REC'd 8-21-12

Templin Forestry, Inc.

P.O. Box 8170 • Alexandria, LA 71306-1180 • (318) 445-5566 • FAX (318) 445-4422
Web site: www.templin forestry.com Email: steve@templinforestry.com

August 16, 2012

Department of the Army
Operations Division
Regulatory Branch
Attn: Jacqueline Farabee
P.O. Box 60267
New Orleans, LA 70160-0267

Subject: G.D.E. Investments LA, LLC; Mitigation Bank

Dear Ms. Farabee:

Per your request in a letter dated July 13, 2012, Templin Forestry was commissioned by the owners of the G.D.E. Investments LA, LLC Mitigation Bank to perform the field work and reporting needed to bring the mitigation bank into compliance with the terms of the G.D.E. Mitigation Banking Instrument. Enclosed please find two copies of the G.D.E. Investments, LA, LLC Mitigation Bank Monitoring Report for your records.

If you have any questions please feel free to contact me at (318) 451-8031 or robert@templinforestry.com.

Sincerely,

Robert J Tassin

Robert J. Tassin, ACF
Vice-President/Silvicultural Contracting Manager

Enclosures

Copy: G.D.E. Investments LA, LLC

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Mitigation Monitoring Report

On 278.3 acres in Evangeline Parish

Prepared for: G.D.E. Investments, LA, LLC

Date of report: August 16, 2012

Comprehensive Forest Management Services
Member of the Association of Consulting Foresters of America, Inc.

INTRODUCTION

A Mitigation Banking Instrument (BI) was approved and executed in April of 2007 for G.D.E. Investments LA, LLC to establish guidelines and responsibilities for the establishment, use, operation, protection, monitoring, and maintenance of the G.D.E. Investments LA, LLC Mitigation Bank. This BI also defines performance standards, monitoring protocol and remedial actions so as to ensure the mitigation bank success.

The goal of the G.D.E. Investments LA, LLC Mitigation bank was to restore an agricultural area back to a self-sustaining forested wetland ecosystem by re-establishing and maintaining functions, values, and services from historical agricultural uses of the subject property according to the plan contained in the BI.

All of the acreage was rice fields at the time the BI was executed. The old rice levees were flattened and the dirt spread out using a tractor with a disk and a bulldozer to approximately 4 to 6 inches above grade to help retain water. No culverts were installed or removed. This has proved to be very successful in altering the hydrology back to one associated with a natural wetland as opposed to a very easy to drain and flood agricultural field.(#2)*

At the time of the planting, fire lines *(photo 6)* were installed along the edges of the planted areas for protection in the event of wildfire. Portions of the mitigation bank falls inside a high fenced area *(photo 2 & 8)* in which the owner has food plots, feeders, and ponds for the wildlife.

In January 2007, the owner planted 244 acres with a mixture of bottomland hardwood one year old bare root seedlings. In January of 2009, an additional 181 acres was planted using a mixture of bottomland hardwood one-year-old bare root seedlings. Species planted were: Willow Oak (*Quercus phellos*), Nuttall Oak (*Quercus texana*), Overcup Oak (*Quercus lyrata*), Sweet Pecan (*Carya illinoinensis*), Bitter Pecan (*Carya x lecontei*), Green Ash (*Fraxinus pennsylvanica*), Red Maple (*Acer rubrum*), Mayhaw (*Crataegus opaca*), Sugarberry (*Celtis laevigata*),

American Elm (*Ulmus americana*), and Persimmon (*Diospyros virginiana*). The trees were planted on a 9'x9' spacing yielding 538 trees per acre.

Interim success criteria state:

1. Hydrology: By Year 3, site hydrology shall be restored such that the site meets the wetland criterion as described in the Corps 1987 Wetlands Delineation Manual.

2. A) For a given planting, a minimum of 300 seedlings per acre must survive through the end of the fourth year (i.e. Year 5) following successful attainment of the one-year survivorship criteria. Trees established through natural recruitment may be included in this tally; however, a range of 120 to 135 hard mast-producing seedlings per acre must be present. Exotic/invasive species may not be included in this tally.

   B) By Year 5 following successful attainment of the one-year survivorship criteria, the bank acreage and the perimeter of that acreage shall be virtually free (approximately 5% or less on an acre-by-acre basis) of exotic/invasive vegetation.

   C) Planted tracts must exhibit characteristics and diversity indicative of a viable native forested wetland community commensurate with stand age and site conditions by Year 5. Achievement of a wetland vegetation community where more than 50% of all dominant species are facultative ("FAC") or wetter, excluding FAC-plants, using "routine delineation methods: as described in the "Corps of Engineers Wetland Delineation Method," Technical Report 87-1 ("1987 Manual").

LOCATION

The Bank encompasses approximately 517.3 acres and is located off Louisiana State Highway 106 in the Community of Beaver approximately 5 miles west of Oakdale, and approximately 20 miles northwest of Ville Platte, Louisiana in

Sections 5, 8, 9, and 16, T3S, R2W in Evangeline Parish. According to the BI, with certainty 278.3 acres of the site was eligible to be restored to forested wetlands.

METHODS

In August of 2012, 12 permanent 1/50th –acre circular survey monitoring plots *(photos 1 & 3)* were established. These 12 plots covered a total area of .25 acres (12 x .02 acres = .24 acres). The GPS coordinates were taken at plot center of each plot and then plot center was marked using an 8-foot PVC pipe anchored with metal T posts. A map of the mitigation bank denoting the location of each plot is attached to this report (Attachment 1). All trees within the survey plot were permanently marked and numbered. The number, species, height, diameter at breast height (if applicable), and origin (planted or volunteer) of the tagged trees within each plot were documented. A spreadsheet for each individual plot listing the measurements for each plot (Attachment 2-13) is also attached to this report. The number of trees was then divided by the area of the plot to obtain the number of trees per acre.

RESULTS

A total of 80 planted trees and 164 volunteer trees were located within the 12 monitoring plots. It should be noted that 74 of the 164 volunteer trees were exotic species and do not count toward survival goals; therefore, only 90 volunteers are used in computing trees per acre. The planted trees are averaging 333 trees per acre thus resulting in a survival rate of 62% (80 trees / .24 acre = 333.33 trees per acre / 538 trees per acre planted = 62%). When the 90 volunteer trees are added with the planted trees, the Bank is averaging 708 trees per acre total (170 trees / .24 acre = 708 trees per acre). The volunteer species are comprised of mainly Sweetgum (*Liquidambar styraciflua*) and Loblolly Pine (*Pinus taeda*).

The invasive/exotic species are averaging 308 trees per acre (74 trees / .24 acre = 308 trees per acre) which equates to 44% (308 exotic trees per acre / 708 total trees per acre = 44%) of the total trees per acre. This is well above the 5% threshold, so an herbicide treatment will need to be applied to control these

stems. In the 2007 planting, the exotics make up 71% of the stems per acre, while in the 2009 planting they only account for 7% of the stems per acre. The exotics are more numerous along the edges of the mitigation bank. This is due to them moving in from adjacent properties that have a high amount of large seed bearing trees on them. The exotics do not appear to be having any effect on the growth of the other trees in the plots as the planted trees and the other volunteers are all taller than the exotics. It is recommended that the 2007 planting be treated in 2 years when the planted trees and other volunteers have reached canopy closure. By doing this, the chemical can kill any existing exotic species and the canopy closure will shade out any exotics that may germinate. If the tract were to be sprayed now, there is enough sunlight touching the forest floor that any seeds that may germinate would be free to grow. This would mean that another herbicide treatment would be needed in 2 to 3 years. The recommendation for the 2009 planting is that it also be sprayed when it reaches canopy closure in 4 to 5 years for the same reasons listed for the 2007 planting.(#3)*

Vines and other vegetation are very well established on all the plots. Vegetation that was observed includes: Goldenrod (*Solidago sp.*), Dog Fennel (*Eupatorium capillifolium*), Dewberry (*rubus sp.*), Purple Vervain (*Verbena bonariensis*), Sedges (*Cyperus sp.*), and Baccharus (*Baccharus halimifolia*).

Included with this written report is an excel spreadsheet for each individual plot listing species, height, diameter at breast height (when applicable), volunteer/planted, and exotic/natural. The gps coordinates of each plot are also given along with the year established, planting rate, herbaceous species observed, and visual cover estimates. There is also an aerial photograph of the north half and the south half of the mitigation bank showing the location of the plots, each reforested plot of the bank with the acreage and planting date, the location of the ponds, food plots, high fence, fence corners and gates, and roads. The following aerial photographs are also included:

1. Fence and establishment year location aerial map.
2. Fire line location aerial map.
3. Food plot location aerial map.

4. Road and pond location aerial map.

Labels, dimensions, and acreages are given in table form on the maps when needed.

OBSERVATIONS

All of the trees both planted and natural are healthy and appear to be thriving thanks in large part to the hydrological changes that were put in place. The majority of the area in the mitigation bank and that area that adjoins the mitigation bank is comprised of shallow areas of standing water and moist soil conditions.

There is an abundance of wildlife present *(photos 7 and 8)* and utilizing the subject property for cover and feeding. Thanks to the 19.73 acres of food plots (9.78 acres of food plots in the bank and 9.95 acres on adjoining planted areas) along with the wild game feeders *(photos 4 & 5)* that are present, there was very little browsing noted on the planted seedlings while measuring the monitoring plots. The wildlife are also utilizing the 4 ponds *(photos 4 & 5)* that are located in or near the mitigation bank. There were multiple white tail deer, turkey, raccoon, and rabbit sightings while measuring the plots. There is also an abundance of songbirds and insects using this ecosystem.

CONCLUSION

The effort to restore an agricultural area back to a self-sustaining forested wetland ecosystem by re-establishing and maintaining functions, values, and services from historical agricultural uses on the subject property appears to be working very well. The area adjacent to the mitigation bank that presently is not in the mitigation bank but has been treated the same from the beginning appears to have the same vegetation layers, vegetation characteristics, and soil conditions as the mitigation bank. The owner is well on his way to reaching his ultimate goal of a self-sustaining forested wetland ecosystem to be enjoyed by man and nature alike.

GDE Investments LA, LLC Mitigation Bank
Field Investigation Photographs
Monitoring Report August 2012

Photo1. Sample plot of 2007 hardwood mitigation planting with both planted and volunteer trees flagged.

Photo 2. High fence and fire lines around 2009 mitigation bank planting.

Photo 3. Sample plot of 2009 hardwood mitigation planting with both planted and volunteer trees flagged.

Photo 4. Pond with feeders along edge of mitigation bank.

Photo 5. Pond and food plot in mitigation bank.

Photo 6. Fire line between existing woods and mitigation bank.

Photo 7. Deer in food plot in mitigation bank.

Photo 8. Pair of doves sitting on high fence bordering mitigation bank.

8/16/2012

2012 GDE, LLC Mitigation Bank Monitoring Report

Plot Number:	1
GPS Coordinates:	30.80739, -92.575786
Year Established:	2009
Planting Rate (TPA):	538

Tree Number	Species	Scientific Name	Total Height (feet)	DBH (inches)	Establishment Type	Exotic Species
1	Nuttall Oak	*Quercus texana*	2'8"		planted	no
2	Loblolly Pine	*Pinus taeda*	3'7"		volunteer	no
3	Chinese Tallowtree	*Triadica sebifera*	6'3"	0.5"	volunteer	yes
4	Nuttall Oak	*Quercus texana*	3'5"		planted	no
5	Loblolly Pine	*Pinus taeda*	2'8"		volunteer	no
6	Loblolly Pine	*Pinus taeda*	6'	1.0"	volunteer	no
7	Sweetum	*Liquidambar styraciflua*	1'7"		volunteer	no
8	Overcup Oak	*Quercus lyrata*	2'8"		planted	no
9	Nuttall Oak	*Quercus texana*	2'7"		planted	no
10	Loblolly Pine	*Pinus taeda*	4'		volunteer	no
11	Loblolly Pine	*Pinus taeda*	5'8"	0.4"	volunteer	no
12	Loblolly Pine	*Pinus taeda*	1'6"		volunteer	no
13	Loblolly Pine	*Pinus taeda*	6'10"	1.1"	volunteer	no
14	Sweetum	*Liquidambar styraciflua*	3'11"		volunteer	no
15	Loblolly Pine	*Pinus taeda*	4'2"		volunteer	no
16	Loblolly Pine	*Pinus taeda*	7'10"	1.0"	volunteer	no

Plot Statistics

Trees per Plot:	16
Total Trees per Acre:	800
Planted Trees per Acre:	200
Pecent of Total trees:	25%
Survival Rate of Planted Trees:	37%
Volunteer Trees per Acre:	600
Percent of Total Trees:	75%
Exotics per Plot:	1
Exotics per Acre:	50
Percent Exotic:	6%
# of Species per Plot:	4

Herbaceous species :

Dark Green Bulrush (*Scirpe atrovirens*)
Bluestem (*Andropogon sp.)*
Baccharus (*Baccharus halimifolia)*
Sedge (*Cyperus sp.)*

Visual Cover Estimates
95% ground cover
100% Facultative

Plot Number:	2
GPS Coordinates:	30.813771, -92.576628
Year Established:	2007
Planting Rate (TPA):	538

Tree Number	Species	Scientific Name	Total Height (feet)	DBH (inches)	Establishment Type	Exotic Species
17	Sweetgum	*Liquidambar styraciflua*	7'3"	0.5"	volunteer	no
18	Chinese Tallowtree	*Triadica sebifera*	3'8"		volunteer	yes
19	Sweetgum	*Liquidambar styraciflua*	3'3'		volunteer	no
20	Sweetgum	*Liquidambar styraciflua*	4'		volunteer	no
21	Nuttall Oak	*Quercus texana*	4'		planted	no
22	Chinese Tallowtree	*Triadica sebifera*	4'2"		volunteer	yes
23	Chinese Tallowtree	*Triadica sebifera*	4'1"		volunteer	yes
24	Sweetgum	*Liquidambar styraciflua*	6'10"	0.5"	volunteer	no
25	Chinese Tallowtree	*Triadica sebifera*	3'10"		volunteer	yes
26	Sweetgum	*Liquidambar styraciflua*	6'5"	0.6"	volunteer	no
27	Sweetgum	*Liquidambar styraciflua*	4'		volunteer	no
28	Sweetgum	*Liquidambar styraciflua*	5'10"	0.3"	volunteer	no
29	Chinese Tallowtree	*Triadica sebifera*	3'3"		volunteer	yes
30	Chinese Tallowtree	*Triadica sebifera*	3'2"		volunteer	yes
31	Sweetgum	*Liquidambar styraciflua*	3'4"		volunteer	no
32	Sweetgum	*Liquidambar styraciflua*	2'6"		volunteer	no
33	Nuttall Oak	*Quercus texana*	8'	0.8"	planted	no
34	Chinese Tallowtree	*Triadica sebifera*	6'3"	0.3"	volunteer	yes
35	Nuttall Oak	*Quercus texana*	3'		planted	no
36	Chinese Tallowtree	*Triadica sebifera*	6'2"	0.3"	volunteer	yes
37	Loblolly Pine	*Pinus taeda*	3'10"		volunteer	no
38	Nuttall Oak	*Quercus texana*	8'7"	0.9"	planted	no
39	Sweetgum	*Liquidambar styraciflua*	2'5"		volunteer	no
40	Chinese Tallowtree	*Triadica sebifera*	3'		volunteer	yes
41	Chinese Tallowtree	*Triadica sebifera*	3'10"		volunteer	yes
42	Nuttall Oak	*Quercus texana*	9'	1.2"	planted	no
43	Chinese Tallowtree	*Triadica sebifera*	2'10"		volunteer	yes
44	Nuttall Oak	*Quercus texana*	13'5"	1.1"	planted	no
45	Chinese Tallowtree	*Triadica sebifera*	2'4"		volunteer	yes
46	Chinese Tallowtree	*Triadica sebifera*	6'4"	0.3"	volunteer	yes
47	Sweetgum	*Liquidambar styraciflua*	6'2"	0.3"	volunteer	no
48	Chinese Tallowtree	*Triadica sebifera*	2'		volunteer	yes
49	Nuttall Oak	*Quercus texana*	6'2"	0.3"	planted	no
50	Chinese Tallowtree	*Triadica sebifera*	6'4"	0.3"	volunteer	yes
51	Chinese Tallowtree	*Triadica sebifera*	3'4"		volunteer	yes

Plot Statistics

Trees per Plot:	35
Total Trees per Acre:	1,750
Planted Trees per Acre:	350
Pecent of Total trees:	20%
Survival Rate of Planted Trees:	65%
Volunteer Trees per Acre:	1,400
Percent of Total Trees:	80%
Exotics per Plot:	16
Exotics per Acre:	800
Percent Exotic:	45%
# of Species per Plot:	3

Herbaceous species :

Dark Green Bulrush (*Scirpe atrovirens*)
Bluestem (*Andropogon sp.)*
Baccharus (*Baccharus halimifolia)*
Sedge (*Cyperus sp.)*

Visual Cover Estimates
95% ground cover
90% Facultative

Plot Number:	3
GPS Coordinates:	30.814653, -92.579523
Year Established:	2007
Planting Rate (TPA):	538

Tree Number	Species	Scientific Name	Total Height (feet)	DBH (inches)	Establishment Type	Exotic Species
52	Green Ash	*Fraxinus pennsylvanica*	11'9"	1.3"	planted	no
53	Green Ash	*Fraxinus pennsylvanica*	12'10"	1.7"	planted	no
54	Chinese Tallowtree	*Triadica sebifera*	6'7"	0.4"	volunteer	yes
55	Chinese Tallowtree	*Triadica sebifera*	11'7"	1.3'	volunteer	yes
56	Green Ash	*Fraxinus pennsylvanica*	7'8"	0.3"	planted	no
57	Sweetgum	*Liquidambar styraciflua*	8'3"	1.0"	volunteer	no
58	Loblolly Pine	*Pinus taeda*	4'		volunteer	no
59	Green Ash	*Fraxinus pennsylvanica*	12'4"	1.2"	planted	no
60	Chinese Tallowtree	*Triadica sebifera*	10'9"	1.2"	volunteer	yes
61	Chinese Tallowtree	*Triadica sebifera*	7'6"	0.7"	volunteer	yes
62	Green Ash	*Fraxinus pennsylvanica*	11'6"	1.3"	planted	no
63	Chinese Tallowtree	*Triadica sebifera*	8'1"	0.6"	volunteer	yes
64	Loblolly Pine	*Pinus taeda*	4'9'	0.2"	volunteer	no
65	Nuttall Oak	*Quercus texana*	6'2"	0.3"	planted	no

Plot Statistics

Trees per Plot:	14
Total Trees per Acre:	700
Planted Trees per Acre:	300
Pecent of Total trees:	43%
Survival Rate of Planted Trees:	56%
Volunteer Trees per Acre:	400
Percent of Total Trees:	80%
Exotics per Plot:	5
Exotics per Acre:	250
Percent Exotic:	36%
# of Species per Plot:	4

Herbaceous species :

Baccharus *(Baccharus halimifolia)*
Dewberry *(rubus sp.)*

Visual Cover Estimates
40% ground cover
100% Facultative

Plot Number:	4
GPS Coordinates:	30.81448, -92.581017
Year Established:	2007
Planting Rate (TPA):	538

Tree Number	Species	Scientific Name	Total Height (feet)	DBH (inches)	Establishment Type	Exotic Species
66	Loblolly Pine	*Pinus taeda*	5'6"	03'	volunteer	no
67	Loblolly Pine	*Pinus taeda*	5'1"	0.1'	volunteer	no
68	Willow Oak	*Quercus phellos*	11'3"	1.2"	planted	no
69	Loblolly Pine	*Pinus taeda*	6'4"	0.4"	volunteer	no
70	Sweetgum	*Liquidambar styraciflua*	3'10"		volunteer	no
71	Loblolly Pine	*Pinus taeda*	3'1"		volunteer	no
72	Sweetgum	*Liquidambar styraciflua*	7'4"	0.4"	volunteer	no
73	Loblolly Pine	*Pinus taeda*	5'	0.3"	volunteer	no
74	Loblolly Pine	*Pinus taeda*	6'	0.4"	volunteer	no
75	Chinese Tallowtree	*Triadica sebifera*	3'		volunteer	yes
76	Willow Oak	*Quercus phellos*	7'8"	0.2"	planted	no
77	Chinese Tallowtree	*Triadica sebifera*	9'	0.7'	volunteer	yes
78	Chinese Tallowtree	*Triadica sebifera*	11'4"	1.0"	volunteer	yes
79	Chinese Tallowtree	*Triadica sebifera*	9'5"	1.2"	volunteer	yes
80	Loblolly Pine	*Pinus taeda*	6'1"	0.4"	volunteer	no
81	Chinese Tallowtree	*Triadica sebifera*	4'		volunteer	yes
82	Chinese Tallowtree	*Triadica sebifera*	3'4"		volunteer	yes
83	Chinese Tallowtree	*Triadica sebifera*	4'8"	0.1"	volunteer	yes
84	Chinese Tallowtree	*Triadica sebifera*	6'4"	0.4"	volunteer	yes
85	Loblolly Pine	*Pinus taeda*	10'10"	1.4"	volunteer	no
86	Loblolly Pine	*Pinus taeda*	9'9"	1.2"	volunteer	no
87	Loblolly Pine	*Pinus taeda*	7'4"	0.8"	volunteer	no
88	Loblolly Pine	*Pinus taeda*	2'4"		volunteer	no
89	Green Ash	*Fraxinus pennsylvanica*	13'8"	1.6"	planted	no
90	Chinese Tallowtree	*Triadica sebifera*	11'4"	0.8"	volunteer	yes
91	Loblolly Pine	*Pinus taeda*	11'8"	0.9"	volunteer	no
92	Red Maple	*Acer rubrum*	9'1"	0.4"	planted	no
93	Chinese Tallowtree	*Triadica sebifera*	11'3"	1.0"	volunteer	yes
94	Chinese Tallowtree	*Triadica sebifera*	12'	1.6"	volunteer	yes
95	Chinese Tallowtree	*Triadica sebifera*	5'2"	0.1"	volunteer	yes
96	Loblolly Pine	*Pinus taeda*	2'7"		volunteer	no
97	Loblolly Pine	*Pinus taeda*	2'		volunteer	no

Plot Statistics

Trees per Plot:	32
Total Trees per Acre:	1,600
Planted Trees per Acre:	200
Pecent of Total trees:	13%
Survival Rate of Planted Trees:	37%
Volunteer Trees per Acre:	1,400
Percent of Total Trees:	88%
Exotics per Plot:	12
Exotics per Acre:	600
Percent Exotic:	38%
# of Species per Plot:	5

Herbaceous species :

Baccharus *(Baccharus halimifolia)*
Dewberry *(rubus sp.)*
Sedge *(Cyperus sp.)*
Goldenrod *(Solidago sp.)*
Dog Fennel *(Eupatorium capillifolium)*

Visual Cover Estimates
60% ground cover
85% Facultative

Plot Number:	5
GPS Coordinates:	30.814758, -92.584913
Year Established:	2007
Planting Rate (TPA):	538

Tree Number	Species	Scientific Name	Total Height (feet)	DBH (inches)	Establishment Type	Exotic Species
98	Green Ash	*Fraxinus pennsylvanica*	2'10"		planted	no
99	Nuttall Oak	*Quercus texana*	2'9"		planted	no
100	Green Ash	*Fraxinus pennsylvanica*	4'		planted	no
101	Sweetgum	*Liquidambar styraciflua*	6'2"	0.2"	volunteer	no
102	Overcup Oak	*Quercus lyrata*	7'4"	0.4"	planted	no
103	Sweetgum	*Liquidambar styraciflua*	2'2"		volunteer	no
104	Chinese Tallowtree	*Triadica sebifera*	4'5"		volunteer	yes
105	Overcup Oak	*Quercus lyrata*	2'2"		planted	no
106	Bitter Pecan	*Carya x lecontei*	7'4"	0.4"	planted	no

Plot Statistics

Trees per Plot:	9
Total Trees per Acre:	450
Planted Trees per Acre:	300
Pecent of Total trees:	67%
Survival Rate of Planted Trees:	56%
Volunteer Trees per Acre:	150
Percent of Total Trees:	33%
Exotics per Plot:	1
Exotics per Acre:	50
Percent Exotic:	11%
# of Species per Plot:	5

Herbaceous species :

Baccharus *(Baccharus halimifolia)*
Dark Green Bulrush (*Scirpe atrovirens*)
Sedge (*Cyperus sp.)*
Goldenrod *(Solidago sp.)*
Dog Fennel *(Eupatorium capillifolium)*

Visual Cover Estimates
95% ground cover
95% Facultative

Plot Number:	6
GPS Coordinates:	30.812568, -92.578197
Year Established:	2007
Planting Rate (TPA):	538

Tree Number	Species	Scientific Name	Total Height (feet)	DBH (inches)	Establishment Type	Exotic Species
107	Nuttall Oak	*Quercus texana*	11'	1.9"	planted	no
108	Chinese Tallowtree	*Triadica sebifera*	3'1"		volunteer	yes
109	Loblolly Pine	*Pinus taeda*	6'3"	0.7"	volunteer	no
110	Chinese Tallowtree	*Triadica sebifera*	5'4"	0.2"	volunteer	yes
111	Chinese Tallowtree	*Triadica sebifera*	4'1"		volunteer	yes
112	Willow Oak	*Quercus phellos*	7'8"	0.5"	planted	no
113	Loblolly Pine	*Pinus taeda*	6'5"	0.3"	volunteer	no
114	Loblolly Pine	*Pinus taeda*	6'10"	0.4"	volunteer	no
115	Chinese Tallowtree	*Triadica sebifera*	5'6"	0.1"	volunteer	yes
116	Loblolly Pine	*Pinus taeda*	7'10"	0.4"	volunteer	no
117	Chinese Tallowtree	*Triadica sebifera*	1'10"		volunteer	yes
118	Chinese Tallowtree	*Triadica sebifera*	3'5"		volunteer	yes
119	Chinese Tallowtree	*Triadica sebifera*	4'		volunteer	yes
120	Chinese Tallowtree	*Triadica sebifera*	7'7"	0.7"	volunteer	yes
121	Chinese Tallowtree	*Triadica sebifera*	4'		volunteer	yes
122	Chinese Tallowtree	*Triadica sebifera*	4'8"	0.2"	volunteer	yes
123	Loblolly Pine	*Pinus taeda*	6'7"	0.4"	volunteer	no
124	Chinese Tallowtree	*Triadica sebifera*	1'6"		volunteer	yes
125	Chinese Tallowtree	*Triadica sebifera*	2'5"		volunteer	yes
126	Willow Oak	*Quercus phellos*	6'7"	0.2"	planted	no
127	Chinese Tallowtree	*Triadica sebifera*	8'3"	0.4"	volunteer	yes
128	Chinese Tallowtree	*Triadica sebifera*	4'1"		volunteer	yes
129	Chinese Tallowtree	*Triadica sebifera*	6'5"	0.2"	volunteer	yes
130	Chinese Tallowtree	*Triadica sebifera*	7'3"	0.1"	volunteer	yes
131	Chinese Tallowtree	*Triadica sebifera*	4'1"		volunteer	yes
132	Chinese Tallowtree	*Triadica sebifera*	5'3"	0.1"	volunteer	yes
133	Loblolly Pine	*Pinus taeda*	4'2"		volunteer	no
134	Chinese Tallowtree	*Triadica sebifera*	8'2"	0.4"	volunteer	yes
135	Chinese Tallowtree	*Triadica sebifera*	2'1"		volunteer	yes
136	Chinese Tallowtree	*Triadica sebifera*	3'		volunteer	yes
137	Chinese Tallowtree	*Triadica sebifera*	6'9"	0.2"	volunteer	yes
138	Loblolly Pine	*Pinus taeda*	6'	0.3"	volunteer	no
139	Chinese Tallowtree	*Triadica sebifera*	5'11"	0.2"	volunteer	yes
140	Chinese Tallowtree	*Triadica sebifera*	5'10"	0.1"	volunteer	yes
141	Chinese Tallowtree	*Triadica sebifera*	5'8"	0.2"	volunteer	yes
142	Sweetgum	*Liquidambar styraciflua*	3'3"		volunteer	no
143	Loblolly Pine	*Pinus taeda*	3'2"		volunteer	no
144	Sweet Pecan	*Carya illinoinensis*	11'7"	1.1"	planted	no
145	Loblolly Pine	*Pinus taeda*	3'2"		volunteer	no
146	Nuttall Oak	*Quercus texana*	8'11"	1.2"	planted	no
147	Chinese Tallowtree	*Triadica sebifera*	3'7"		volunteer	yes
148	Loblolly Pine	*Pinus taeda*	6'	0.7"	volunteer	no
149	Loblolly Pine	*Pinus taeda*	4'2"		volunteer	no
150	Nuttall Oak	*Quercus texana*	7'5"	1.1"	planted	no
151	Loblolly Pine	*Pinus taeda*	4'		volunteer	no
152	Chinese Tallowtree	*Triadica sebifera*	5'6"	0.2"	volunteer	yes
153	Loblolly Pine	*Pinus taeda*	8'	1.0"	volunteer	no
154	Loblolly Pine	*Pinus taeda*	6'11"	0.7"	volunteer	no
155	Chinese Tallowtree	*Triadica sebifera*	4'2"		volunteer	yes
156	Chinese Tallowtree	*Triadica sebifera*	4'5"		volunteer	yes
157	Chinese Tallowtree	*Triadica sebifera*	5'7"	0.1"	volunteer	yes

Plot Statistics

Trees per Plot:	51
Total Trees per Acre:	2,550
Planted Trees per Acre:	300
Pecent of Total trees:	12%
Survival Rate of Planted Trees:	56%
Volunteer Trees per Acre:	2,250
Percent of Total Trees:	88%
Exotics per Plot:	30
Exotics per Acre:	1,500
Percent Exotic:	58%
# of Species per Plot:	5

Herbaceous species :

Baccharus *(Baccharus halimifolia)*
Purple vervain *(verbena bonariensis)*
Dewberry *(rubus sp.)*
Goldenrod *(Solidago sp.)*
Dog Fennel *(Eupatorium capillifolium)*

Visual Cover Estimates
90% ground cover
95% Facultative

Plot Number:	7
GPS Coordinates:	30.807952, -92.57384
Year Established:	2009
Planting Rate (TPA):	538

Tree Number	Species	Scientific Name	Total Height (feet)	DBH (inches)	Establishment Type	Exotic Species
158	Nuttall Oak	*Quercus texana*	1'		planted	no
159	Loblolly Pine	*Pinus taeda*	3'3"		volunteer	no
160	Nuttall Oak	*Quercus texana*	1'5"		planted	no
161	Nuttall Oak	*Quercus texana*	1'8"		planted	no
162	Loblolly Pine	*Pinus taeda*	3'		volunteer	no
163	Loblolly Pine	*Pinus taeda*	2'3"		volunteer	no
164	Loblolly Pine	*Pinus taeda*	4'5"		volunteer	no
165	Loblolly Pine	*Pinus taeda*	6'5"	0.4"	volunteer	no
166	Loblolly Pine	*Pinus taeda*	5'1"	0.2"	volunteer	no
167	Nuttall Oak	*Quercus texana*	1'5"		planted	no
168	Loblolly Pine	*Pinus taeda*	2'8"		volunteer	no
169	Loblolly Pine	*Pinus taeda*	7'5"	1.2"	volunteer	no
170	Loblolly Pine	*Pinus taeda*	3'8"		volunteer	no
171	Nuttall Oak	*Quercus texana*	1'7"		planted	no
172	Loblolly Pine	*Pinus taeda*	2'		volunteer	no
173	Loblolly Pine	*Pinus taeda*	1'10"		volunteer	no
174	Loblolly Pine	*Pinus taeda*	2'		volunteer	no
175	Loblolly Pine	*Pinus taeda*	10'	1.3"	volunteer	no
176	Sweet Pecan	*Carya illinoinensis*	1'4"		planted	no
177	Loblolly Pine	*Pinus taeda*	9'4"	1.3"	volunteer	no
178	Sweetgum	*Liquidambar styraciflua*	1'6"		volunteer	no
179	Loblolly Pine	*Pinus taeda*	6'1"	0.7"	volunteer	no
180	Nuttall Oak	*Quercus texana*	1'		planted	no
181	Nuttall Oak	*Quercus texana*	1'8"		planted	no
182	Loblolly Pine	*Pinus taeda*	5'5"	0.2"	volunteer	no
183	Chinese Tallowtree	*Triadica sebifera*	1'5"		volunteer	yes
184	Bitter Pecan	*Carya x lecontei*	2'2"		planted	no
185	Loblolly Pine	*Pinus taeda*	5'9"	0.4"	volunteer	no
186	Loblolly Pine	*Pinus taeda*	5'6"	0.4"	volunteer	no

Plot Statistics

Trees per Plot:	29
Total Trees per Acre:	1,450
Planted Trees per Acre:	450
Pecent of Total trees:	31%
Survival Rate of Planted Trees:	84%
Volunteer Trees per Acre:	1,000
Percent of Total Trees:	69%
Exotics per Plot:	1
Exotics per Acre:	50
Percent Exotic:	3%
# of Species per Plot:	5

Herbaceous species :

Baccharus *(Baccharus halimifolia)*
Dewberry *(rubus sp.)*
Sedge (*Cyperus sp.)*
Goldenrod *(Solidago sp.)*
Dog Fennel *(Eupatorium capillifolium)*

Visual Cover Estimates

95% ground cover
95% Facultative

Plot Number:	8
GPS Coordinates:	30.8415333, -92.57811
Year Established:	2007
Planting Rate (TPA):	538

Tree Number	Species	Scientific Name	Total Height (feet)	DBH (inches)	Establishment Type	Exotic Species
187	Willow Oak	*Quercus phellos*	7'7"	0.5"	planted	no
188	Willow Oak	*Quercus phellos*	7'4"	0.4"	planted	no
189	Willow Oak	*Quercus phellos*	8'8"	1.0"	planted	no
190	Willow Oak	*Quercus phellos*	9'9"	0.8"	planted	no
191	Chinese Tallowtree	*Triadica sebifera*	8'2"	0.4"	volunteer	yes
192	Nuttall Oak	*Quercus texana*	2'9"		planted	no
193	Overcup Oak	*Quercus lyrata*	3'2"		planted	no
194	Persimmon	*Diospyros virginiana*	2'		planted	no
195	Persimmon	*Diospyros virginiana*	1'5"		planted	no
196	Chinese Tallowtree	*Triadica sebifera*	2'4"		volunteer	yes
197	Willow Oak	*Quercus phellos*	8'5"	0.9"	planted	no
198	Willow Oak	*Quercus phellos*	3'7"		planted	no
199	Chinese Tallowtree	*Triadica sebifera*	4'11"	0.2"	volunteer	yes
200	Chinese Tallowtree	*Triadica sebifera*	4'		volunteer	yes

Plot Statistics

Trees per Plot:	14
Total Trees per Acre:	700
Planted Trees per Acre:	500
Pecent of Total trees:	71%
Survival Rate of Planted Trees:	93%
Volunteer Trees per Acre:	200
Percent of Total Trees:	29%
Exotics per Plot:	4
Exotics per Acre:	200
Percent Exotic:	29%
# of Species per Plot:	4

Herbaceous species :

Baccharus *(Baccharus halimifolia)*
Dewberry *(rubus sp.)*
Sedge (*Cyperus sp.)*
Goldenrod *(Solidago sp.)*
Dog Fennel *(Eupatorium capillifolium)*
Purple vervain *(verbena bonariensis)*

Visual Cover Estimates

95% ground cover
95% Facultative

Plot Number:	9
GPS Coordinates:	30.80233, -92.570583
Year Established:	2009
Planting Rate (TPA):	538

Tree Number	Species	Scientific Name	Total Height (feet)	DBH (inches)	Establishment Type	Exotic Species
201	Willow Oak	*Quercus phellos*	5'	0.1"	planted	no
202	Willow Oak	*Quercus phellos*	5'2"	0.2"	planted	no
203	Nuttall Oak	*Quercus texana*	5'7"	0.2"	planted	no
204	Willow Oak	*Quercus phellos*	6'7"	0.3"	planted	no

Plot Statistics

Trees per Plot:	4
Total Trees per Acre:	200
Planted Trees per Acre:	200
Pecent of Total trees:	100%
Survival Rate of Planted Trees:	37%
Volunteer Trees per Acre:	0
Percent of Total Trees:	0%
Exotics per Plot:	0
Exotics per Acre:	-
Percent Exotic:	0
# of Species per Plot:	2

Herbaceous species :

Baccharus *(Baccharus halimifolia)*
Dewberry *(rubus sp.)*
Sedge (*Cyperus sp.)*
Goldenrod *(Solidago sp.)*
Dog Fennel *(Eupatorium capillifolium)*
Purple vervain *(verbena bonariensis)*

Visual Cover Estimates

95% ground cover
95% Facultative

Plot Number:	10
GPS Coordinates:	30.803325, -92.573417
Year Established:	2009
Planting Rate (TPA):	538

Tree Number	Species	Scientific Name	Total Height (feet)	DBH (inches)	Establishment Type	Exotic Species
205	Willow Oak	*Quercus phellos*	6'1"	0.2"	planted	no
206	Chinese Tallowtree	*Triadica sebifera*	2'		volunteer	yes
207	Chinese Tallowtree	*Triadica sebifera*	2'		volunteer	yes
208	Chinese Tallowtree	*Triadica sebifera*	2'6"		volunteer	yes
209	Overcup Oak	*Quercus lyrata*	1'		planted	no
210	Bitter Pecan	*Carya x lecontei*	4'4"		planted	no
211	Willow Oak	*Quercus phellos*	4'6"		planted	no
212	Willow Oak	*Quercus phellos*	4'7"		planted	no
213	Green Ash	*Fraxinus pennsylvanica*	2'10"		planted	no
214	Loblolly Pine	*Pinus taeda*	4'		volunteer	no
215	Green Ash	*Fraxinus pennsylvanica*	1'7"		planted	no
216	Green Ash	*Fraxinus pennsylvanica*	3'3"		planted	no

Plot Statistics

Trees per Plot:	12
Total Trees per Acre:	600
Planted Trees per Acre:	400
Pecent of Total trees:	67%
Survival Rate of Planted Trees:	74%
Volunteer Trees per Acre:	200
Percent of Total Trees:	33%
Exotics per Plot:	3
Exotics per Acre:	150
Percent Exotic:	25%
# of Species per Plot:	5

Herbaceous species :

Baccharus *(Baccharus halimifolia)*
Dewberry *(rubus sp.)*
Sedge (*Cyperus sp.)*
Goldenrod *(Solidago sp.)*
Dog Fennel *(Eupatorium capillifolium)*
Purple vervain *(verbena bonariensis)*

Visual Cover Estimates
95% ground cover
95% Facultative

Plot Number:	11
GPS Coordinates:	30.803582, -92.576458
Year Established:	2009
Planting Rate (TPA):	538

Tree Number	Species	Scientific Name	Total Height (feet)	DBH (inches)	Establishment Type	Exotic Species
217	Willow Oak	*Quercus phellos*	2'8"		planted	no
218	Sweet Pecan	*Carya illinoinensis*	2'10"		planted	no
219	Loblolly Pine	*Pinus taeda*	2'		volunteer	no
220	Loblolly Pine	*Pinus taeda*	4'4"		volunteer	no
221	Loblolly Pine	*Pinus taeda*	4'		volunteer	no
222	Willow Oak	*Quercus phellos*	6'11"	0.2"	planted	no
223	Willow Oak	*Quercus phellos*	5'10"	0.2"	planted	no
224	Willow Oak	*Quercus phellos*	5'7"	02"	planted	no
225	Loblolly Pine	*Pinus taeda*	7'1"	0.3"	volunteer	no
226	Willow Oak	*Quercus phellos*	5'7"	0.2"	planted	no
227	Loblolly Pine	*Pinus taeda*	6'	0.3"	volunteer	no
228	Willow Oak	*Quercus phellos*	4'7"	0.2"	planted	no
229	Loblolly Pine	*Pinus taeda*	3'		volunteer	no
230	Loblolly Pine	*Pinus taeda*	3'		volunteer	no
231	Loblolly Pine	*Pinus taeda*	3'11"		volunteer	no
232	Willow Oak	*Quercus phellos*	2'9"		planted	no
233	Loblolly Pine	*Pinus taeda*	4'3"		volunteer	no

Plot Statistics

Trees per Plot:	17
Total Trees per Acre:	850
Planted Trees per Acre:	400
Pecent of Total trees:	47%
Survival Rate of Planted Trees:	74%
Volunteer Trees per Acre:	450
Percent of Total Trees:	56%
Exotics per Plot:	0
Exotics per Acre:	-
Percent Exotic:	0%
# of Species per Plot:	3

Herbaceous species :

Baccharus *(Baccharus halimifolia)*
Dewberry *(rubus sp.)*
Sedge (*Cyperus sp.)*
Dog Fennel *(Eupatorium capillifolium)*
Purple vervain *(verbena bonariensis)*

Visual Cover Estimates
95% ground cover
95% Facultative

Plot Number:	12
GPS Coordinates:	30.803597, -92.571197
Year Established:	2007
Planting Rate (TPA):	538

Tree Number	Species	Scientific Name	Total Height (feet)	DBH (inches)	Establishment Type	Exotic Species
234	Persimmon	*Diospyros virginiana*	8'2"	0.3"	planted	no
235	Overcup Oak	*Quercus lyrata*	7'2"	0.3"	planted	no
236	Chinese Tallowtree	*Triadica sebifera*	4'		volunteer	yes
237	Loblolly Pine	*Pinus taeda*	5'8"	0.2"	volunteer	no
238	Loblolly Pine	*Pinus taeda*	6'9"	0.2"	volunteer	no
239	Persimmon	*Diospyros virginiana*	7'9"	0.4"	planted	no
240	Green Ash	*Fraxinus pennsylvanica*	10'5"	0.6"	planted	no
241	Nuttall Oak	*Quercus texana*	7'2"	0.3"	planted	no
242	Overcup Oak	*Quercus lyrata*	8'3"	0.4"	planted	no
243	Persimmon	*Diospyros virginiana*	11'2"	1.2"	planted	no
244	Overcup Oak	*Quercus lyrata*	5'8"	0.7"	planted	no

Plot Statistics

Trees per Plot:	11
Total Trees per Acre:	550
Planted Trees per Acre:	400
Pecent of Total trees:	73%
Survival Rate of Planted Trees:	74%
Volunteer Trees per Acre:	150
Percent of Total Trees:	27%
Exotics per Plot:	1
Exotics per Acre:	50
Percent Exotic:	9%
# of Species per Plot:	5

Herbaceous species :

Baccharus *(Baccharus halimifolia)*
Dewberry *(rubus sp.)*
Sedge (*Cyperus sp.)*
Dog Fennel *(Eupatorium capillifolium)*
Purple vervain *(verbena bonariensis)*

Visual Cover Estimates

90% ground cover
95% Facultative

GDE Investments LA, LLC Mitigation Bank
Northern Portion, Section 9, T3S, R2W, Evangeline Parish, LA

GDE Investments LA, LLC Mitigation Bank
Southern Portion, Section 9 & 16, T3S, R2W, Evangeline Parish, LA

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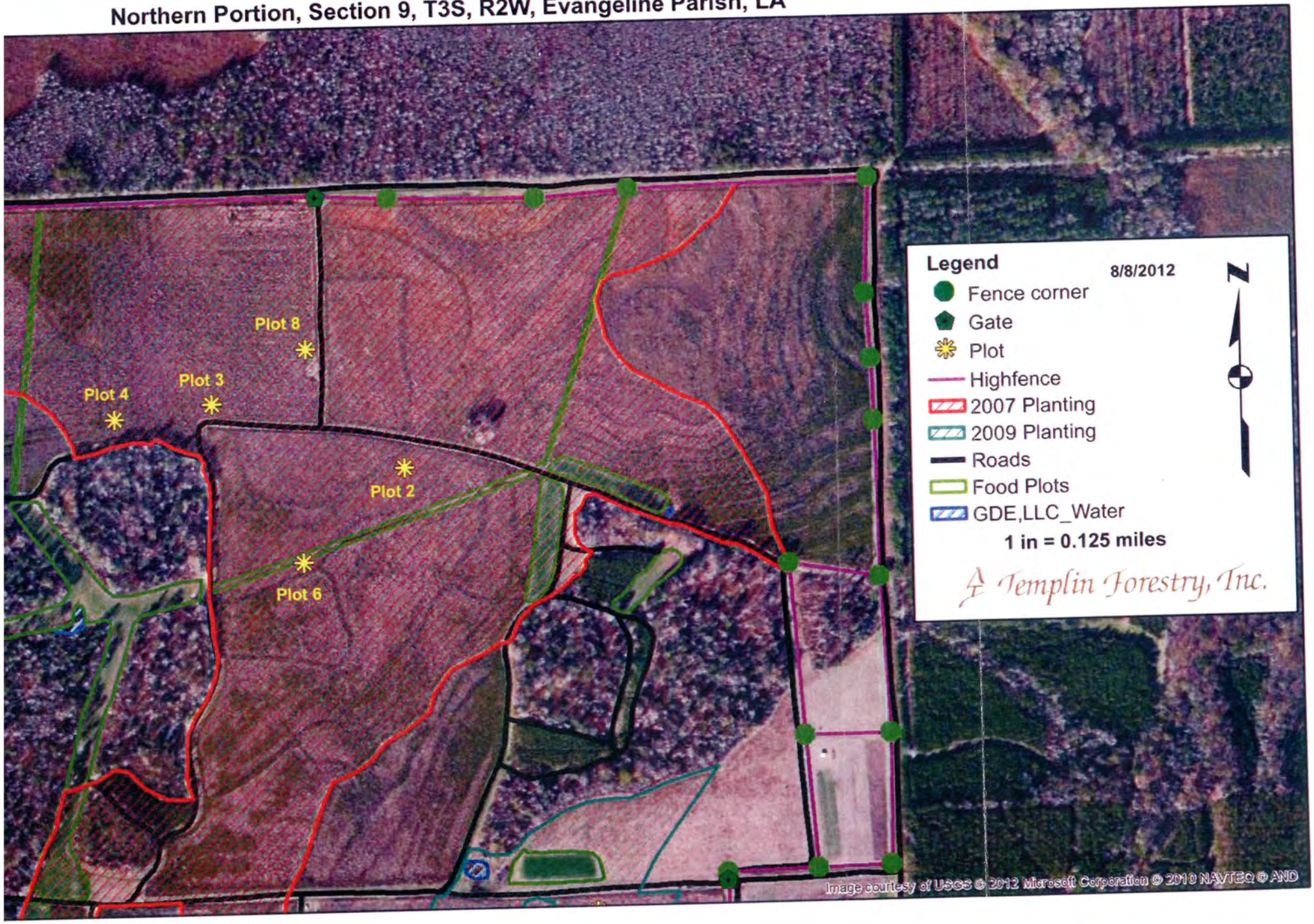
Northern Portion, Section 9, T3S, R2W, Evangeline Parish, LA



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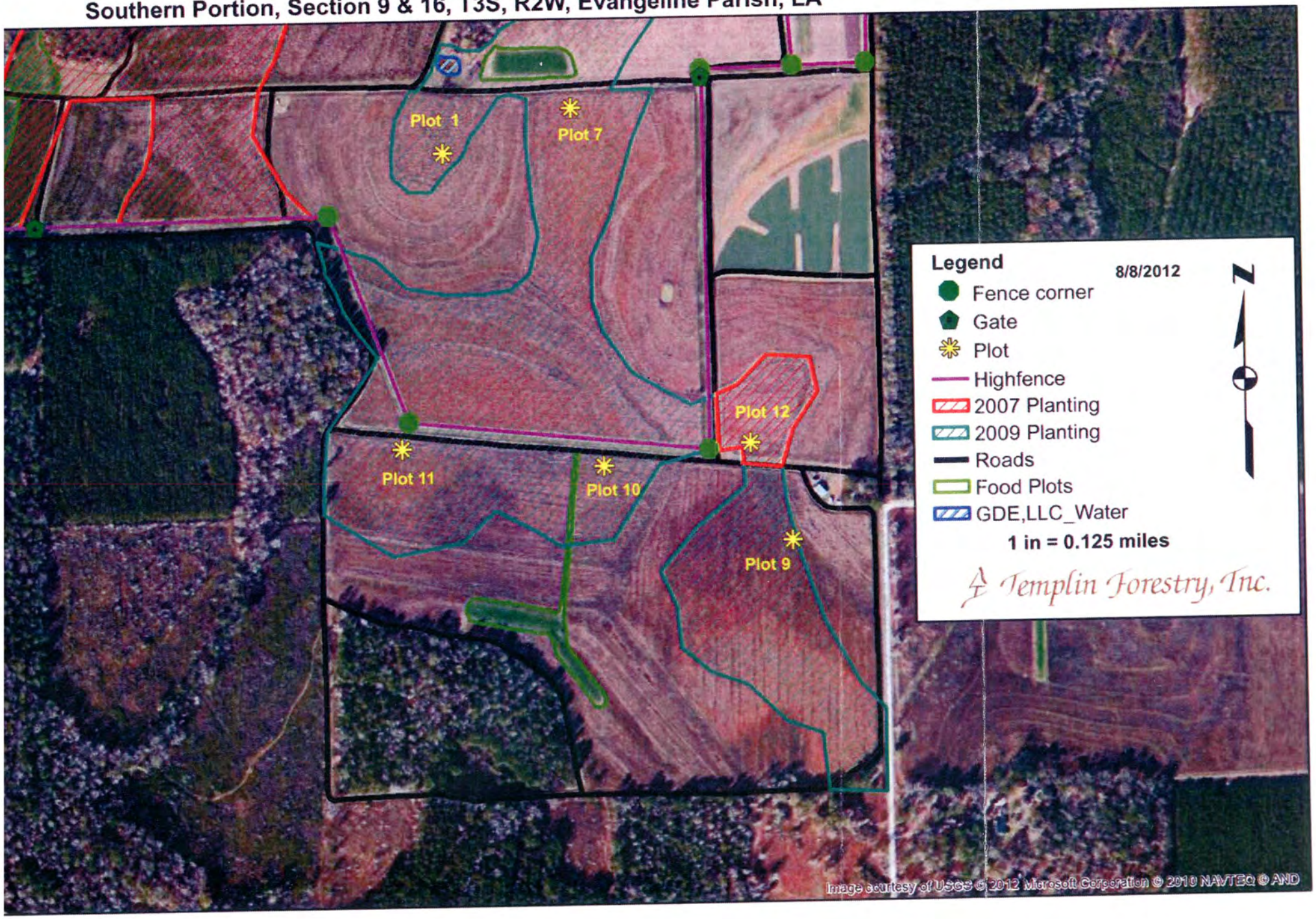

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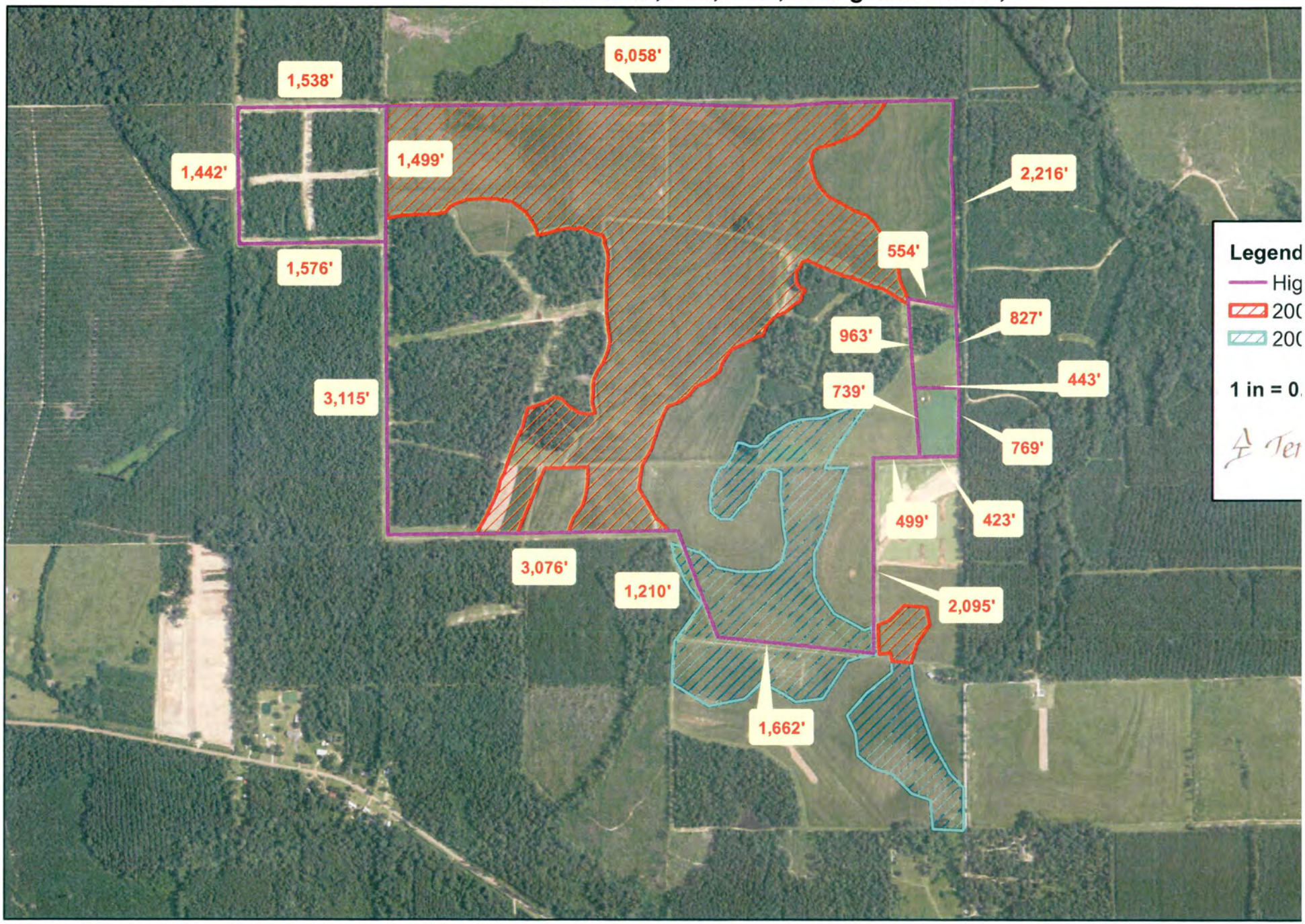

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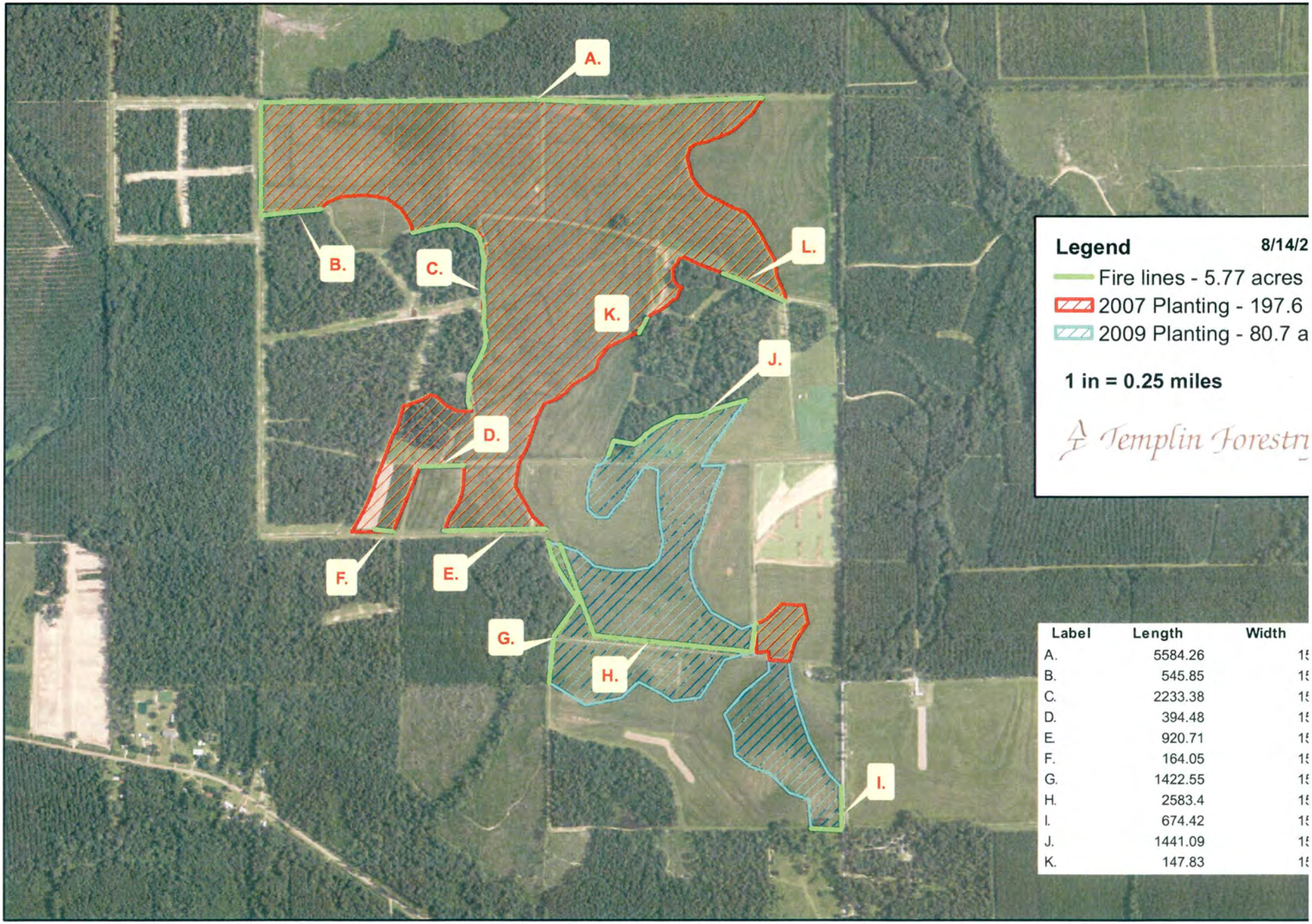

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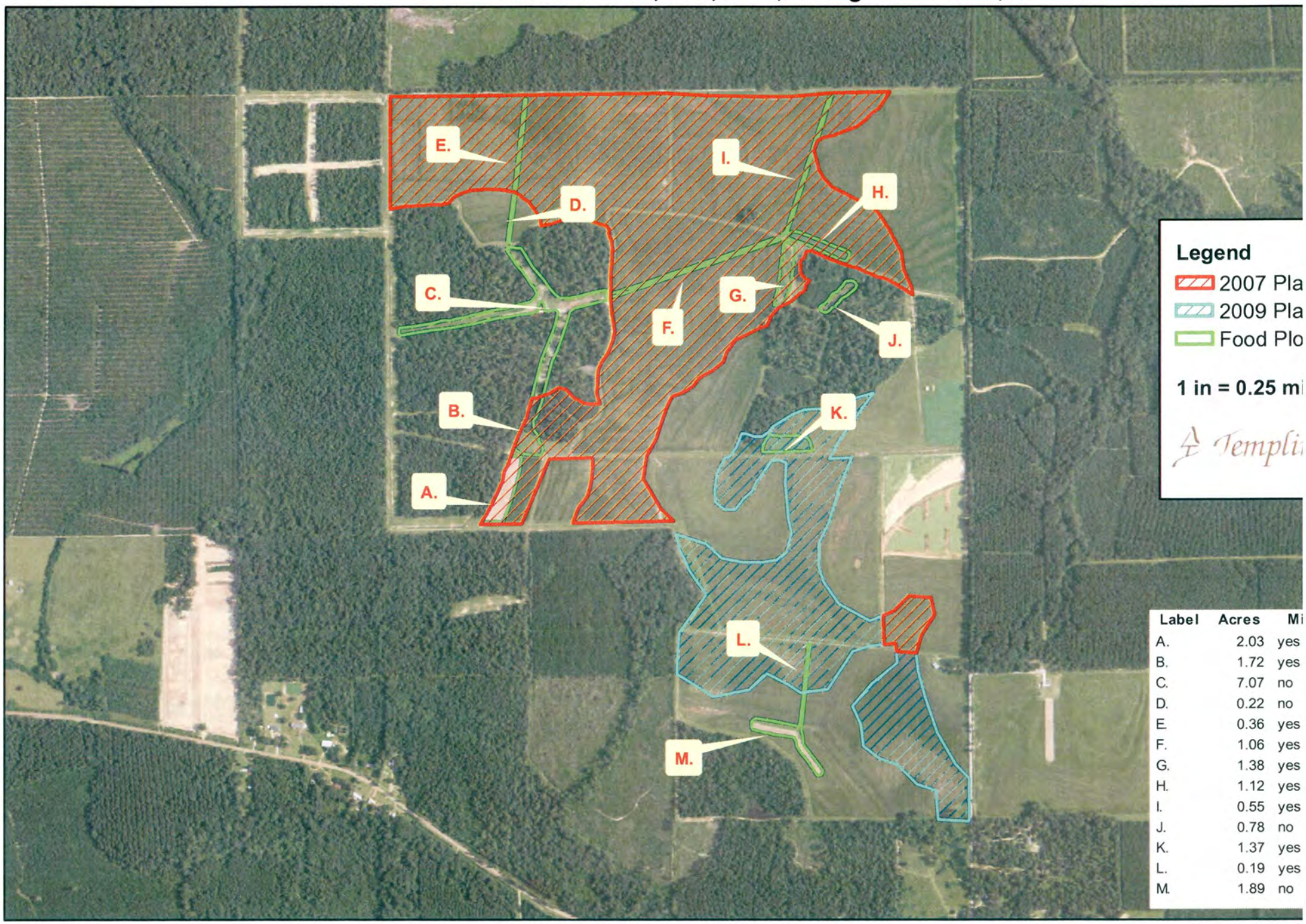

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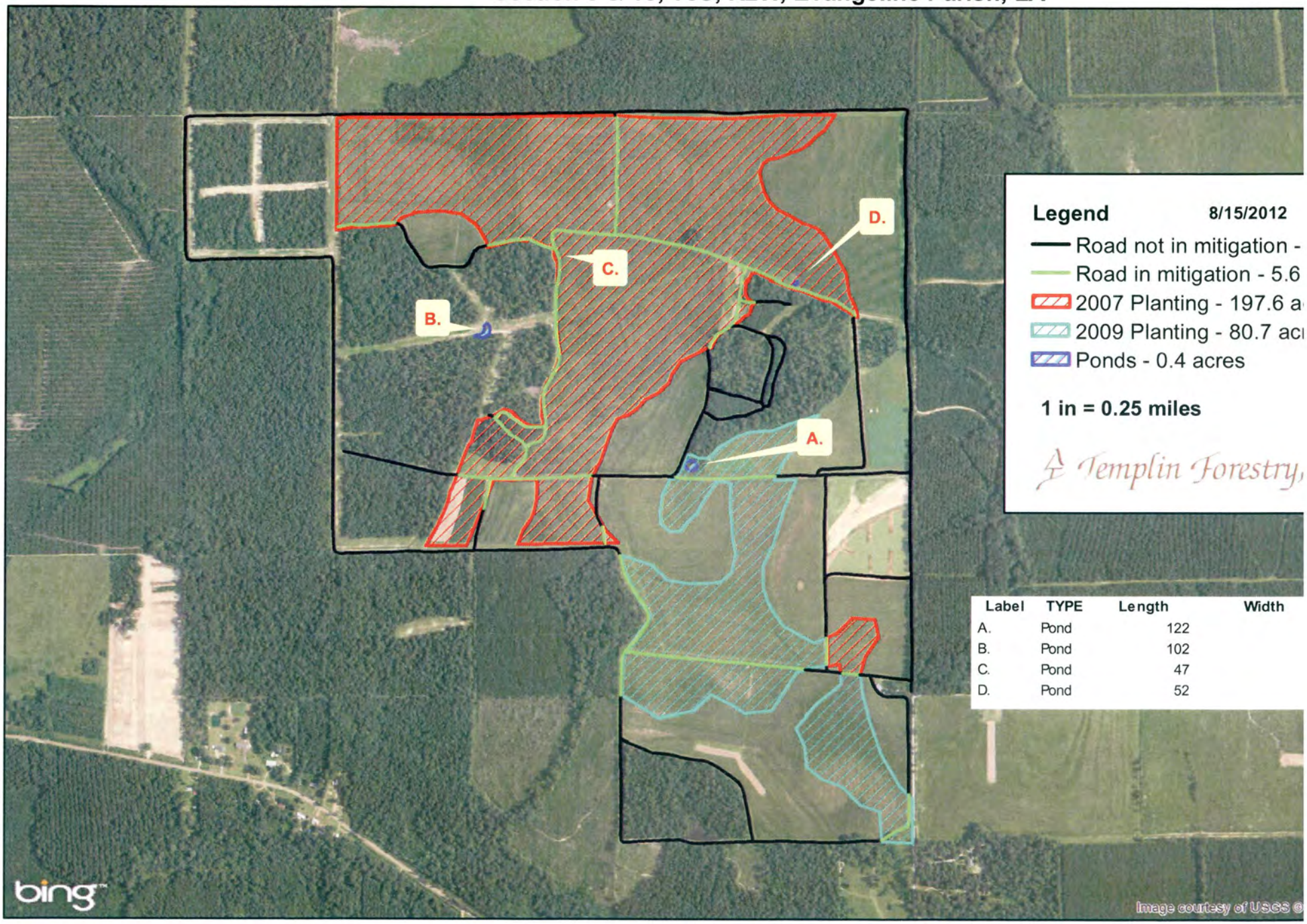

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