

**AGENDA**  
**JEFFERSON COUNTY PLANNING AND ZONING COMMITTEE**  
**DECISION MEETING**

*Steve Nass, Chair; Greg David, Vice-Chair; Don Reese, Secretary; Amy Rinard; George Jaeckel*

**ROOM 203, COUNTY COURTHOUSE**  
**320 S. MAIN ST., JEFFERSON, WI 53549**  
**8:30 A.M. ON MONDAY, AUGUST 26, 2013**

1. **Call to Order**
2. **Roll Call**
3. **Certification of Compliance with Open Meetings Law Requirements**
4. **Review of Agenda**
5. **Public Comment (Not to Exceed 15 Minutes and Not to Include Petitions Slated for Decision)**
6. **Approval of July 29, August 12 and August 15, 2013 Meeting Minutes**
7. **Update and Review of Hoard's Dairyman Farm Manure Storage Structure as it Relates to CU1438-06 with Phil Ristow, Corporation Counsel and Mark Watkins, Land and Water Conservation Department Director**
8. **Monthly Financial Report Land Information Department – Andy Erdman**
9. **Monthly Financial Report Planning and Zoning Department – Rob Klotz**
10. **2014 Zoning Department Budget Discussion – Rob Klotz**
11. **Review and Possible Decision on Request from ATC for Outside Storage on PIN 012-0816-2232-040 in the Town of Ixonia at W1225 Marietta Avenue/N8233 CTH F**
12. **Determination of Completeness for Wilke's LLC Livestock Siting Application, Town of Waterloo**
13. **Determination of Completeness for Never Rest Dairy LLC Livestock Siting Application, Town of Milford**
14. **Update on Kutz Dairy Conditional Use Permit and Animal Waste Storage Facility**
15. **Decisions on Petitions Presented in Public Hearing on August 15, 2013:**  
R3664A-13 – Donald & Bonnie Lott, Town of Concord  
R3665A-13 – Robert Ross, Town of Oakland  
CU1748-13 – Jasen Wendt, Town of Watertown  
CU1749-13 – Kathryn A. Dankert, Town of Palmyra
16. **Future Agenda Items**
17. **Upcoming Meeting Dates**  
September 16, 8:00 a.m. – Site Inspections Beginning in Courthouse Room 203  
September 19, 7:00 p.m. – Public Hearing in Courthouse Room 205  
September 30, 8:30 a.m. – Decision Meeting in Courthouse Room 203  
October 14, 8:00 a.m. – Site Inspections Beginning in Courthouse Room 203  
October 17, 7:00 p.m. – Public Hearing in Courthouse Room 205  
October 28, 8:30 a.m. – Decision Meeting in Courthouse Room 203
18. **Adjourn**

**If you have questions regarding the petitions, please contact the Zoning Department at 920-674-7131. Petition files referenced on this agenda may be viewed in Courthouse Room 201 between the hours of 8:00 a.m. and 4:30 p.m., Monday through Friday, excluding holidays. Materials covering other agenda items can be found at [www.jeffersoncountywi.gov](http://www.jeffersoncountywi.gov).**

**Individuals requiring special accommodations for attendance at the meeting should contact the County Administrator at 920-674-7101 at least 24 hours prior to the meeting so that appropriate arrangements can be made.**

**MINUTES OF THE  
JEFFERSON COUNTY PLANNING AND ZONING COMMITTEE  
DECISION MEETING**

*Steve Nass, Chair; Greg David, Vice-Chair; Don Reese, Secretary; Amy Rinard; George Jaeckel*

**ROOM 203, COUNTY COURTHOUSE  
320 S. MAIN ST., JEFFERSON, WI 53549  
8:30 A.M. ON MONDAY, JULY 29, 2013**

- 1. Call to Order**  
The meeting was called to order by Chairman Nass at 8:30 a.m.
- 2. Roll Call**  
Nass, Reese and Jaeckel were present at the time of roll call. Also present were Rob Klotz, Michelle Staff and Deb Magritz of the Zoning Department.
- 3. Certification of Compliance with Open Meetings Law Requirements**  
Reese verified that the meeting was being held in compliance with open meetings law requirements.
- 4. Review of Agenda**  
There were no changes proposed to the agenda.
- 5. Public Comment (Not to Exceed 15 Minutes and Not to Include Petitions Slated for Decision)**  
There was no public comment.
- 6. Approval of May 3, 2013, June 20, June 24, July 15 and July 18, 2013 Meeting Minutes**  
Motion by Reese, seconded by Jaeckel to approve the May 3 minutes as presented. Motion carried on a voice vote with no objection. Motion by Reese, seconded by Jaeckel to approve the June 20 minutes as presented. Motion carried on a voice vote with no objection. Motion by Jaeckel, seconded by Reese to approve the June 24 minutes as presented. Motion carried on a voice vote with no objection. Motion by Reese, seconded by Jaeckel to approve the July 15 minutes as presented. Motion carried on a voice vote with no objection. Motion by Reese, seconded by Jaeckel to approve the July 18 minutes as presented. Motion carried on a voice vote with no objection.
- 7. Monthly Financial Report – Land Information Department – Andy Erdman**  
Erdman handed out his report and explained it. He noted that revenues are currently down from expected.

**Rinard arrived at 8:33 a.m.**

- 8. Review of Proposed Land Information Budget – Andy Erdman**  
Erdman presented his handout and said that he will be meeting with the County Administrator on Friday to discuss the budget. Erdman noted the consolidation of Business Units 1303 and 1308. He explained that the budget includes Land Information projects planned for the Register of Deeds Office, a replication server for Workforce

Development, plotter replacement and a new GPS base station. Erdman added that he has reduced the surveyor's budget revenue expectations. Motion by Reese, seconded by Jaeckel to approve the recommended budget. Motion carried on a voice vote with no objection.

**9. Consideration of Letter of Support for Wisconsin Regional Orthophotography Consortium Program for 2015**

A draft letter of support including changes suggested by Corporation Counsel was presented by Erdman. Motion by Rinard, seconded by Jaeckel to forward this draft on; motion carried on a voice vote with no objection.

**10. Monthly Financial Report – Planning and Zoning Department – Rob Klotz**

Klotz explained his handout which compared July 2013 revenues to July 2012 revenues. Currently the Department is operating above budget projections for revenues.

**11. 2014 Budget Discussion – Rob Klotz**

Klotz offered to deliver more concise information after meeting with the County Administrator and the Finance Director. He noted that his proposed budget is under limit requirements by \$7,000. Future expenditures may include a new projector for approximately \$1,000, and a copier/scanner/printer to be funded 60% by Zoning and 40% by Solid Waste funds.

**12. Preliminary Plat Review for Mounds View Subdivision, Town of Koshkonong, Section 25, T5N, R13E**

Staff explained her review and pointed to information in the Committee packets. Motion by Jaeckel, seconded by Reese to approve the preliminary plat with conditions found in Staff's review letter. Motion carried on a voice vote with no objection.

**13. Decisions on Petitions Presented in Public Hearing on July 18, 2013:**

**APPROVED WITH CONDITIONS** R3646A-13 & CU1738-13 – Greg Roben, Town of Concord, both on motions by Reese, seconded by Jaeckel. Both motions carried on voice votes with no objection.

**APPROVED WITH CONDITIONS** R3658A-13, R3659A-13 & CU1742-13 – Debbie Reece/Ardis Eilenfeldt Trust Property, Town of Aztalan, all on motions by Reese, seconded by Jaeckel. All three motions carried on voice votes with no objection.

**APPROVED WITH CONDITIONS** R3660A-13 – Gregg Heideman/Roger & Patsy Heideman Property, Town of Aztalan on a motion by Reese, seconded by Jaeckel. Motion carried on a voice vote with no objection.

**NO ACTION TAKEN ON** R3661A-13 – Brian Statz, Town of Concord; petitioner did not appear at public hearing.

**APPROVED WITH CONDITIONS** R3662A-13 – Jeff Lukas, Town of Hebron on a motion by Nass, seconded by Rinard. Motion carried on a voice vote with no objection.

**APPROVED WITH CONDITIONS** R3663A-13 – Frederick Uttech, Town of Watertown on a motion by Reese, seconded by Jaeckel. Motion carried on a voice vote with no objection.

**APPROVED WITH CONDITIONS** CU1744-13 – Adrian and Cindy Sue Cornelius/Franklin & Betty Brightsman Property, Town of Aztalan on a motion by Nass, seconded by Rinard. Motion carried on a voice vote with no objection.

**APPROVED WITH CONDITIONS** CU1745-13 – Greg & Erin Paasch, Town of Jefferson on a motion by Jaeckel, seconded by Rinard. Motion carried on a voice vote with no objection.

**APPROVED WITH CONDITIONS** CU1746-13 – Dan & Lloyd Marks/D L Shoot, LLC Property, Town of Milford on a motion by Jaeckel, seconded by Reese. Motion carried on a voice vote with no objection.

**APPROVED WITH CONDITIONS** CU1747-13 – Shane Benning, Town of Waterloo on a motion by Nass, seconded by Reese. Motion carried on a voice vote with no objection.

- 14. Salvage Yards Licensing**  
Klotz reported on each yard and recommended approved of relicensing them all. Motion by Reese, seconded by Jaeckel to approve the relicensing. Motion carried on a voice vote with no objection.
- 15. Correspondence**
  - a. Letter from Aaron Johnson Regarding Odor Issues at Daybreak Foods**  
The letter was handed out, and Klotz reported that the Environmental Protection Agency had been contacted.
- 16. Future Agenda Items**  
Update and review of Hoard’s Dairyman Farm manure storage structure as it relates to CU1438-06
- 17. Upcoming Meeting Dates**  
August 12, 8:00 a.m. – Site Inspections Beginning in Courthouse Room 203  
August 15, 7:00 p.m. – Public Hearing in Courthouse Room 205  
August 26, 8:30 a.m. – Decision Meeting in Courthouse Room 203  
September 16, 8:00 a.m. – Site Inspections Beginning in Courthouse Room 203  
September 19, 7:00 p.m. – Public Hearing in Courthouse Room 205  
September 30, 8:30 a.m. – Decision Meeting in Courthouse Room 203

A break was taken at 10 a.m. The meeting resumed at 10:05 a.m.

- 18. Discussion Regarding Process for Alternate Uses of Barns and Possible Ordinance Amendment**  
Steve Grabow, now in attendance, reviewed the Committee’s past work of May 3, 2013. He led the group in continued discussion, listing barn uses each would like to see. Staff asked whether this if for existing barns only, or for other structures as well. The consensus was that a good definition of barns is needed, as is policy on reuse versus relocation. Klotz will chart the information from this meeting and bring it back to the Committee. The Committee’s conclusions will be taken to the Department of Agriculture, Trade and Consumer Protection (DATCP) and to the Towns for their opinions.
- 19. Adjourn**  
Motion by Reese, seconded by Jaeckel to adjourn at 11:25 a.m. Motion carried on a voice vote with no objection.

**Don Reese, Secretary**

*A recording of the preceding meeting is available upon request to the Zoning Department.*

**MINUTES OF  
JEFFERSON COUNTY PLANNING AND ZONING COMMITTEE  
SITE INSPECTIONS**

*Steve Nass, Chair; Greg David, Vice-Chair; Don Reese, Secretary; Amy Rinard; George Jaeckel*

**ROOM 203, COUNTY COURTHOUSE  
320 S. MAIN ST., JEFFERSON, WI 53549  
8:00 A.M. ON MONDAY, AUGUST 12, 2013**

- 1. Call to Order**  
The meeting was called to order by Chairman Nass at 8:01 a.m.
- 2. Roll Call**  
All Committee members were present. Also in attendance were Rob Klotz, Michelle Staff and Deb Magritz, Zoning Department staff members.
- 3. Certification of Compliance with Open Meetings Law Requirements**  
Reese verified that the meeting was being held in compliance with open meetings law requirements.
- 4. Review of Agenda**  
No changes were proposed.
- 5. Public Comment (Not to Exceed 15 Minutes and Not to Include Petitions Slated for Decision)**  
There was no public comment.

The Committee left for the following site inspections:

- 6. Site Inspections of Petitions to be Presented in Public Hearing on August 15, 2013:**  
R3664A-13 – Donald & Bonnie Lott, Hillside Drive, Town of Concord  
R3665A-13 – Robert Ross, W7531 CTH C, Town of Oakland  
CU1748-13 – Jasen Wendt, N8894 River Road, Town of Watertown  
CU1749-13 – Kathryn A. Dankert, W1229 South Shore Drive, Town of Palmyra
- 7. Adjourn**  
Motion by Reese, seconded by David to adjourn the meeting at 10:15 a.m. Motion carried on a voice vote with no objection.

Don Reese, Secretary

*A recording of the preceding meeting is available upon request to the Zoning Department.*

**If you have questions regarding the petitions, please contact the Zoning Department at 920-674-7131. Petition files referenced on this agenda may be viewed in Courthouse Room 201 between the hours of 8:00 a.m. and 4:30 p.m., Monday through Friday, excluding holidays. Materials covering other agenda items can be found at [www.jeffersoncountywi.gov](http://www.jeffersoncountywi.gov).**

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**MINUTES OF PUBLIC HEARING**  
**JEFFERSON COUNTY PLANNING AND ZONING COMMITTEE**  
*Steve Nass, Chair; Greg David, Vice-Chair; Don Reese, Secretary; Amy Rinard; George  
Jaeckel*

**SUBJECT:** Map Amendments to the Jefferson County Zoning Ordinance and  
Requests for Conditional Use Permits

**DATE:** August 15, 2013

**TIME:** 7:00 p.m.

**PLACE:** Room 205, Jefferson County Courthouse, 320 S. Main St., Jefferson, WI

**1. Call to Order**

The meeting was called to order by Vice Chair Greg David at 7:00 pm.

**2. Roll Call**

Members present were David, Reese, Rinard and Jaeckel. Member absent at time of roll call was Nass.

**3. Certification of Compliance With Open Meetings Law Requirements**

Klotz and Reese verified that the meeting was being held in compliance with the open meeting law.

**4. Review of Agenda**

No changes to the agenda.

**5. Explanation of Process by Committee Chair**

David explained the public hearing process to the audience.

**6. Public Hearing**

**NOTICE IS HEREBY GIVEN** that the Jefferson County Planning and Zoning Committee will conduct a public hearing at 7 p.m. on Thursday, August 15, 2013, in Room 205 of the Jefferson County Courthouse, Jefferson, Wisconsin. A hearing will be given to anyone interested in the proposals. **PETITIONERS, OR THEIR REPRESENTATIVES, SHALL BE PRESENT.** Matters to be heard are petitions to amend the zoning ordinance of Jefferson County and applications for conditional use permits. A map of the properties affected may be obtained from the Zoning Department. Individual files are available for viewing between the hours of 8 a.m. and 4:30 p.m., Monday through Friday, excepting holidays. If you have questions regarding these matters, please contact Zoning at 920-674-7131.

**FROM AGRICULTURAL A-1 TO A-3, AGRICULTURAL/RURAL  
RESIDENTIAL**

**R3664A-13 – Donald & Bonnie Lott:** Rezone to create a 6-acre building site from part of PIN 006-0716-1914-000 (93.4 Acres), on **Hillside Drive** in the Town of Concord.

Petitioner: Donald Lott, N5983 Hillside Drive was present. Lott stated that he would like to combine his three non-prime lots into one 6-acre lot and sell an additional 35 acres with the lot. Lott did not give a rebuttal for the two speaking against the petition.

Comments in Favor: None

Comments Opposed: Klotz read into the record a letter from Kenneth & Carol Jaeck at N6031 Hillside Road. They are concerned about the proposed driveway location encompassing their property.

Gordon Price, N5901 Hillside Road was present. He explained that the Jaecks couldn't be here and was also representing them. He stated that the Jaecks would like to have the driveway on the north side of their property and "swap" land on the south side with the Lotts. Klotz explained that this proposal was presented but the variance to accomplish this was denied. Again, Price expressed Jaecks' concern about a driveway encompassing their lot.

Questions from the Committee: None

Town Response: Klotz read Town response into the record. They had no objection.

Staff Report: Staff report given by Robert Klotz and now on file in the Zoning Department.

**R3665A-13 – Robert Ross:** Rezone approximately 0.5 acre of PIN 022-0613-3621-000 (30.001 Acres) to add it to an adjoining A-3 zoned lot at **W7531 CTH C** in the Town of Oakland.

Petitioner: Robert Ross from 950 Dogwood Trail in Franklin Lakes, NJ was present. Ross stated that his brother currently lives at the residence at W7531 CTH C. Ross explained the history of the property and stated that it has been in his family since 1940. He explained that after the lot was divided a building was constructed along the lot line because the survey markers were destroyed while bringing in large amounts of fill; they were not present at the time of construction. They would like to change the lot line to have the shed be on the W7531 CTH C property.

Comments in Favor: None

Comments Opposed: None

Questions from the Committee: None

Town Response: Klotz read Town response into the record. They had no objection.

Staff Report: Staff report given by Robert Klotz and now on file in the Zoning Department. Klotz stated that a Zoning/Land Use permit was not found for the structure and would need a permit issued by the department.

Steve Nass arrives at 7:22 pm.

### **CONDITIONAL USE PERMIT APPLICATIONS**

**CU1748-13 – Jasen Wendt:** Conditional use to sanction an existing 1,200 square foot storage structure and allow a new 900 foot storage structure in a Residential R-2 zone at **N8894 River Road** in the Town of Watertown, on PIN 032-0815-1411-001 (3.26 Acres).

Petitioner: Jim Wendt from W2725 Rock River Paradise Rd. was present for the petitioner Jasen Wendt. Wendt explained that his son would like to replace an existing shed with a larger structure. Wendt stated that this is storage for only personal items and his son works for a construction company but currently does not have a garage. He stated that this will be for personal use only.

Comments in Favor: None

Comments Opposed: Diane Stanczak at N8878 River Rd stated that she was not in opposition to Wendt having a garage structure but had some concerns about the heating of the structure. She would not like to have the structure be heated by a wood burning stove and explained that she has medical conditions that would be affected by this type of heating.

Klotz explained that the County does not regulate wood burning stoves and any property owner could put one in at any time without permission from the County.

Patrick Stanczak at N8878 River Rd stated that he also has concerns about heating with a wood burning stove. In addition, he was concerned that this may turn into a business operation.

Town Response: Klotz read Town response into the record. They had no objection.

Staff Report: Staff report given by Robert Klotz and now on file in the Zoning Department. Klotz asked the petitioner the type of equipment that will be stored and the profession of the petitioner.

**CU1749-13 – Kathryn A. Dankert:** Conditional use to allow an extensive on-site storage structure in a Residential R-1 zone. The site is at **W1229 South Shore Drive** in the Town of Palmyra, on PIN 024-0516-2734-025 (0.796 Acre).

Petitioner: Mike Zariack at W1229 South Shore Drive who is representing Kathryn Dankert. They currently have a permit for a detached garage but would like to enlarge it by 10 feet to a total of 1060 square feet. He stated it would be used as garage storage.

Comments in Favor: None

Comments Opposed: None

Town Response: Larry Kau was present and stated that the Town of Palmyra did not have any objection to the petition.

Staff Report: Staff report given by Robert Klotz and now on file in the Zoning Department. Klotz stated that this structure could only be used for accessory residential storage.

**7. Adjourn**

Motion by Reese, seconded by Nass, to adjourn the public hearing at 7:34 p.m.

Don Reese, Secretary

Individuals requiring special accommodations for attendance at the meeting should contact the County Administrator at 920-674-7101 24 hours prior to the meeting so that appropriate arrangements can be made.

Land Information Office  
1301 Real Estate Description

Date Ran 8/21/2013  
Period 7  
Year 2013

Revenues

Acct Number	Description	Current Period Actual	Current Period Budget	YTD Actual	YTD Budget	Prorated Variance	Total Budget	Annual Remaining	Percentage Of Budget
									#DIV/0!
451006	REAL ESTATE DESCRIP CHARGES	(304.50)	(441.67)	(3,245.37)	(3,091.67)	(153.70)	(5,300.00)	(2,054.63)	61.23%
451008	REMOTE ACCESS FEES	(225.00)	(450.00)	(2,985.83)	(3,150.00)	164.17	(5,400.00)	(2,414.17)	55.29%
472011	OTHER GOVT LAND INFO CHARC	(106.86)	(375.00)	(1,806.51)	(2,625.00)	818.49	(4,500.00)	(2,693.49)	40.14%
<b>Totals</b>		<b>(636.36)</b>	<b>(1,266.67)</b>	<b>(8,037.71)</b>	<b>(8,866.67)</b>	<b>828.96</b>	<b>(15,200.00)</b>	<b>(7,162.29)</b>	<b>52.88%</b>

Expenditures

Acct Number	Description	Current Period Actual	Current Period Budget	YTD Actual	YTD Budget	Prorated Variance	Total Budget	Annual Remaining	Percentage Of Budget
									#DIV/0!
511110	SALARY-PERMANENT REGULAR	5,830.11	7,411.75	45,169.31	51,882.25	(6,712.94)	88,941.00	43,771.69	50.79%
511210	WAGES-REGULAR	6,553.14	9,174.46	52,382.77	64,221.21	(11,838.44)	110,093.50	57,710.73	47.58%
511310	WAGES-SICK LEAVE	565.83	-	4,133.81	-	4,133.81	-	(4,133.81)	#DIV/0!
511320	WAGES-VACATION PAY	3,120.08	-	8,794.94	-	8,794.94	-	(8,794.94)	#DIV/0!
511330	WAGES-LONGEVITY PAY	-	79.17	-	554.17	(554.17)	950.00	950.00	0.00%
511340	WAGES-HOLIDAY PAY	840.90	-	3,964.33	-	3,964.33	-	(3,964.33)	#DIV/0!
511350	WAGES-MISCELLANEOUS(COMP	-	-	416.91	-	416.91	-	(416.91)	#DIV/0!
512141	SOCIAL SECURITY	1,207.18	1,237.17	8,232.85	8,660.17	(427.32)	14,846.01	6,613.16	55.45%
512142	RETIREMENT (EMPLOYER)	1,123.89	1,104.10	7,637.71	7,728.70	(90.99)	13,249.20	5,611.49	57.65%
512144	HEALTH INSURANCE	4,800.51	4,448.92	31,053.55	31,142.42	(88.87)	53,387.00	22,333.45	58.17%
512145	LIFE INSURANCE	8.87	8.58	61.22	60.08	1.14	103.00	41.78	59.44%
512173	DENTAL INSURANCE	360.70	283.50	2,019.17	1,984.50	34.67	3,402.00	1,382.83	59.35%
531243	FURNITURE & FURNISHINGS	-	87.50	-	612.50	(612.50)	1,050.00	1,050.00	0.00%
531298	UNITED PARCEL SERVICE UPS	-	2.50	57.07	17.50	39.57	30.00	(27.07)	190.23%
531311	POSTAGE & BOX RENT	28.30	33.33	139.26	233.33	(94.07)	400.00	260.74	34.82%
531312	OFFICE SUPPLIES	76.89	125.00	1,389.35	875.00	514.35	1,500.00	110.65	92.62%
531313	PRINTING & DUPLICATING	-	16.67	-	116.67	(116.67)	200.00	200.00	0.00%
531314	SMALL ITEMS OF EQUIP	-	8.33	-	58.33	(58.33)	100.00	100.00	0.00%
531324	MEMBERSHIP DUES	-	5.00	60.00	35.00	25.00	60.00	-	100.00%
531351	GAS/DIESEL	-	2.08	-	14.58	(14.58)	25.00	25.00	0.00%
532325	REGISTRATION	240.00	81.67	1,040.00	571.67	468.33	980.00	(60.00)	106.12%
532332	MILEAGE	-	29.17	100.09	204.17	(104.08)	350.00	249.91	28.60%
532335	MEALS	-	5.00	14.76	35.00	(20.24)	60.00	45.24	24.60%
532336	LODGING	-	35.00	-	245.00	(245.00)	420.00	420.00	0.00%
533225	TELEPHONE & FAX	20.95	33.33	188.54	233.33	(44.79)	400.00	211.46	47.14%
535242	MAINTAIN MACHINERY & EQUIP	-	133.33	-	933.33	(933.33)	1,600.00	1,600.00	0.00%
571004	IP TELEPHONY ALLOCATION	39.73	40.17	278.11	281.17	(3.06)	482.00	203.89	57.70%
571005	DUPLICATING ALLOCATION	-	109.17	-	764.17	(764.17)	1,310.00	1,310.00	0.00%
571009	MIS PC GROUP ALLOCATION	1,502.27	1,740.92	10,469.39	12,186.42	(1,717.03)	20,891.00	10,421.61	50.11%
571010	MIS SYSTEMS GRP ALLOC(ISIS)	211.46	219.33	1,480.22	1,535.33	(55.11)	2,632.00	1,151.78	56.24%

591519 OTHER INSURANCE	87.38	90.92	612.11	636.42	(24.31)	1,091.00	478.89	56.11%
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<b>Totals</b>	<b>26,618.19</b>	<b>26,546.06</b>	<b>179,695.47</b>	<b>185,822.41</b>	<b>(6,126.94)</b>	<b>318,552.71</b>	<b>138,857.24</b>	<b>56.41%</b>
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Other Financing Sources (Uses)

Acct Number	Description	Current Period Actual	Current Period Budget	YTD Actual	YTD Budget	Prorated Variance	Total Budget	Annual Remaining	Percentage Of Budget
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<b>Totals</b>	-	-	-	-	-	-	-	-	#DIV/0!
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<b>Total Business Unit</b>	<b>25,981.83</b>	<b>25,279.39</b>	<b>171,657.76</b>	<b>176,955.75</b>	<b>(5,297.99)</b>	<b>303,352.71</b>	<b>131,694.95</b>	<b>56.59%</b>
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Land Information Office  
1302 Assessment of Property

Date Ran 8/21/2013  
Period 7  
Year 2013

Revenues

Acct Number	Description	Current Period Actual	Current Period Budget	YTD Actual	YTD Budget	Prorated Variance	Total Budget	Annual Remaining	Percentage Of Budget
									#DIV/0!
									#DIV/0!
<b>Totals</b>		-	-	-	-	-	-	-	#DIV/0!

Expenditures

Acct Number	Description	Current Period Actual	Current Period Budget	YTD Actual	YTD Budget	Prorated Variance	Total Budget	Annual Remaining	Percentage Of Budget
									#DIV/0!
531312	OFFICE SUPPLIES	-	266.67	151.25	1,866.67	(1,715.42)	3,200.00	3,048.75	4.73%
531313	PRINTING & DUPLICATING	-	37.50	-	262.50	(262.50)	450.00	450.00	0.00%
532156	BOARD MEMBER TRAINING	-	3.33	-	23.33	(23.33)	40.00	40.00	0.00%
532332	MILEAGE	-	3.33	-	23.33	(23.33)	40.00	40.00	0.00%
535242	MAINTAIN MACHINERY & EQUIP	-	62.50	750.00	437.50	312.50	750.00	-	100.00%
571005	DUPLICATING ALLOCATION	144.42	147.50	1,010.95	1,032.50	(21.55)	1,770.00	759.05	57.12%
<b>Totals</b>		144.42	520.83	1,912.20	3,645.83	(1,733.63)	6,250.00	4,337.80	30.60%

Other Financing Sources (Uses)

Acct Number	Description	Current Period Actual	Current Period Budget	YTD Actual	YTD Budget	Prorated Variance	Total Budget	Annual Remaining	Percentage Of Budget
									#DIV/0!
									#DIV/0!
<b>Totals</b>		-	-	-	-	-	-	-	#DIV/0!
<b>Total Business Unit</b>		144.42	520.83	1,912.20	3,645.83	(1,733.63)	6,250.00	4,337.80	30.60%

Land Information Office  
1303 Land Information

Date Ran 8/21/2013  
Period 7  
Year 2013

Revenues

Acct Number	Description	Current Period Actual	Current Period Budget	YTD Actual	YTD Budget	Prorated Variance	Total Budget	Annual Remaining	Percentage Of Budget
									#DIV/0!
421001	STATE AID	-	(25.00)	-	(175.00)	175.00	(300.00)	(300.00)	0.00%
451008	REMOTE ACCESS FEES	(397.50)	(810.00)	(5,268.67)	(5,670.00)	401.33	(9,720.00)	(4,451.33)	54.20%
451305	LAND INFO/DEEDS FEE	(8,514.00)	(8,500.00)	(56,268.00)	(59,500.00)	3,232.00	(102,000.00)	(45,732.00)	55.16%
474018	DEPT LAND OFFICE FEES	-	-	(12.00)	-	(12.00)	-	12.00	#DIV/0!
<b>Totals</b>		<b>(8,911.50)</b>	<b>(9,335.00)</b>	<b>(61,548.67)</b>	<b>(65,345.00)</b>	<b>3,796.33</b>	<b>(112,020.00)</b>	<b>(50,471.33)</b>	<b>54.94%</b>

Expenditures

Acct Number	Description	Current Period Actual	Current Period Budget	YTD Actual	YTD Budget	Prorated Variance	Total Budget	Annual Remaining	Percentage Of Budget
									#DIV/0!
514151	PER DIEM	-	18.33	-	128.33	(128.33)	220.00	220.00	0.00%
521219	OTHER PROFESSIONAL SERV	7,303.81	1,666.67	7,303.81	11,666.67	(4,362.86)	20,000.00	12,696.19	36.52%
521220	CONSULTANT	190.00	-	190.00	-	190.00	-	(190.00)	#DIV/0!
521296	COMPUTER SUPPORT	-	3,238.50	31,818.72	22,669.50	9,149.22	38,862.00	7,043.28	81.88%
531303	COMPUTER EQUIPMT & SOFTW	-	492.83	5,556.73	3,449.83	2,106.90	5,914.00	357.27	93.96%
531312	OFFICE SUPPLIES	1.70	-	372.19	-	372.19	-	(372.19)	#DIV/0!
531313	PRINTING & DUPLICATING	26.64	-	148.65	-	148.65	-	(148.65)	#DIV/0!
531324	MEMBERSHIP DUES	-	16.67	150.00	116.67	33.33	200.00	50.00	75.00%
532325	REGISTRATION	-	75.00	830.00	525.00	305.00	900.00	70.00	92.22%
532332	MILEAGE	-	16.67	240.70	116.67	124.03	200.00	(40.70)	120.35%
532335	MEALS	-	8.33	63.76	58.33	5.43	100.00	36.24	63.76%
532336	LODGING	-	46.67	420.00	326.67	93.33	560.00	140.00	75.00%
532339	OTHER TRAVEL & TOLLS	-	-	2.00	-	2.00	-	(2.00)	#DIV/0!
571005	DUPLICATING ALLOCATION	48.79	-	341.53	-	341.53	-	(341.53)	#DIV/0!
594813	CAP OFC EQUIP	-	742.50	-	5,197.50	(5,197.50)	8,910.00	8,910.00	0.00%
594819	CAP OTHER EQUIP	-	833.33	8,960.00	5,833.33	3,126.67	10,000.00	1,040.00	89.60%
594950	OPERATING RESERVE	-	4,132.50	-	28,927.50	(28,927.50)	49,590.00	49,590.00	0.00%
<b>Totals</b>		<b>7,570.94</b>	<b>11,288.00</b>	<b>56,398.09</b>	<b>79,016.00</b>	<b>(22,617.91)</b>	<b>135,456.00</b>	<b>79,057.91</b>	<b>41.64%</b>

Other Financing Sources (Uses)

Acct Number	Description	Current Period Actual	Current Period Budget	YTD Actual	YTD Budget	Prorated Variance	Total Budget	Annual Remaining	Percentage Of Budget
									#DIV/0!
691100	OPER REV ADJUST	-	1,575.83	-	11,030.83	(11,030.83)	18,910.00	18,910.00	0.00%
691200	CAP REV ADJUST	-	(1,575.83)	-	(11,030.83)	11,030.83	(18,910.00)	(18,910.00)	0.00%
<b>Totals</b>		<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>#DIV/0!</b>
<b>Total Business Unit</b>		<b>(1,340.56)</b>	<b>1,953.00</b>	<b>(5,150.58)</b>	<b>13,671.00</b>	<b>(18,821.58)</b>	<b>23,436.00</b>	<b>28,586.58</b>	<b>-21.98%</b>

Land Information Office  
1308 Public Access

Date Ran 8/21/2013  
Period 7  
Year 2013

Revenues

Acct Number	Description	Current Period Actual	Current Period Budget	YTD Actual	YTD Budget	Prorated Variance	Total Budget	Annual Remaining	Percentage Of Budget
									#DIV/0!
451305	LAND INFO/DEEDS FEE	(2,838.00)	(2,832.00)	(18,756.00)	(19,824.00)	1,068.00	(33,984.00)	(15,228.00)	55.19%
474019	DEPT PUBLIC ACCESS FEES	-	(1.33)	(4.00)	(9.33)	5.33	(16.00)	(12.00)	25.00%
<b>Totals</b>		<b>(2,838.00)</b>	<b>(2,833.33)</b>	<b>(18,760.00)</b>	<b>(19,833.33)</b>	<b>1,073.33</b>	<b>(34,000.00)</b>	<b>(15,240.00)</b>	<b>55.18%</b>

Expenditures

Acct Number	Description	Current Period Actual	Current Period Budget	YTD Actual	YTD Budget	Prorated Variance	Total Budget	Annual Remaining	Percentage Of Budget
									#DIV/0!
521219	OTHER PROFESSIONAL SERV	-	2,083.33	-	14,583.33	(14,583.33)	25,000.00	25,000.00	0.00%
521295	DATA CONVERSION	-	3,333.33	-	23,333.33	(23,333.33)	40,000.00	40,000.00	0.00%
521296	COMPUTER SUPPORT	-	241.67	-	1,691.67	(1,691.67)	2,900.00	2,900.00	0.00%
531303	COMPUTER EQUIPMT & SOFTW	-	165.83	2,406.00	1,160.83	1,245.17	1,990.00	(416.00)	120.90%
594818	CAP COMPUTER	-	1,416.67	17,665.00	9,916.67	7,748.33	17,000.00	(665.00)	103.91%
594950	OPERATING RESERVE	-	2,267.75	-	15,874.25	(15,874.25)	27,213.00	27,213.00	0.00%
<b>Totals</b>		<b>-</b>	<b>9,508.58</b>	<b>20,071.00</b>	<b>66,560.08</b>	<b>(46,489.08)</b>	<b>114,103.00</b>	<b>94,032.00</b>	<b>17.59%</b>

Other Financing Sources (Uses)

Acct Number	Description	Current Period Actual	Current Period Budget	YTD Actual	YTD Budget	Prorated Variance	Total Budget	Annual Remaining	Percentage Of Budget
									#DIV/0!
<b>Totals</b>		<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>#DIV/0!</b>
<b>Total Business Unit</b>		<b>(2,838.00)</b>	<b>6,675.25</b>	<b>1,311.00</b>	<b>46,726.75</b>	<b>(45,415.75)</b>	<b>80,103.00</b>	<b>78,792.00</b>	<b>1.64%</b>

Land Information Office  
1311 Surveyor

Date Ran 8/21/2013  
Period 7  
Year 2013

**Revenues**

Acct Number	Description	Current Period Actual	Current Period Budget	YTD Actual	YTD Budget	Prorated Variance	Total Budget	Annual Remaining	Percentage Of Budget
472007	MUNICIPAL OTHER CHARGES	-	(16.67)	-	(116.67)	116.67	(200.00)	(200.00)	#DIV/0! 0.00%
474130	PROPANE GAS SALE	-	(3,250.00)	-	(22,750.00)	22,750.00	(39,000.00)	(39,000.00)	0.00%
<b>Totals</b>		-	(3,266.67)	-	(22,866.67)	22,866.67	(39,200.00)	(39,200.00)	0.00%

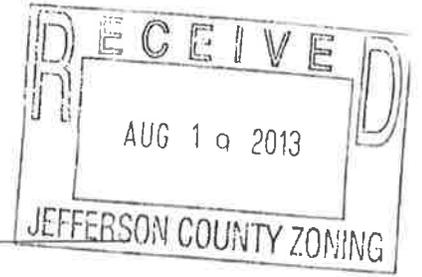
**Expenditures**

Acct Number	Description	Current Period Actual	Current Period Budget	YTD Actual	YTD Budget	Prorated Variance	Total Budget	Annual Remaining	Percentage Of Budget
511110	SALARY-PERMANENT REGULAR	4,278.97	-	26,707.70	-	26,707.70	-	(26,707.70)	#DIV/0! #DIV/0!
511210	WAGES-REGULAR	-	4,340.47	-	30,383.30	(30,383.30)	52,085.65	52,085.65	0.00%
511310	WAGES-SICK LEAVE	-	-	205.54	-	205.54	-	(205.54)	#DIV/0!
511320	WAGES-VACATION PAY	130.80	-	2,285.84	-	2,285.84	-	(2,285.84)	#DIV/0!
511340	WAGES-HOLIDAY PAY	199.31	-	784.79	-	784.79	-	(784.79)	#DIV/0!
511350	WAGES-MISCELLANEOUS(COMP)	-	-	320.33	-	320.33	-	(320.33)	#DIV/0!
512141	SOCIAL SECURITY	352.60	332.04	2,319.49	2,324.25	(4.76)	3,984.42	1,664.93	58.21%
512142	RETIREMENT (EMPLOYER)	306.49	260.52	2,016.26	1,823.66	192.60	3,126.27	1,110.01	64.49%
512145	LIFE INSURANCE	0.83	0.50	6.17	3.50	2.67	6.00	(0.17)	102.83%
512173	DENTAL INSURANCE	106.32	81.00	584.22	567.00	17.22	972.00	387.78	60.10%
531311	POSTAGE & BOX RENT	-	1.67	-	11.67	(11.67)	20.00	20.00	0.00%
531312	OFFICE SUPPLIES	3.46	8.33	35.66	58.33	(22.67)	100.00	64.34	35.66%
531313	PRINTING & DUPLICATING	1.85	3.33	21.87	23.33	(1.46)	40.00	18.13	54.68%
531314	SMALL ITEMS OF EQUIP	43.62	165.83	1,188.41	1,160.83	27.58	1,990.00	801.59	59.72%
531324	MEMBERSHIP DUES	-	19.17	270.00	134.17	135.83	230.00	(40.00)	117.39%
531349	OTHER OPERATING EXPENSES	-	58.33	-	408.33	(408.33)	700.00	700.00	0.00%
531351	GAS/DIESEL	82.46	91.67	329.56	641.67	(312.11)	1,100.00	770.44	29.96%
532325	REGISTRATION	-	22.92	240.00	160.42	79.58	275.00	35.00	87.27%
532332	MILEAGE	-	8.33	89.28	58.33	30.95	100.00	10.72	89.28%
532336	LODGING	-	17.50	140.00	122.50	17.50	210.00	70.00	66.67%
533225	TELEPHONE & FAX	5.71	9.17	40.59	64.17	(23.58)	110.00	69.41	36.90%
535242	MAINTAIN MACHINERY & EQUIP	-	100.00	951.42	700.00	251.42	1,200.00	248.58	79.29%
535352	VEHICLE PARTS & REPAIRS	-	4.17	-	29.17	(29.17)	50.00	50.00	0.00%
571004	IP TELEPHONY ALLOCATION	9.93	10.08	69.51	70.58	(1.07)	121.00	51.49	57.45%
571005	DUPLICATING ALLOCATION	9.70	5.50	67.89	38.50	29.39	66.00	(1.89)	102.86%
571009	MIS PC GROUP ALLOCATION	93.89	91.67	654.35	641.67	12.68	1,100.00	445.65	59.49%
571010	MIS SYSTEMS GRP ALLOC(ISIS)	60.42	62.67	422.94	438.67	(15.73)	752.00	329.06	56.24%
591519	OTHER INSURANCE	34.45	45.00	391.18	315.00	76.18	540.00	148.82	72.44%
594810	CAP EQUIP	-	1,833.33	20,440.00	12,833.33	7,606.67	22,000.00	1,560.00	92.91%
<b>Totals</b>		<b>5,720.81</b>	<b>7,573.20</b>	<b>60,583.00</b>	<b>53,012.36</b>	<b>7,570.64</b>	<b>90,878.34</b>	<b>30,295.34</b>	<b>66.66%</b>

**Other Financing Sources (Uses)**

Acct Number	Description	Current Period Actual	Current Period Budget	YTD Actual	YTD Budget	Prorated Variance	Total Budget	Annual Remaining	Percentage Of Budget
<b>Totals</b>		-	-	-	-	-	-	-	#DIV/0!
<b>Total Business Unit</b>		<b>5,720.81</b>	<b>4,306.53</b>	<b>60,583.00</b>	<b>30,145.70</b>	<b>30,437.30</b>	<b>51,678.34</b>	<b>(8,904.66)</b>	<b>117.23%</b>

#11



TOWN OF IXONIA

DATE: August 13, 2013
TO: Jefferson County Planning and Zoning Committee
RE: Jefferson County Zoning Petition Number

Filed By Sandy Creek LLC and American Transmission Company, (ATC); Parcel #012-0816-1912-002 W1225 Marietta Ave/N8233 CTH F, Ixonia

The Town of Ixonia, having considered the above described petition on which a public hearing was held the 13th day of August 12, 2013, finds IN FAVOR OF THE PETIONER FOR A TEMPORARY CONSTRUCTION SITE TO STORE MATERIALS AND SOME EQUIPEMTN WHILE WORK IS DONE ON NEARBY HIGH VOLTAGE ELECTRIC TRANSMISSION LINE FOR FOUR MONTHS.

[Multiple horizontal lines for additional text or notes]

Signed [Signature], Town Chair
Attest [Signature], Town Clerk



CORPORATE HEADQUARTERS: P.O. BOX 47 • WAUKESHA, WI 53187-0047  
262-506-6700 • Toll Free: 866-899-3204 • Fax: 262-506-6124 • www.atcllc.com

August 15, 2013

Jefferson County  
320 S Main St, Room 201  
Jefferson WI 53549

Re: Request by ATC for Temporary Outside Storage in Industrial Zone  
Zoning and Land Use Permit Application

**PIN:** 012-0816-2232-040

**Address:** W1225 Marietta Avenue

**Reason for application:** Request by ATC for Temporary Outside Storage in Industrial Zone

**Explanation of proposed operation:** ATC has a high voltage electric transmission line nearby that requires (15) pole-structures to be replaced. ATC needs a 1 acre-plus site to store materials and some equipment. The project is scheduled to take 1 month; however we have requested use of the outdoor storage site for 3 months (receipt of materials on storage site, then materials will immediately be moved to the line span locations for construction/installation followed by clean-up and demobilize from storage site – this is how we estimate 3 months)

**Structures needed (new and/or existing):** ATC will bring in a portable 20x8' Connex storage trailer, Small Office Trailer & Porta John

**Explanation of any needed land modifications:** None

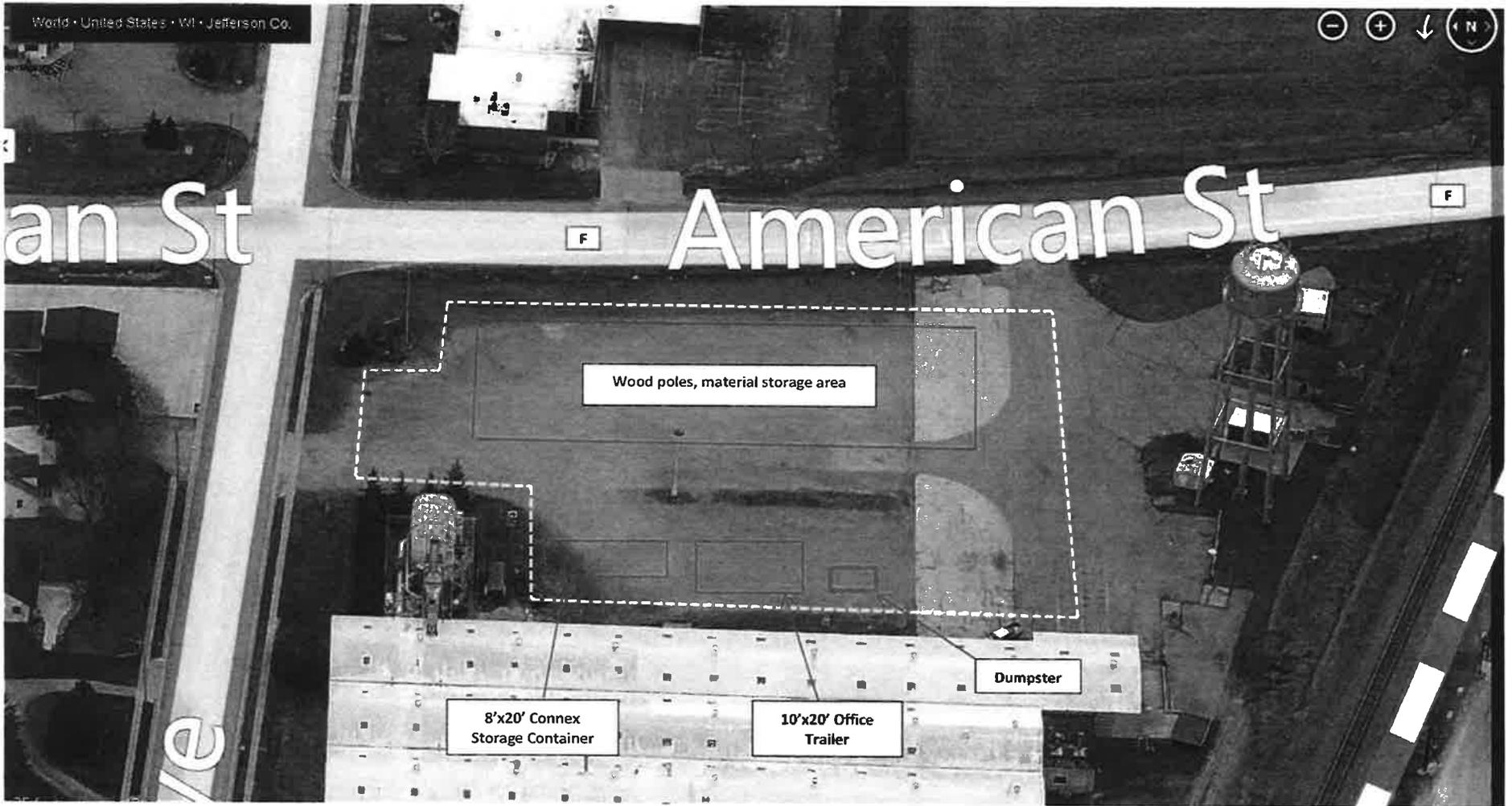
**Other pertinent information:** Business hours are Monday – Friday 7AM – 5PM. This is not a large man-power or material project therefore neither excessive employee or vehicular traffic situations will occur.

If you have any questions concerning this matter, please contact me at the above address or by calling (262) 424-4189.

Sincerely,

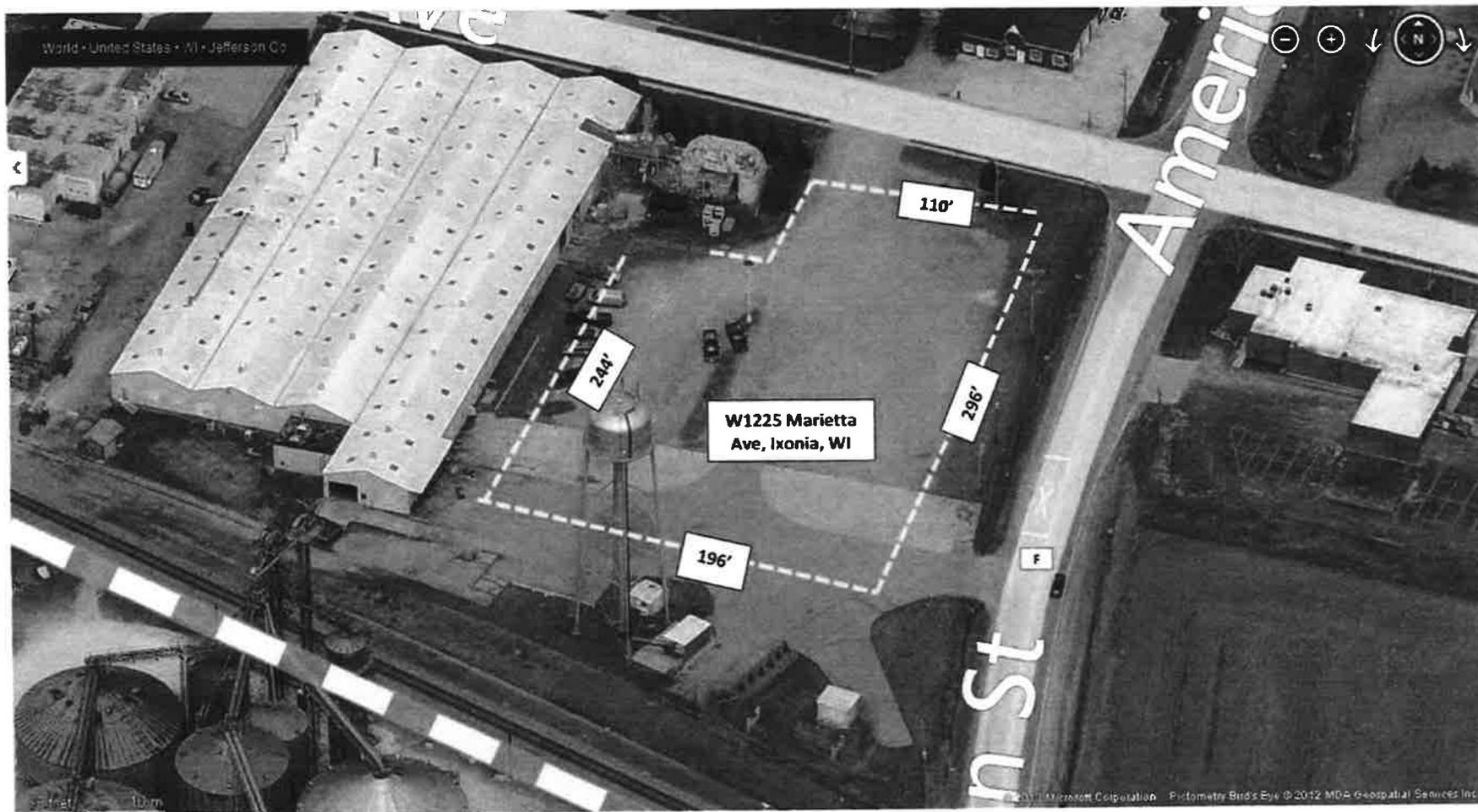
A handwritten signature in black ink that reads "Kim Stratton". The signature is written in a cursive, flowing style.

Kim Stratton  
Real Estate Representative



**ATC Proposed Material Storage Site**

**W1225 Marietta Avenue  
Ixonia, WI**



**Line 9042 Proposed-alternate laydown site – County Road F in Ixonia**

Location – Bing Map Link: <http://binged.it/10zF3Nt>

# **Equipment and Material Inventory for Laydown Site**

**(Approximately 1.5 to 2 acre site needed)**

## **Equipment**

- 1-Office trailer and generator
- 1-Port-a-let
- 1-Connex box (20'x8') for equipment and material
- 1-Manitex truck mounted crane
- 2-Bucket trucks
- 1-Digger/Derrick truck
- 1-Knuckle Boom truck
- 1-Dump Truck with trailer
- 1-Loader/Backhoe
- 1-Skid Steer
- 1-Dumpster
- 1-crew pickup truck
- 3-4 personal vehicles

## **Material**

- 15- H Frame Framing Kits (cross arms and bracing)
- 1-Lot of miscellaneous hardware
- 6-pellets of insulators (72 insulators per pallet)
- 50- crane mats



## ADDENDUM TO

Hoard's Dairyman Farm  
Monitoring Plan  
June 30 2010

### Section III. Additions to Monitoring Plan

1. Liquid waste added to the basin during the live test will not go above 12" below the available freeboard of the cofferdam currently surrounding the inlet pipe.

- i. Bladder plug will be monitored daily, visually and pressure checked to ensure it is intact and functioning properly. Visual evidence of leakage shall be reported to the LWCD immediately.
- ii. Permanent closure plan for the inlet pipe will be submitted by July 10 2010 for review and approval by the Land & Water Conservation Department or its agents
- iii. Implementation and inspection of closure will be completed before additional waste to the maximum operating level above the cofferdam will be authorized.

2. Monitoring following start of "live" test (putting liquid manure in the manure storage facility). Waste transfer method will be as set forth in the Larson E-mail of June 15 2010. Transfer leakage or spillage shall be reported at the time to the LWCD.

- i. The discharge from the under drain will be monitored five days each week by the farm staff for changes in odor and color. A log book will be kept containing the data set forth in II.1. of the April 2009 Monitoring Plan. If the odor and/or color indicate the possible presence of manure, then a water sample will be taken and analyzed. The odor or color change will immediately be reported to the LWCD. The flow rate will be measured and recorded at the time the sample is taken.
- ii. From June 2010 through October 1, 2010, water samples from the under drain will be taken weekly and analyzed by a lab. The flow rate will be measured and recorded at the time of each sampling.
- iii. For purposes of establishing baseline values, water samples will be taken from a known seepage area (northeast corner of storage perimeter), flow rate permitting, and from the interceptor pipe discharge before the live test begins and monthly through October 1, 2010 (5 samples at each point). Flow rates for the interceptor pipe will be measured and recorded at the time of each sampling.
- iv. Hoard's will direct its laboratory in writing (with a copy to LWCD) to submit test results from water samples referred to in Items 2. i., ii., iii., v., 3ii and 4ii, directly to the Land and Water Conservation Department.
- v. Hoard's Dairyman Farm will sample the water from the dairy's domestic wells on the farm before more manure is put into the pit and will provide the results to the Land and Water Conservation Department. In addition, all test results associated with the Milk Quality Permit since April 2009 will be submitted to the Land and Water Conservation Department as previously required by the April 2009 Monitoring Plan.

3. Evaluation of water sample test results and evidence of leakage.
  - i. The water quality parameters and values that will be used as the base sample to compare the 1<sup>st</sup> water sample taken in Item 2.ii. will be the following data from May 07, 2010:
    - Ammonia as N, 18 mg/l and 68.13 mg/min
    - BOD<sub>5</sub>, 8.6 mg/l and 32.5 mg/min
    - Chloride, 57 mg/l and 215.75 mg/min
    - Total Phosphorus, 0.41 mg/l and 1.55 mg/min
    - Total Kjeldahl Nitrogen, 13 mg/l and 49.21 mg/min
    - Total Suspended Solids
  - ii. Each subsequent sample result will be converted to mg/min using the associated flow rate.
  - iii. Sample data will be taken weekly, Monday's before noon (copy sent to LWCD). Each sample will be compared to the previous sample, the May 7 2010 sample data and the September 30,2009 data (including any samples taken due to changes in color or odor). If the results of the most recent test show a steady state or an increase in any parameter, another sample would be taken immediately and the results expedited.. The objective of continued under drain water sampling will be to document declining levels in BOD, TKN and Suspended Solids. The September 30, 2009 data will be used as a base line for comparison. By October 1 2010 , test results should be at or below results of the referenced September 30 2009 sample. If sample results are not equal to or less then the September 30 2009 sample by October 1 2010 then no more manure will be added to the manure storage facility and arrangements will be made to empty the basin as set forth in item # 4 below, Further storage/ nutrient management options will then need to be explored. A deadline extension maybe requested if data shows a steady decline in parameter levels and the pace of clearing is slower than anticipated.

Jefferson County reserves the right to determine leakage is present based on TKN levels below 16.28 mg/min, or data showing an increase above the 9/30/2009 values after a parameter has reached its 9/30/2009 value, or the presence of other manure generated pollutants.

4. Action upon potential leakage condition as determined by results in 3.iii.
  - i. Hoards will immediately cease putting more material into the storage structure.
  - ii. Samples from all three locations will be taken immediately and sent to the lab for expedited analysis. LWCD may request or perform additional sampling.
  - iii. The discharge from the outfall will be captured and returned to the storage facility until it is determined there is no leak or the storage facility is emptied.



## WHO'S RESPONSIBLE: FECAL SOURCE TRACKING WITH *BACTEROIDES*

**Katharine Field** (kate.field@orst.edu), Assistant Professor, Department of Microbiology, Oregon State University, 220 Nash Hall, Corvallis, Oregon 97331, Phone: (541) 737-1837; **T.J. Brodeur, L.K. Dick, M. Simonich, T.E. Jones, Jr. and C. Bracken**, Oregon State University; **A.E. Bernhard**, University of Washington

### Introduction

Standard methods of measuring fecal pollution in water do not distinguish its source. Non-point sources such as manure from dairy pastures, failing septic systems, and overloads at sewage treatment facilities may all contribute to fecal pollution problems. Coliforms, the traditional indicators of fecal pollution, have the advantage of being easy to grow, but coliform species are common to many hosts and thus do not identify the source of the pollution.

Several methods of discriminating the source of fecal pollution have been proposed (e.g. see 4, 5, 7, 8, 10), but each has drawbacks. Often the level of correct identification is unacceptably low, or the methods require lengthy collection and culturing steps and large numbers of reference strains for comparison.

Our purpose was to develop an alternative indicator for fecal source tracking, based on molecular genetic markers. Ideally, such a method would be quick and reliable, would not require culturing bacterial isolates, would not require a library of reference strains, would be flexible for easy field handling and storage of samples, and would require a minimum of specialized equipment.

We chose the fecal anaerobic genus *Bacteroides* as an indicator because this group, common to all warm-blooded animals, contains far more genetic diversity than coliform bacteria, and *Bacteroides* species have been reported to show host-specific distributions. Up to a third of fecal bacteria are in the *Bacteroides* group. Because these bacteria are restricted to gut habitats, their presence in water always indicates fecal pollution. Molecular detection circumvents the complexities of growing anaerobic bacteria.

### Methods

We initially targeted human and cow feces to identify *Bacteroides* genetic markers that would distinguish between human and cow fecal pollution in water. We chose to use the small-subunit ribosomal RNA gene (16S rDNA) as a marker, because this gene is widely used in evolutionary and ecological studies of bacteria, and many gene sequences are available through international databases.

Any test for fecal pollution must first increase the indicators to a level sufficient for detection. Coliforms tests do this by growing the bacteria. To amplify our genetic markers to a detectable level, we utilized the polymerase chain reaction (PCR), a method of making many copies of a target gene sequence in a test tube. In PCR, specific gene sequences are "selected" for amplification by the use of "primers" specific for the desired sequences.

Using available gene sequences, we designed PCR primers specific for *Bacteroides* 16S rDNA (2). We extracted DNAs from fresh human and cow feces collected from a variety of locales (2). By means of our *Bacteroides*-specific PCR primers, we amplified *Bacteroides* 16S rDNA gene fragments from the human and cow fecal DNAs. We separated the amplified gene fragments by

size, using LH-PCR (9) and T-RFLP (6). These two techniques use a DNA automated sequencer and GeneScan software to discriminate between gene fragment lengths. We looked for unique host-specific patterns or sizes among the amplified fragments.

Once we had identified PCR fragments specific to cow or human feces, we analyzed fresh- and saltwater samples from the watershed of the Tillamook Estuary, Oregon, to see if these *Bacteroides* markers were present. Fecal coliforms in these samples ranged from 0 to 120 CFU/100mls. We filtered the samples through 0.2 micron nucleopore filters and extracted DNA from the filters. We amplified *Bacteroides* rDNA with specific primers as above and analyzed the fragments using LH-PCR and T-RFLP.

To verify the identities of the genetic markers, we constructed 16S rDNA clone libraries from cow and human fecal DNAs and Tillamook Bay water samples using *Bacteroides*-specific primers. We screened 192 clones from each host and sequenced clones that had the LH-PCR or T-RFLP pattern of interest. We also constructed *Bacteroides* rDNA clone libraries from Tillamook Bay water samples (3). We analyzed the resulting gene sequences and constructed phylogenetic trees.

To develop a PCR assay for identifying sources of fecal bacteria in water, we designed primers specific for each of the unique phylogenetic groups of sequences we identified (3). We established specificity and optimal annealing temperatures for all primers using plasmid DNAs from target and closely related non-target sequences as well as *Bacteroides* DNA from cultures. Specificity of the primers was further tested by amplifying fecal DNAs from target hosts and other animal species.

We tested the sensitivity of our host-specific primers using serial dilutions of cow feces or raw sewage. DNAs from each dilution were tested for the markers by PCR. We measured fecal coliforms in each dilution according to standard methods (1).

## Results

We identified several *Bacteroides* 16S rDNA gene fragments that were unique to either cow or human fecal DNAs (2). LH-PCR identified a 276 base pair (bp) cow-specific fragment. T-RFLP analysis revealed cow-specific peaks at 227 and 222 bp and a 119 bp human-specific fragment.

We found six different clones in the library from human feces corresponding to the 119 bp human-specific marker. These sequences were related to, but not identical to, *B. vulgatus* or *B. uniformis*. We recovered seven clones from cow feces that produced the 227 bp size fragment. Sequence analysis of the clones corresponding to the 222 bp (T-RFLP) and the 276 bp (LH-PCR) cow-specific markers revealed that these markers represented the same sequences. We found four clones representing three different sequences that corresponded to these two markers. None of the cow-specific clones were closely related to any characterized microorganisms. They formed two distinct gene clusters within the genus *Bacteroides*.

The new PCR primers could reliably discriminate fecal pollution from cows and humans. Sensitivity of detection was similar to sensitivity of fecal coliform testing. However, we found that the cow fecal markers also occur in other ruminant species, although not in other hoofed mammals such as pigs and horses.

Our current research is focused on developing markers for more species. We have tested markers for pig, elk, dog and cat, and are developing markers for various wildlife species. All of the animal species that we have tested have contained previously-unknown *Bacteroides* strains,



Wisconsin State Laboratory of Hygiene  
 2601 Agriculture Drive, PO Box 7996  
 Madison, WI 53707-7996  
 (800)442-4618 - FAX (608)224-6213  
 http://www.slh.wisc.edu

# Laboratory Report

D.F. Kurtycz, M.D., Medical Director - Charles D. Brokopp, Dr.P.H., Director

Environmental Health Division

WDNR LAB ID: 113133790

NELAP LAB ID: E37658

EPA LAB ID: WI00007

WI DATCP ID: 105-415

**WSLH Sample: 86608001**

Report To:

MARK WATKINS  
 320 SOUTH MAIN STREET  
 JEFFERSON, WI 53549

Invoice To:

MARK WATKINS  
 320 SOUTH MAIN STREET  
 JEFFERSON, WI 53549

Customer ID: 337453

Collection Date: 7/19/2013 10:30:00 AM

Owner: , ,

Unique Well #: NA

Well Construction:

County:

Driller or Pump Installers License #:

Sampling Location: OUTLET PIPE

N2856 STH 89

FT ATKINSON, WI

Sampling Point:

Collected By: JOE STRUPP

Well Completion Date:

Date Received: 7/19/2013

Date Reported: 7/24/2013

Sample Reason:

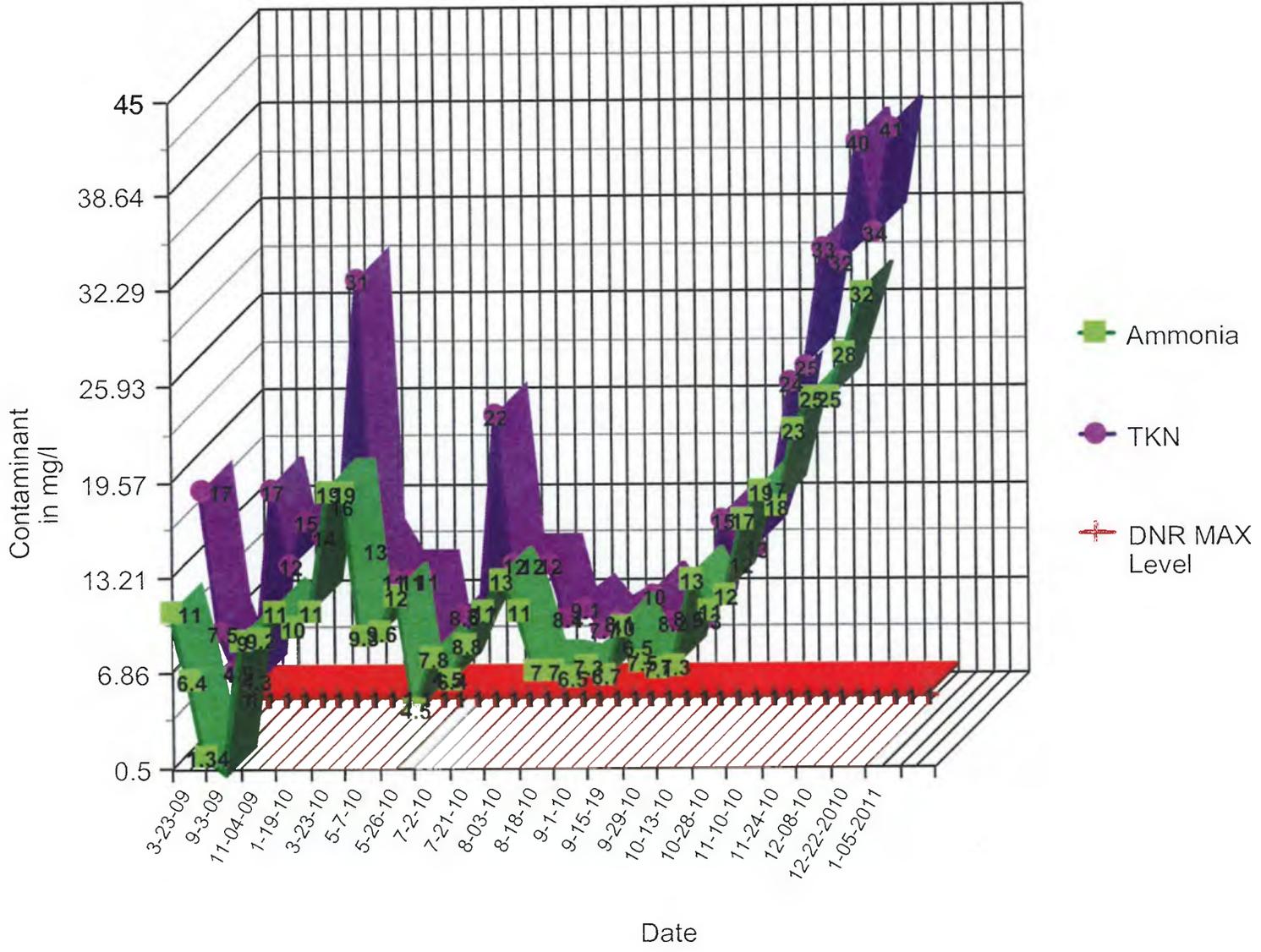
## Sample Comments

Analyzed past the 2 days holding time: Method Haugland etal, J.Wtr&Hlth2008 analyzed on 07/24/13 0800

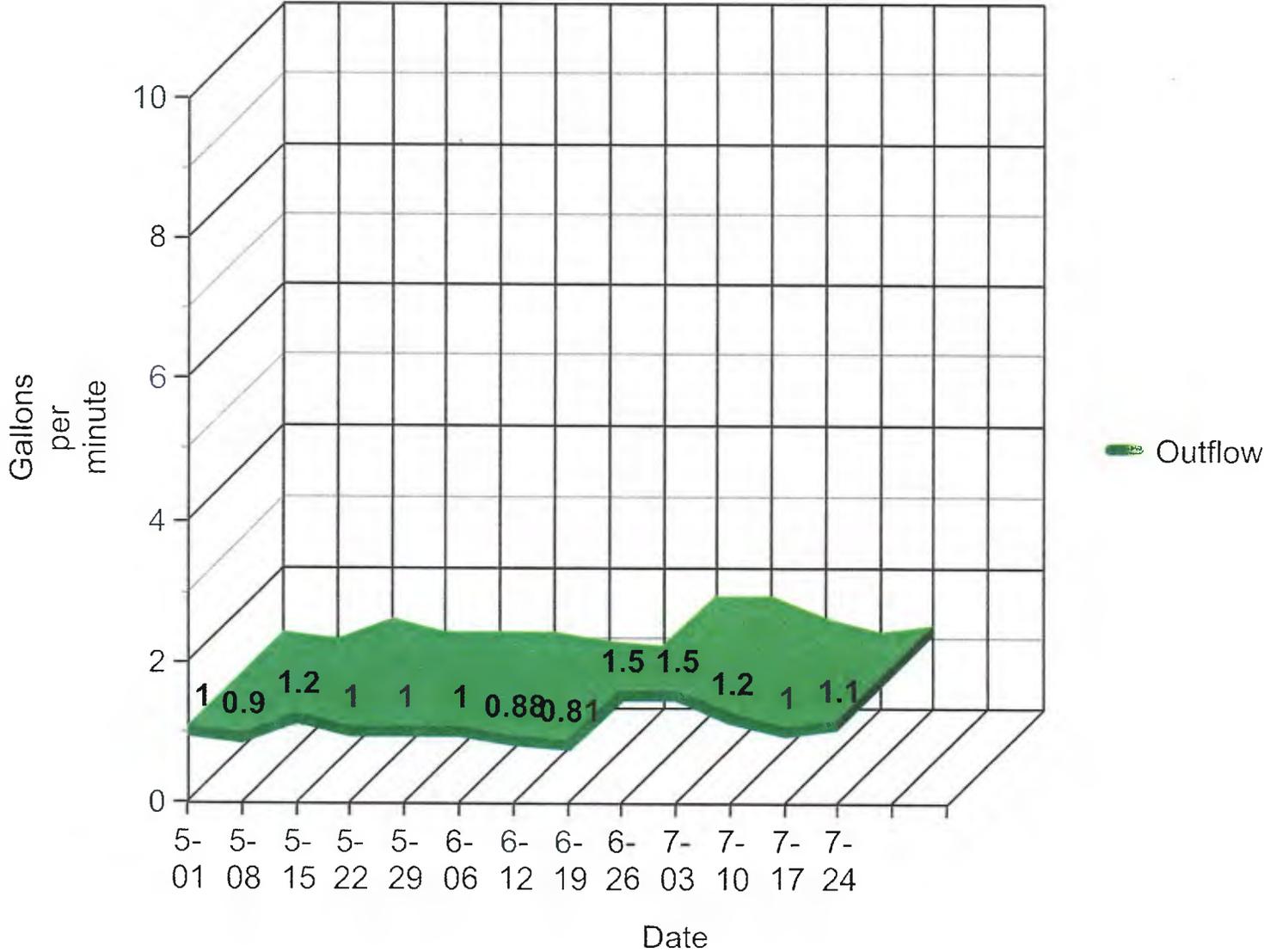
## Microbiology

Analyte	Analysis Method	Result	Units	LOD	LOQ	RL
Prep Date 07/24/13	Analysis 07/24/13					
Total Bacteroides species	Layton etal, AppEnvMic 72(6)	2300000	Gene	1	1	1
Human Bacteroides species	Layton etal, AppEnvMic 72(6)	140000	Gene	1	1	1
<b>Bovine Bacteroides species</b>	Layton etal, AppEnvMic 72(6)	22000000	Gene	1	1	1
Prep Date 07/19/13	Analysis 07/20/13					
E. Coli	SM9223BMPN	35	MPN/100 mL	1	1	

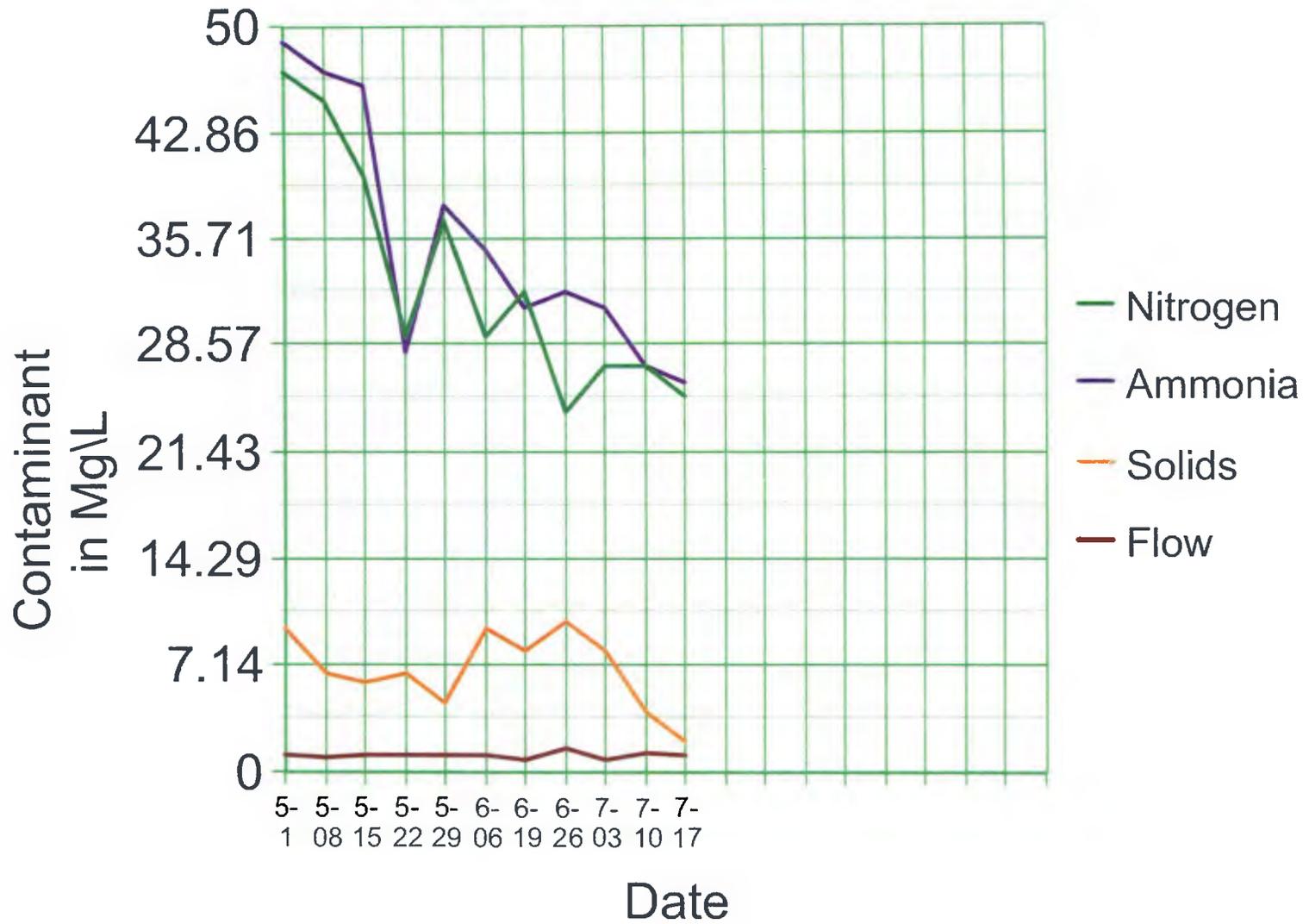
Contaminant Levels in Groundwater Flow



# Ground Water Outflow



# Contaminant Levels in Out Flow





# Mattress Recycling Event

Jefferson County Fair Park

503 N. Jackson Avenue – Jefferson – Gate 1

**Saturday, October 12, 2013 8 am - Noon**

*Drop off your  
mattress or box spring for recycling!*

**\$15 per piece**

Pay with cash, check or credit card  
(*Visa, MasterCard, Discover – No American Express*)



920-674-7430

sharoneh@jeffersoncountywi.gov

[www.jeffersoncountywi.gov/cleansweep](http://www.jeffersoncountywi.gov/cleansweep)  
[www.midwestmattressrecovery.com](http://www.midwestmattressrecovery.com)



920-261-1999

kkopplin@mattressrecovery.com