEST	9.4	104	YES
KY 569	WEST	9.3	50	YES
KY 569	WEST	0.4	815	YES
			TOTAL = 1194 FT.	

HART COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GRADE
KY 728	EAST	3.7	300	YES POST
KY 728	EAST	6.2	502	YES
KY 728	EAST	6.4	63	YES
KY 728	EAST	8.3	18	NO
KY 728	EAST	8.4	205	NO
KY 728	EAST	14.1	60	YES POST
KY 728	EAST	14.3	180	YES POST
KY 728	EAST	14.4	100	YES POST
KY 728	EAST	14.5	105	YES POST
KY 728	EAST	14.9	73	YES POST
KY 728	EAST	17.7	434	NO
KY 728	EAST	17.9	362	NO
KY 728	EAST	18.2	325	YES
KY 728	EAST	18.4	855	YES
KY 728	EAST	19.3	257	NO POST
KY 728	EAST	20.5	239	YES POST
KY 728	EAST	21.4	78	NO
KY 728	EAST	21.1	176	NO
KY 728	EAST	21.4	248	YES
KY 728	EAST	21.6	192	YES
KY 728	EAST	21.8	120	NO
KY 728	EAST	21.9	118	NO
KY 728	EAST	23.6	120	YES
KY 728	EAST	23.8	160	NO
KY 728	EAST	23.9	158	YES
KY 728	WEST	23.9	158	YES
KY 728	WEST	23.8	154	NO
KY 728	WEST	21.9	125	YES
KY 728	WEST	21.8	115	YES
KY 728	WEST	21.6	192	YES
KY 728	WEST	21.5	254	YES
KY 728	WEST	21.3	216	YES
KY 728	WEST	21.2	173	YES
KY 728	WEST	21.1	66	NO
KY 728	WEST	20.6	197	NO POST
KY 728	WEST	19.9	44	NO POST
KY 728	WEST	19.3	222	NO POST
KY 728	WEST	18.5	406	YES
KY 728	WEST	18.3	323	YES
KY 728	WEST	17.8	344	YES
KY 728	WEST	14.9	47	NO
KY 728	WEST	14.3	150	YES
KY 728	WEST	14.1	51	YES
KY 728	WEST	13.9	98	NO

KY 728	WEST	13.7	81	YES
KY 728	WEST	13.7	156	YES
KY 728	WEST	8.4	209	YES
KY 728	WEST	6.4	90	YES
KY 728	WEST	6.3	457	YES
KY 728	WEST	3.7	140	NO POST
			TOTAL = 9720 FT.	

HART COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GRADE
KY1015	WEST	1.0	675	YES
KY1015	WEST	0.8	585	YES
KY1015	EAST	0.1	196	YES
KY1015	EAST	0.6	557	YES
KY1015	EAST	0.8	681	YES
			TOTAL = 2694 FT.	

HART COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GRADE
KY1079	NORTH	1.8	195	YES
KY1079	NORTH	2.0	98	YES POST
KY1079	NORTH	2.3	422	YES
KY1079	NORTH	2.9	110	YES POST
KY1079	NORTH	3.4	117	YES POST
KY1079	NORTH	3.7	229	YES POST
KY1079	NORTH	4.0	122	YES POST
KY1079	NORTH	4.0	177	YES POST
KY1079	NORTH	4.4	228	YES
KY1079	SOUTH	4.7	265	YES
KY1079	SOUTH	4.6	176	YES POST
KY1079	SOUTH	2.5	372	YES POST
KY1079	SOUTH	2.3	283	YES
KY1079	SOUTH	1.9	219	YES
			TOTAL = 3013 FT.	

HART COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GRADE
KY1140	NORTH	9.9	51	YES POST
KY1140	NORTH	9.9	77	YES POST
KY1140	NORTH	10.1	234	YES POST
KY1140	NORTH	10.3	106	YES POST
KY1140	NORTH	10.3	177	YES POST
KY1140	SOUTH	9.9	85	YES POST
KY1140	SOUTH	9.9	85	YES POST

TOTAL = 815 FT.**HART COUNTY**

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GRADE
KY1214	NORTH	2.4	345	YES
KY1214	SOUTH	2.4	325	YES

TOTAL = 670 FT.**HART COUNTY**

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GRADE
KY1391	NORTH	3.6	275	YES
KY1391	SOUTH	2.8	821	YES
KY1391	SOUTH	2.5	266	YES

TOTAL = 1362 FT.**HART COUNTY**

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GRADE
KY2185	NORTH	1.2	546	YES
KY2185	NORTH	1.3	281	YES
KY2185	NORTH	1.7	416	YES
KY2185	SOUTH	1.8	192	YES

TOTAL = 1435 FT.**HART COUNTY**

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GRADE
KY2746	NORTH	0.2	470	NO
KY2746	NORTH	0.2	162	NO
KY2746	SOUTH	0.2	183	NO
KY2746	SOUTH	0.2	84	NO

TOTAL = 899 FT.

HART COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GRADE
KY2748	SOUTH	0.2	552 TOTAL = 552 FT.	NO

LARUE COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
31 E	NORTH	0.8	80	NO
31 E	NORTH	2.3	421	NO
31 E	NORTH	3	178	NO
31 E	NORTH	3.1	186	NO
31 E	NORTH	4	342	NO
31 E	NORTH	4.8	187	NO
31 E	NORTH	5.1	456	NO
31 E	NORTH	5.3	154	NO
31 E	NORTH	5.3	653	NO
31 E	NORTH	6.6	277	YES
31 E	NORTH	9.6	112	NO
31 E	NORTH	10.9	232	NO
31 E	NORTH	12.4	263	NO
31 E	NORTH	13	393	YES
31 E	NORTH	13.4	61	YES
31 E	NORTH	13.4	51	YES
31 E	NORTH	14.8	774	YES
31 E	NORTH	17	181	YES
31 E	NORTH	17.1	61	YES
31 E	NORTH	17.9	185	YES
31 E	NORTH	17.9	218	YES
31 E	NORTH	19.2	169	NO
31 E	NORTH	20.6	396	<u>NO</u>

TOTAL = 6030 FT.

LARUE COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
31 E	SOUTH	2.4	267	NO
31 E	SOUTH	3.1	178	NO
31 E	SOUTH	3.2	167	NO
31 E	SOUTH	3.8	405	NO
31 E	SOUTH	4.1	327	NO
31 E	SOUTH	4.9	479	NO
31 E	SOUTH	5.2	184	NO
31 E	SOUTH	5.4	442	NO
31 E	SOUTH	5.5	537	NO
31 E	SOUTH	8.8	296	NO
31 E	SOUTH	9.5	141	NO
31 E	SOUTH	10.7	990	YES
31 E	SOUTH	10.9	410	YES
31 E	SOUTH	12.6	339	YES
31 E	SOUTH	13.2	380	NO
31 E	SOUTH	13.4	51	YES
31 E	SOUTH	13.5	52	YES
31 E	SOUTH	15.6	586	YES
31 E	SOUTH	16	397	YES
31 E	SOUTH	17	206	YES
31 E	SOUTH	17.1	92	YES
31 E	SOUTH	17.9	154	YES
31 E	SOUTH	18	106	YES
31 E	SOUTH	20.6	253	<u>YES</u>

TOTAL = 7439 FT.

LARUE COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
61	SOUTH	1.4	163	NO
61	SOUTH	3.4	333	NO
61	SOUTH	4.1	115	NO
61	SOUTH	5.5	190	NO
61	SOUTH	5.4	65	NO
61	SOUTH	5.4	168	NO
61	SOUTH	5.6	44	NO
61	SOUTH	8.3	850	YES
61	SOUTH	9.2	575	YES
61	SOUTH	10.3	2582	YES
61	SOUTH	10.4	192	NO
61	SOUTH	10.4	321	YES
61	SOUTH	13.6	159	<u>YES</u>

TOTAL = 5757 FT.

61	NORTH	1.4	160	YES
61	NORTH	3.2	250	NO
61	NORTH	4	170	NO
61	NORTH	5.4	170	NO
61	NORTH	5.4	105	YES
61	NORTH	5.7	45	NO
61	NORTH	5.7	50	NO
61	NORTH	8	713	YES
61	NORTH	9	467	YES
61	NORTH	9.6	994	YES
61	NORTH	9.9	1340	YES
61	NORTH M	10.2	188	NO
61	NORTH	10.3	180	YES
61	NORTH M	13.6	199	YES
61	NORTH M	13.6	187	<u>NO</u>

TOTAL = 5218 FT.

52	WEST	0	151	NO
52	WEST	3	956	YES
52	EAST	0	148	NO
52	EAST	2.8	1289	NO

TOTAL = 2544 FT.

LARUE COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
210	EAST	0	83	YES
210	EAST	5	157	NO
210	EAST	14.9	611	YES
210	EAST	15.1	260	YES
210	EAST	15.5	560	YES
210	EAST	15.8	405	YES
210	EAST	16.2	1002	<u>YES</u>
			TOTAL = 3078 FT.	
210	WEST	0	100	YES
210	WEST	5	324	NO
210	WEST	15.2	1457	YES
210	WEST	15.7	752	YES
210	WEST	15.9	566	YES
210	WEST	16.2	257	YES
210	WEST	16.5	732	<u>YES</u>
			TOTAL = 4188 FT.	
3204	WEST	0.3	910	YES
3204	EAST	0.1	992	NO
3204	EAST	0.5	537	<u>YES</u>
			TOTAL = 2439 FT.	
357	NORTH	7.6	415	<u>YES</u>
			TOTAL = 415 FT.	
2426	WEST	0	123	<u>YES</u>
			TOTAL = 123 FT.	
1192	WEST	7.9	20	NO
1192	EAST	7.9	276	<u>NO</u>
			TOTAL = 296 FT.	

LARUE COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
84	EAST	6.6	380	YES
84	EAST	6.6	327	YES
84	EAST	9	141	NO
84	EAST	12.1	325	YES
84	EAST	12.4	159	YES
84	EAST	12.5	140	<u>NO</u>
			TOTAL = 1472 FT.	
84	WEST	6.2	189	YES
84	WEST	6.6	279	YES
84	WEST	11.1	260	YES
84	WEST	11.7	2305	YES
84	WEST	11.9	938	YES
84	WEST	12.4	168	YES
84	WEST	12.6	243	YES
			TOTAL = 4382 FT.	
470	SOUTH	0.1	220	NO
470	SOUTH	1.9	30	YES
470	SOUTH	3.1	237	YES
470	SOUTH	4.3	41	NO
470	SOUTH	5.1	53	NO
470	SOUTH	5.3	52	NO
470	SOUTH	6.6	128	NO
470	NORTH	1.9	30	YES
470	NORTH	3	240	YES
470	NORTH	4.2	16	YES
470	NORTH	5.2	26	NO
470	NORTH	6.2	88	<u>NO</u>
			TOTAL = 1161 FT.	
462	NORTH	9.6	153	NO
462	NORTH	9.7	587	YES
462	SOUTH	9.6	149	NO
462	SOUTH	9.7	576	<u>YES</u>
			TOTAL = 1465 FT.	

LARUE COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
224	EAST	0.7	175	YES
224	EAST	0.7	184	YES
224	EAST	0.8	202	YES
224	EAST	0.8	314	NO
224	WEST	0.7	175	YES
224	WEST	0.7	187	YES
224	WEST	0.8	56.4	<u>YES</u>
			TOTAL = 1293.4 FT.	→ 1,801
222	EAST	0.1	264	YES
222	EAST	3.9	245	NO
222	EAST	4	118	NO
222	WEST	0.1	309	YES
222	WEST	3.9	170	NO
222	WEST	4	118	NO
			TOTAL = 1224 FT.	
916	EAST	2.7	118	YES
916	EAST	7.6	176	NO
916	WEST	2.7	130	YES
916	WEST	7.6	135	NO
			TOTAL = 559 FT.	
2217	EAST	0.4	201	YES
2217	EAST	2.3	494	YES
2217	WEST	0.4	263	YES
2217	WEST	2.3	373	<u>YES</u>
			TOTAL = 1331 FT.	
583	NORTH	2	193	NO
583	NORTH	2.7	136	YES
583	NORTH	3.1	478	YES
583	SOUTH	2	243	NO
583	SOUTH	2.7	183	YES
583	SOUTH	3.2	200	YES
			TOTAL = 1433 FT.	

MEADE COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
60	WEST	1.8	866	NO
60	WEST	11.6	194	NO
60	WEST	11.6	152	NO
60	WEST	12	605	NO
60	WEST	12.4	748	NO
60	WEST	12.5	154	YES
60	EAST	8.5	770	YES
60	EAST	10.4	457	YES
60	EAST	11	328	YES
60	EAST	11.2	1009	YES
60	EAST	11.6	200	YES
60	EAST	11.7	149	YES
60	EAST	12.3	830	NO
60	EAST	12.5	150	NO

TOTAL = 6612 FT.

MEADE COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
79	NORTH	8.8	521	YES
79	NORTH	9.2	468	YES
79	NORTH	9.8	234	YES
79	SOUTH	8.5	260	YES
79	SOUTH	8.6	308	YES
79	SOUTH	9	424	YES
79	SOUTH	9.3	385	YES
79	SOUTH	9.5	415	YES
79	SOUTH	9.9	174	YES

TOTAL = 3189 FT.

MEADE COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
144	WEST	4.8	62	NO
144	WEST	4.8	55	NO
144	WEST	35.9	76	YES
144	EAST	4.8	25	NO
144	EAST	4.8	106	NO
144	EAST	13.3	515	NO
144	EAST	35.9	62	YES

TOTAL 901 FT.

MEADE COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
228	WEST	4.9	219	NO
228	WEST	5	190	NO
228	WEST	6.8	2199	NO
228	WEST	15.6	626	YES
228	WEST	15.7	307	YES
228	WEST	23.1	554	YES
228	WEST	23.2	208	YES
228	EAST	2.8	565	NO
228	EAST	3.1	1280	YES
228	EAST	4.8	275	NO
228	EAST	4.9	186	NO

TOTAL = 6609 FT.

MEADE COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
448	NORTH	3.2	148	YES
448	NORTH	3.3	230	YES
448	NORTH	4.4	875	YES
448	SOUTH	4.3	289	YES
448	SOUTH	4.4	481	YES
448	SOUTH	4.6	425	YES
448	SOUTH	7.4	110	YES

TOTAL = 2558 FT.

MEADE COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
710	NORTH	5.8	192	NO
710	NORTH	6.9	255	YES

TOTAL = 447 FT.

MEADE COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
1051	EAST	0.1	189	YES
1051	EAST	0.9	268	YES
1051	EAST	1.3	368	YES
1051	WEST	0.1	258	YES
1051	WEST	0.7	268	YES
1051	WEST	0.9	308	YES
1051	WEST	1.3	308	YES
1051	WEST	1.4	324	YES

TOTAL = 2291 FT.

MEADE COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
1500	EAST	0	239	YES
1500	EAST	0.1	311	YES
1500	EAST	0.9	218	NO
1500	WEST	0.1	211	YES
1500	WEST	0.3	136	YES

TOTAL = 1115 FT.

MEADE COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
1638	WEST	0.5	251	NO
1638	WEST	1.4	1255	NO
1638	WEST	1.9	500	NO
1638	WEST	3.1	280	NO
1638	WEST	3.2	302	NO
1638	WEST	3.4	660	NO
1638	WEST	5.6	796	YES
1638	WEST	6.8	793	YES
1638	WEST	7	257	YES
1638	WEST	8.4	225	NO
1638	EAST	0.2	648	NO
1638	EAST	0.4	1089	NO
1638	EAST	0.5	290	NO
1638	EAST	1	1978	NO
1638	EAST	1.7	392	NO
1638	EAST	1.9	818	NO
1638	EAST	2.3	323	NO
1638	EAST	2.5	698	NO
1638	EAST	2.9	293	NO
1638	EAST	3.1	330	NO
1638	EAST	3.4	330	NO
1638	EAST	5.6	699	YES
1638	EAST	6	500	YES
1638	EAST	6.5	770	YES
1638	EAST	6.8	1135	YES
1638	EAST	8.2	361	YES

TOTAL = 15973 FT.

MEADE COUNTY

ROUTE	DIRECTION	MILE MARKER	FOOT OF RAIL	DENSE GF
1844	EAST	3	359	NO

TOTAL = 359 FT.

ATTACHMENT B - KYG99 PESTICIDE KPDES PERMIT



STEVEN L. BESHEAR
GOVERNOR

ENERGY AND ENVIRONMENT CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
DIVISION OF WATER
200 FAIR OAKS LANE
FRANKFORT, KENTUCKY 40601
www.kentucky.gov

LEONARD K. PETERS
SECRETARY

FACT SHEET

General Permit for Pesticide Application

KPDES No.: KYG990000

AI No.: 35050

Permit Writer: Ronnie Thompson

Date: March 30, 2012

Public Notice Information

Public Notice Start Date: February 10, 2012

Comment Due Date: March 13, 2012

Information concerning the public notice process may be obtained on the Division of Water's Public Notice Webpage at the following address:

http://dep.gateway.ky.gov/eSearch/Search_Pending_Approvals.aspx?Program=Wastewater&NumDaysDoc=30

Comments may be filed electronically at the following e-mail address: DOWPublicNotice@ky.gov

Or, by sending written comments to:

Division of Water
Surface Water Permits Branch
200 Fair Oaks Lane
Frankfort, Kentucky 40601

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FACT SHEET

KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT TO DISCHARGE INTO WATERS OF THE COMMONWEALTH GENERAL PERMIT FOR PESTICIDE APPLICATION

1.0 BACKGROUND

1.1 Introduction

Pesticides were first regulated in the United States when Congress passed the Federal Insecticides Act in 1910. Because the sale of ineffective products was common at the time, the purpose was to try to protect farmers from fraudulent products and misleading claims. The law set manufacturing standards for insecticides and fungicides and provided for the seizure of adulterated substances. The number of agricultural pesticides grew, and in response to concern over their widespread use, Congress passed the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) in 1947. The law required all pesticides to be properly registered through the United States Department of Agriculture (USDA) and established guidelines for product labeling. The focus of pesticide regulation began to shift from protecting consumers to protecting public health and the environment when the effects of indiscriminate pesticide use came into question. The responsibility for regulating pesticides was given to The Environmental Protection Agency (EPA) when it was created in 1970. FIFRA was re-written in 1972 and EPA now regulates the sale, distribution and use of pesticides through the current law. EPA uses product labeling to ensure that pesticides will not pose an unreasonable risk to human health or the environment when used in accordance with the instructions. It is illegal under federal law to use a registered pesticide in a manner inconsistent with its labeling.

Over the past ten years, several courts have addressed the question of whether or not a National Pollutant Discharge Elimination System (NPDES) permit is required by the Clean Water Act (CWA) to apply pesticides. The cases have had conflicting outcomes as to whether or not pesticides are considered pollutants and when a permit is actually required. On November 27, 2006, EPA issued a final rule clarifying that an NPDES permit is not required when pesticides are applied directly to or over water, providing that the application is consistent with FIFRA requirements. The rule became effective on January 6, 2007. However, environmental and industry interest groups quickly challenged the rule. On January 7, 2009, the U.S. Sixth Circuit Court of Appeals vacated the EPA rule in *National Cotton Council of America v. EPA*, stating it was not a reasonable interpretation of the CWA. The court held that biological pesticides and chemical pesticides that leave a residue fall within the CWA definition of "pollutant" and an NPDES permit is required for the discharge of either of these pollutants if discharged from a point source for which NPDES permits are required. However, the court did not define what constitutes a pesticide residual. EPA assumes that all chemical pesticides will in fact leave a residue once the product has performed its intended purpose and that any means of application constitutes a point source, such as the discharge from the nozzle of a spray system.

The court later issued a two-year stay until April 2011 at the request of EPA, after which NPDES permits will be required for discharges to waters of the United States of biological pesticides and chemical pesticides that leave a residue. On November 2, 2009, the U.S. Supreme Court was petitioned to review the Sixth Circuit Court decision. The Supreme Court denied the request to hear the case, which left the April 2011 date to require NPDES permits unchanged. On March 28, 2011, a motion filed by EPA to stay the mandate until October 31, 2011 was granted by the Sixth Circuit Court of Appeals. NPDES permits are required as of this new date for discharges related to pesticides.

States delegated by EPA to implement the provisions of the CWA must develop the appropriate permits that satisfy the regulatory requirements of the NPDES program and that adequately protect water quality. Therefore, the Kentucky DOW is issuing a Kentucky Pollutant Discharge Elimination System (KPDES) general permit that authorizes the discharge of pollutants occurring from applying liquid pesticides under circumstances that make contact with surface water either intentional or unavoidable. A general permit is being issued because it is appropriate when multiple operations within a specific industry perform similar activities that can be addressed by a single set of permit conditions.

This permit regulates discharges from using liquid pesticides in general terms. It does not include any requirements that apply to a specific pesticide, a particular pesticide product, or a certain pollutant. This permit does not address terrestrial pesticide applications made to control pests on agricultural crops. This permit does not address other terrestrial pesticide applications unless there is an unavoidable discharge to surface water due to proximity. Applications to grounds where no surface water exists, including applications to temporarily dry intermittent streams and ditches do not constitute a point source discharge. This permit does not address the issue of off target spray drift.

Granular, powdered or other dry pesticides are not considered liquid or waterborne industrial waste and are therefore not required to obtain a wastewater discharge permit under the KPDES program, unless mixed with water or some other liquid before application. This permit does not address pesticide applications made with foggers. Because cold and thermal foggers produce a suspended mist and not a measurable liquid flow, applications of this type do not constitute a point source discharge. Storm water runoff from agricultural land, silviculture activities, orchards, cultivated crops, pastures, rangelands, forestlands and irrigation return flows are also exempt from coverage, even if the discharge is known to contain pesticides. In 1987, Congress amended the CWA to exempt these types of discharges from NPDES permitting requirements.

Because the date after which discharges related to pesticides are legally required to be permitted has passed, coverage under this permit will be automatic. That means coverage is available without a permit application and approval process. As such, an operator is authorized to discharge under the terms and conditions of this permit without notifying the DOW or receiving correspondence from the DOW. Any pesticide user must comply with all applicable FIFRA requirements, regardless of coverage under this permit. This permit includes additional requirements that do not contradict FIFRA requirements.

1.2 Selected Definitions

Action Threshold is the point at which pest control action must be taken because pest populations, or environmental conditions caused by pest populations, can no longer be tolerated. The action threshold can vary by pest, location, and season. Often, the action threshold is expressed as the number of pests per unit area. The action threshold can also represent a zero or near zero tolerance level.

Active Ingredient means the component of a pesticide meant to prevent, destroy, repel or mitigate a pest, or that functions as a plant regulator, desiccant or defoliant. The term generally refers to all but the inert portion of a pesticide.

Agricultural Land is distinctive land that is cultivated and specifically used for the production of crops or any other plant produced commodity.

Antidegradation is a policy developed and adopted as part of the state's water quality standards that ensures protection of existing water uses and maintains the existing level of water quality where that water quality exceeds levels necessary to protect both fish and wildlife propagation and recreation in and on the water.

Application or applying means the placing of a pesticide for effect, including mixing, loading and transport.

Applicator refers to a person, group or organization that applies pesticides and is not involved with any of the functions of an operator. Any given facility cannot have an applicator without also having an operator.

Best Management Practices means a schedule of activities, prohibitions of certain practices, maintenance procedures and other management practices designed to prevent or reduce surface water pollution. The term also includes treatment requirements, operating procedures, and practices that control plant site runoff, spills or leaks, sludge or waste disposal, or drainage from raw material storage.

Biological Pesticides include microbial pesticides, biochemical pesticides and plant-incorporated protectants (PIPs). Microbial pesticides are pesticides that include a microbial agent intended for preventing, destroying, repelling or mitigating any pest or that is used as a plant regulator, defoliant or desiccant. A microbial agent is a eukaryotic microorganism, a prokaryotic microorganism or a parasitically replicating microscopic element and may include protozoa, algae, fungi, Eubacteria, Archaeobacteria and viruses. Biochemical pesticides are pesticides that are a naturally occurring substance, or structurally similar and functionally identical to a naturally occurring substance, that has a history of exposure to people and the environment, has demonstrated minimal toxicity, and has a non-toxic mode of action on target pests. PIPs are substances intended to be produced and used in a living plant or its produce and in the genetic material necessary to produce the substances. PIPs include any inert ingredients contained in the plant or its produce.

Chemical Pesticides are any pesticides not classified as biological pesticides. The definition includes phosphorus inactivation chemicals such as aluminum sulfate, if used as a pesticide or pesticide aid.

Cold Water Aquatic Habitat means surface water and associated substrate capable of supporting indigenous aquatic life or self-sustaining or reproducing trout populations on a year-round basis.

Control Measures include management practices, operating procedures, application techniques, storage methods, maintenance schedules or other steps taken to reduce or eliminate pesticide discharges.

Declared Pest Emergency Situation is an event defined by the public declaration of a pest emergency by a federal, state or local governmental agency. The public declaration of a pest emergency may be based upon significant risk to human health, substantial economic loss or the threat to an endangered species.

Exceptional Water is generally a unique water of the Commonwealth. The term may include waters that contain a fish community that is rated as "excellent" by the Index of Biotic Integrity; waters that contain a macro invertebrate community that is rated as "excellent" by the Macro invertebrate Bio-assessment Index; or waters that are in the Cabinet's reference reach network. The term automatically includes any water identified as Outstanding State Resource Water.

Facility means an area in which an activity takes place, in this case the application of liquid pesticide, with a point source discharge that is subject to regulation under the KPDES program. It is the area under control of the operator.

Habitat is the place where a pest is usually found. It is the natural environment of a particular species of plant, animal or other type of organism. A species' environment includes the water, land and air in which it lives or may be sustained.

High Quality Water means surface water not listed as Outstanding State Resource Water, Exceptional Water or as Impaired Water. This is therefore the default category for any surface water not assessed by the Cabinet.

Impaired Water means surface water that assessed by the Cabinet as not fully supporting one or more of its designated uses and has been listed in the latest approved Integrated Report to Congress.

Inert Ingredient is a substance or group of structurally similar substances, other than an active ingredient, that is intentionally included in a pesticide product. Inert ingredient also means any substance, such as a selectable marker, used to confirm or ensure the presence of the active ingredient, and includes the genetic material necessary for the production of the substance, if genetic material is intentionally introduced into a living plant in addition to the active ingredient.

Large Operation means any facility not meeting the qualifications of a small operation.

Minimize means to reduce and/or eliminate. As used in this permit, the term also means to maintain a minimum level without allowing an unnecessary increase.

Operator refers to a person, group or organization that provides financing for pesticide applications, that makes the decision to apply pesticides, that performs the activities that are necessary to ensure compliance with this permit or that has authority over those whom perform the activities that are necessary to ensure compliance with this permit. Any given facility must have an operator, but not necessarily an applicator, as an operator can also perform the function of an applicator.

Outstanding State Resource Water is generally a unique water of the Commonwealth. The term may include waters that are part of a relatively undisturbed watershed that can provide basic scientific data and possess outstanding water quality characteristics; waters that support a diverse or unique native aquatic flora or fauna; waters that provide exceptional aesthetic or ecological value; waters that are part of a unique geological or historical area; or waters that possess physical or chemical characteristics that provide an unusual aquatic habitat within a physiographic region. The term automatically includes waters identified under the Kentucky Wild Rivers Act, the Kentucky Nature Preserves Act, the Federal Wild and Scenic Rivers Act and waters that support endangered or threatened species.

Permittee is a term used to describe the permit holder. The term has the same meaning as “operator”, except that an operator is only a permittee while having coverage under this permit. Requirements made of permittees by this permit do not necessarily have to be carried out by the operator, but it is the ultimate responsibility of the permittee to ensure compliance with the requirements of this permit.

Pest means any unwanted organism. The term may include rodents, insects, weeds, spiders, snails, moss, algae, mussels or fungus. The target pest is that particular pest for which a pesticide is intended to work.

Pest Management Area is the region, zone or locale for which pest management activities are being conducted, such as a city, a watershed, a wildlife refuge or a county. A pest management area may include one or possibly many treatment areas.

Pesticide includes any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest, and any substance or mixture of substances intended for use as a plant regulator, defoliant, or desiccant, or any nitrogen stabilizer.

The term does not include:

- any article that is a “new animal drug” within the meaning of Section 201 of the Federal Food, Drug and Cosmetic Act (FFDCA) that has been determined by the Secretary of Health and Human Services not to be a new animal drug by a regulation establishing conditions of use for the article, or that is an animal feed within the meaning of Section 201 of the Act bearing or containing a new animal drug.
- liquid chemical sterilant products (including any sterilant or subordinate disinfectant claims on those products) for use on a critical or semi-critical device, as defined in the FFDCA. For purposes of the preceding sentence, the term “critical device” includes any device that is introduced directly into the human body, either into or in contact with the bloodstream or normally sterile areas of the body and the term “semi-critical device” includes any device that contacts intact mucous membranes, but that does not ordinarily penetrate the blood barrier or otherwise enter normally sterile areas of the body.

The term applies to insecticides, herbicides, fungicides, rodenticides, and various other substances used to control pests. The definition encompasses all uses of pesticides authorized under FIFRA, including uses authorized under Section 3 (registration of pesticides), Section 5 (experimental use permits), Section 18 (emergency exemptions), Section 24(c) (special local needs), and Section 25(b) (exemption of pesticides from FIFRA).

Note: Drugs used to control diseases of humans or animals (such as livestock and pets) are not considered pesticides; those drugs are regulated by the Food and Drug Administration. Fertilizers, nutrients, and other substances used to promote plant survival and health are not considered plant growth regulators and thus, are not pesticides. Biological control agents, except for certain microorganisms, are exempted from regulation as pesticides under FIFRA. (Biological control agents include beneficial predators such as birds or ladybugs that eat insect pests, parasitic wasps, fish, etc).

This permit uses the term “pesticide” when referring to a substance as applied. When referring to the portion of a substance with pesticidal qualities, the permit uses the term “active ingredient.”

Pesticide Research and Development refers to creative work undertaken on a systematic basis to gain new knowledge, and to use this new knowledge to develop new or improve products or procedures.

Point Source is any discernible, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel, or other floating craft from which pollutants are or may be discharged. The term does not include return flows from irrigated agriculture or agricultural storm water runoff. As used in this permit, the term describes both stationary and mobile sources as “points.”

Pollutant means dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal, and agricultural waste discharged into water. In regards to pesticide use, a biological pesticide is considered a “biological material,” and any pesticide residue resulting from use of a chemical pesticide is considered a “chemical waste.”

Sewage System means individually or collectively those constructions or devices used for collecting, pumping, treating and disposing of liquid or waterborne sewage, industrial waste or other waste.

Small Operation refers to the activity of a private enterprise that does not exceed the Small Business Administration (SBA) size standards found in Title 13 of the Code of Federal Regulations (13 CFR), 13 CFR 121.201, or a local government that serves a population of 10,000 people or less. The DOW realizes that the SBA defines small as serving less than 50,000 persons, but has adopted EPA’s lower threshold of 10,000 persons.

Surface water means waters having well-defined banks and beds, either constantly or intermittently flowing; lakes and impounded waters; marshes and wetlands; and any subterranean waters flowing in well-defined channels and having a demonstrable hydrologic connection with the surface. Lagoons used for waste treatment and effluent ditches that are situated on property owned, leased, or under valid easement by a permitted discharger are not considered surface waters of the Commonwealth. As used in this permit, the term describes only those features where water is present at the time of the activity.

Toxicity is the property of a pesticide, or some other substance, that causes any adverse physiological effects on a living organism. Pesticides with this property are considered to be toxic.

Treatment Area means the area where pesticides are actually applied and any extended area where applied pesticides are present and are intended to act. If pesticides are applied at a single location, such as through a drip line into a canal for example, the treatment area is the entire area intentionally affected by the pesticide. The treatment area is usually a portion of a larger pest management area.

Warm Water Aquatic Habitat means surface water and associated substrate capable of supporting indigenous warm water aquatic life.

Water Quality Related Adverse Incident is an event when a person, domesticated animal, plant or any other non-target organism suffers an unexpected toxic or adverse effect because of contact with surface water that has been affected by the use of pesticides. Toxic or adverse effects may include distressed, lethargic, floating or dead fish and wilted or discolored vegetation. An unexpected toxic or adverse effect from using a pesticide that is not due to contact with surface water is an “adverse incident”, but is not related to water quality and is therefore not a water quality related incident.

Water’s Edge is the land sloping toward and immediately bordering surface water. Land application of pesticides to this area may result in unavoidable pesticide contact with surface water. The term is used in this permit to describe an area where due to its shape a linear annual treatment area threshold expressed in miles is used instead of an annual treatment area threshold expressed in acres.

1.3 Area of Coverage

This permit covers all facilities located wholly or in part within the Commonwealth of Kentucky.

1.4 Covered Facilities

Any facility with an eligible discharge shall have automatic coverage under this permit. All eligible discharges are authorized upon the effective date of this permit. All facilities with an eligible discharge shall abide by the terms and conditions of this permit upon the effective date. Facilities with ineligible discharges shall have an individual KPDES permit.

1.5 Eligible Discharges

All discharges created by applying liquid pesticides directly to surface water and all non-agricultural land applications where pesticide contact with surface water is either intentional or unavoidable, except those excluded discharges.

Eligible discharges may include: applying pesticides directly to surface water to manage aquatic animals or submersed, emersed or floating vegetation in the water; or applying pesticides over surface water to manage flying insects that breed and live in or close to water; or applying pesticides to a utility right-of-way or a forest canopy to manage invasive vegetation where surface water exists within the right-of-way or below the canopy.

Only those initial discharges to surface water due to the use of pesticides are required to have coverage under this permit. For instance, using pesticides to clear unwanted vegetation in a catch basin does not require permit coverage, even though storm water runoff may cause the catch basin to discharge pesticides to surface water during a rainfall. The same holds true for hatchery ponds, which may be drained to surface water.

1.6 Excluded Discharges

Discharges created by applying pesticides to agricultural land are excluded from coverage under this permit. However, this permit makes no judgment as to whether a KPDES permit may actually be required by the CWA.

The following discharges are excluded from coverage under this permit and must be authorized by an individual permit:

- Designated as Cold Water Aquatic Habitat (CAH) or as Outstanding State Resource Water (OSRW) as listed in 401 KAR 10:026, Section 5.
- Categorized as Outstanding National Resource Water (ONRW) or as Exceptional Water (EW) as listed in 401 KAR 10:030, Section 1.
- Listed in the most recent Integrated Report to Congress on Water Quality in Kentucky (303(d) and 305(b) report) as impaired for the specific pesticide being used, or any of its constituents. For instance, applying the pesticide copper sulfate to surface water impaired for either copper or sulfate would not be eligible because copper sulfate can degrade into these two substances.

Surface water designations and categorizations are available at:

<http://www.lrc.state.ky.us/kar/401/010/026.htm> and <http://www.lrc.state.ky.us/kar/401/010/030.htm>

The 303(d) and the 305(b) Integrated Reports to Congress are available at:

<http://water.ky.gov/waterquality/pages/integratedreports.aspx>

The DOW may exclude any discharge from coverage under this general permit if it determines that an individual permit would better address the discharge.

1.7 Receiving Waters

This permit authorizes discharges to surface water:

- Classified as Warmwater Aquatic Habitat (WAH), Primary/Secondary Contact Recreation (PCR/SCR) and Domestic Water Supply (DWS) as listed in 401 KAR 10:026, Section 5.
- Listed in the most recent Integrated Report to Congress on Water Quality in Kentucky (303(d) and 305(b) report) as impaired, if the impairment is not for the specific pesticide that is being used, or any of its constituents.
- Categorized as High Quality as listed in 401 KAR 10:030, Section 1, provided the discharge complies with the additional controls as specified in this permit.

1.8 Permitting Action

This is the first issuance of a KPDES general permit for discharges resulting from the use of pesticides.

2.0 PROPOSED TECHNOLOGY BASED EFFLUENT LIMITATIONS

Pursuant to Title 40 of the Code of Federal Regulation (40 CFR), 40 CFR 122.44(a)(1), as incorporated by 401 KAR 5:065, Section 2(4), each NPDES permit issued by a delegated state shall include conditions that meet technology based effluent limitations and standards. Those conditions shall be based on the effluent limitations and standards promulgated under Section 301 of the CWA, or on the new source performance standards promulgated under Section 306 of the CWA, or on effluent limitations determined on a case-by-case basis under Section 402(a)(1)(B) of the CWA, or on a combination of the three, in accordance with 40 CFR 125.3(c)(3).

40 CFR 125.3(a)(2), as incorporated by 401 KAR 5:080, Section 2, establishes the minimum level of control that must be imposed in permits issued under Section 402 of the CWA. Permits for discharges other than those from a Publicly Owned Treatment Works (POTW) shall contain the following technology based treatment requirements in accordance with the following statutory deadlines: the best practicable control technology currently available (BPT) for all pollutants by March 31, 1989; the best conventional pollutant control technology (BCT) for conventional pollutants by March 31, 1989 and the best available technology economically achievable (BAT) for toxic or non-conventional pollutants by March 31, 1989.

However, EPA has not promulgated an effluent limitation guideline (ELG) for discharges associated with the application of pesticides for any of these three treatment levels. When EPA-promulgated effluent limitations are inapplicable, permit limitations may be based on a case-by-case Best Professional Judgment (BPJ) interpretation in accordance with 40 CFR 125.3(c)(2). The permit writer shall consider the appropriate technology for the category or class of point sources of which the applicant is a member, based upon all available information and shall consider any unique factors relating to the applicant.

40 CFR 122.44(k)(2) allows for Best Management Practices (BMPs) to be used in lieu of numeric limitations when numeric limitations are infeasible. Biological pesticides use microbial agents, most commonly based on a strain of *Bacillus thuringiensis*. Biological materials of this nature do not contain conventional pollutants for which numeric limits could be established. In the case of discharges from chemical pesticides, the time at which a numeric effluent limitation would apply is not clear, since a residue only comes into existence at some point after the actual discharge. A sample of the pesticide mixture that was applied could not be measured against an effluent limitation, since the mixture would have been diluted to varying degrees by surface water before the limit would apply.

Therefore, only non-numeric effluent limitations will be used in this general permit in accordance with a BPJ evaluation of the eligible discharges listed in Section 1.4. In accordance with the CWA and 40 CFR 122.44(k), as incorporated by 401 KAR 5:065, Section 2(4), this general permit includes narrative conditions (BMP effluent limitations incorporated through certain control measures instead of numeric effluent limitations) to reduce both the quantity of pesticide discharges and the likelihood of unintentional pesticide discharges because numeric limitations are infeasible, and the practices are reasonably necessary to carry out the purposes and intent of the CWA.

2.1 Minimizing Pesticide Discharges

The following control measures shall be used to minimize pesticide discharges:

1. The permittee shall use no more than the necessary amount of pesticide, no more frequently than necessary to control the target pest and shall apply the pesticide in suitable weather conditions, in accordance with the label.
2. The permittee shall keep application equipment in proper operating condition by calibrating, cleaning and performing maintenance on a regular basis and by making repairs when necessary.

Before making the first pesticide application covered by this permit and once per calendar year afterwards (before making the first pesticide application for that calendar year) the permittee shall:

1. Determine the basis of the pest problem, such as impeded land or water uses like fishing and recreation, increased health risks and the propagation of disease or utility interference.
2. Analyze surveillance data from the previous year to help identify the cause of the problem, to determine if the problem is reoccurring or if there are new sources that are contributing to the problem. If data from the previous year for the specific pest management area is not available, older data or data from a similar location may be used.
3. Establish pest size or population density to serve as an action threshold.
4. Identify the current pest distribution and estimate the distribution potential without the use of pesticides.

5. Identify specific pest species to target and develop species-specific management strategies based on species development and behavior.
6. If applicable, identify flying insect breeding sites so that larva control programs can be implemented.
7. If applicable, identify factors causing or contributing to weed or algae problems such as excessive nutrients.
8. If applicable, identify factors causing or contributing to aquatic animal problems such as accidental introduction of exotic species.

Before making every pesticide application covered by this permit, the permittee shall:

1. Conduct surveillance to determine if the action threshold has been met.
2. Determine if the current climate would be able to support populations beyond the threshold and evaluate the method and timing of applying pesticides to reduce any possible affects on the environment and on non-target organisms.
3. Evaluate using pesticides against the most susceptible stage of pest development.

Control measures are required only to the extent that they are applicable to the type of pesticide product being used and its intended function. For example, pesticides are sometimes used as a preventative measure. When pre-emergent herbicides are used in order to prevent seed germination, action thresholds or surveillance data may not be relevant. If the discharges covered by this permit are due to the application of a pesticide that is being used solely for the purpose of research and development, then control measures only have to be implemented to the extent that they do not compromise research results.

Coverage under this permit does not relieve the permittee from the requirement to follow FIFRA labeling. If it is determined that a pesticide has been applied at a higher rate than specified by the manufacturer's directions, either through error or poorly calibrated equipment, then the permittee is in violation of this permit because pesticide discharges are not being minimized. The requirement to minimize pesticide discharges does not suggest that the permittee must use less than the recommended application rates specified by the product label.

2.2 Water Quality Related Adverse Incident Reporting

In order to provide an opportunity for the Cabinet to respond, if necessary, this permit contains a notification requirement when the permittee become aware that a water quality related adverse incident has occurred.

The permittee shall provide a written account of a water quality related adverse incident caused by a liquid pesticide discharge to the appropriate DOW Regional Office as listed in Attachment A within thirty days of the incident. This requirement is in addition to the reporting requirements of FIFRA, Section 6(a)(2) and 40 CFR Part 159.

The report must contain the following information:

1. The name of the surface water affected and any changes in appearance such as color, sheen or clarity.
2. The name of the affected species and an estimate of the amount and size of any dead or distressed organisms.
3. The size of the affected area, such as stream distance, lake area or terrestrial acreage.
4. The name of the pesticide, application rate, application method, active ingredient and EPA registration number.
5. A habitat description and the circumstances under which the incident occurred.
6. An identification of what actions will be taken to correct, remedy, cleanup or otherwise address the incident and prevent the incident from reoccurring.
7. How and when the incident was discovered.
8. If biological tests or water sampling were conducted, provide a summary of the test results within thirty days of the results becoming available.

Reporting a water quality related adverse incident occurring to non-target pests that are similar in kind to the target pest is not required. For example, if a different species of fly is affected by the application of a pesticide intended for black flies only, then a report is not required.

Water quality related adverse incidents do not include those occurring to terrestrial organisms, unless the incident was caused by contact with surface water affected by a pesticide. For instance, brown vegetation caused by foliage having a direct contact with a pesticide is not considered a water quality related adverse incident, and a report is not required.

If a federally listed threatened or endangered species or its federally designated critical habitat is adversely affected by the use of a pesticide, then the permittee must immediately notify the U.S. Fish and Wildlife Service (FWS).

Additional information on federally listed threatened or endangered species and federally designated critical habitat is available at: www.fws.gov

2.3 Visual Inspections

Although visual inspections may be subjective by nature, they can be used in a practical manner to determine compliance with this permit. Visual monitoring is required as a means of identifying instances of harmful impact to non-target organisms related to the use of pesticides in a given area.

The permittee shall:

1. Conduct visual inspections while applying pesticides for immediate and observable water quality related adverse incidents. This requirement only applies when visual inspections are possible. For instance, visual inspections may not be possible during nighttime applications or when the treatment area is inaccessible.
2. Conduct post-application visual inspections in and around the treatment area for observable water quality related adverse incidents. This requirement only applies if the operator performs surveillance or effectiveness checks as part of their normal pest management program.

2.4 Corrective Actions

A corrective action requirement is included to help document and eliminate environmental problems associated with pesticide use and to promote compliance with permit requirements.

If any of the following situations occur, the permittee shall take specific actions to correct the situation and to prevent reoccurrence.

1. Failure to meet the technology based effluent limitations.
2. Pesticide applications are causing or contributing to an excursion of a narrative water quality standard.
3. Pesticide applications cause a water quality related adverse incident.

Corrective action shall be taken before the next pesticide application or otherwise as soon as possible. In addition, the process of considering and selecting discharge control measures must be evaluated for effectiveness. The permittee shall document any event that triggers a corrective action within thirty days of the event. The documentation must include a description of the event, the date the event took place, the date the permittee learned of the event and how the event was discovered. The permittee shall summarize any corrective actions taken, including date begun, date complete, or the anticipated completion date. The permittee shall document what measures are taken to prevent a reoccurrence of the event. The permittee shall maintain a copy of corrective actions at the operator's business address and shall make the records available upon request to Cabinet personnel.

2.5 Recordkeeping

The permittee shall keep a record of those items identified in (a) through (j) of the recordkeeping requirements for agricultural pest control within the Kentucky Department of Agriculture administrative regulation, 302 KAR 27:020, Section 1(3). The permittee shall maintain a copy of records at the operator's business address and shall make the records available upon request to Cabinet personnel.

2.6 Activity Summary

Permittees shall prepare a summary of activity for each calendar year. The summary shall contain the permittee name and the applicator name(s). The common name of any pesticide used during the year must be included, with the registration number(s), application method and quantity applied. The summary shall include a brief outline of any water quality related adverse incidents that occurred during the year and any corrective actions taken. The summary shall be completed by February 15 of each year. The permittee shall maintain a copy of the summary at the operator's business address and shall make the summary available upon request to Cabinet personnel.

3.0 PROPOSED WATER QUALITY BASED EFFLUENT LIMITATIONS

3.1 Applicable Water Quality Standards

Pursuant to 40 CFR 122.44(d)(1), as incorporated by 401 KAR 5:065, Section 2(4), each NPDES permit issued by a delegated state shall include conditions that meet water quality standards and state requirements. Those conditions shall be in addition to or more stringent than an ELG promulgated under Sections 301, 304, 306, 307, 318 or 405 of the CWA when necessary to achieve water quality standards established under Section 303 of the CWA, including state narrative criteria for water quality. 40 CFR 122.44(d)(1)(i) stipulates that limitations must control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic) that the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard, including state narrative criteria for water quality.

The stated purpose of a pesticide is to control an unwanted organism. Biological pesticides have a non-toxic mode of action and by definition, discharges from their application will not have the reasonable potential to cause an excursion of a water quality standard. Chemical pesticides are toxic to the target species and it is possible that they contain substances that could degrade surface water. However, only after a chemical pesticide has completed its intended purpose is it considered a pollutant for which this KPDES permit is required. Therefore, it is not possible to determine if their application will have the reasonable potential to cause an excursion of a water quality standard since the actual residue typically cannot be measured. Attempting to establish a numeric water quality based effluent limitation for a particular pollutant based on some type of in-stream or surface water monitoring is difficult because the origin of elevated pollutant levels could not be traced back to the actual discharge. Therefore, only state narrative criteria for water quality apply to the discharges covered by this permit.

401 KAR 10:031, Section 2(1) establishes the minimum criteria that apply to all surface waters. This section states that surface waters shall not be aesthetically or otherwise degraded by substances that:

- Settle to form objectionable deposits
- Float as debris, scum, oil, or other matter to form a nuisance
- Produce objectionable color, odor, taste, or turbidity
- Injure, are chronically or acutely toxic to or produce adverse physiological or behavioral responses in humans, animals, fish, and other aquatic life
- Produce undesirable aquatic life or result in the dominance of nuisance species
- Cause fish flesh tainting

Any discharge that causes or contributes to an excursion of a narrative water quality standard is prohibited and is a violation of this permit.

3.2 Antidegradation

The CWA requires each State to develop an antidegradation policy and associated implementation procedures for the protection and maintenance of a water body's existing water quality. Kentucky's antidegradation policy is found in 401 KAR 10:029, Section 1. The antidegradation policy implementation methodology is contained in 401 KAR 10:030.

The purpose of 401 KAR 10:026 through 10:031 is to safeguard the surface waters of the Commonwealth for their designated uses, to prevent the creation of new pollution of these waters, and to abate existing pollution. Where the quality of surface water exceeds that necessary to support propagation of fish, shellfish, wildlife and recreation in and on the water, that quality shall be maintained and protected unless the Cabinet finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the Cabinet's continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located.

The procedure for implementing antidegradation requirements in general permits is found in 401 KAR 10:030, Section 1(3)(b)2. The Cabinet may introduce permit conditions to satisfy antidegradation requirements and must describe in the Fact Sheet how the general permit complies with antidegradation requirements.

Regarding antidegradation and lowering water quality, the application of pesticides does not necessarily have a negative affect, depending on the specific pesticide that is being used. In some cases, the use of a pesticide improves

water quality. If a pesticide prevents the growth of algae for instance, the dissolved oxygen level of surface water will not be depleted by subsequent algae decay.

It has already been determined that any pesticide registered for use under the FIFRA will not pose a risk to the environment if used in accordance with its labeling. This permit requires pesticides to be used in accordance with their label through technology based effluent limitations. In addition, the discharges covered by this permit are inherently different from typical wastewater discharges. Pesticides are deliberately purchased and used with a beneficial intention. Most other discharge permits are issued as a means to dispose of an unwanted wastewater.

However, in an effort to further protect high quality waters the DOW has decided to include within this permit additional requirements that provide alternatives to the use of pesticides. In some instances, the need to use pesticides can be reduced or virtually eliminated by using alternative strategies for pest control. Therefore, operators of permitted facilities with a direct discharge into surface water categorized as high quality water shall investigate the possibility of using the following methods of pest control instead of using pesticides:

- **Mechanical Removal Method**

This option involves physically removing the pest from the area. Examples include pulling, mowing, cutting, burning and trapping. Appropriate best management practices have to be used to minimize any environmental disturbances caused by using this method.

- **Habitat Alteration Method**

This procedure consists of increasing pest mortality by altering the pest habitat to make it less suitable to produce and sustain the pest species. Alterations may include eliminating standing water to control mosquito breeding grounds or using pond dyes to inhibit algae growth.

- **Biological Control Method**

This technique makes use of organisms such as herbivores, predators, parasites and pathogens to combat pests. The mosquito fish (*Gambusia affinis*) feeds on mosquito larvae and is an example of using biological control as an alternative to using pesticides.

The permittee shall evaluate these options prior to each pesticide application covered by this permit, considering their impact on water quality, impact to non-target organisms, effectiveness and feasibility versus those of applying a pesticide. If practical, one or more of these alternatives shall be used instead of applying pesticides that lead to a discharge to high quality water. If an alternative method is successful in eradicating a pest, the permittee shall consider taking steps to prevent the pest species from being reintroduced into the pest management area. The implementation of these requirements shall be documented by the permittee in the Pesticide Discharge Management Plan (PDMP) and are in addition to the standard PDMP requirements that apply. If the permittee is not required to develop a PDMP, then the implementation of any alternative methods of pest control shall be documented and kept on file with the other records as required by the recordkeeping section of this permit.

These requirements clarify the DOW's expectation of permittees to meet all applicable antidegradation requirements. The specific goal of these requirements is to prevent any lowering of water quality of those surface waters categorized as high quality. In addition to protecting high quality waters, this permit also protects impaired waters because coverage under this permit is not available for discharges to waters impaired for the specific pesticide being used, or any of its constituents.

Therefore, the conditions of 401 KAR 10:029, Section 1 and 401 KAR 10:030, Section 1 have been satisfied by this permit action. If DOW determines that additional controls or requirements beyond those contained in this permit are necessary to meet antidegradation requirements, then the operator shall be required to obtain an individual permit.

4.0 PDMP REQUIREMENT FOR LARGE OPERATORS

The DOW has adopted EPA's criteria for large and small designations to determine which permittees must develop a Pesticide Discharge Management Plan (PDMP). Therefore, the following requirements are applicable only to those facilities that meet the definition of a large operation.

The permittee shall develop and implement a PDMP for their facilities covered by this permit. The plan shall be complete at the time pesticide application commences. The permittee shall maintain a copy of the PDMP at the operator's business address and shall make the plan available upon request to Cabinet personnel. The plan may incorporate by reference any other documents that may also be used to comply with the requirements of this permit.

The plan shall include the following items:

1. Pesticide Discharge Management Team

The plan shall list a qualified discharge management team, including each member's name, responsibility and contact information. The list must include the name of a person who performs each of these specific tasks: making pest management decisions, making pesticide applications, performing visual inspections, taking corrective actions, detecting or responding to a leak or spill and developing the PDMP. The team may include as many or as few members as necessary to fulfill the requirements of this permit.

If the pesticide applicator is unknown when the team is established, indicate when the applicator can be identified. Include any written agreements between the permittee and another operator or pesticide applicator that specify the separation of responsibilities regarding the requirements of this permit.

2. Pest Management Area Description

The plan shall describe the management area in detail, including an explanation of the pest problem, an identification of the target pest, an explanation of the action thresholds and how they were determined, and the probable cause of the pest problem. If surveillance data from the previous year was not used to identify the cause of the pest problem, then include an explanation of how the cause was determined. If data from another location is used, as allowed by this permit, then explain how that data is relevant.

3. Pest Management Area Map

The plan shall include a map (topographical, city, county or other appropriate map) of the management area and treatment area(s).

4. Discharge Control Measures Description

The plan shall describe what control measures are being used to minimize pesticide discharges in accordance with permit requirements. The plan shall list the pesticide application frequency and rate and how they were determined. An evaluation of the affect the pesticide's active ingredients will have on the environment shall also be included. The plan must describe how weather data such as temperature, wind speed and rainfall is gathered, including an explanation of how that information is evaluated to determine if conditions are favorable for applying pesticides.

5. Water Quality Related Adverse Incident Procedures

The plan shall contain procedures for identifying, documenting and responding to a water quality related adverse incident, including protocols for notifying the appropriate personnel, emergency response organizations and regulatory agencies.

6. Visual Inspection Scheduling and Procedures

The plan shall include a schedule for when visual inspections will be conducted, including an explanation of the inspection procedures and protocols.

7. Spill Response Procedures

The plan shall contain procedures for stopping, containing and cleaning up leaks or spills, including protocols for notifying the appropriate personnel, emergency response organizations and regulatory agencies. Individuals that may cause, detect or respond to a leak or spill must be trained in the correct spill response procedures and must have the necessary spill response equipment available to them.

8. PDMP Modifications

The PDMP shall be modified when a change in the facility significantly alters the type, frequency or volume of pesticides discharged, or anytime the permittee takes corrective action. Modifications must be made within 90 days of the change or the corrective action.

9. Implementation of Antidegradation Requirements

If alternative pest control methods are used because of the antidegradation requirements of this permit, then the plan shall contain a description of those methods.

Small operations and any facility making an application exclusively in response to a Declared Pest Emergency Situation are not required to develop a PDMP.

5.0 NOI REQUIREMENTS

Coverage under this permit is automatic. This initial issuance of KYG990000, DOW has elected not to require the submission of a Notice of Intent (NOI) during this initial issuance due to a number of administrative factors. The requirement to submit an NOI shall be addressed in the reissued KYG990000.

6.0 AUTHORIZATION TO DISCHARGE

Facilities with eligible discharges are automatically covered under this permit. Operators are thereby authorized to discharge under the terms and conditions of this permit upon its effective date.

7.0 SCHEDULE OF COMPLIANCE

The permittee shall attain compliance with all requirements of this permit on the effective date of this permit. The requirements of this permit are not tied to submission of an NOI, and therefore must be met from the time discharges begin.

8.0 OTHER INFORMATION

8.1 Permit Duration

This permit has a five (5) year duration and will expire on the date indicated on the signature page. However, existing coverage under an expired general permit continues in effect in accordance with 40 CFR 122.6, as incorporated by 401 KAR 5:060, Section 2(4), until the DOW makes a determination on any proposal to reissue the permit.

8.2 Permit and Public Notice Information

The draft permit, fact sheet and public notice are available on the DOW Public Notice web page and the Department of Environmental Protection's Pending Approvals Search web page at:

<http://water.ky.gov/Pages/PublicNotices.aspx>:

http://dep.gateway.ky.gov/eSearch/Search_Pending_Approvals.aspx?Program=Wastewater&NumDaysDoc=30

Comments may be filed electronically at the following e-mail address: DOWPublicNotice@ky.gov

Or, by sending written comments to:

Division of Water
Surface Water Permits Branch
200 Fair Oaks Lane
Frankfort, Kentucky 40601

8.3 References and Cited Documents

All material and documents referenced or cited in this fact sheet are parts of the permit information as described above and are readily available at the Division of Water Central Office. Information regarding these materials may be obtained from the Division of Water's Open Records Coordinator at (502) 564-3410 or by e-mail at dowopenrecords@ky.gov.

8.4 Certification and License

Pesticide applications must be made by individuals certified in a pesticide use category consistent with the type of application in accordance with Kentucky Department of Agriculture administrative regulation, 302 KAR 27:050. Individuals who sell, distribute or make recommendations for the use of certain pesticides must be licensed to do so in accordance with 302 KAR 27:030.

KPDES



KENTUCKY POLLUTANT
DISCHARGE ELIMINATION
SYSTEM

PERMIT

PERMIT NO.: KYG990000
AI NO.: 35050

AUTHORIZATION TO DISCHARGE UNDER THE KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

Pursuant to Authority in KRS 224,

facilities that meet the eligibility requirements of this general permit

are authorized to discharge from operations located

wholly or in part within the Commonwealth of Kentucky

to receiving waters identified as

any of the eligible surface waters of the Commonwealth that comprise the Mississippi and Ohio River basins and sub-basins, within the political and geographical boundaries of Kentucky

in accordance with effluent limitations, monitoring requirements and other conditions set forth in this permit.

This permit shall become effective on April 1, 2012.

This permit and the authorization to discharge shall expire at midnight, March 31, 2017.

March 30, 2012

Date Signed

A handwritten signature in black ink, reading "S. L. Gruzesky".

**Sandra L. Gruzesky, Director
Division of Water**

1.0 COVERAGE UNDER THIS PERMIT

1.1 Covered Facilities

Any facility with an eligible discharge shall have automatic coverage under this permit. All eligible discharges are authorized upon the effective date of this permit. All facilities with an eligible discharge shall abide by the terms and conditions of this permit upon the effective date. Facilities with ineligible discharges shall have an individual KPDES permit.

1.2 Eligible Discharges

All discharges created by applying liquid pesticides directly to surface water and all non-agricultural land applications where pesticide contact with surface water is either intentional or unavoidable, except those excluded discharges.

1.3 Excluded Discharges

Discharges created by applying pesticides to agricultural land are excluded from coverage under this permit. However, this permit makes no judgment as to whether a KPDES permit may actually be required by the CWA.

The following discharges are excluded from coverage under this permit and must be authorized by an individual permit:

- Designated as Cold Water Aquatic Habitat (CAH) or as Outstanding State Resource Water (OSRW) as listed in 401 KAR 10:026, Section 5.
- Categorized as Outstanding National Resource Water (ONRW) or as Exceptional Water (EW) as listed in 401 KAR 10:030, Section 1.
- Listed in the most recent Integrated Report to Congress on Water Quality in Kentucky (303(d) and 305(b) report) as impaired for the specific pesticide being used, or any of its constituents. For instance, applying the pesticide copper sulfate to surface water impaired for either copper or sulfate would not be eligible because copper sulfate can degrade into these two substances.

1.4 Receiving Waters

This permit authorizes discharges to surface water:

- Classified as Warmwater Aquatic Habitat (WAH), Primary/Secondary Contact Recreation (PCR/SCR) and Domestic Water Supply (DWS) as listed in 401 KAR 10:026, Section 5.
- Listed in the most recent Integrated Report to Congress on Water Quality in Kentucky (303(d) and 305(b) report) as impaired, if the impairment is not for the specific pesticide that is being applied, or any of its constituents.
- Categorized as High Quality as listed in 401 KAR 10:030, Section 1, provided the discharge complies with the additional controls as specified in this permit.

2.0 TECHNOLOGY BASED EFFLUENT LIMITATIONS

2.1 Minimizing Pesticide Discharges

The following control measures shall be used to minimize pesticide discharges:

- The permittee shall use no more than the necessary amount of pesticide, no more frequently than necessary to control the target pest and shall apply the pesticide in suitable weather conditions, in accordance with the label.
- The permittee shall keep application equipment in proper operating condition by calibrating, cleaning and performing maintenance on a regular basis and by making repairs when necessary.

Before making the first pesticide application covered by this permit and once per calendar year afterwards (before making the first pesticide application for that calendar year) the permittee shall:

- Determine the basis of the pest problem, such as impeded land or water uses like fishing and recreation, increased health risks and the propagation of disease or utility interference.
- Analyze surveillance data from the previous year to help identify the cause of the problem, to determine if the problem is reoccurring or if there are new sources that are contributing to the problem. If data from the previous

year for the specific pest management area is not available, older data or data from a similar location may be used.

- Establish pest size or population density to serve as an action threshold.
- Identify the current pest distribution and estimate the distribution potential without the use of pesticides.
- Identify specific pest species to target and develop species-specific management strategies based on species development and behavior.
- If applicable, identify flying insect breeding sites so that larva control programs can be implemented.
- If applicable, identify factors causing or contributing to weed or algae problems such as excessive nutrients.
- If applicable, identify factors causing or contributing to aquatic animal problems such as accidental introduction of exotic species.

Before making every pesticide application covered by this permit, the permittee shall:

- Conduct surveillance to determine if the action threshold has been met.
- Determine if the current climate would be able to support populations beyond the threshold and evaluate the method and timing of applying pesticides to reduce any possible affects on the environment and on non-target organisms.
- Evaluate using pesticides against the most susceptible stage of pest development.

2.2 Water Quality Related Adverse Incident Reporting

The permittee shall provide a written account of a water quality related adverse incident caused by a liquid pesticide discharge to the appropriate DOW Regional Office as listed in Attachment A within thirty days of the incident. This requirement is in addition to the reporting requirements of FIFRA, Section 6(a)(2) and 40 CFR Part 159.

The report must contain the following information:

- The name of the surface water affected and any changes in appearance such as color, sheen or clarity.
- The name of the affected species and an estimate of the amount and size of any dead or distressed organisms.
- The size of the affected area, such as stream distance, lake area or terrestrial acreage.
- The name of the pesticide, application rate, application method, active ingredient and EPA registration number.
- A habitat description and the circumstances under which the incident occurred.
- An identification of what actions will be taken to correct, remedy, cleanup or otherwise address the incident and prevent the incident from reoccurring.
- How and when the incident was discovered.
- If biological tests or water sampling were conducted, provide a summary of the test results within thirty days of the results becoming available.

2.3 Visual Inspections

The permittee shall:

- Conduct visual inspections while applying pesticides for immediate and observable water quality related adverse incidents. This requirement only applies when visual inspections are possible. For instance, visual inspections may not be possible during nighttime applications or when the treatment area is inaccessible.
- Conduct post-application visual inspections in and around the treatment area for observable water quality related adverse incidents. This requirement only applies if the operator performs surveillance or effectiveness checks as part of their normal pest management program.

2.4 Corrective Actions

If any of the following situations occur, the permittee shall take specific actions to correct the situation and to prevent reoccurrence.

- Failure to meet the technology based effluent limitations.
- Pesticide applications are causing or contributing to an excursion of a narrative water quality standard.
- Pesticide applications cause a water quality related adverse incident.

Corrective action shall be taken before the next pesticide application or otherwise as soon as possible. The permittee shall document any event that triggers a corrective action within five days of the event. The documentation must include a description of the event, the date the event took place, the date the permittee learned of the event and how the event was discovered. The permittee shall summarize any corrective actions taken, including date begun, date complete, or the anticipated completion date. The permittee shall document what measures are taken to prevent a recurrence of the event. The permittee shall maintain a copy of corrective actions at the operator's business address and shall make the records available upon request to Cabinet personnel.

2.5 Recordkeeping

The permittee shall keep a record of those items identified in (a) through (j) of the recordkeeping requirements for agricultural pest control within the Kentucky Department of Agriculture administrative regulation, 302 KAR 27:020, Section 1(3). The permittee shall maintain a copy of records at the operator's business address and shall make the records available upon request to Cabinet personnel.

2.6 Activity Summary

Permittees shall prepare a summary of activity for each calendar year. The summary shall contain the permittee name and the applicator name(s). The common name of any pesticide used during the year must be included, with the registration number(s), application method and quantity applied. The summary shall include a brief outline of any water quality related adverse incidents that occurred during the year and any corrective actions taken. The summary shall be completed by February 15 of each year. The permittee shall maintain a copy of the summary at the operator's business address and shall make the summary available upon request to Cabinet personnel.

3.0 WATER QUALITY BASED EFFLUENT LIMITATIONS

3.1 Applicable Water Quality Standards

Surface waters shall not be aesthetically or otherwise degraded by substances that:

- Settle to form objectionable deposits
- Float as debris, scum, oil, or other matter to form a nuisance
- Produce objectionable color, odor, taste, or turbidity
- Injure, are chronically or acutely toxic to or produce adverse physiological or behavioral responses in humans, animals, fish, and other aquatic life
- Produce undesirable aquatic life or result in the dominance of nuisance species
- Cause fish flesh tainting

Any discharge that causes or contributes to an excursion of a narrative water quality standard is prohibited and is a violation of this permit.

3.2 Antidegradation

Operators of permitted facilities with a direct discharge to surface water categorized as high quality water shall investigate the possibility of using the following alternative methods of pest control instead of using pesticides:

- **Mechanical Removal Method**
This option involves physically removing the pest from the area. Examples include pulling, mowing, cutting, burning and trapping. Appropriate best management practices have to be used to minimize any environmental disturbances caused by using this method.
- **Habitat Alteration Method**
This procedure consists of increasing pest mortality by altering the pest habitat to make it less suitable to produce and sustain the pest species. Alterations may include eliminating standing water to control mosquito breeding grounds or using pond dyes to inhibit algae growth.

- **Biological Control Method**

This technique makes use of organisms such as herbivores, predators, parasites and pathogens to combat pests. The mosquito fish (*Gambusia affinis*) feeds on mosquito larvae and is an example of using biological control as an alternative to using pesticides.

The permittee shall evaluate these options prior to each pesticide application covered by this permit, considering their impact on water quality, impact to non-target organisms, effectiveness and feasibility versus those of applying a pesticide. If practical, one or more of these alternatives shall be used instead of applying pesticides that lead to a discharge to high quality water. If an alternative method is successful in eradicating a pest, the permittee shall consider taking steps to prevent the pest species from being reintroduced into the pest management area. The implementation of these requirements shall be documented by the permittee in the PDMP and are in addition to the standard PDMP requirements that apply. If the permittee is not required to develop a PDMP, then the implementation of any alternative methods of pest control shall be documented and kept on file with the other records as required by the recordkeeping section of this permit.

If DOW determines that additional controls or requirements beyond those contained in this permit are necessary to meet antidegradation requirements, then the operator shall be required to obtain an individual permit.

4.0 PDMP REQUIREMENT FOR LARGE OPERATORS

The permittee shall develop and implement a PDMP for their facilities covered by this permit. The plan shall be complete at the time pesticide application commences. The permittee shall maintain a copy of the PDMP at the operator's business address and shall make the plan available upon request to Cabinet personnel. The plan may incorporate by reference any other documents that may also be used to comply with the requirements of this permit.

The plan shall include the following items:

- **Pesticide Discharge Management Team**

The plan shall list a qualified discharge management team, including the member's name, responsibility and contact information. The list must include the name of a person who performs each of these specific tasks: making pest management decisions, making pesticide applications, performing visual inspections, taking corrective actions, detecting or responding to a leak or spill and developing the PDMP. The team may include as many or as few members as necessary to fulfill the requirements of this permit.

If the pesticide applicator is unknown when the team is established, indicate when the applicator can be identified. Any written agreements between the permittee and another operator or pesticide applicator that specify the separation of responsibilities regarding the provisions of this permit must be included.

- **Pest Management Area Description**

The plan shall describe the management area in detail, including an explanation of the pest problem, an identification of the target pest, an explanation of the action thresholds and how they were determined and the probable cause of the pest problem. If surveillance data from the previous year was not used to identify the cause of the pest problem, then include an explanation of how the cause was determined. If data from another location is used, as allowed by this permit, then explain how that data is relevant.

- **Pest Management Area Map**

The plan shall include a map (topographical, city, county or other appropriate map) of the management area and treatment area(s).

- **Discharge Control Measures Description**

The plan shall describe what control measures are being used to minimize pesticide discharges in accordance with permit requirements. The plan shall list the pesticide application frequency and rate and how they were determined. An evaluation of the affect the pesticide's active ingredients will have on the environment shall also be included. The plan must describe how weather data such as temperature, wind speed and rainfall is gathered, including an explanation of how that information is evaluated to determine if conditions are favorable for applying pesticides.

- **Water Quality Related Adverse Incident Procedures**

The plan shall contain procedures for identifying, documenting and responding to a water quality related adverse incident, including protocols for notifying the appropriate personnel, emergency response organizations and regulatory agencies.

- **Visual Inspection Scheduling and Procedures**

The plan shall include a schedule for when visual inspections will be conducted, including an explanation of the inspection procedures and protocols.

- **Spill Response Procedures**

The plan shall contain procedures for stopping, containing and cleaning up leaks or spills, including protocols for notifying the appropriate personnel, emergency response organizations and regulatory agencies. Individuals that may cause, detect or respond to a leak or spill must be trained in the correct spill response procedures and must have the necessary spill response equipment available to them.

- **PDMP Modifications**

The PDMP shall be modified when a change in the facility significantly alters the type, frequency or volume of pesticides discharged, or anytime the permittee takes corrective action. Modifications must be made within 90 days of the change or the corrective action.

- **Implementation of Antidegradation Requirements**

If alternative pest control methods are used because of the antidegradation requirements of this permit, then the plan shall contain a description of those methods.

Small facilities and any facility making an application exclusively in response to a Declared Pest Emergency Situation are not required to develop a PDMP.

5.0 NOI REQUIREMENTS

Coverage under this permit is automatic. This initial issuance of KYG990000, DOW has elected not to require the submission of a Notice of Intent (NOI) during this initial issuance due to a number of administrative factors. The requirement to submit an NOI shall be addressed in the reissued KYG990000.

6.0 OTHER REQUIREMENTS

6.1 Reopener Clause

In accordance with 401 KAR 5:070, Section 6(1) [40 CFR 122.62(a)(7)], a permit may be reopened for modification or revoked and reissued when required by the reopener conditions of 401 KAR 5:065, Section 2(4) [40 CFR 122.44(b)]. A permit shall be modified, or alternatively revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved in accordance with 401 KAR 5:050 through 5:080, if the effluent standard or limitation so issued or approved:

- Contains different conditions or is otherwise more stringent than any effluent limitation in the permit
- Controls any pollutant not limited in the permit

- This permit may be reopened to implement the findings of a reasonable potential analysis performed by the DOW. A permit shall be modified, or alternatively revoked and reissued, if the DOW determines surface waters are aesthetically or otherwise degraded by substances that:
 - Settle to form objectionable deposits
 - Float as debris, scum, oil, or other matter to form a nuisance
 - Produce objectionable color, odor, taste, or turbidity
 - Injure, are chronically or acutely toxic to or produce adverse physiological or behavioral responses in humans, animals, fish, and other aquatic life
 - Produce undesirable aquatic life or result in the dominance of nuisance species
 - Cause fish flesh tainting

6.2 Standard Conditions

This permit has been issued under the provisions of KRS Chapter 224 and regulations promulgated pursuant thereto. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits or licenses required by this Cabinet and other state, federal, and local agencies.

All conditions of 40 CFR 122.41 (401 KAR 5:065, Section 2(1)) are hereby incorporated by reference as conditions of this permit. For existing manufacturing, commercial, mining and silvicultural discharges the conditions of 40 CFR 122.42 (a) (401 KAR 5:065, Section (2)) are hereby incorporated as conditions of this permit.

6.3 Schedule of Compliance

The permittee shall attain compliance with all requirements of this permit on the effective date of this permit. The requirements of this permit are not tied to submission of an NOI, and therefore must be met from the time an eligible operator begins discharging.

Attachment A

<p>Bowling Green Regional Office 1508 Westen Avenue Bowling Green, Kentucky 42104 (270) 746-7475</p> <p>Allen Edmonson Logan Simpson Barren Grayson Ohio Warren Butler Hart</p>	<p>London Regional Office 875 South Main Street London, Kentucky 40741 (606) 330-2080</p> <p>Bell Jackson Leslie Rockcastle Clay Knox McCreary Whitley Harlan Laurel Owsley</p>
<p>Columbia Regional Office 2751 Campbellsville Road Columbia, Kentucky 42728 (270) 384-4734</p> <p>Adair Green Metcalfe Russell Boyle Larue Monroe Taylor Casey Lincoln Nelson Washington Clinton Marion Pulaski Wayne Cumberland</p>	<p>Louisville Regional Office 9116 Leesgate Road Louisville, Kentucky 40222-5084 (502) 429-7122</p> <p>Breckinridge Hardin Meade Shelby Bullitt Jefferson Oldham Spencer</p>
<p>Florence Regional Office 8020 Veterans Memorial Drive, Suite 110 Florence, Kentucky 41042 (859) 525-4923</p> <p>Boone Carroll Henry Pendleton Bracken Gallatin Kenton Trimble Campbell Grant Owen</p>	<p>Madisonville Regional Office Madisonville State Office Building 625 Hospital Drive Madisonville, Kentucky 42431-1683 (270) 824-7529</p> <p>Caldwell Daviess Hopkins Todd Christian Hancock McLean Union Crittenden Henderson Muhlenberg Webster</p>
<p>Frankfort Regional Office 200 Fair Oaks Lane, 3rd Floor Frankfort, Kentucky 40601 (502) 564-3358</p> <p>Anderson Fayette Jessamine Powell Bourbon Franklin Madison Scott Clark Garrard Mercer Woodford Estill Harrison Nicholas</p>	<p>Morehead Regional Office 525 Hecks Plaza Drive Morehead, Kentucky 40351 (606) 783-8655</p> <p>Bath Fleming Mason Morgan Boyd Greenup Menifee Robertson Carter Lawrence Montgomery Rowan Elliott Lewis</p>
<p>Hazard Regional Office 233 Birch Street, Suite 1 Hazard, Kentucky 41701 (606) 435-6022</p> <p>Breathitt Knott Magoffin Pike Floyd Lee Martin Wolfe Johnson Letcher Perry</p>	<p>Paducah Regional Office 130 Eagle Nest Drive Paducah, Kentucky 42003 (270) 898-8468</p> <p>Ballard Fulton Livingston McCracken Calloway Graves Lyon Trigg Carlisle Hickman Marshall</p>



STEVEN L. BESHEAR
GOVERNOR

ENERGY AND ENVIRONMENT CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
DIVISION OF WATER
200 FAIR OAKS LANE
FRANKFORT, KENTUCKY 40601
www.kentucky.gov

LEONARD K. PETERS
SECRETARY

March 30, 2012

Re: Pesticides General Permit
KPDES No.: KYG99000
AI No.: 35050
Pulaski County, Kentucky

Dear Commenter:

Your comments concerning the above-referenced draft permit have been reviewed and responses prepared in accordance with Kentucky Pollutant Discharge Elimination System (KPDES) regulation 401 KAR 5:075, Section 12. The comments have been briefly described below and our responses to the comments follow:

- COMMENT 1:** Because of legal responsibility issues with Clean Water Act compliance, several comments pertain to the thresholds for which coverage under the general permit is not required. Smaller operations should have the protection of permit coverage to avoid litigation.
- RESPONSE 1:** The draft permit has been revised to require coverage for all eligible facilities regardless of size of the treatment area.
- COMMENT 2:** The phrase “near surface water” is unclear and cannot be quantified. Are terrestrial treatments with a 50-foot setback from surface water exempt from coverage?
- RESPONSE 2:** The word “near” has been removed from the draft permit. Any terrestrial discharge is exempt unless the treatment causes an unavoidable discharge to surface water. The distance necessary to avoid a discharge to a surface varies depending on the type of pesticide being used, the application method, weather conditions, terrain and other factors.
- COMMENT 3:** How should large organizations divide themselves to create the correct number of permittees?
- RESPONSE 3:** This issue is largely up to the organization in question. The DOW recommends making no changes to the entity’s pesticide decision-making structure.
- COMMENT 4:** The draft permit contains an overly broad requirement for the permittee to comply with water quality standards. This deprives the permittee of the reasonable expectation that if they fully comply with the terms and conditions of the permit they will not be subject to enforcement action for an unintended and unknown excursion of a water quality standard. The requirement should be deleted.

RESPONSE TO COMMENTS

KPDES No.: KYG990000

AI No.: 35050

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- RESPONSE 4:** 40 CFR 122.44(d)(1) as incorporated by 401 KAR 5:065, Section 2(4), requires every KPDES permit to include conditions to meet state water quality standards.
- COMMENT 5:** Are powdered herbicides that must be mixed with water before application covered under this permit?
- RESPONSE 5:** Yes. Additional clarification has been added to the draft permit concerning this issue.
- COMMENT 6:** Are artificially controlled water bodies, such as catch basins or hatchery ponds covered under this permit? Do discharges to ephemeral streams require a permit?
- RESPONSE 6:** In most cases, no. Additional clarification has been added to the draft permit concerning this issue.
- COMMENT 7:** Utility providers are concerned about the height of woody vegetation in the right-of-way. Any effort to estimate pest density would be an unnecessary expense. Please add utility right-of-way maintenance as an example in Section 1.4.
- RESPONSE 7:** Pesticide use on a utility right-of-way has been added as an example of a type of eligible discharge.
- COMMENT 8:** The direct/indirect discharge designations are unclear and unworkable. The definition of "Indirect Discharge" is not reasonable.
- RESPONSE 8:** This concept has been removed from the permit. Any discharge to a special use water, now requires an individual permit.
- COMMENT 9:** The draft permit should expressly exclude agricultural pesticide applications.
- RESPONSE 9:** The statement regarding eligible discharge types has been revised to indicate that terrestrial applications are more specifically "non-agricultural land applications".
- COMMENT 10:** There is a concern that the requirement to minimize pesticide discharges means reducing levels to below what is allowed by FIFRA.
- RESPONSE 10:** Additional clarification has been added to the draft permit concerning this issue.

Any person aggrieved by the issuance of a permit final decision may demand a hearing pursuant to KRS 224.10-420(2) within thirty (30) days from the date of the issuance of this letter. Any demand for a hearing on the permit shall be filed in accordance with the procedures specified in KRS 224.10-420, 224.10-440, 224.10-470, and the regulations promulgated thereto. The request for hearing should be submitted in writing to the Energy and Environment Cabinet, Office of Administrative Hearings, 35-36 Fountain Place, Frankfort, Kentucky 40601 and the Commonwealth of Kentucky, Energy and Environment Cabinet, Division of Water, 200 Fair Oaks Lane, Frankfort, Kentucky 40601. For your record keeping purposes, it is recommended that these requests be sent by certified mail. The written request must conform to the appropriate statutes referenced above.

RESPONSE TO COMMENTS

KPDES No.: KYG990000

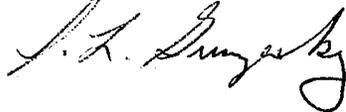
AI No.: 35050

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If you have any questions regarding this response, please contact Ronnie Thompson, Surface Water Permits Branch, at (502) 564-3410, extension 4925.

Further information on procedures and legal matters pertaining to the hearing request may be obtained by contacting the Office of Administrative Hearings at (502) 564-7312.

Sincerely,

A handwritten signature in black ink, appearing to read "S. L. Gruzesky". The signature is written in a cursive style with a large, looping final letter.

Sandra L. Gruzesky, Director
Division of Water

SLG:JMB:rt

ATTACHMENT C

DELEGATION OF AUTHORITY

I, _____ (name), hereby designate the person or specifically described position below to be a duly authorized representative for the purpose of overseeing compliance with environmental requirements, including the KPDES Pesticide General Permit, KYG99 for the _____ project. The designee is authorized to sign any reports, or documents required by the permit.

(name of person or position)
(company)
(address)
(city, state, zip)
(phone)

By signing this authorization, I confirm that I meet the requirements to make such a designation as set forth in Standard Permit Conditions and that the designee above meet the definition of a "duly authorized representative".

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the pest management area, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: _____

Company: _____

Title: _____

Signature: _____

Date: _____

ATTACHMENT D

SUBCONTRACTOR CERTIFICATION

Project Number: _____

Project Name: _____

Decision-maker(s): _____

As a subcontractor, you are required to comply with the KPDES Pesticide General Permit, KYG99, and the Pesticide Discharge Management Plan (PDMP) for any work that you perform for the above designated project. Any person or group who violates any condition of the PDMP may be subject to substantial penalties or loss of contract. You are encouraged to advise each of your employees working on this project of the requirements of the PDMP. A copy of the PDMP is available for your review.

Each subcontractor engaged in pesticide activities in the pest management area that could impact Waters of the United State must be identified and sign the following certification statement.

I certify under the penalty of law that I have read and understand the terms and conditions of the PDMP for the above designated project.

This certification is hereby signed in reference to the above named project.

Company: _____

Address: _____

Telephone Number: _____

Type of pesticide application service to be provided:

Signature: _____

Title: _____

Date: _____