# 2010 PARCEL 22 MONITORING REPORT

## BAILEY'S BRANCH AND PLEASANT RUN REMOVAL ACTION
## BEDFORD, INDIANA

**Prepared For:**
**General Motors LLC**

**FEBRUARY 2011**
**REF. NO. 017368 (5)**
This report is printed on recycled paper.

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| | |
|---|---|
| Agreement | Performance-Based Corrective Action Agreement |
| AOC | Administrative Order on Consent |
| Bailey's Branch Creek | Bailey's Branch Creek at the upstream end of Pleasant Run Watershed |
| CA | Corrective Action |
| CERCLA | Comprehensive Environmental Response, Compensation and Liability Act |
| CETC | Castings Engines Transmissions and Components (formerly Powertrain) |
| CRA | Conestoga-Rovers & Associates Inc. |
| Facility | GM CETC Bedford Facility |
| GM | General Motors LLC |
| GPS | global positioning system |
| IDNR | Indiana Department of Natural Resources |
| IOMMP | Interim Operation, Maintenance, and Monitoring Plan |
| RA | Removal Action |
| Report | 2010 Parcel 22 Monitoring Report |
| RCRA | Resource Conservation and Recovery Act |
| U.S. EPA | United States Environmental Protection Agency |

## 1.0 INTRODUCTION

Conestoga-Rovers and Associates, Inc. (CRA), on behalf of General Motors LLC (GM), has prepared this 2010 Parcel 22 Monitoring Report (Report) documenting the findings of the 2010 Fall Inspection of Parcel 22 and the restored channel of Bailey's Branch Creek and adjacent riparian areas located on this parcel, downstream of the GM Castings Engines Transmissions and Components (CETC) Bedford Facility (Facility), located in Bedford, Indiana. This Report was prepared in accordance with the Administrative Order on Consent (AOC, United States Environmental Protection Agency [U.S. EPA] Docket No.: V-W-'03-C-747), effective July 31, 2003, for Removal Action (RA) under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), and consistent with the requirements of the Toxic Substances Control Act (TSCA) and the Resource Conservation and Recovery Act (RCRA) Corrective Action (CA) work conducted under the Performance Based Agreement executed on March 20, 2001, and modified on October 1, 2002, March 29, 2007, and May 9, 2008, for the Facility.

The inspection was conducted in accordance with the Parcel 22 Interim Operation, Maintenance, and Monitoring Plan (IOMMP) (CRA, May 14, 2010). The 2010 Fall Inspection was completed during the week of September 27, 2010.

## 2.0 BACKGROUND

The Parcel 22 RA included removal of impacted soil, rock, and sediment from the creek area for off-Site disposal and restoration of the creek and adjacent habitats in the affected areas. The creek channel, riparian corridor, and floodplain were restored to generally similar features using clean soil and aggregate materials. Restoration of the creek channel also included the construction of instream features such as pool-riffle sequences and bank stabilization structures. The riparian corridor and floodplain were returned to similar condition and vegetated with a variety of native seed mixes, shrubs and trees (combination of seedlings and specimens with diameters of 1 inch or greater) consistent with the property owners' request. Habitat features, such as deadfalls and vernal ponds were installed within the riparian corridor. Table 2.1 presents a summary of vegetation installed, including the specific seed mixes applied.

## 3.0 RESTORATION MONITORING

The following sections outline monitoring activities undertaken at Parcel 22 during the Fall 2010 Inspection, which included a field reconnaissance to assess creek channel stability, extent and nature of vegetative cover, and status of the habitat features. A photographic log, including the location of the photographs using a hand held global positioning system (GPS), was implemented to document conditions along the stream channel and is attached to this report in Appendix A. The vegetative assessment was completed and documented using the monitoring form provided in the Parcel 22 IOMMP (CRA, 2010) and is provided in Appendix B.

### 3.1 CREEK STABILIZATION

A continuous photographic log was completed along the stream channel to document the stability of the stream channel. The presence or lack of pool-riffle sequences and waterfalls were also assessed. It should be noted that natural processes are expected to modify the creek through time, and the weirs (i.e., rock current deflectors installed to create pool-riffle sequences) placed during restoration are expected to be altered and/or moved during the natural stream flow processes.

In general, the creek channel has not moved or shifted significantly since the restoration activities were completed. As expected, the creek substrate within the creek channel has been sorted, forming a smaller meandering channel with point bars in the larger overall creek channel. The photographic log, in Appendix A, illustrates the creek substrate at various locations along the creek, consisting of stones of varying sizes.

A number of rock current deflectors were installed to promote the formation of pool-riffle sequences within the channel. The rock current deflectors have performed as designed, remain largely intact, and are documented within the photo log.

The banks along the length of the creek channel do not show a significant amount of erosion, undercutting or failure as compared to the pre-construction condition. The banks are well vegetated.

### 3.2 VEGETATIVE COVERAGE

Areas adjacent to the restored creek channel (riparian zone) were re-vegetated by applying diverse seed mixes of native grasses and forbs and planting native shrubs and

trees to promote succession to re-establish native habitats. Due to the relatively small width of the restored riparian zones, ground truthing during the monitoring event encompassed the entire riparian area restored on Parcel 22.

For grasses and forbs, the relative abundance of each species observed was assigned a value between 1 and 6 based on the abundance categories of Simon et al. (2001). Species abundance categories for grasses and forbs are presented in Table 3.1. Each species observed was noted as either included in the specified seed mix or as a volunteer. Species identified by Indiana Department of Natural Resources (IDNR) as invasive to Southern Indiana were noted (Nice, 2006). The percent areal cover of grasses and forbs within each cover type was estimated by visual inspection and recorded on the monitoring form.

For shrubs and trees, monitoring consisted of identifying species present and evaluating survival of seedlings and larger specimens planted on Parcel 22. Survival of shrubs and trees were assigned to one of four survival classes, as defined in Table 3.2. In addition to noting the survival of the specimens planted, shrubs and trees that have colonized Parcel 22 (volunteers), including invasive species, were identified and noted.

Sod was placed in the immediate vicinity of the house to shorten the timeframe needed to establish the lawn. The sod has become established and the areal coverage is greater than 95 percent. For the remainder of Parcel 22, the percent areal coverage of grasses and forbs is greater than 85 percent. The grasses observed consist of species that were specified in the original seed mixes and several species of volunteers. The majority of forbs observed are volunteers; however, there are several species of forbs present, such as mistflower and tickseed sunflower, which were specified in the original seed mixes.

Twenty-two (22) trees with diameters ranging from 0.75 to 5 inches have been planted in the area that is lawn. All but one of the 22 trees was alive at the time of the Fall 2010 Inspection, which is Class 4 survival (76 to 100 percent). For the remainder of Parcel 22, survival of trees installed as seedlings is Class 3 (51 to 75 percent). Although several of the larger trees and all of the seedlings have been replaced since the initial plantings, the survival classes are based on the original number of trees specified in the restoration plan for Parcel 22.

## 3.3 HABITAT FEATURES

No additional enhanced habitat features other than those originally present in the creek, were incorporated into the Parcel 22 restoration.

## 4.0 RESTORATION MAINTENANCE

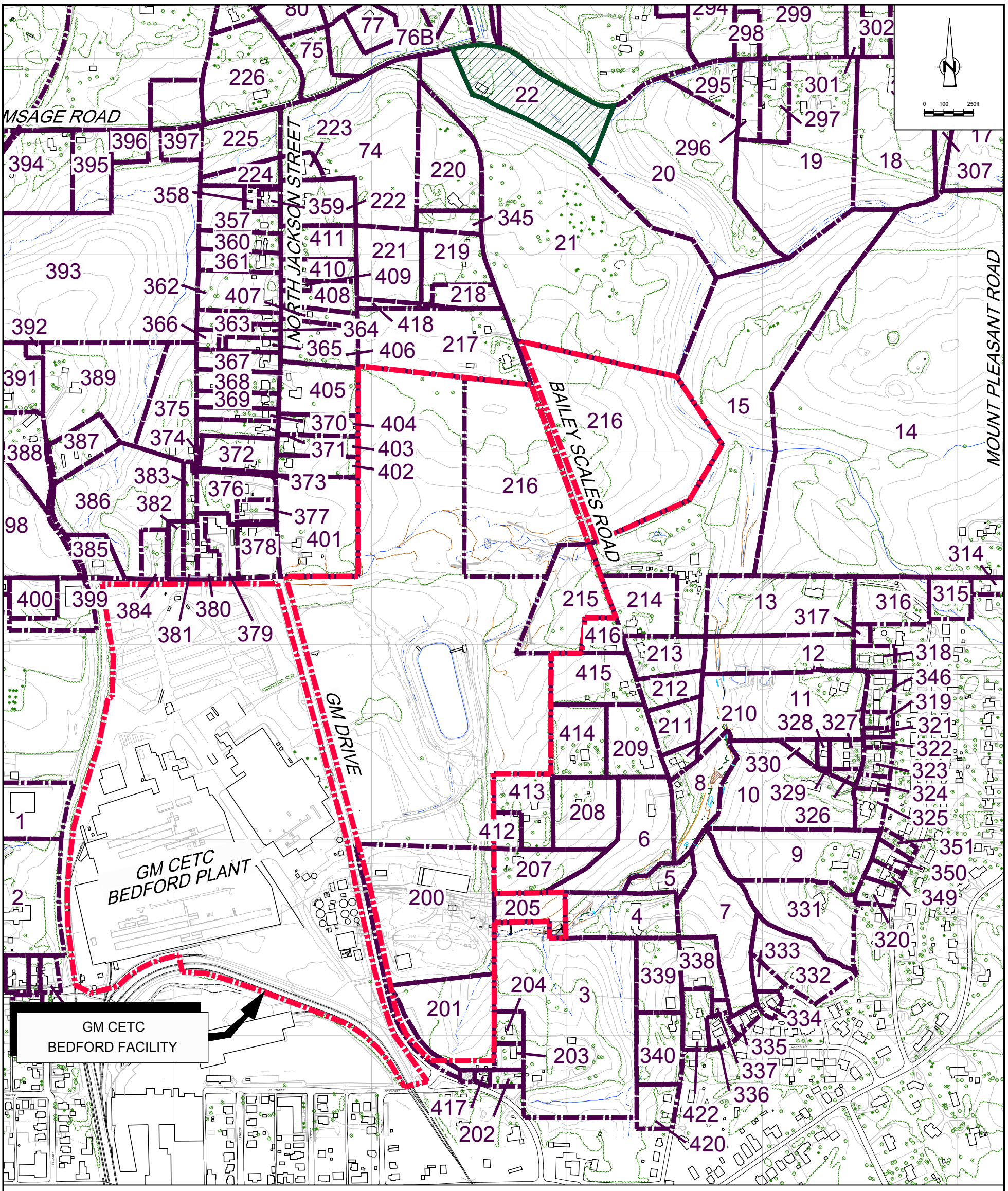
No maintenance activities are recommended at this time.

## 5.0 REFERENCES

Conestoga-Rovers & Associates, Inc., Parcel 22 Interim Operation, Maintenance, and Monitoring Plan, May 14, 2010.

Nice, G. 2006. Noxious and invasion weeds and weed laws in Indiana. Purdue Extension Weed Science. Revised 12/06.

Simon, T.P., Stewart, P.M., and Rothrock, P.E., 2001. Development of multimetric indices of biotic integrity of riverine and palustrine wetland plant communities along Southern Lake Michigan. Aquatic Ecosystem Health and Management 4: 293-309.




## LEGEND

- EXISTING GROUND SURFACE ELEVATION CONTOURS (feet AMSL)
- EXISTING VEGETATION
- EXISTING BUILDINGS
- FENCE LINE
- RAILROAD TRACKS
- DIRT ROADS
- ROADS / PAVED AREAS
- APPROXIMATE SURFACE WATER LOCATION
- APPROXIMATE PARCEL BOUNDARY
- APPROXIMATE GM PROPERTY BOUNDARY
- PARCEL 22

NOTE: PROPERTY BOUNDARY LOCATIONS APPROXIMATED FROM THE LAWRENCE COUNTY SURVEY PLATS. LOCATIONS MAY NOT ACCURATELY REPRESENT THE TRUE BOUNDARIES

| № | Revision | Date | Initial |
|---|---|---|---|
| | | | |

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

Approved

GM CETC
BEDFORD PLANT

2010 PARCEL 22 MONITORING REPORT

PARCEL 22 LOCATION

CONESTOGA-ROVERS & ASSOCIATES

Source Reference:
BASE MAP COMPLETED BY AIR-LAND SURVEYS, FLINT, MI. APRIL 2001 AND CRA SURVEYS 2002 TO 2005

| Project Manager: | Reviewed By: | Date: | |
|---|---|---|---|
| J.M. | P.G. | JANUARY 2011 | |
| Scale: AS SHOWN | Project №: 17368-20 | Report №: 005 | Drawing №: figure 1.1 |

17368-20(005)GN-WA138 JAN 14/2011

**TABLE 2.1**

**TREE/VEGETATION SUMMARY**
**2010 PARCEL 22 MONITORING REPORT**
**GMCETC BEDFORD FACILITY**
**BEDFORD, INDIANA**

| | *Number of trees/seedlings and shrubs installed* | *Other* |
|---|---|---|
| Parcel 22 | 66 | grass/wildflower seed mix, slope forest seed mix, lawn seed mix and sod |

**TABLE 3.1**

**SPECIES ABUNDANCE CATEGORIES FOR GRASSES AND FORBS**
**2010 PARCEL 22 MONITORING REPORT**
**GM CETC BEDFORD FACILITY**
**BEDFORD, INDIANA**

| *Abundance Rating* | *Abundance Category* | *Description* |
|---|---|---|
| 1 | Observed | 1 individual of a species present |
| 2 | Rare | 2-4 individuals of a species present |
| 3 | Rare/Common | >4 individuals of a species, but not enough to be categorized as "common" |
| 4 | Common | Species is easily located |
| 5 | Very Common | Species is slightly dominant; up to 25% of the plant community |
| 6 | Abundant | Species accounts for 25-100% of the plant community |

Source: Simon et al., 2001

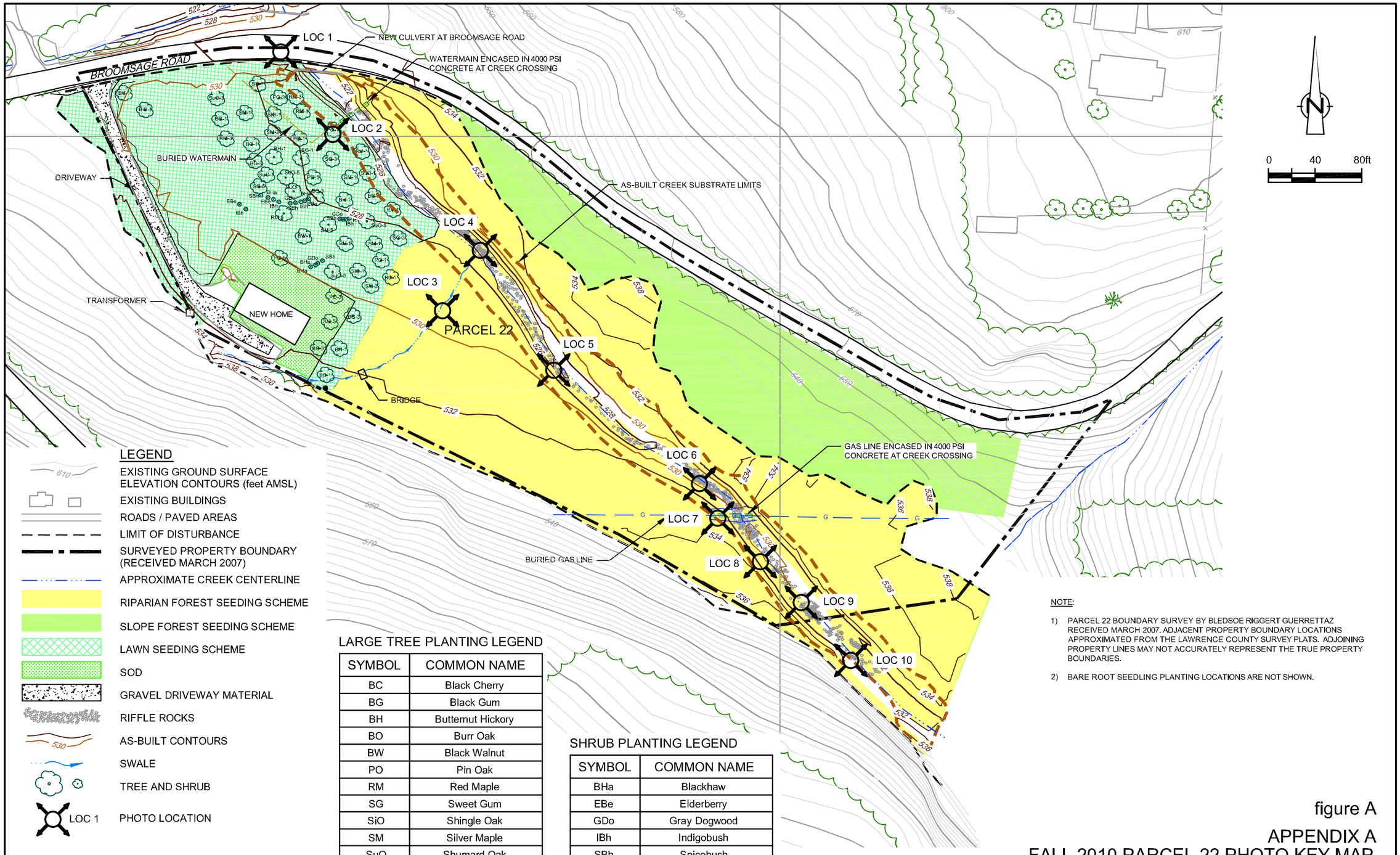
**TABLE 3.2**

**SURVIVAL CLASSES FOR TREES AND SHRUBS**
**2010 PARCEL 22 MONITORING REPORT**
**GM CETC BEDFORD FACILITY**
**BEDFORD, INDIANA**

| *Survival Class* | *Range of Percent Survival* |
|---|---|
| 1 | 0 – 25% |
| 2 | 26 – 50% |
| 3 | 51 – 75% |
| 4 | 76 – 100% |

# APPENDIX A

# FALL 2010 CREEK CHANNEL PHOTOGRAPHIC LOG




LEGEND

- EXISTING GROUND SURFACE ELEVATION CONTOURS (feet AMSL)
- EXISTING BUILDINGS
- ROADS / PAVED AREAS
- LIMIT OF DISTURBANCE
- SURVEYED PROPERTY BOUNDARY (RECEIVED MARCH 2007)
- APPROXIMATE CREEK CENTERLINE
- RIPARIAN FOREST SEEDING SCHEME
- SLOPE FOREST SEEDING SCHEME
- LAWN SEEDING SCHEME
- SOD
- GRAVEL DRIVEWAY MATERIAL
- RIFFLE ROCKS
- AS-BUILT CONTOURS
- SWALE
- TREE AND SHRUB
- LOC 1 PHOTO LOCATION

LARGE TREE PLANTING LEGEND

| SYMBOL | COMMON NAME |
|---|---|
| BC | Black Cherry |
| BG | Black Gum |
| BH | Butternut Hickory |
| BO | Burr Oak |
| BW | Black Walnut |
| PO | Pin Oak |
| RM | Red Maple |
| SG | Sweet Gum |
| SiO | Shingle Oak |
| SM | Silver Maple |
| SuO | Shumard Oak |

SHRUB PLANTING LEGEND

| SYMBOL | COMMON NAME |
|---|---|
| BHa | Blackhaw |
| EBe | Elderberry |
| GDo | Gray Dogwood |
| IBh | Indigobush |
| SBh | Spicebush |

NOTE:

1) PARCEL 22 BOUNDARY SURVEY BY BLEDSOE RIGGERT GUERRETTAZ RECEIVED MARCH 2007. ADJACENT PROPERTY BOUNDARY LOCATIONS APPROXIMATED FROM THE LAWRENCE COUNTY SURVEY PLATS. ADJOINING PROPERTY LINES MAY NOT ACCURATELY REPRESENT THE TRUE PROPERTY BOUNDARIES.

2) BARE ROOT SEEDLING PLANTING LOCATIONS ARE NOT SHOWN.

SOURCE: BASE MAP COMPLETED BY AIR-LAND SURVEYS, FLINT, MI. APRIL 2001. AND CRA SURVEYS 2002 - 2005

figure A

APPENDIX A
FALL 2010 PARCEL 22 PHOTO KEY MAP
GM CETC BEDFORD FACILITY
*Bedford, Indiana*


FIGURE 1.0 - PARCEL 22, LOCATION 1, LOOKING UPSTREAM


FIGURE 1.1 - PARCEL 22, LOCATION 1, LOOKING DOWNSTREAM

APPENDIX A
FALL 2010 PARCEL 22 PHOTO LOG
GM CETC BEDFORD FACILITY
*Bedford, Indiana*


FIGURE 1.2 - PARCEL 22, LOCATION 1, LOOKING NORTH-EAST


FIGURE 1.3 - PARCEL 22, LOCATION 1, LOOKING SOUTH-EAST

APPENDIX A
FALL 2010 PARCEL 22 PHOTO LOG
GM CETC BEDFORD FACILITY
*Bedford, Indiana*


FIGURE 2.0 - PARCEL 22, LOCATION 2, LOOKING UPSTREAM


FIGURE 2.1 - PARCEL 22, LOCATION 2, LOOKING DOWNSTREAM

APPENDIX A
FALL 2010 PARCEL 22 PHOTO LOG
GM CETC BEDFORD FACILITY
*Bedford, Indiana*


FIGURE 2.2 - PARCEL 22, LOCATION 2, NORTH BANK


FIGURE 2.3 - PARCEL 22, LOCATION 2, SOUTH BANK

APPENDIX A
FALL 2010 PARCEL 22 PHOTO LOG
GM CETC BEDFORD FACILITY
*Bedford, Indiana*


FIGURE 3.0 - PARCEL 22, LOCATION 3, DRAINAGE SWALE - LOOKING SOUTH-WEST (UPSTREAM)


FIGURE 3.1 - PARCEL 22, LOCATION 3, DRAINAGE SWALE, LOOKING NORTH-EAST (DOWNSTREAM)

APPENDIX A
FALL 2010 PARCEL 22 PHOTO LOG
GM CETC BEDFORD FACILITY
*Bedford, Indiana*


FIGURE 4.0 - PARCEL 22, LOCATION 4, LOOKING UPSTREAM


FIGURE 4.1 - PARCEL 22, LOCATION 4, LOOKING DOWNSTREAM

APPENDIX A
FALL 2010 PARCEL 22 PHOTO LOG
GM CETC BEDFORD FACILITY
*Bedford, Indiana*


FIGURE 4.2 - PARCEL 22, LOCATION 4, NORTH BANK


FIGURE 4.3 - PARCEL 22, LOCATION 4, SOUTH BANK

APPENDIX A
FALL 2010 PARCEL 22 PHOTO LOG
GM CETC BEDFORD FACILITY
*Bedford, Indiana*


FIGURE 5.0 - PARCEL 22, LOCATION 5, LOOKING UPSTREAM


FIGURE 5.1 - PARCEL 22, LOCATION 5, LOOKING DOWNSTREAM

APPENDIX A
FALL 2010 PARCEL 22 PHOTO LOG
GM CETC BEDFORD FACILITY
*Bedford, Indiana*


FIGURE 5.2 - PARCEL 22, LOCATION 5, NORTH BANK


FIGURE 5.3 - PARCEL 22, LOCATION 5, SOUTH BANK

APPENDIX A
FALL 2010 PARCEL 22 PHOTO LOG
GM CETC BEDFORD FACILITY
*Bedford, Indiana*


FIGURE 5.4 - PARCEL 22, LOCATION 5, CREEK SUBSTRATE

APPENDIX A
FALL 2010 PARCEL 22 PHOTO LOG
GM CETC BEDFORD FACILITY
*Bedford, Indiana*


FIGURE 6.0 - PARCEL 22, LOCATION 6, LOOKING UPSTREAM


FIGURE 6.1 - PARCEL 22, LOCATION 6, LOOKING DOWNSTREAM

APPENDIX A
FALL 2010 PARCEL 22 PHOTO LOG
GM CETC BEDFORD FACILITY
*Bedford, Indiana*


FIGURE 6.2 - PARCEL 22, LOCATION 6, NORTH BANK


FIGURE 6.3 - PARCEL 22, LOCATION 6, SOUTH BANK

APPENDIX A
FALL 2010 PARCEL 22 PHOTO LOG
GM CETC BEDFORD FACILITY
*Bedford, Indiana*


FIGURE 7.0 - PARCEL 22, LOCATION 7, FORCEMAIN CROSSING, LOOKING UPSTREAM


FIGURE 7.1 - PARCEL 22, LOCATION 7, GAS LINE CROSSING

APPENDIX A
FALL 2010 PARCEL 22 PHOTO LOG
GM CETC BEDFORD FACILITY
*Bedford, Indiana*


FIGURE 8.0 - PARCEL 22, LOCATION 8, LOOKING UPSTREAM


FIGURE 8.1 - PARCEL 22, LOCATION 8, LOOKING DOWNSTREAM

APPENDIX A
FALL 2010 PARCEL 22 PHOTO LOG
GM CETC BEDFORD FACILITY
*Bedford, Indiana*


FIGURE 8.2 - PARCEL 22, LOCATION 8, NORTH BANK


FIGURE 8.3 - PARCEL 22, LOCATION 8, SOUTH BANK

APPENDIX A
FALL 2010 PARCEL 22 PHOTO LOG
GM CETC BEDFORD FACILITY
*Bedford, Indiana*


FIGURE 9.0 - PARCEL 22, LOCATION 9, LOOKING UPSTREAM


FIGURE 9.1 - PARCEL 22, LOCATION 9, LOOKING DOWNSTREAM

APPENDIX A
FALL 2010 PARCEL 22 PHOTO LOG
GM CETC BEDFORD FACILITY
*Bedford, Indiana*


FIGURE 9.2 - PARCEL 22, LOCATION 9, LOOKING NORTH-EAST


FIGURE 9.3 - PARCEL 22, LOCATION 9, SOUTH BANK

APPENDIX A
FALL 2010 PARCEL 22 PHOTO LOG
GM CETC BEDFORD FACILITY
*Bedford, Indiana*


FIGURE 9.4 - PARCEL 22, LOCATION 9, CREEK SUBSTRATE

APPENDIX A
FALL 2010 PARCEL 22 PHOTO LOG
GM CETC BEDFORD FACILITY
*Bedford, Indiana*


FIGURE 10.2 - PARCEL 22, LOCATION 10, NORTH BANK


FIGURE 10.3 - PARCEL 22, LOCATION 10, SOUTH BANK

APPENDIX A
FALL 2010 PARCEL 22 PHOTO LOG
GM CETC BEDFORD FACILITY
*Bedford, Indiana*


FIGURE 10.0 - PARCEL 22, LOCATION 10, LOOKING UPSTREAM


FIGURE 10.1 - PARCEL 22, LOCATION 10, LOOKING DOWNSTREAM

APPENDIX A
FALL 2010 PARCEL 22 PHOTO LOG
GM CETC BEDFORD FACILITY
*Bedford, Indiana*

# APPENDIX B

# FALL 2010 VEGETATIVE ASSESSMENT FIELD FORMS

**VEGETATION MONITORING FORM**
**PARCEL 22 IOMMP**
**GM CETC BEDFORD FACILITY**
**BEDFORD, INDIANA**

| | |
|---|---|
| **Inspectors** | S. Jones/P. Farquharson |
| **Date** | September 29, 2010 |
| **Parcels/Cover Type** | Parcel 22/Grass-Forb Cover |

## I. GRASSES AND FORBS

| Common Name | Scientific Name | Abundance | | Seeded | | Volunteer | | Invasive | |
|---|---|---|---|---|---|---|---|---|---|
| | | Rating | Category | Yes | No | Yes | No | Yes | No |
| Switchgrass | *Panicum virgatum* | 4 | Common | X | | | X | | X |
| Indiangrass | *Sorghastrum nutans* | 2 | Rare | X | | | X | | X |
| Redtop | *Agrostis sp.* | 2 | Rare | X | | | X | | X |
| Foxtail | *Alopecurus sp.* | 4 | Common | | X | X | | | X |
| Fescue | *Festuca sp.* | 4 | Common | | X | X | | | X |
| Goosegrass | *Eleusine indica* | 1 | Observed | | X | X | | | X |
| Side Oats Gramma | *Bouteloua curtipendula* | 2 | Rare | X | | | X | | X |
| Johnsongrass | *Sorghum halepense* | 2 | Rare | | X | X | | X | |
| Bluejoint Grass | *Calamagrostis canadensis* | 2 | Rare | X | | | X | | X |
| Big Bluestem | *Andropogon gerardii* | 3 | Rare/Common | X | | | X | | X |
| Ragweed | *Ambrosia artemisiifolia* | 5 | Very Common | | X | X | | | X |
| Lurid Sedege | *Carex lurida* | 2 | Rare | | X | X | | | X |

**VEGETATION MONITORING FORM**
**PARCEL 22 IOMMP**
**GM CETC BEDFORD FACILITY**
**BEDFORD, INDIANA**

## I. GRASSES AND FORBS (continued)

| Common Name | Scientific Name | Abundance | | Seeded | | Volunteer | | Invasive | |
|---|---|---|---|---|---|---|---|---|---|
| | | Rating | Category | Yes | No | Yes | No | Yes | No |
| Great Ragweed | *Ambrosia trifida* | 2 | Rare | | X | X | | | X |
| Prairie Dock | *Silphium terebinthinaceum* | 2 | Rare | X | | | X | | X |
| Mistflower | *Conoclinium coelestinum* | 2 | Rare | X | | | X | | X |
| White Snakeroot | *Eupatorium rugosum* | 2 | Rare | | X | X | | | X |
| Shepherd's Purse | *Capsella bursa-pastoris* | 1 | Observed | | X | X | | | X |
| Red Clover | *Trifolium pratense* | 4 | Common | | X | X | | | X |
| Small White Aster | *Symphyotrichum racemosum* | 3 | Rare/Common | | X | X | | | X |
| Queen Anne's Lace | *Daucus carota* | 2 | Rare | | X | X | | | X |
| Cocklebur | *Xanthium sp.* | 1 | Observed | | X | X | | X | |
| Thin-Leaved Coneflowe | *Rudbeckia triloba* | 1 | Observed | | X | X | | | X |
| Swamp Smartweed | *Polygonum coccineum* | 5 | Very Common | | X | X | | | X |
| Tickseed Sunflower | *Bidens aritosa* | 5 | Very Common | X | | | X | | X |
| Virginia Creeper | *Parthenocissus quinquefolia* | 4 | Common | | X | X | | | X |
| Canada Goldenrod | *Solidago canadensis* | 2 | Rare | | X | X | | | X |
| White Panicle Aster | *Symphyotrichum lanceolatum* | 1 | Observed | | X | X | | | X |
| Jewelweed | *Impatiens capensis* | 1 | Observed | | X | X | | | X |

**Percent Areal Coverage of Grasses and Forbs** > 85%

**VEGETATION MONITORING FORM**
**PARCEL 22 IOMMP**
**GM CETC BEDFORD FACILITY**
**BEDFORD, INDIANA**

## II. SHRUBS AND TREES

| Common Name | Scientific Name | Planted | | Volunteer | | Invasive | |
|---|---|---|---|---|---|---|---|
| | | Yes | No | Yes | No | Yes | No |
| Red Maple | *Acer rubrum* | X | | | X | | X |
| Bur Oak | *Quercus macrocarpa* | X | | | X | | X |
| Sycamore | *Platanus occidentalis* | X | | | X | | X |
| Box Elder | *Acer negundo* | | X | X | | | X |
| Black Gum | *Nyssa sylvatica* | X | | | X | | X |
| Sweet Gum | *Liquidambar styraciflua* | X | | | X | | X |
| Shumard Oak | *Quercus shumardii* | X | | | X | | X |
| Hickory | *Carya sp.* | X | | | X | | X |
| Silver Maple | *Acer saccharinum* | X | | | X | | X |

**Survival Class (Shrubs and Trees**

≤ 25% | 26-50% | **51-75%** | > 75%

## III. WILDLIFE OBSERVED

Numerous songbirds observed in area during monitoring

[1] - Invasive species based on: Nice, G. 2006. Noxious and Invasive Weeds and the Weed Laws in Indiana. Purdue Extension Weed Science. Revised 12/06