

IV. Assessments

Forest Resources

2009 Sheboygan County Inventory

In the spring of 2009, the Sheboygan County EAB work group determined that due to the proximity of EAB being found in Newberg, WI (Ozaukee County), a county-wide municipal owned land tree inventory should be conducted in order to develop an EAB Response Management Plan. The tree inventory was conducted in the summer of 2009 by three limited term employees on all municipal owned street and park trees in the county. The inventory mapped and digitized all tree locations, along with their associated information. Funding to conduct the inventory was financed by a grant from the Sheboygan County Stewardship Fund. Municipal lands inventoried included the cities of Plymouth (park trees only), Sheboygan, and Sheboygan Falls; the villages of Adell, Cascade, Cedar Grove, Elkhart Lake, Glenbeulah, Howards Grove, Kohler, Oostburg, Random Lake, and Waldo; towns of Lima (unincorporated areas of Gibbsville and Hingham), Scott (unincorporated areas of Batavia and Beechwood), Sheboygan (park areas), and Sherman (unincorporated area of Silver Creek); and county owned properties.

County owned properties inventoried included boat landings at Crystal Lake, Elkhart Lake, Gerber Lake, Jetzers Lake, and Little Elkhart Lake; the Old Plank Road Trail trailheads at Erie Ave, Meadowlark Rd, Village of Plymouth, and Town of Greenbush; the wayside on County Road LS; UW Sheboygan Campus; Esslingen Park; and Sheboygan County Marsh Park.

The information collected on each tree can be found in Table 1.

Table 1: Tree inventory data collected

Tree Type	DBH*	Condition	Site Characteristics
Ash	0 - 6"	Good	Overhead Utilities
Honey Locust	6" - 12"	Fair	
Linden	> 12"	Poor	
Maple		Dead	
Oak			
Ornamental Tree			
Other			

*Diameter at Breast Height (4 ½ feet)

Inventory results

The following pages summarize the 2009 tree inventory data and the 2003 City of Plymouth data. For the City of Plymouth, the 2009 inventory was conducted only on park trees due to an existing inventory of street trees. Combining the two inventories allows for a complete analysis of their public trees. Tables 2 through 6 show a side by side comparison of all the municipalities inventoried according to the specific information located. There is a table for tree type, DBH, condition, ash trees by DBH, and ash trees by condition. In addition, the data is compiled by the individual municipality in Tables 7 through 101. If additional information concerning the data or maps is needed please contact Sheboygan County Land and Water Conservation or Planning Departments.

Table 2: Tree type and percentage by municipality

Municipality	Tree Species														Total per Municipality
	Ash	%	Honeylocust	%	Linden	%	Maple	%	Oak	%	Ornamental	%	Other	%	
City of Plymouth (Park Trees, 2009)	190	22.9	22	2.7	27	3.3	254	30.6	17	2.1	33	4.0	286	34.5	829
City of Plymouth (Street Trees, 2003)	371	20.8	40	2.2	193	10.8	664	37.2	14	0.8	---	---	505	28.3	1,787
City of Sheboygan	5,154	22.6	605	2.7	4,550	20.0	8,254	36.3	620	2.7	1,435	6.3	2,141	9.4	22,759
City of Sheboygan Falls	179	23.6	27	3.6	23	3.0	304	40.1	5	0.7	42	5.5	178	23.5	758
Village of Adell	17	20.0	---	---	5	5.9	52	61.2	---	---	---	---	11	12.9	85
Village of Cascade	27	40.3	---	---	3	4.5	10	14.9	1	1.5	3	4.5	23	34.3	67
Village of Cedar Grove	14	7.6	1	0.5	6	3.2	115	62.2	---	---	3	1.6	46	24.9	185
Village of Elkhart Lake	34	14.4	1	0.4	24	10.2	68	28.8	1	0.4	19	8.1	89	37.7	236
Village of Glenbeulah	11	5.5	2	1.0	1	0.5	57	28.6	4	2.0	---	---	124	62.3	199
Village of Howards Grove	112	40.3	22	7.9	11	4.0	41	14.7	3	1.1	2	0.7	87	31.3	278
Village of Kohler	203	23.8	76	8.9	92	10.8	156	18.3	64	7.5	110	12.9	151	17.7	852
Village of Oostburg	16	8.8	4	2.2	3	1.7	60	33.1	---	0.0	82	45.3	16	8.8	181
Village of Random Lake	57	35.8	1	0.6	11	6.9	40	25.2	1	0.6	7	4.4	42	26.4	159
Village of Waldo	15	25.4	---	---	---	---	2	3.4	---	---	1	1.7	41	69.5	59
Town of Lima	7	17.5	---	---	1	2.5	18	45.0	---	---	1	2.5	13	32.5	40
Town of Scott	8	13.6	1	1.7	5	8.5	39	66.1	---	---	---	---	6	10.2	59
Town of Sheboygan	23	76.7	---	---	---	---	2	6.7	---	---	1	3.3	4	13.3	30
Town of Sherman	5	33.3	---	---	---	---	7	46.7	---	---	3	20.0	---	---	15
Sheboygan County	408	45.5	13	1.4	20	2.2	171	19.1	29	3.2	24	2.7	232	25.9	897
State of Wisconsin	1	6.7	---	---	---	---	---	---	---	---	1	6.7	13	86.7	15
Total per Species Group	6,852	23.2	815	2.8	4,975	16.9	10,314	35.0	759	2.6	1,767	6.0	4,008	13.6	29,490

Table 3: DBH class and percentage by municipality

Municipality	Diameter at Breast Height (DBH)						Total per Municipality
	0-6"	%	6-12"	%	> 12"	%	
City of Plymouth (Park Trees, 2009)	140	16.9	244	29.4	445	53.7	829
City of Plymouth (Street Trees, 2003)	929	52.0	210	11.8	648	36.3	1,787
City of Sheboygan	3,930	17.3	6,447	28.3	12,382	54.4	22,759
City of Sheboygan Falls	120	15.8	161	21.2	477	62.9	758
Village of Adell	8	9.4	13	15.3	64	75.3	85
Village of Cascade	7	10.4	24	35.8	36	53.7	67
Village of Cedar Grove	66	35.7	56	30.3	63	34.1	185
Village of Elkhart Lake	131	55.5	56	23.7	49	20.8	236
Village of Glenbeulah	8	4.0	76	38.2	115	57.8	199
Village of Howards Grove	28	10.1	150	54.0	100	36.0	278
Village of Kohler	114	13.4	236	27.7	502	58.9	852
Village of Oostburg	91	50.3	22	12.2	68	37.6	181
Village of Random Lake	46	28.9	43	27.0	70	44.0	159
Village of Waldo	3	5.1	19	32.2	37	62.7	59
Town of Lima	3	7.5	29	72.5	8	20.0	40
Town of Scott	2	3.4	2	3.4	55	93.2	59
Town of Sheboygan	12	40.0	11	36.7	7	23.3	30
Town of Sherman	1	6.7	5	33.3	9	60.0	15
Sheboygan County	169	18.8	302	33.7	724	80.7	897
State of Wisconsin	3	20.0	6	40.0	6	40.0	15
Total per Diameter Group	5,811	19.7	8,112	27.5	15,865	53.8	29,490

Table 4: Condition class by municipality

Municipality	Condition								Total per Municipality
	Good	%	Fair	%	Poor	%	Dead	%	
City of Plymouth (Park Trees, 2009)	829	100.0							829
City of Plymouth (Street Trees, 2003)	No Data		No Data		No Data		No Data		1,787
City of Sheboygan	20,140	88.5	2,127	9.3	436	1.9	56	0.2	22,759
City of Sheboygan Falls	758	100.0							758
Village of Adell	85	100.0							85
Village of Cascade	67	100.0							67
Village of Cedar Grove	185	100.0							185
Village of Elkhart Lake	236	100.0							236
Village of Glenbeulah	199	100.0							199
Village of Howards Grove	278	100.0							278
Village of Kohler	852	100.0							852
Village of Oostburg	181	100.0							181
Village of Random Lake	159	100.0							159
Village of Waldo	59	100.0							59
Town of Lima	40	100.0							40
Town of Scott	59	100.0							59
Town of Sheboygan	30	100.0							30
Town of Sherman	15	100.0							15
Sheboygan County	897	100.0							897
State of Wisconsin	14	93.3	1	6.7					15
Total per Condition Group	25,083	85.1	2,128	7.2	436	1.5	56	0.2	29,490

Table 5: Number of ash trees by diameter class and municipality

Municipality	Ash Diameter at Breast Height (DBH)						Total per Municipality
	0-6"	%	6-12"	%	> 12"	%	
City of Plymouth (Park Trees, 2009)	25	13.2	90	47.4	75	39.5	190
City of Plymouth (Street Trees, 2003)	190	51.2	61	16.4	120	32.3	371
City of Sheboygan	804	15.6	1,488	28.9	2,862	55.5	5,154
City of Sheboygan Falls	13	7.3	27	15.1	139	77.7	179
Village of Adell	---	---	8	47.1	9	52.9	17
Village of Cascade	6	22.2	7	25.9	14	51.9	27
Village of Cedar Grove	1	7.1	7	50.0	6	42.9	14
Village of Elkhart Lake	11	32.4	15	44.1	8	23.5	34
Village of Glenbeulah	---	---	10	90.9	1	9.1	11
Village of Howards Grove	6	5.4	62	55.4	44	39.3	112
Village of Kohler	5	2.5	38	18.7	160	78.8	203
Village of Oostburg	3	18.8	2	12.5	11	68.8	16
Village of Random Lake	24	42.1	19	33.3	14	24.6	57
Village of Waldo	2	13.3	9	60.0	4	26.7	15
Town of Lima	---	---	6	85.7	1	14.3	7
Town of Scott	1	12.5	---	---	7	87.5	8
Town of Sheboygan	9	39.1	9	39.1	5	21.7	23
Town of Sherman	---	---	2	40.0	3	60.0	5
Sheboygan County	95	23.3	153	37.5	160	39.2	408
State of Wisconsin	1	100.0	---	---	---	---	1
Total per Diameter Group	1,196	17.5	2,013	29.4	3,643	53.2	6,852

Table 6: Number of ash trees by condition class and municipality

Municipality	Ash Condition								Total per Municipality
	Good	%	Fair	%	Poor	%	Dead	%	
City of Plymouth (Park Trees, 2009)	190	100.0							190
City of Plymouth (Street Trees, 2003)	No Data		No Data		No Data		No Data		371
City of Sheboygan	4,632	89.9	425	8.2	94	1.8	3	0.1	5,154
City of Sheboygan Falls	179	100.0							179
Village of Adell	17	100.0							17
Village of Cascade	27	100.0							27
Village of Cedar Grove	14	100.0							14
Village of Elkhart Lake	34	100.0							34
Village of Glenbeulah	11	100.0							11
Village of Howards Grove	112	100.0							112
Village of Kohler	203	100.0							203
Village of Oostburg	16	100.0							16
Village of Random Lake	57	100.0							57
Village of Waldo	15	100.0							15
Town of Lima	7	100.0							7
Town of Scott	8	100.0							8
Town of Sheboygan	23	100.0							23
Town of Sherman	5	100.0							5
Sheboygan County	408	100.0							408
State of Wisconsin	1	100.0							1
Total per Condition Group	5,959	87.0	425	6.2	94	1.4	3	0.04	6,852

Table 7, 8, and 9: City of Plymouth tree inventory data summary by tree type, DBH, and condition

Tree Species	Number	%
Ash	561	21.4
Honeylocust	62	2.4
Linden	220	8.4
Maple	918	35.1
Oak	31	1.2
Ornamental	33	1.3
Other	791	30.2
Tree Total	2,616	100

Diameter (DBH)	Number	%
0-6"	1,069	40.9
6-12"	454	17.4
> 12"	1,093	41.8
Tree Total	2,616	100

Condition*	Number	%
Good	829	100.0
Fair	---	---
Poor	---	---
Dead	---	---
Tree Total	829	100

* 2009 Data Only

Table 10 and 11: City of Plymouth ash tree only inventory data summary

Ash Diameter (DBH)	Number	%
0 - 6"	215	38.3
6-12"	151	26.9
> 12"	195	34.8
Ash Total	561	100

Ash Condition*	Number	%
Good	190	100.0
Fair	---	---
Poor	---	---
Dead	---	---
Ash Total	190	100

* 2009 Data Only

Table 12, 13, and 14: City of Sheboygan tree inventory data summary by tree type, DBH, and condition

Tree Species	Number	%
Ash	5,154	22.6
Honeylocust	605	2.7
Linden	4,550	20.0
Maple	8,254	36.3
Oak	620	2.7
Ornamental	1,435	6.3
Other	2,141	9.4
Tree Total	22,759	100

Diameter (DBH)	Number	%
0-6"	3,930	17.3
6-12"	6,447	28.3
> 12"	12,382	54.4
Tree Total	22,759	100

Condition	Number	%
Good	20,140	88.5
Fair	2,127	9.3
Poor	436	1.9
Dead	56	0.2
Tree Total	22,759	100

Table 15 and 16: City of Sheboygan ash tree only inventory data summary

Ash Diameter (DBH)	Number	%
0 - 6"	804	15.6
6-12"	1488	28.9
> 12"	2862	55.5
Ash Total	5154	100

Ash Condition	Number	%
Good	4,632	89.9
Fair	425	8.2
Poor	94	1.8
Dead	3	0.1
Ash Total	5,154	100

Table 17, 18, and 19: City of Sheboygan Falls tree inventory data summary by tree type, DBH, and condition

Tree Species	Number	%
Ash	179	23.6
Honeylocust	27	3.6
Linden	23	3.0
Maple	304	40.1
Oak	5	0.7
Ornamental	42	5.5
Other	178	23.5
Tree Total	758	100

Diameter (DBH)	Number	%
0-6"	120	15.8
6-12"	161	21.2
> 12"	477	62.9
Tree Total	758	100

Condition	Number	%
Good	758	100.0
Fair	---	---
Poor	---	---
Dead	---	---
Tree Total	758	100

Table 20 and 21: City of Sheboygan Falls ash tree only inventory data summary by DBH and condition

Ash Diameter (DBH)	Number	%
0 - 6"	13	7.3
6-12"	27	15.1
> 12"	139	77.7
Ash Total	179	100

Ash Condition	Number	%
Good	179	100.0
Fair	---	---
Poor	---	---
Dead	---	---
Ash Total	179	100

Table 22, 23, and 24: Village of Adell tree inventory data summary by tree type, DBH, and condition

Tree Species	Number	%
Ash	17	20.0
Linden	5	5.9
Maple	52	61.2
Other	11	12.9
Tree Total	85	100

Diameter (DBH)	Number	%
> 12" DBH	64	75.3
0-6" DBH	8	9.4
6-12" DBH	13	15.3
Tree Total	85	100

Condition	Number	%
Good	85	100
Fair	---	---
Poor	---	---
Dead	---	---
Tree Total	85	100

Table 25 and 26: Village of Adell ash tree only inventory data summary by DBH and condition

Ash Diameter (DBH)	Number	%
0 - 6"	---	---
6-12"	8	47.1
> 12"	9	52.9
Ash Total	17	100

Ash Condition	Number	%
Good	17	100.0
Fair	---	---
Poor	---	---
Dead	---	---
Ash Total	17	100

Table 27, 28, and 29: Village of Cascade tree inventory data summary by tree type, DBH, and condition

Tree Species	Number	%
Ash	27	40.3
Honeylocust	---	---
Linden	3	4.5
Maple	10	14.9
Oak	1	1.5
Ornamental	3	4.5
Other	23	34.3
Tree Total	67	100

Diameter (DBH)	Number	%
0-6"	24	35.8
6-12"	36	53.7
> 12"	7	10.4
Tree Total	67	100

Condition	Number	%
Good	67	100.0
Fair	---	---
Poor	---	---
Dead	---	---
Tree Total	67	100

Table 30 and 31: Village of Cascade ash tree only inventory data summary by DBH and condition

Ash Diameter (DBH)	Number	%
0 - 6"	6	---
6-12"	7	25.9
> 12"	14	51.9
Ash Total	27	100

Ash Condition	Number	%
Good	27	100.0
Fair	---	---
Poor	---	---
Dead	---	---
Ash Total	27	100

Table 32, 33, and 34: Village of Cedar Grove tree inventory data summary by tree type, DBH, and condition

Tree Species	Number	%
Ash	14	7.6
Honeylocust	1	0.5
Linden	6	3.2
Maple	115	62.2
Oak	---	---
Ornamental	3	1.6
Other	46	24.9
Tree Total	185	100

Diameter (DBH)	Number	%
0-6"	66	35.7
6-12"	56	30.3
> 12"	63	34.1
Tree Total	185	100

Condition	Number	%
Good	185	100.0
Fair	---	---
Poor	---	---
Dead	---	---
Tree Total	185	100

Table 35 and 36: Village of Cedar Grove ash tree only inventory data summary by DBH and condition

Ash Diameter (DBH)	Number	%
0 - 6"	1	7.1
6-12"	7	50.0
> 12"	6	42.9
Ash Total	14	100

Ash Condition	Number	%
Good	14	100.0
Fair	---	---
Poor	---	---
Dead	---	---
Ash Total	14	100

Table 37, 38, and 39: Village of Elkhart Lake tree inventory data summary by tree type, DBH, and condition

Tree Species	Number	%
Ash	34	14.4
Honeylocust	1	0.4
Linden	24	10.2
Maple	68	28.8
Oak	1	0.4
Ornamental	19	8.1
Other	89	37.7
Tree Total	236	100

Diameter (DBH)	Number	%
0-6"	131	55.5
6-12"	56	23.7
> 12"	49	20.8
Tree Total	236	100

Condition	Number	%
Good	236	100.0
Fair	---	---
Poor	---	---
Dead	---	---
Tree Total	236	100

Table 40 and 41: Village of Elkhart Lake ash tree only inventory data summary by DBH and condition

Ash Diameter (DBH)	Number	%
0 - 6"	11	32.4
6-12"	15	44.1
> 12"	8	23.5
Ash Total	34	100

Ash Condition	Number	%
Good	34	100.0
Fair	---	---
Poor	---	---
Dead	---	---
Ash Total	34	100

Table 42, 43, and 44: Village of Glenbeulah tree inventory data summary by tree type, DBH, and condition

Tree Species	Number	%
Ash	11	5.5
Honeylocust	2	1.0
Linden	1	0.5
Maple	57	28.6
Oak	4	2.0
Ornamental	---	---
Other	124	62.3
Tree Total	199	100

Diameter (DBH)	Number	%
0-6"	8	4.0
6-12"	76	38.2
> 12"	115	57.8
Tree Total	199	100

Condition	Number	%
Good	199	100.0
Fair	---	---
Poor	---	---
Dead	---	---
Tree Total	199	100

Table 45 and 46: Village of Glenbeulah ash tree only inventory data summary by DBH and condition

Ash Diameter (DBH)	Number	%
0 - 6"	---	---
6-12"	10	90.9
> 12"	1	9.1
Ash Total	11	100

Ash Condition	Number	%
Good	11	100.0
Fair	---	---
Poor	---	---
Dead	---	---
Ash Total	5,154	100

Table 47, 48, and 49: Village of Howards Grove tree inventory data summary by tree type, DBH, and condition

Tree Species	Number	%
Ash	112	40.3
Honeylocust	22	7.9
Linden	11	4.0
Maple	41	14.7
Oak	3	1.1
Ornamental	2	0.7
Other	87	31.3
Tree Total	278	100

Diameter (DBH)	Number	%
0-6"	28	10.1
6-12"	150	54.0
> 12"	100	36.0
Tree Total	278	100

Condition	Number	%
Good	278	100.0
Fair	---	---
Poor	---	---
Dead	---	---
Tree Total	278	100

Table 50 and 51: Village of Howards Grove ash tree only inventory data summary by DBH and condition

Ash Diameter (DBH)	Number	%
0 - 6"	6	5.4
6-12"	62	55.4
> 12"	44	39.3
Ash Total	112	100

Ash Condition	Number	%
Good	112	100.0
Fair	---	---
Poor	---	---
Dead	---	---
Ash Total	112	100

Table 52, 53, and 54: Village of Kohler tree inventory data summary by tree type, DBH, and condition

Tree Species	Number	%
Ash	203	23.8
Honeylocust	76	8.9
Linden	92	10.8
Maple	156	18.3
Oak	64	7.5
Ornamental	110	12.9
Other	151	17.7
Tree Total	852	100

Diameter (DBH)	Number	%
0-6"	114	13.4
6-12"	236	27.7
> 12"	502	58.9
Tree Total	852	100

Condition	Number	%
Good	852	100.0
Fair	---	---
Poor	---	---
Dead	---	---
Tree Total	852	100

Table 55 and 56: Village of Kohler ash tree only inventory data summary by DBH and condition

Ash Diameter (DBH)	Number	%
0 - 6"	5	2.5
6-12"	38	18.7
> 12"	160	78.8
Ash Total	203	100

Ash Condition	Number	%
Good	203	100.0
Fair	---	---
Poor	---	---
Dead	---	---
Ash Total	203	100

Table 57, 58, and 59: Village of Oostburg tree inventory data summary by tree type, DBH, and condition

Tree Species	Number	%
Ash	16	8.8
Honeylocust	4	2.2
Linden	3	1.7
Maple	60	33.1
Oak	---	---
Ornamental	82	45.3
Other	16	8.8
Tree Total	181	100

Diameter (DBH)	Number	%
0-6"	91	50.3
6-12"	22	12.2
> 12"	68	37.6
Tree Total	181	100

Condition	Number	%
Good	181	100.0
Fair	---	---
Poor	---	---
Dead	---	---
Tree Total	181	100

Table 60 and 61: Village of Oostburg ash tree only inventory data summary by DBH and condition

Ash Diameter (DBH)	Number	%
0 - 6"	3	18.8
6-12"	2	12.5
> 12"	11	68.8
Ash Total	16	100

Ash Condition	Number	%
Good	16	100.0
Fair	---	---
Poor	---	---
Dead	---	---
Ash Total	16	100

Table 62, 63, and 64: Village of Random Lake tree inventory data summary by tree type, DBH, and condition

Tree Species	Number	%
Ash	57	35.8
Honeylocust	1	0.6
Linden	11	6.9
Maple	40	25.2
Oak	1	0.6
Ornamental	7	4.4
Other	42	26.4
Tree Total	159	100

Diameter (DBH)	Number	%
0-6"	46	28.9
6-12"	43	27.0
> 12"	70	44.0
Tree Total	159	100

Condition	Number	%
Good	159	100.0
Fair	---	---
Poor	---	---
Dead	---	---
Tree Total	159	100

Table 65 and 66: Village of Random Lake ash tree only inventory data summary by DBH and condition

Ash Diameter (DBH)	Number	%
0 - 6"	24	42.1
6-12"	19	33.3
> 12"	14	24.6
Ash Total	57	100

Ash Condition	Number	%
Good	57	100.0
Fair	---	---
Poor	---	---
Dead	---	---
Ash Total	57	100

Table 67, 68, and 69: Village of Waldo tree inventory data summary by tree type, DBH, and condition

Tree Species	Number	%
Ash	15	25.4
Honeylocust	---	---
Linden	---	---
Maple	2	3.4
Oak	---	---
Ornamental	1	1.7
Other	41	69.5
Tree Total	59	100

Diameter (DBH)	Number	%
0-6"	3	5.1
6-12"	19	32.2
> 12"	37	62.7
Tree Total	59	100

Condition	Number	%
Good	59	100.0
Fair	---	---
Poor	---	---
Dead	---	---
Tree Total	59	100

Table 70 and 71: Village of Waldo ash tree only inventory data summary by DBH and condition

Ash Diameter (DBH)	Number	%
0 - 6"	2	13.3
6-12"	9	60.0
> 12"	4	26.7
Ash Total	15	100

Ash Condition	Number	%
Good	15	100.0
Fair	---	---
Poor	---	---
Dead	---	---
Ash Total	15	100

Table 72, 73, and 74: Town of Lima tree inventory data summary by tree type, DBH, and condition

Tree Species	Number	%
Ash	7	17.5
Honeylocust	---	---
Linden	1	2.5
Maple	18	45.0
Oak	---	---
Ornamental	1	2.5
Other	13	32.5
Tree Total	40	100

Diameter (DBH)	Number	%
0-6"	3	7.5
6-12"	29	72.5
> 12"	8	20.0
Tree Total	40	100

Condition	Number	%
Good	40	100.0
Fair	---	---
Poor	---	---
Dead	---	---
Tree Total	40	100

Table 75 and 76: Town of Lima ash tree only inventory data summary by DBH and condition

Ash Diameter (DBH)	Number	%
0 - 6"	---	---
6-12"	6	85.7
> 12"	1	14.3
Ash Total	7	100

Ash Condition	Number	%
Good	7	100.0
Fair	---	---
Poor	---	---
Dead	---	---
Ash Total	7	100

Table 77, 78, and 79: Town of Scott tree inventory data summary by tree type, DBH, and condition

Tree Species	Number	%
Ash	8	13.6
Honeylocust	1	1.7
Linden	5	8.5
Maple	39	66.1
Oak	---	---
Ornamental	---	---
Other	6	10.2
Tree Total	59	100

Diameter (DBH)	Number	%
0-6"	2	3.4
6-12"	2	3.4
> 12"	55	93.2
Tree Total	59	100

Condition	Number	%
Good	59	100.0
Fair	---	---
Poor	---	---
Dead	---	---
Tree Total	59	100

Table 80 and 81: Town of Scott ash tree only inventory data summary by DBH and condition

Ash Diameter (DBH)	Number	%
0 - 6"	1	12.5
6-12"	---	---
> 12"	7	87.5
Ash Total	8	100

Ash Condition	Number	%
Good	8	100.0
Fair	---	---
Poor	---	---
Dead	---	---
Ash Total	8	100

Table 82, 83, and 84: Town of Sheboygan tree inventory data summary by tree type, DBH, and condition

Tree Species	Number	%
Ash	23	76.7
Honeylocust	---	---
Linden	---	---
Maple	2	6.7
Oak	---	---
Ornamental	1	3.3
Other	4	13.3
Tree Total	30	100

Diameter (DBH)	Number	%
0-6"	12	40.0
6-12"	11	36.7
> 12"	7	23.3
Tree Total	30	100

Condition	Number	%
Good	30	100.0
Fair	---	---
Poor	---	---
Dead	---	---
Tree Total	30	100

Table 85 and 86: Town of Sheboygan ash tree only inventory data summary by DBH and condition

Ash Diameter (DBH)	Number	%
0 - 6"	9	39.1
6-12"	9	39.1
> 12"	5	21.7
Ash Total	23	100

Ash Condition	Number	%
Good	23	100.0
Fair	---	---
Poor	---	---
Dead	---	---
Ash Total	23	100

Table 87, 88, and 89: Town of Sherman tree inventory data summary by tree type, DBH, and condition

Tree Species	Number	%
Ash	5	33.3
Honeylocust	---	---
Linden	---	---
Maple	7	46.7
Oak	---	---
Ornamental	3	20.0
Other	---	---
Tree Total	15	100

Diameter (DBH)	Number	%
0-6"	1	6.7
6-12"	5	33.3
> 12"	9	60.0
Tree Total	15	100

Condition	Number	%
Good	15	100.0
Fair	---	---
Poor	---	---
Dead	---	---
Tree Total	15	100

Table 90 and 91: Town of Sherman ash tree only inventory data summary by DBH and condition

Ash Diameter (DBH)	Number	%
0 - 6"	---	---
6-12"	2	40.0
> 12"	3	60.0
Ash Total	5	100

Ash Condition	Number	%
Good	5	100.0
Fair	---	---
Poor	---	---
Dead	---	---
Ash Total	5	100

Table 92, 93, and 94: Sheboygan County tree inventory data summary by tree type, DBH, and condition

Tree Species	Number	%
Ash	408	45.5
Honeylocust	13	1.4
Linden	20	2.2
Maple	171	19.1
Oak	29	3.2
Ornamental	24	2.7
Other	232	25.9
Tree Total	897	100

Diameter (DBH)	Number	%
0-6"	169	18.8
6-12"	302	33.7
> 12"	724	80.7
Tree Total	897	100

Condition	Number	%
Good	897	100.0
Fair	---	---
Poor	---	---
Dead	---	---
Tree Total	897	100

Table 95 and 96: Sheboygan County ash tree only inventory data summary by DBH and condition

Ash Diameter (DBH)	Number	%
0 - 6"	95	23.3
6-12"	153	37.5
> 12"	160	39.2
Ash Total	408	100

Ash Condition	Number	%
Good	408	100.0
Fair	---	---
Poor	---	---
Dead	---	---
Ash Total	408	100

Table 97, 98, and 99: State of Wisconsin tree inventory data summary by tree type, DBH, and condition

Tree Species	Number	%
Ash	1	6.7
Honeylocust	---	---
Linden	---	---
Maple	---	---
Oak	---	---
Ornamental	1	6.7
Other	13	86.7
Tree Total	15	100

Diameter (DBH)	Number	%
0-6"	3	20.0
6-12"	6	40.0
> 12"	6	40.0
Tree Total	15	100

Condition	Number	%
Good	14	93.3
Fair	1	6.7
Poor	---	---
Dead	---	---
Tree Total	15	100

Table 100 and 101: State of Wisconsin ash tree only inventory data summary by DBH and condition

Ash Diameter (DBH)	Number	%
0 - 6"	1	100.0
6-12"	---	---
> 12"	---	---
Ash Total	1	100

Ash Condition	Number	%
Good	1	100.0
Fair	---	---
Poor	---	---
Dead	---	---
Ash Total	1	100

Maps showing tree location and species will be added to the document.

USDA Forest Service, Forest Inventory and Analysis (FIA) Data for Sheboygan County

Forest Inventory and Analysis (FIA) collects, analyzes, reports, and distributes data about the Nation’s forests: how much forest exists, who owns it, what condition it's in, where it's located, and how it's changed. FIA is managed by the Research and Development organization within the USDA Forest Service in cooperation with State and Private Forestry and National Forest Systems. FIA has been in operation under various names (Forest Survey, Forest Inventory and Analysis) for some 70 years. It covers forests on all forest lands within the US. For more information on this program refer to <http://fia.fs.fed.us/>.

The data for Sheboygan County came from FIA’s Forest Inventory Data On-line (FIDO). The data is derived from permanent sample plots and was generated by a Forest Resource Analyst with WDNR. Table 102 shows the number of ash trees by diameter class in 2007 for Sheboygan County.

Table 102: Ash trees within Sheboygan County by diameter class for 2007

Tree Diameter Classifications	Tree Species			Total
	White ash (541)	Black ash (543)	Green ash (544)	
1.0-2.9 in (1)	1,620,284	2,007,667	387,383	4,015,334
3.0-4.9 in (2)	352,257	1,268,027	1,091,898	2,712,182
5.0-6.9 in (3)	311,562	537,210	1,091,838	1,940,610
7.0-8.9 in (4)	269,144	135,712	694,920	1,099,777
9-10.9 in (5)	48,057	33,918	398,638	480,613
11-12.9 in (6)	16,959	81,975	104,614	203,548
13-14.9 in (7)	--	--	113,074	113,074
15-16.9 in (8)	--	--	31,098	31,098
17-18.9 in (9)	--	--	14,139	14,139
19-20.9 in (10)	31,098	--	0	31,098
21-28.9 in (11)	--	--	33,918	33,918
29+ in (12)	--	--	--	--
Totals:	2,649,362	4,064,509	3,961,519	10,675,391

* All estimates have a percent sampling error (pse) greater than 25% and less than or equal to 50%, unless estimate is bold than pse is greater than 50%

Other Inventories

In the past, other communities within Sheboygan County have conducted their own tree inventories. They are listed below in Table 103. For more information on these inventories please contact the respected community.

Table 103: Tree inventories by community

Municipality	Year Conducted	Areas Inventoried
City of Plymouth	2003	Street trees
Village of Elkhart Lake	2000	Parks, Parkway trees
	2005	Picture survey
Village of Kohler	2005	Street trees

Associated Costs and Benefits

The Davey Tree Expert Company conducted a quick analysis using the iTree benefit analysis and the 2009 Sheboygan County Tree Inventory Data and found the following annual benefits for just ash trees in Sheboygan County public areas:

- Ash trees sequester 4,204,092 lbs of CO₂ for a value of \$48,551.
- Ash trees save communities \$310,265 in energy costs with an average savings of \$47 per tree.
- Trees intercept 16,338,919 gallons of rainfall for a savings of \$442,815.
- Trees provide \$56,426 in air quality benefits.
- The total aesthetic value of ash trees in Sheboygan county is \$474,537.

Support Resources

Staffing, Training, and Budgets

When considering the control and management of EAB, communities will need to assess if they have adequate numbers of staff and they will need to ensure they are properly trained

to conduct the work needed. Information shared by communities through a survey show that 14 of the 28 communities have a Public Works Department, Town Board, or other employee responsible for overseeing the care of public trees. The level of responsibility differs by community, from communities removing only dead and hazardous trees along roadways, to conducting general maintenance of trees, to planting of new trees, to a combination of all. There are three additional communities who have no responsible party for tree care, but contract with the County Highway Department to remove dead and hazardous trees along the roadways. Four communities have no responsible party for tree care. And there was no data for 7 communities.

Out of the 28 communities, eight have a specific budget in place for the care of public trees. And one has a budget for implementing EAB activities.

Out the communities that conduct some level of tree care, only one has certified arborist(s) on staff. Four other communities conduct minimal training, consisting of safety and basic tree care and maintenance. All others provide no level of training. In addition, when conducting tree care only one community follows the American National Standards Institute (ANSI) standards for tree care. Communities have expressed a desire for training pertaining to tree identification, maintenance, and felling; proper pruning techniques; identification of tree related issues; and continuing education for arborist certification.

Equipment

In addition to communities needing proper staff they will also need the proper equipment to conduct work in-house. This can include equipment for preventative treatment of trees, tree removals, tree maintenance, and wood utilization. In many instances the lack of equipment and resources will result in municipalities using contract labor or limit the productive use of wood waste. Below in Table 104 is a listing of equipment by municipality that could potentially be used for tree care, removal, maintenance and/or utilization. The table does not list all equipment within the municipality and lists were not available for all municipalities in the county. For a complete list of equipment for each municipality please contact the individual municipality.

Table 104: Equipment listing by municipality

Sheboygan County		
15 Pickup trucks	2 Water tankers	43 Haul trucks - 10 yards+
8 Front-end loaders	5 Tractors w/loaders	10 Trailers
42 Chainsaws	2 Tractor backhoes	1 Stump cutter
2 Brush chippers PTO tractor mounted	3 Brush chippers engine driven	12 Various size trucks, platform, and dump
15 5-yard trucks	2 Track loaders	1 Bucket truck
3 Skid steer loaders		
City of Plymouth		
1 Brush chipper	2 Leaf loaders	1 Tractor loader
2 Rubber wheel front end loaders	6 Various size pickup trucks	6 5-yard pickup trucks/plows
2 Chainsaws		

Table 104 cont.:

City of Sheboygan		
43 Various size pickup trucks 1 Versa lift 3 Dump trailers 4 Front end loaders 4 Chippers 1 Log splitter	28 Various size dump trucks 4 Bucket trucks 11 Various tractors 5 Bobcats 3 Stumpgrinders 2 Backhoes	6 1 and 2-ton utility trucks 1 Tree spade 4 Mules 8 Chainsaws 2 Power pruners
City of Sheboygan Falls		
3 Pickup trucks 2 Rubber wheel loaders 1 1-Ton dump truck	5 Dump trucks 1 Skid steer loader 1 Leaf loader	2 Backhoes 4 Chainsaws
Village of Howards Grove		
1 20" chipper 1 Extendable pruning saw 1 Loader backhoe	3 5-yard dump trucks 2 Chainsaws 1 Utility tractor and trailer	2 Pickup trucks 1 Bucket trucks 1 Tractor w/side flail mower

Ordinances

Out of the 28 municipalities in Sheboygan County, six have a tree ordinance. Those that have an ordinance are the Cities of Plymouth and Sheboygan; and the Villages of Elkhart Lake, Howards Grove, Kohler, and Random Lake. No towns in the county have a tree ordinance.

All of the ordinances take into account specifics that should be considered for the control and management of EAB, except for having provisions about firewood movement or storage. They all establish authority for a city forester to perform the duties and exercise the powers imposed by the ordinance. However, only a few specifically establish municipal authority. All of them also establish authority for the control of planting, removal, maintenance, and protection of trees on public property and to guard against the spread of disease, insects and pests on all trees and shrubs on public and private areas. They all have authority to abate public nuisances and a few of the ordinances specifically name Dutch Elm disease as a public nuisance. Although EAB will fall under the public nuisance definition in all the ordinances, none of the ordinances name EAB as such.

There are a few other noteworthy items about the ordinances. Some of the ordinances still list ash trees as a recommended species for planting. The City of Sheboygan has a licensing ordinance where “no person for compensation shall plant, prune, trim, spray or remove any tree or shrub in the city without first obtaining a license from the city.” And the Village of Kohler specifically places duties upon private land owners abutting on public streets or public places to “remove and refrain from planting any tree, plant or shrub designated by the Department of Agriculture of the state of Wisconsin and published in its regulations to be a host or carrier of a dangerous plant disease or insect pest.”

For more information on ordinances refer to the *Section III - EAB Community Response Plan Elements*.

Current Debris/Wood Handling and Disposal Methods

According to information shared by communities through a survey, communities in Sheboygan County currently manage their wood waste in the following manners:

Table 105: Current debris/wood disposal methods in Sheboygan County

Method	Number
Cities and Villages	
Chipping	4
Mix of Chipping and Firewood	2
Firewood	1
Burning	1
Contract hauling	2
Towns:	
Chipping	2
Burning	2
Taken to transfer station	1
Individuals responsible of own	6
No response or data	10

From the survey responses it was found that the most urbanized municipalities of the county have systems in place to either chip waste or cut it into firewood, with a couple of municipalities hiring a contractor to haul their waste. The more rural municipalities with systems in place currently use a combination of chipping, firewood, and burning with most of the rural municipalities having no system in place to deal with waste and their residents are left to handle their own waste.

When municipalities were asked how they were going to handle wood waste generated by EAB, most had no plan in place or expressed that they were going to use the same methods of wood utilization already in place. Only one community expressed a need to explore new options for disposal and wood generation. If the wood waste became too much for a municipality to handle on their own, most expressed that they would be open to partnering with other communities, while four communities preferred to deal with the wood waste on their own. If an additional location to a municipalities current wood disposal site was needed for handling wood waste (marshalling yard) most municipalities (15) either didn't have a location that could be used or was unsure. Seven municipalities had tentative locations for a marshalling yard.

Emerald Ash Borer Activities

Information shared by communities through a survey show that the Village of Kohler is the only community with an EAB plan in place and a budget for implementation. However, there are a couple of other municipalities within the county who are presently taking preemptive measures to manage the effects of EAB on their communities. For specifics on management efforts taking place refer to Table 106.

Table 106: EAB Management efforts within Sheboygan County

Municipality	Management Efforts
City of Plymouth	Replacing \$2,500 worth of ash trees with other species per year. (Equals approximately 25 trees). Prepared City Council presentation on EAB.
Village of Elkhart Lake	Placed EAB information from WDNR in library for residents.
Village of Howards Grove	Dead, diseased, and hazardous trees are removed immediately. Trees are replaced as available from the Village tree lot. EAB will be a subject at the Village yearly informational meeting.
Village of Kohler	Conducting chemical injections of large trees and surface treatments of small trees. Plan to remove dead ash trees and replace with other species. Publishing EAB related material in Kohler newspaper.