

Delta Charter Township



2011

Year End Report

April 16, 2012

Accounting /Treasurer Department

2011 Accomplishments

- Recipient of the GFOA Distinguished Budget Award for the 2011 Budget.
- Eliminated automatic mailing of tax payment receipts, saving the township \$3,500 in postage costs.
- Instituted an email utility bill option for utility customers. Currently have 600 customers signed up, saving \$4,800 per year in printing and mailing cost.
- Fully integrated new Utility Billing radio read system for meter reading. This included installing a training staff on new meter reading software, and integrating with our existing Utility Billing program. To date, over 2,500 radio read units have been installed and are transmitting monthly reads. New software has allowed us to monitor leak detection and high or abnormal usage.
- Successfully sold several surplus property items, including vehicles, computers, and many different items from the fire department.
- Back office check scanning procedures were implemented, saving in armored car service costs, and ensuring checks are deposited in township accounts up to three days faster than they used to be.
- Increased delinquent personal property tax collection efforts, resulting in additional tax collections. Received board approval to represent the township in small claims court for the purposes of delinquent tax collection in 2011.
- Finance Director taught a 4 hour municipal budgeting class to over 100 students for the Michigan Municipal Treasurers' Association. Feedback from students was extremely positive.
- Audit costs were reduced 15% due to the accounting staff preparing all audit work papers for annual financial statement audit.
- Successfully managed township investments, with annual return near 1.5%, which is significantly greater than the benchmark of the two year treasury note.
- Waited on over 21,000 customers at our counter. Several positive comments from customers relating to customer service and "going the extra mile" were received by the Finance Director.
- Printing and mailing of monthly utility bills was outsourced, saving 15% on total printing/ mailing cost, and saving several hours of staff time.\
- Finance Director led the Employee Benefit Committee, ultimately recommending and implementing a change in health insurance plan to a HDHP.
- New Township wide fuel purchasing program was implemented by the Finance Director, ultimately saving 22,000 miles, 400 staff hours, and 1,900 gallons of gas on an annual basis.

2011 Year End Report

Assessing Department

OVERVIEW

The Delta Township Assessing Department has completed yet another successful year! While the real estate market seems to be somewhat stabilizing, foreclosures are still impacting property values. This, coupled with the lack of sales in particular areas, still pose certain challenges to our Department when determining assessments. While negative media attention toward the current economy still raises questions from taxpayers, we know our proactive approach in educating our community in the process of property assessment and taxation has helped tremendously to put most of these concerns to rest.

Each employee is committed to providing the highest level of service to all citizens, taxpayers and others using the services of the department, as we strive to carry out our statutory function of providing fair and equitable property assessments. The quality of the property records and the availability of these records are under constant refinement through the efforts of all employees.

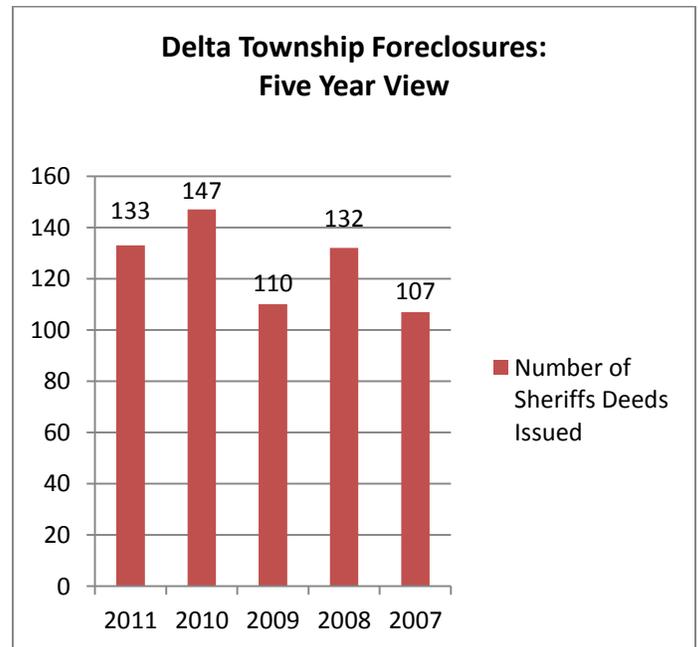
While much of the work within the department is prescribed by Michigan law and under a rigid tax calendar that remains the same from year-to-year, the Assessing Department continues to enhance the operation and delivery of services through the better use of technology, and by offering training and educational opportunities to all employees.

ASSESSING CONTRACT WITH CITY OF GRAND LEDGE

The Assessing Department continued to develop and cultivate our working relationship with the City of Grand Ledge. Having completed the reappraisal of residential properties, our next focus was to complete the same task for their commercial properties. This means throughout the course of the year our staff visited new and existing commercial properties to take pictures, verify measurements and update record data.

PREPARING 2011 ASSESSMENT ROLL

The main function of the Assessing Department is the preparation of the annual assessment roll. Work begins on the preparation of the roll each April as soon as the previous year is finalized, and ends once taxpayers are notified of their new property values for the upcoming year, followed by the annual Board of Review sessions held in March. The challenge in preparing the 2011 assessment roll was incorporating the declining housing market and the steady stream of foreclosures into achieving fair assessments. While the numbers of foreclosures have decreased slightly for 2011, they are unfortunately still an active part of the market.



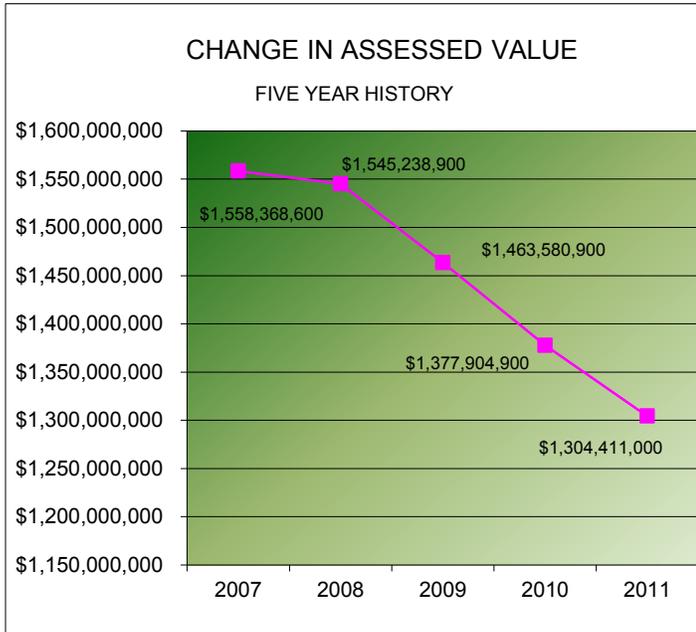
Once the six month redemption period has expired, the bank is free to resell these properties. These are the sales that make our job in setting values even more challenging; as the banks typically sell these properties for amounts far under value, these sales unfavorably influence the market.

2011 Year End Report

Assessing Department

ASSESSED VALUES

The following chart depicts a five year history of assessed value totals, and summarizes Delta's change in value over a five year period. The assessed value is to be 50% of the true cash (market) value.



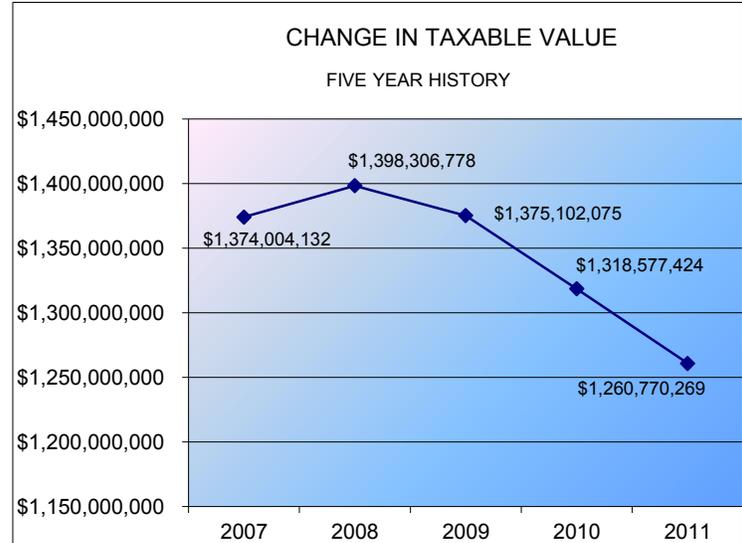
TAXABLE VALUE

The Assessing Department also calculates a second set of values on each property. Since the passage of Proposal A in 1994, the growth in taxable value on all property is limited to the lesser of the inflation rate or 5%, unless the property has sold or physically changed in some way. For new owners the assessed value becomes the taxable value. The taxable value is used as a base for the calculation of property tax bills.

The Consumer Price Index (rate of inflation) that was used to calculate the taxable value over the past 5 years was:

Year	Consumer Price Index
2007	3.70%
2008	2.30%
2009	4.40%
2010	-0.03%
2011	1.17%

The following chart depicts the change in taxable values over the last five years.



DELTA TOWNSHIP'S PERCENTAGE OF TOTAL VALUE

Based on the official 2011 Eaton County Equalization Report, Delta Township's percentage of total value compared to other assessment units within Eaton County is as follows:

Total Eaton County Assessed Value:
\$3,738,726,754
Total Delta Township Assessed Value:
\$1,304,411,000

Agricultural.....	0.92%
Residential.....	30.80%
Commercial.....	62.92%
Industrial.....	52.07%
Developmental.....	52.12%
Personal Property.....	46.57%

2011 Year End Report

Assessing Department

PREPARING 2011 SUMMER TAX ROLL

The Assessing Department has the responsibility of preparing the tax rolls and Treasurer’s Warrant, authorizing the collection of taxes. Approximately 13,471 taxable properties were included in the summer tax cycle for schools, county and state property tax levies. No actual property taxes for Delta Township are collected in the summer tax cycle.

\$35,044,094 in Ad-Valorem taxes
\$845,367 in IFT taxes

PREPARING 2011 WINTER TAX ROLL

The winter tax cycle spreads the balance of the school and county taxes and also collects the Delta Township levies for general operating purposes, firefighter/paramedic, and the debt levy for the new fire department building. Special assessments are also spread on the winter tax roll. Delta also spreads the drain assessments on this bill. The total levies are:

\$20,229,213 Ad-valorem taxes
\$2,732,659 Special Assessments
\$ 375,429 IFT taxes

TOTAL TAXES PAID BY DELTA TOWNSHIP TAXPAYERS

The amount of ad-valorem tax dollars paid by Delta Township property owners to each taxing authority are as follows:

Delta Township.....	\$7,603,755
Eaton County.....	\$9,747,349
Delta Dist. Library.....	\$1,284,842
Grand Ledge School District	\$9,128,933
Lansing School District.....	\$104,831
Holt School District.....	\$61,007
Waverly School District.....	\$9,671,115
Eaton I. S. D.....	\$2,552,788
Ingham I. S.D.....	\$3,722,661
Lansing Community College	\$4,907,998

WEBSITE PROPERTY INFORMATION

The Assessing Department utilizes the Delta Township website to make property information readily available to interested persons through a link with our software suppliers. This link makes “real time” assessing, tax, permit, and utility billing information readily available which allows better utilization of staff time for meeting other needs within the department. In 2011 BS & A Software recorded 152,706 “hits” to Delta Township online information.

CONTINUING EDUCATION

All Assessing Department employees are Certified Michigan Assessing Officers, a designation awarded by the State Assessors Board. In addition, all employees are certified from the State Tax Commission as Personal Property Examiners. To keep these certifications active all personnel are required to take a continuing educational class that is approved by the State Assessor’s Board in order to maintain their Assessor Certification. There were also periodic assessment administration meetings made available to all personnel to enhance their performance and interests.

ANNUAL BOARD OF REVIEW SESSIONS

The Board of Review is composed of three Township residents appointed by the Township Board to provide an independent review process for property owners with questions on the property values set by the Assessing Department during their annual March sessions.

At the annual March session, the Board of Review heard 181 cases to review the values set by this department.

- 117 Residential Appeals**
- 13 Commercial Appeals**
- 7 Industrial Appeals**
- 39 Personal Property Appeals**
- 5 Developmental Property Appeals**

2011 Year End Report

Assessing Department

The Board of Review in their July and December sessions is limited to correcting clerical errors and mutual mistakes of fact previously verified by the Assessor, and correcting Homeowner's Principal Residence Exemptions (P.R.E.).

In July 33 cases were reviewed.

25 corrected P.R.E. for 2009 - 2011
8 were property value calculations.

In December 45 cases were reviewed.

32 corrected P.R.E. for 2009 – 2011
13 corrected property calculation

PROCESSED PROPERTY TAX APPEALS

While the Assessing Department works diligently to prevent property tax appeals from escalating to the **Michigan Tax Tribunal** level, it is unrealistic to expect to eliminate property tax appeals altogether.

There are currently 57 active Michigan Tax Tribunal Dockets.

These Tribunal cases require a great deal of time and energy. Typically these Tribunal cases are handled "in-house," without contracting with attorneys to handle the cases. However, some appeals involve a legal issues rather than a value question, the Assessing Department then will utilize the services of the Township Attorney as this appeal progresses towards a resolution.

PROCESSED PROPERTY SALES

All information must be recorded and analyzed for each property transfer. As deeds are processed, names and addresses are updated and the details of the sales transaction are entered into the Assessing software for analysis of the real estate market. There are approximately 150 neighborhoods that we individually analyze to carry out the State requirement of assessing property uniformly at 50% of its true cash value. Each transaction typically may involve Principal Residence Exemption forms, Property Transfer Affidavits, deeds, and sales data analysis. Over 1,500 such

transactions were reviewed and processed in 2011.

OTHER MAJOR DEPARTMENT FUNCTIONS

Homeowner's Principal Residence Exemptions grant property tax reductions on owner occupied principal residences. Since state revenues are used to fund the tax savings of these programs, Michigan has been attempting to ensure that eligible exemptions are given and invalid claims are handled appropriately. The State of Michigan has put a renewed interest in verifying that ineligible exemptions are denied and that the property owners are billed for the additional taxes that may be due, including interest and penalties for discovered ineligible exemptions. The state's renewed emphasis in this area has required a great deal of additional time as we track down the "leads" provided to Delta on State Denial Lists. The Assessing Department continues to work closely with eligible property owners to assist them in receiving full benefits of this program.

APPRAISING NEW CONSTRUCTION

Appraisals require on site verification of building size, stage of construction, types of material, and other pertinent features of both the property and building for valuation purposes. Since the Assessing Department is required to value all properties as of tax day (December 31st); many projects require multiple visits over several years prior to completion. It is our mission to professionally and accurately appraise all new construction as it is added to the Assessment Roll. Department staff visited over 210 properties to verify structure changes.

DATA VERIFICATION

The mass appraisal technique used in the assessing field requires that the underlying property information be accurate to yield acceptable results. The Assessing Department has made a complete inspection on all Township properties. On an annual basis, additional neighborhoods are visited by Departmental Appraisers to check the validity

2011 Year End Report

Assessing Department

of our information. Newer developing neighborhoods are visited as the individual properties are constructed, with reviewing the neighborhood as an entirety once completely built out. As sales of property are analyzed each year, it sometimes becomes apparent that internal equity between properties in some neighborhoods is not as close as it should be. These neighborhoods receive priority in scheduling for re-inspection. In 2011 approximately 2,342 parcels were inspected, primarily in the City of Grand Ledge, to verify the accuracy of our data.

PERSONAL PROPERTY CANVAS

This canvas is used to inventory all assessable personal property as of December 31st of each year ensuring that all assessable property is accounted for and added to our assessment roll. Personal Property accounts for roughly 13% of the total assessed value for Delta Township.

MAINTAINING PERSONAL PROPERTY RECORDS

The main duty of the Assessing Department is to create an accurate assessment roll. In order to achieve this purpose, most of the department's activities are directed in one way or another at maintaining and improving the information gathered on each Delta Township property. As Delta Township continues to grow and the parcel count increases, the management of the assessment roll becomes more complex but the Department continues to handle the extra workload.

425 AREA SUPPORT

The Assessing Department works closely with the City of Lansing to ensure that the proper revenue sharing amounts are exchanged. For 2011 \$689,375 was paid to Delta as a result of revenue sharing from the 425 area

PART OF DELTA'S "TEAM"

The Assessing Department considers itself to be part of a larger "Delta Township Team" and works closely with other departments on items of common interests, or where we are able to

offer assistance. On a regular basis the department works closely with the Accounting Department on property tax related issues, the Planning Department on Land Divisions and site plans, the Engineering Department on parcel mapping, and the Building Department on building related issues. In addition, we work with the Clerk's Office on developing special assessment benefit amounts to apportion the annual cost on proposed street lighting projects, and with the Manager's Office regarding IFT exemption certificates and preparing property tax spreadsheets for various projects.

2011 Clerk's Office Year End Report

Elections

[Election workers are required to attend trainings in order to work elections. 3,500 voter registrations were purged and destroyed from 2000 – 2010. Delta Township has nearly 6,000 voters on the permanent absentee voter list.]

23,768 Registered Voters
6,062 Voter Registrations/Changes Processed
1 Election held in November
4,166 Total Voters All Elections
3,670 Absentee Voter Ballots Prepared
5 Election Worker and Chairman Classes Held
\$12,092.50 Election Inspector Costs

Board of Trustees

[9% increase in meetings and a 2% decrease in resolutions.]

35 Meetings Held
187 Resolutions Passed
14 Code of Ordinance/Zoning Ordinance Amendments Passed

Licenses

[flat numbers compared to 2010]

5 Vendor Licenses
1 Fireworks License
1 Amusement & Entertainment License

Passports

[215% increase in sales over the same # months in 2010]

426 Adult Passports Processed
88 Minor Passports Processed
339 Passport Pictures Taken
\$66,866.24 Total Fees Collected
\$53,281.24 Passport Fees Collected United States Department of State
\$9,517.00 Passport fees Collected
\$4,068.00 Passport Picture Fees Collected



Community Development Department
and Planning Commission

2011 ANNUAL REPORT

DELTA CHARTER TOWNSHIP

December, 2011

Township Board

Ken Fletcher, Supervisor
Mary Clark, Clerk
Howard Pizzo, Treasurer
Janice Cunningham, Trustee
Jeff Hicks, Trustee
Barb Poma, Trustee
Cara Spagnuolo, Trustee

Planning Commission

Robert McConnell, Chair
Patricia Gabriel, Vice Chair
Jim Schweitzer, Secretary
Andrea Cascarilla, Member
Kim Laforet, Member
Bob Lathrop, Member
Mike MacLaren, Member
Mark Mudry, Member
Alecia Ruswinckel, Member

Zoning Board of Appeals

Gary Reed, Chair
Merle Barnhart, Vice-Chair
David Arking, Member
Kim Laforet, Planning Commission Rep.
Jeff Hicks, Township Board Rep.
Sue Parr, Member

Planning Department Staff

Mark Graham, Director
Gary Bozek, Senior Planner
Jeff Huard, Assistant Planner

YEAR END SUMMARY

The following chart summarizes the various activities completed by the Planning Commission and Planning Department during the past five years.

ACTIVITY	2011	2010	2009	2008	2007
Rezoning (Cases heard as of 12/31/10)	4	3	1	1	0
Special Land Use Permits (Cases heard as of 12/31/10)	11	8	6	7	11
Site Plans (Including PUD's)	11	8	4	23	13
Tentative Preliminary Plats (PC Approval)	1	0	0	0	0

The following chart summarizes the residential construction activity in the Township during the past five years.

ACTIVITY	2011	2010	2009	2008	2007
Single Family Units (Site Built)	16	54	27	18	44
Manufactured Homes	0	5	1	3	1
Duplex/Triplex Units	0	0	0	0	0
Residential Condominium Buildings (Attached and Detached Units)	7	20	6	2	16
Mult. Family Units (Apartments and Townhomes)	0	0	0	0	0
TOTAL RESIDENTIAL UNITS BUILT (Single Family + Condominium + Multiple)	23	79	34	23	67

1. 2011 Planning Commission Activities

A. Capital Improvements Program

On September 12, 2011 the Planning Commission approved the 2012-2017 Delta Township Capital Improvements Program (CIP). The CIP was then transmitted to the Township Manager for his use in preparation of the 2012 budget. The CIP is an extension of the Comprehensive Plan identifying the public improvements that are necessary to meet the Township's needs.

The primary purpose of the CIP is to identify needed improvements, the level of service to which they should be designed, and the time frame for their implementation. The report addresses these issues and guides investments in public facilities necessary to provide an integrated system of public services for Township residents.

B. Rezoning

Chapter 25 of the Zoning Ordinance provides that the Planning Commission shall review and make a recommendation on all rezoning requests. The final decision on all rezoning requests is made by the Township Board. The table below summarizes the rezoning cases heard by the Planning Commission in 2011.

CASE NO.	APPLICANT	FROM	TO	LOCATION	SECTION	PLANNING COMM. RECC.	BOARD ACTION
2-11-3	DTN Management/ Verndale apts.	RD	RE	Cherbourg/ Montevideo	23	Approved 4/11/11	Approved 5/2/11
4-11-7	Reno's	RC	B1	Iris Street	13	Approved 5/23/11	Withdrawn 7/18/11
6-11-9	Buonodono	RB	B1	Mt.Hope Hwy/ Marcy Ave.	24	Approved 7/25/11	Approved 8/15/11
8-11-11	Rifkin Iron & Metal	I1	I2	Creyts Rd.	35	Approved 9/12/11	Approved 10/31/11

C. Special Land Use Permits

Chapter 18 of the Zoning Ordinance requires that the Planning Commission shall review and make a recommendation on all special land use permit requests. The final decision on all special land use permit requests is made by the Township Board. The table below summarizes the special land use permit cases heard by the Planning Commission in 2011.

CASE NO.	APPLICANT	REQUEST	ZONING	LOCATION	SEC.	PLANNING COMM. RECCOMENDATION	BOARD ACTION
12-10-21	Kari Jo Beckler	Group Day Care	RB	4808 W. St. Joe	13	Approved 1/10/11	Approved 1/18/11
12-10-22	Lansing Community College	Utility Training Facility	O	Sanders Road	23	Approved 1/24/11	Approved 2/7/11
12-10-23	Superior Asphalt	Asphalt Management	I2	Canal Road	33	Approved 1/24/11	Approved 2/7/11
2-11-1	Hope Lovell	Rehabilitative Services Facility	O, RD, B2	1020 & 1038 Eastbury Drive	10	Approved 2/28/11	Approved 3/7/11
2-11-2	Culver's Restaurant	Drive-Thru Restaurant	B2	W. Saginaw Hwy.	9	Approved 2/28/11	Approved 3/7/11
6-11-8	Rob Harrison	Car Wash	B1	6008 W. Saginaw Hwy.	11	Approved 7/25/11	Approved 8/15/11
6-11-10	Nathan Shipley	Vehicle Towing	I1	4214 W. Mt. Hope	24	Approved 7/25/11	Approved 8/15/11
8-11-12	Rifkin Iron & Metal	Recycling Operation	I2	4401 S. Creyts Rd.	35	Approved 9/12/11	Approved 10/3/11
9-11-13	Todd Nyquist	Landscape Operation	RB	11280 Nixon Road	17	Denied 10/24/11	Denied 11/7/11
10-11-14	Kelly Roberson	Group Day Care	RC	513 Hume Blvd.	13	Approved 11/14/11	Approved 12/5/11
11-11-15	Astera Credit Union	Drive-Thru Credit Union	B1	5615 W. Saginaw Hwy.	14	Approved 11/28/11	Approved 12/19/11

D. Subdivision Plat Reviews

The Delta Township Subdivision Regulations require the Planning Commission to review all Tentative Preliminary Plats and recommend their approval or denial to the Township Board. The table below summarizes the plat reviews conducted by the Planning Commission in 2011.

PLAT NAME	LOCATION/SECTION NO.	TENTATIVE PRELIMINARY PLAT	FINAL PRELIMINARY PLAT (BOARD)	FINAL PLAT (BOARD)
Pointe West #3	Saddlebrook, Corkery/Sec. 20	5/23/11		
Shadow Glen #2-6	Yellowstone Lane	1/24/11		

E. Site Plan Reviews

Chapter 19 and Section 19.2.0 of the Zoning Ordinance mandate that the Planning Commission review site plans if the subject parcel has a gross site area greater than (2) acres. Site Plans approved for parcels less than two (2) acres in size are approved by staff but are included here for ease of reference. The table below summarizes the site plan reviews conducted by the Planning Commission and staff in 2011.

NAME	LOCATION	SECTION	DATE P.C. APPROVED	DATE Z.A. APPROVED
Great Lakes Christian College	6211 W. Willow Hwy.	11	NA	10-28-2011
Liquid Web Parking Lot	2703 Ena Dr.	28	NA	10-6-2011
Bridgewater Interiors Building Expansion	2369 S. Canal	27	NA	04-27-2011
O'Reilly Auto Parts	4337 W. Saginaw	13	NA	07-01-2011
LCC Utility Training Center	Sanders Rd.	23	06-27-2011	08-04-2011
Meijer Compressor Room	Creyts Rd.	26	N/A	08-08-2011
Meijer Parking Lot Expansion	Millett Hwy.	26 & 35	N/A	05-13-2011
Horrocks Building Addition	7420 W. Saginaw	10	N/A	05-26-2011
Culver's Restaurant	8488 W. Saginaw Hwy.	9	N/A	07-29-2011

Site Plan Reviews (Continued)				
Soapy Joe's Car Wash	6008 W. Saginaw Hwy.	11	N/A	09-27-2011
Reno's West Patio Expansion	5001 W. Saginaw Hwy.	13	N/A	07-29-2011
Hampton Inn	900 N. Canal	10	11-28-11	
Superior Asphalt	Canal	33	04-11-11	

2. **ZONING BOARD OF APPEALS ACTIVITIES**

A. **Variances**

Chapter 23 of the Zoning Ordinance provides the Zoning Board of Appeals with the authority to decide applications for variances, appeals, and interpretations of the Township Zoning Ordinance. The table below summarizes the variance cases heard by the Zoning Board of Appeals in 2011.

CASE NO.	APPLICANT	ZONING	STREET NAME	VARIANCE	ZBA ACTION
V-11-1-2	Dent	RC	Waverly	Side Setback	Approved 3/8/11
	Delta Township			Procedural Rules	Approved 4/12/11
V-11-2-17	Mikesell	A2	Broadbent	Lot Size	Approved 06/14/11
V-11-3-13	Cronkright	O	Waverly	Front Setback	Approved 08/09/11
V-11-5-13	Sam's Store	B2	Waverly	Rear Setback	Approved 12/13/11

B. **Interpretations and Appeals**

The table below summarizes the interpretation and appeal cases heard by the Zoning Board of Appeals in 2010.

DATE	INQUIRER	INTERPRETATION/APPEAL
6/22/11	Reno's West Restaurant	The Zoning Board of Appeals determined that calculating the parking requirements for a restaurant should be based on the number of seats provided as well as the number of employees in the largest working shift. Further, the Zoning Board of Appeals determined that outdoor seating is seasonal in nature and thus a parking rate of 50% be applied to such seating areas.

3. STAFF ACTIVITIES

A. Lot Splits

The Township’s Subdivision regulations require review and approval from the Township Board for the request to split a platted (subdivision) lot. Land divisions (the splitting of unplatted land) are processed by the Township Assessing Department and are not included in this table. The table below summarizes only the lot split applications processed by Planning Department staff in 2011.

CASE NO.	APPLICANT	LOT #	SUBDIVISION	SECTION	BOARD ACTION

B. Zoning Ordinance Amendments

Chapter 25 of the Zoning Ordinance provides the Township Board with the authority to, from time to time, amend, modify, supplement or revise the provisions of the Township Zoning Ordinance. The Planning Commission shall review and make a recommendation on all Zoning Ordinance Amendment requests. The table below summarizes the Zoning Ordinance Amendment cases heard by the Planning Commission in 2010.

CASE NO.	AMENDMENT	P.C. RECOMMENDATION	BOARD ACTION
11-10-18	Processing of SLU Permits	Approved 1/10/11	Approved 2/7/11
11-10-19	Parking Requirements for Various Uses	Approved 1/10/11	Approved 2/7/11
11-10-20	Regulations for Banquet Halls	Approved 1/10/11	Approved 2/7/11
2-11-4	Definitions of Clinic & Nursery	Approved 4/11/11	
2-11-5	Parking Requirements of Office Buildings	Approved 4/11/11	
2-11-6	Rooftop Wind Energy Systems	Approved 4/11/44	

C. Code of Ordinances Amendments

The Code of Ordinances provides the Township Board with the authority to, from time to time, amend, modify, supplement or revise the provisions of the Code of Ordinances. The table below summarizes the Code of Ordinances Amendment cases prepared by the Planning Department in 2011.

CODE OF ORDINANCES AMENDMENT	BOARD ACTION
Medical Marijuana Ordinance	Approved 02/7/11

D. Other Staff Activities

Code & Ordinance Amendments

- Staff spent a significant amount of time reviewing Michigan’s Medical Marijuana Act, drafting an ordinance and providing presentations to the Township Board regarding the new law. On February 7, 2011 the Township Board adopted a Medical Marijuana Ordinance.
- A “package” of Zoning Ordinance amendments, identified as case nos. 11-10-18 to 20, was adopted by the Township Board on February 7th. The amendments pertained to the processing of special land use permits, parking for nail/beauty shops, carpet stores, and regulations for banquet halls and conference centers.
- Jeff Huard drafted Zoning Ordinance amendments pertaining to rooftop mounted wind energy systems. The amendments were adopted by the Township Board on June 20th.
- On May 2nd the Township Board adopted Zoning Ordinance Amendments pertaining to the definitions of “clinic” and “plant material nursery” which related to medical marijuana (being case no. 02-11-04). The Board also approved amendments permitting a decrease in the parking for office buildings over 50,000 sq. ft. from 5 per 1,000 sq. ft. to 3.3 per 1,000 sq. ft.
- Mark Graham reviewed the Township’s Code of Ordinances in conjunction with the Township Clerk’s Office conducting a comprehensive review of the various ordinances. Mr. Graham prepared a five page listing identifying sections of the Code of Ordinances which needed to be addressed.

Planning Activities

- The Planning Commission held 11 meetings during 2011. Staff was responsible for the preparation of staff reports, graphics and agendas.

- On January 10th and September 6th the Community Development Director gave a status report to the Township Board on the updating of the Township's Comprehensive Plan. An update on the Plan was also given to the Township Planning Commission on January 10th.
- Mark Graham partnered with planning consultant LAP in conducting a "Futuring Session" pertaining to an updating of the Township's Comprehensive Plan. The event was held on May 12th.
- Mark Graham continued his service on the Urban Service Boundaries Committee sponsored by the Tri-County Regional Planning Commission. Mr. Graham assisted Harmony Gmazel of TCRPC in giving a presentation on the USB Committee to the Board on August 8th and Mr. Graham drafted a resolution of support for the USB Committee which the Board adopted on September 19th.
- Gary Bozek was responsible for the preparation of the annual six year Capital Improvements Program mandated by Michigan's Planning Enabling Act. The Planning Commission approved the CIP on September 12th and the Township Board acknowledged receipt of the document on September 19th.

Transportation

- Gary Bozek represented Delta Township at TCRPC's CARTS (Capital Area Regional Transportation Study) Technical Committee meetings.
- Jeff Huard spent a significant amount of time meeting with MDOT officials and responding to citizen/business inquiries regarding the West Saginaw Resurfacing Project which was under construction in the summer of 2011. Mr. Huard participated in M-43 Info sessions held on February 15th and June 23rd.
- Gary Bozek represented the Township at a public hearing regarding the Michigan Avenue Extension conducted by the ECRC at Waverly Middle School on March 3, 2011.
- Mark Graham assisted the Township's consultant, Landscape Architects & Planners, in updating the Township's Non-Motorized Transportation Plan. Staff reviewed the existing Plan, suggested updates, extensively reviewed proposed improvements, and assisted in the public input session held on September 27th.

- Mark Graham assisted the ECRC in preparation of documents pertaining to the Environmental Assessment for the Michigan Avenue Extension Project which were approved by FHWA in 2011.
- Gary Bozek spent significant time working with the Township's Engineering Consultant (Gary Arnold) and various contractors on activities related to the construction of the East-West Pathway between Canal and Creyts Roads.
- Gary Bozek & Mark Graham assisted in the creation of the 2011 Sidewalk Construction Program which was approved by the Township Board on May 16th.

Sustainability

- Gary Bozek continued to represent Delta Township by attending meetings of TCRPC's Groundwater Technical Advisory Committee.
- Gary Bozek represented Delta Township by serving on a Phase II Storm Water Committee at TCRPC known as the GLRC Committee.

Support Activities

- Mark Graham spoke to the Delta/Waverly Rotary Club on January 11, 2011 and August 9th.
- Mark Graham spoke at the Delta/Waverly Kiwanis Club on March 10, 2011
- Mark Graham spoke at the Delta Lioness Club meeting on October 12th.
- Mark Graham attended the monthly Delta Side Business Associating meetings representing Delta Township and provided the group with monthly "business updates".
- Mark Graham attended a series of educational seminars at the Township Library as follows: January 13 = Community Success & The New Economy by the Michigan Municipal League, February 23 = The Greening of Mid-Michigan by TCRPC, and March 22 = The Bio-Economy & Our Regional Assets by the MSU Land Policy Institute.

- Mark Graham attended meetings of the Government Youth Council, provided a van tour of the Township and provided general assistance to the group.
- Mark Graham served on the Township Library's "Run for Reading" Committee which planned for the April 2nd event.
- Gary Bozek served on a committee at the LCC West Campus involved in planning for an energy demonstration project which will eventually result in the construction of a half dozen "demonstration" buildings on the campus.
- Mark Graham spoke to Professor VanRavensway's MSU Graduate Student Class regarding urban planning in suburban communities on April 8th.
- Mark Graham gave Quarterly Status Reports regarding the Community Development Department to the Township Board on June 13 and November 14.
- Mark Graham assisted the Parks & Recreation staff in conducting a public input session pertaining to an updating of the Township's Parks & Recreation Plan on October 6th.

Code Enforcement

- Mark Graham assisted the Township Board in the Delta Township v. Orosco litigation which pertained to the raising of chickens on a residentially zoned property.
- Staff spent a significant amount of time regarding property maintenance code violations on a foreclosed property at 1322 N. Canal all of which were eventually corrected.
- Mark Graham assisted in the enforcement of a ten year old court order mandating the extension of approximately 400 ft. of public water & sanitary sewer along the south side of West Saginaw Highway, west of Townsend Apartments.
- Mark Graham assisted the Township Attorney in legal actions, including a show cause hearing on June 16th, pertaining to the storage of more than 40 vehicles on a residentially zoned property at 2724 S. Waverly Road. The property was eventually brought into compliance following the Township's towing of several vehicles.
- Mark Graham assisted the Manager's Office in the transition from the use of private attorneys for code enforcement to reliance on the Eaton County's Prosecutor's Office.

- The Planning Department responded to citizen complaints and enforced the Zoning Ordinance. The number of violation letters issued annually follows:

<u>2011</u>	<u>2010</u>	<u>2009</u>	<u>2008</u>	<u>2007</u>	<u>2006</u>	<u>2005</u>	<u>2004</u>
38	33	48	45	35	44	63	65

Economic Development

- Mark Graham assisted the Township Manager’s Office by serving on a Selection Committee for the hiring of a new Economic Development Coordinator. The new Coordinator, Ed Reed, began his employment on March 28th with an office in the Community Development Department.
- Mark Graham attended an April 26th seminar at the DeWitt Township Hall entitled “Economic Growth Through Local Agriculture”.

Education

- The staff of the Community Development Department attended in-house training programs pertaining to use of the BS&A Software on June 23 and December 7th & 8th.
- The Community Development Department staff attended in-house ethics training on August 30th.
- Mark Graham gave a presentation at a seminar entitles “The Michigan Medical Marijuana Act – Two Years Later” sponsored by the Michigan Municipal League in Grand Rapids on October 4th.
- Mark Graham attended a half day educational conference presented by the Michigan Attorney General’s Office pertaining to Medical Marijuana in Grand Rapids on November 16th.

2011 ANNUAL REPORT
 BUILDING DIVISION
 DELTA TOWNSHIP COMMUNITY DEVELOPMENT DEPARTMENT

2011 Accomplishments

- Completed the second year of the current three year rental inspection cycle.
- Facilitated training sessions on June 23 and December 7th & 8th pertaining to new BS & A software
- Participated in numerous All-Trades Inspections with the Fire Department regarding the remodeling of existing businesses as well as new businesses
- Coordinated efforts to enforce the Township’s Snow Removal Ordinance
- Assisted in maintaining heating/cooling & plumbing systems in Township buildings
- Staff attended training & education sessions necessary to maintain required licenses
- Continued “Shared Time” arrangements with the Utilities Department pertaining to installation of remote water meter reads, electric vehicle charging stations, electrical wiring for sanitary sewer lift stations, and remodeling of Fire Station #1 offices

2011 Performance Indicators

<u>Permits</u>	<u>2010</u>	<u>2011</u>
Building Permit Value	\$17.3 Million	\$15.5 Million
Building Permits	286	260
Mechanical Permits	623	605
Plumbing Permits	265	240
Electrical Permits	393	468

<u>New Construction Permits</u>	<u>2010</u>	<u>2011</u>
Single Family Homes	54	16
Condominiums	20	7
Est. Value of Res. Addition/Remodel	\$754,040	\$762,935
Est. Value of New Commercial Permits	\$375,000	\$1,907,201
Est. Value of Comm. Addition/Remodel	\$1,253,495	\$2,997,112
Est. Value of New Industrial Permits	0	0
Est. Value of Ind. Addition/Remodel	\$2,487,873	\$4,821,720
<u>Plan Reviews</u>		
Plans Reviewed	45	73
Fire Investigations	N/A	13
Total # of Inspections	6,200	7,312
<u>Code Enforcement</u>		
Blight	82	98
Property Maintenance	8	14
Miscellaneous	28	61
Signs	50	45
Discovery of Unregistered Rentals	13	30

	<u>2010</u>	<u>2011</u>
Sidewalk Snow Complaints	9	35
Registered Rental Units	6,581	6,616

2012 Goals

- Continue staff training to become more proficient in updated BS & A software
- Determine how to proceed to address International Property Maintenance Code updates
- Assist the County Prosecutor's Office in enforcement of Township codes & ordinances
- Explore the possibility of issuing minor permits/payments on the Township's website
- Integration of the Building Division into the new Community Development Department
- Completion of the third and final year of the Rental Property Inspection Cycle

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2011 ANNUAL REPORT
ENGINEERING DIVISION
DELTA TOWNSHIP COMMUNITY DEVELOPMENT DEPARTMENT

2011 Accomplishments

- Completion of East-West Pathway. The Engineering Division prepared the construction plans, staked the route and performed daily inspections of contractor's work
- Prepared graphics related to updating the Township's Comprehensive Plan which include the 2011 Existing Land Use Map
- Summer Intern walked 16.2 miles of sidewalks assessing their condition, taking photos, and entering the data into a GIS format as an initial step for the Five Year Sidewalk Repair Program.
- Preparation for MDEQ Phase II Stormwater Audit
- Assisted the ECRC in the resurfacing of Wolf Run Drive, Pembroke Place, Countryside Drive and Westhaven Boulevard.
- Served as Township representative on the following committees: CARTS Committee (Capital Area Regional Transportation System), G-Tech Committee (Groundwater Technical Advisory Committee), and the GLRC Committee (Phase II Storm Water Committee).
- Staff assisted in the installation of 400 ft. of sanitary sewer and water main along West Saginaw Highway west of Nixon Road.
- Staff assisted the Eaton County Drain Commissioner's Office regarding the reconstruction of drains in the Gettysburg Farms & Gettysburg Estates Subdivisions.
- Responded to requests from citizens, businesses and Township staff with the production of more than 300 individual, electronically transmittable maps & diagrams.

- Assisted MDOT in locating & flagging utilities adjacent to the M-43 Resurfacing Project

<u>2011 Performance Indicators</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>
Miles of Sidewalks Added	3.48	.48	zero
Miles of Pathway Added	zero	4.25	1.00
Site Plans Reviewed	7	5	7
Engineering Project Hours	2,546	2,734	3,387
Abandoned Well Program	18	16	5

2012 Goals

- Continue negotiations to obtain right of way from five property owners for sidewalks near Delta Center School which are being funded by a Safe Routes to School Grant
- Township Engineer to complete updating of the Township's Engineering Standards which are 30+ years old
- Commence Year One of the Proposed Five Year Sidewalk Repair Program
- Assist in the preparation of a Transition Plan mandated by ADA for Township grounds & facilities.
- Prepare a stormwater management plan for all Township owned properties as mandated by the Phase II Stormwater Program administered by the DEQ
- Conduct the Annual Road Condition Survey and meet with ECRC representatives
- Assist consultant in the preparation of Comprehensive Plan graphics
- Review of the Township's website to provide better info regarding the Engineering Division. Consideration should be given to redesigning the website to reflect the new Community Development Department and their four divisions.

EATON COUNTY SHERIFF OFFICE DELTA PATROL ANNUAL REPORT

STATISTICS FOR 2011

Service Calls 14,480

- ◆ Felony reports 714
- ◆ Misdemeanor 3,031
- ◆ Non-Criminal 10,735

Total calls for service were up 0.97 percent as compared to 2010. Felony reports were down 2.86 percent as compared to 2010. Misdemeanors were down 23.56 percent. Non-criminal service calls were up 10.97 percent from 2010.

Accidents 1,729

- ◆ Property Damage accidents 1,528
- ◆ Personal Injury 196
- ◆ Fatal Accidents 5

Overall, accidents are down 18.71 percent as compared to 2010. Injury accidents are down 14.04 percent from 2010.

Arrests 1,966

- ◆ Felony Arrest 266
- ◆ Misdemeanor 1,549
- ◆ Civil Arrest 151

Total Arrests were down 0.2 percent as compared to 2010.

Traffic

- ◆ Stops 7,851
- ◆ Citations issued 5,093
- ◆ School Zone Stops 683

2011 ACCOMPLISHMENTS

Personnel

- ◆ The Delta Patrol is staffed by 1 Lieutenant, 5 Sergeants, 24 Deputies, 4 Detectives and 2 Clerks
- ◆ Lt. Campbell graduated from the Michigan State University School of Staff & Command in June. He was asked to join the instructor staff and help teach their First Line Supervisor course.
- ◆ Sgt. David Biergans and Deputy Bruce Yelvington retired in December. Deputy Ross Tyrell has been hired to fill one vacancy, and the hiring process is in progress for the second vacancy.

Equipment

- ◆ Two 2011 Chevy Impalas added to patrol fleet
- ◆ Three 2011 Harley Davidson Motorcycles utilized for special events and traffic enforcement.

Training

- ◆ Bi-weekly training at squad level
- ◆ Additional Evidence Technicians and Accident Investigators
- ◆ Homeland Security Training
- ◆ Schools
 - Continuous training with K-9 and Handlers
 - Leadership
 - Conducting Investigations
 - Patrol Response
 - Simunition Training
 - Sex Offender Registry Training
 - Annual Federal Commercial Motor Vehicle Inspection Training (please see attached WeighMaster report)

Community Relations

Monthly Meetings

- ◆ GRC
- ◆ Delta Business Associations
- ◆ Area Apartment Managers
- ◆ Loss Prevention

- ◆ Eaton County Child Abuse and Neglect Prevention Council
- ◆ Kids Network

Safety Events

- ◆ Wal-Mart Bike Rodeo and Shop with a Cop
- ◆ Target – National Night Out Community Safety Event in Sharp Park
- ◆ Total Health Chiropractic Kids Health Expo
- ◆ Tobacco compliance checks
- ◆ Alcohol compliance checks

Public Education

- ◆ Self-defense for women
- ◆ Home Alone classes for the youth
- ◆ DARE
- ◆ Health for Waverly and Grand Ledge Schools
- ◆ Government Classes at Waverly High School
- ◆ Crime Prevention
- ◆ Conflict Resolution for elementary school children
- ◆ Pedestrian Safety
- ◆ Fire Prevention Open House
- ◆ Child Safety Seat Inspections
- ◆ Lockdown drills at nine schools
- ◆ Bomb threat video with MSP and Grand Ledge PD
- ◆ Kiwanis Law Enforcement Career Academy
- ◆ Grand Ledge bus driver review

Community Events

- ◆ Touch A Truck
- ◆ Delta Rocks
- ◆ Fill a Cop Car- Help raise food for the needy
- ◆ Safety Patrol Picnic
- ◆ National Night Out Event – Sharp Park
- ◆ Mountain Bike Patrol
- ◆ Fireworks Show
- ◆ Shop with a Cop

- ◆ Neighborhood Watch
- ◆ Providing take home drug awareness kits
- ◆ Lansing Mall- Trunk or Treat
- ◆ Kindergarten Round-up with Waverly Schools
- ◆ Child Abuse Prevention pinwheel garden
- ◆ Freshman Focus at Waverly High School
- ◆ Safe Routes to Schools
- ◆ UAW Pride Ride for Motorcycle Safety
- ◆ Boy/Girl Scout tours and assistance with earning merit badges

Please see attached Dive Team, K-9, and Commercial Motor Vehicle Enforcement Reports

Report Contributors:

Lieutenant Jeff Campbell

Deputy Jon VanCore – Community Relations

Deputy Pete Walter – Dive Team

Deputy Dan Fillion – K-9

Deputy Doug Sharp – Commercial Motor Vehicle Enforcement

2011 K9 ACTIVITIES SUMMARY REPORT

Delta Township has been fortunate to have the services of two K9 teams since 2005. Deputy Dan Fillion's K9 partner Rusty is certified for Narcotics Detection. Deputy Tad Schwartz's K9 partner Koney is certified in Explosives Detection. Both dogs are also trained and certified in the areas of Tracking, Evidence Recovery, Criminal Apprehension, Obedience, Handler Protection, and Area/Building Searches. Koney, age 11, retired from active duty at the end of 2011. The Sheriff's Office is currently in the process of adding a new K9 team to take over for Koney.

TOTAL CANINE CALLS TAKEN (122)

ON DUTY CALLS TAKEN: (111)

CALLED IN ON OVERTIME: (11)

-DELTA OVERTIME CALLS: (6)

-COUNTY OVERTIME CALLS: (7)

CANINE USAGE (145)

AREA SEARCH (8)

ARTICLE SEARCH (1)

BUILDING & VEHICLE SEARCH (34)

EXPLOSIVE SEARCH (4)

NARCOTICS SEARCH (13)

K9DEMO/PUBLIC (10)

PERIMETER SECURITY (30)

SCHOOL SEARCH (6)

CASH & VEHICLE SEIZURES (\$20,761.00)

TRACKING (32)

SUCCESSFUL (6)

SUCCESSFUL/NOT LOCATED(9)

UNSUCCESSFUL (6)

CANCELED BEFORE ARRIVAL (16)

CALLS IN DELTA (77)

DISTRICT 1 (17)

DISTRICT 2 (22)

DISTRICT 3 (17)

DISTRICT 4 (21)

CALLS IN THE COUNTY (16)

BROOKFIEL TWP (1)

EATON RAPIDS TWP (2)

KALAMO TWP (2)

ONEIDA TWP (1)

POTTERVILLE (1)

SUNFIELD (1)

VERMONTVILLE TWP (2)

WALTON TWP (2)

WINDSOR TWP (4)

OTHER AGENCIES (29)

- CHILD PROTECTIVE SERVICES (1)
- CLINTON COUNTY SHERIFF'S OFFICE (2)
- DEPARTMENT OF HOMELAND SECURITY (1)
- EATON RAPIDS POLICE DEPARTMENT (2)
- GRAND LEDGE POLICE DEPARTMENT (1)
- GRAND RAPIDS POLICE SEPARTMENT (4)
- INGHAM COUNTY SHERIFF'S OFFICE (2)
- LANSING POLICE DEPARTMENT (10)
- LANSING TOWNSHIP POLICE DEPARTMENT (4)
- MIDLAND COUNTY SHERIFF'S OFFICE (2)

DIVE TEAM REPORT

Introduction

The Capitol Area Dive Team (CADT) is a regional team consisting of personnel from the Lansing Police and from the Ingham, Clinton, and Eaton County Sheriff Offices. The CADT has 20 members; 9 from the Lansing Police Department, 9 from the Ingham County Sheriff Office, and 2 from the Eaton County Sheriff Office. The CADT is supervised by Sgt. Joe Brown of the Lansing Police Department and Lt. Vern Elliot of the Ingham County Sheriff Office. The command liaison for Eaton County Sheriff Office is Capt. Jeff Warder. Deputy Pete Walter from the Delta Patrol currently serves on the Dive Team, and the process of filling a second ECSO vacancy on the dive team is currently ongoing.

Calls for Service in 2011

Evidence Dives = 8

Vehicles = 2

Body Search Calls = 10

Body Recoveries = 4

Rescue Calls = 10

Actual Rescues = 3

Equipment

The ECSO members of the team are outfitted with dry-suits, Sherwood regulators with dive computer, buoyancy control device, neoprene wet-suits, and insulated suits for cold weather/ice diving.

Training

The CADT trains once a month in the Grand River or local ponds and lakes. The team trains for body recoveries, evidence searches, swift water rescues, vehicle recoveries, and ice/cold weather rescues. The ECSO members of the dive team have been certified as open water divers and are continuing their education through Dive Rescue International.

Summary

The consolidation of the dive teams has been well accepted with the team members and the Eaton County Sheriff Office members continue to have a strong relationship with their fellow departments. It allows the department additional access to personnel in an emergency event, which helps with quicker response times and fewer call-backs of off-duty personnel which has reduced overtime. It has also saved the departments on equipment costs and training which has resulted in decreased manpower costs.

DELTA WEIGHMASTER ANNUAL REPORT

Deputy Sharp spent his first full year as the Delta Weighmaster in 2011, and was very active in Commercial Motor Vehicle enforcement.

Deputy Sharp conducted inspections and enforcement in an effort to bring a continued reduction in overall weight carried by gravel trains and other CMV's in Delta Township. Weight violations and truck equipment violations, such as defective brakes, unsecured loads and bald tires are things that Deputy Sharp looks for as he conducts inspections. Several local carriers have continued to contact him seeking on-site safety equipment reviews, and driver safety meetings, and Deputy Sharp continues to work with their safety directors to correct violations before their trucks hit the roadway, helping to bring them into compliance. Overall truck route violations have decreased as Deputy Sharp continues to contact company dispatchers and provide alternative routes around residential neighborhoods.

When a CMV is found to be operating unsafely on our roadways, a certified inspector is required to remove it from service. Violations include vehicles operating without effective brakes, unsecured loads, flat tires, non-working brake lights, broken steering and suspension parts and fatigued drivers. Each time you pass a shredded truck tire on the highway or see an item laying on the roadside, it came from a vehicle which if inspected would have been taken out of service until properly repaired. Part of the inspection involves the driver's training and alertness; numerous accidents each year are the result of the driver falling asleep behind the wheel or operating a vehicle for which they are not properly qualified to drive.

Proper inspections by CVSA inspectors can help prevent these accidents, which are often deadly when involving vehicles weighing between 80,000 and 160,000 pounds. In today's society each item you use or buy was delivered and shipped on our highways in CMV's. Studies show approximately 50 percent of accidents involving CMV's are the fault of the CMV fatigued driver or his/her faulty equipment. Inspections range from level I to level V. The difference is the time spent with each vehicle and the items looked at. A level I inspection includes a full inspection of all vehicle equipment, cargo, driver and all of the documents. Each inspector is required to complete 32 inspections annually and attend training updates to maintain certification. Deputy Sharp also attended available CMV training sessions in 2011, which included an annual CVSA update class relating to changes in CMV Inspections.

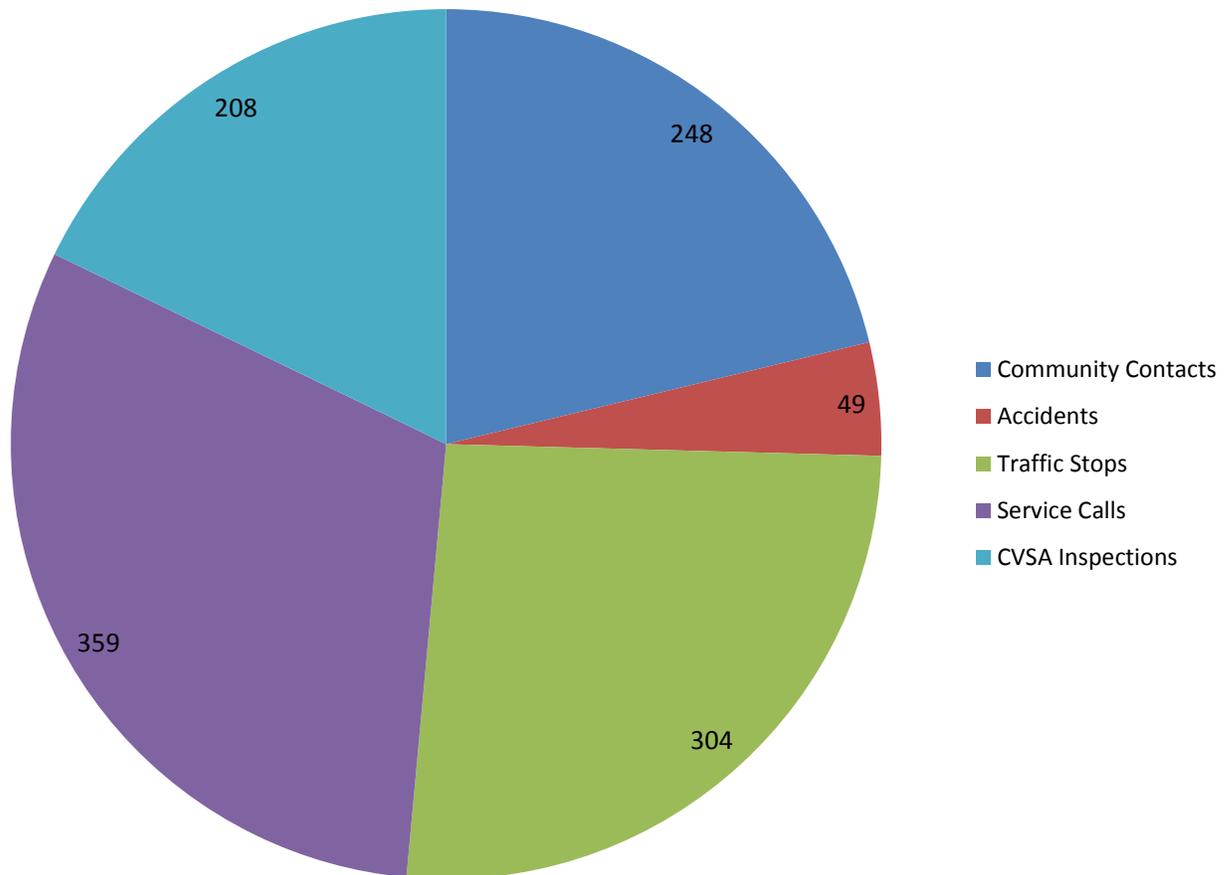
Deputy Sharp has also received additional training in Accident Investigation. After a crash involving a CMV, he is able to perform the necessary CVSA inspection as well as assist with the Accident Investigation understand the acceleration, braking and dynamics large trucks have before and during an accident.

Deputy Sharp continued maintain the Township infrastructure and to look closely at overweight trucks in 2011. A proactive approach was taken to communicate with industry representatives and local trucking company owners. Deputy Sharp has made himself available to answer questions and assist these companies with finding route around more fragile Class B routes and onto the expressway. This open communication accomplished two objectives. First, numerous suppliers who deliver products to and from Delta Township were contacted as their CMV's were found to be violating the Delta Township truck route ordinance. These companies were educated on the ordinance rather than simply being cited for the violation. Second, a reduction in the gross vehicle weight each CMV hauls through the Twp was noticed this year. Companies have begun to observe the weight limits for their vehicles and thereby helped to

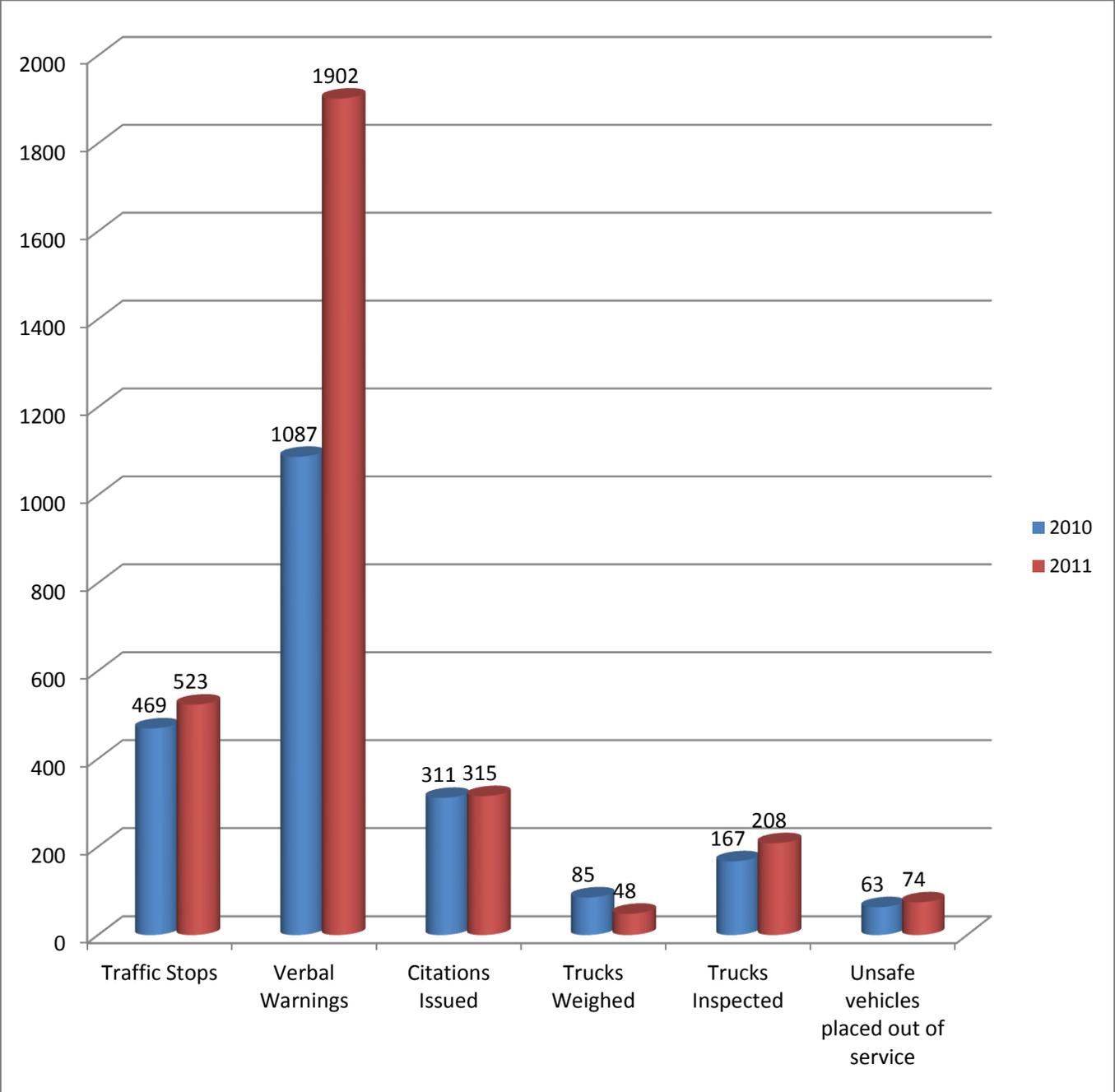
protect the Delta Twp roadway infrastructure. This can be observed in the number of vehicles weighed and the lower number of vehicles cited for weight violations.

Deputy Sharp will stay current on CMV laws and trends. This will allow him to fairly enforce trucking regulations, while helping ensure the safety of both the motoring public and our public roadway infrastructure. The Sheriff's Office values the Township's recognition and commitment to CMV safety. Please see the next page for a breakdown of activity in 2011 by Deputy Sharp.

2011 Service Time Breakdown - Weighmaster



2011 Traffic Data - Weighmaster



DELTA TOWNSHIP FIRE DEPARTMENT

This report is provided to the Board of Trustees and reflects fire department activities, important programs and projects that were undertaken during 2011. The annual report also provides statistical data regarding budget items, fire and EMS alarms, and income derived from the ambulance-billing program.

All goals and achievements of the fire department are reflected in the township's Strategic Plan. Goals 2, 7, and 8 are as follows:

Strategic Goal No. 2: Enhance Delta Township as a government that is proactive and aware of potential changes and opportunities regarding federal and state government relations.

Strategic Goal No. 7: Delta Township will provide a sense of personal security, peacefulness and harmony for people while they are living in their homes, working or traveling in Delta Township.

Strategic Goal No. 8: Delta Township shall continue to provide and ensure high quality services, utilities and facilities through long-term planning.

FIRE DEPARTMENT DATA

To date, the fire department has responded to a total of 4,504 fire and EMS responses. Of those alarms, 3,429 were EMS alarms and 1,103 were fire alarms. We had one fire-related fatality in April at the Hidden Pond Apartment Complex. The victim died of an apparent cardiac arrest while attempting to extinguish a small kitchen fire prior to our arrival.

Some of 2011's major fires included the following:





- April 7th: Kitchen fire in an apartment on Hidden Pond Drive; minor damage; fatality
- April 9th: Vacant house fire at Creyts Rd./Michigan Ave.; approximately \$20,000.00 damage
- July 9th: House Fire on Chris J Drive; approximately \$200,000.00 damage

FIRE PREVENTION ACCOMPLISHMENTS

Presentations and materials were given out to 2,164 Delta Township students from developmental kindergarten through the fourth grade.

Many fire prevention programs and tours of the township's fire stations were given to preschool and elementary school children who received instruction and materials on fire safety.

Emergency Evacuation Plans were reviewed and practiced at several Delta Township senior living centers and adult foster care homes.

Shift and public training was conducted on the following topics: fire suppression systems, fire alarm systems, preserving evidence, meth labs, and current arson trends.

FIRE INVESTIGATION

The Delta Township Fire Investigation Team responded to several calls requiring normal investigation such as citizen complaints, malfunctioning alarm systems, structure fires, car fires, etc.

Fire Investigators investigated seven fires; two of the fires were determined to be accidental in cause, two were undetermined, and three were determined to be arson-related or suspicious and are still open pending further investigation.

PHYSICAL FITNESS PROGRAM

Maintaining physical fitness is important for firefighters to reduce the potential for injury or sudden illness during fire suppression and EMS activities. Both Fire Station No. 1 and Fire Station No. 3 provide modern, well-maintained physical fitness equipment in workout rooms. More than 2,000 man-hours were recorded in the physical fitness logs during 2011.

FIRE INSPECTOR'S REPORT

Fire Inspector O'Brien conducted more than 443 hours of fire inspections including follow-up re-inspections; organized reports and upgraded business cards with new telephone numbers, addresses and contact person information. Many hours were spent with the Building Department Inspectors conducting hotel inspections. Numerous permits were issued for tents and fireworks sales in the township. Suppression shift personnel conducted 120 business visits for a full fire inspection as well as updating contact information, service Knox boxes and answering general fire prevention questions.

PLAN REVIEW

There were 38 plan reviews conducted for new construction sites as well as many building plan reviews.

MUTUAL AID AGREEMENTS

A total of ten communities surrounding Delta Township and in the greater Lansing area have Mutual Aid Agreements with Delta Township. In addition, five communities provide automatic aid during all structure fires. This mutual and automatic aid provision of responding to other jurisdictions and vice versa reflects the benefit of mutual aid agreements.

EMERGENCY MANAGEMENT REPORT

During 2011, several LEPT meetings were held in addition to emergency management training. These important activities give the Emergency Operations Center staff an opportunity to refresh their skills and to receive new updates and information regarding processes used during actual disaster events.

GRANT PROGRAMS

The Delta Township Fire Department received grant funds in the amount of \$210,865.00 in 2011; \$160,865.00 for 23 new SCBA units & 3 RIT packs, and \$50,000.00 from the State of Michigan Region I Department of Homeland Security for a CBRNE (Chemical, Biological, Radiological, Nuclear, and Explosive Event) response vehicle.

CHIEF'S REPORT

Carried out the 2011 Emergency Management Work Plan for Delta Township, including attendance at all required conferences, workshops, classes, seminars and district meetings.

Conducted several LEPT meetings and one full-scale exercise at the Capital City Airport; tested video conferencing equipment.

Developed and completed the FY 2010 Fire Department Annual Report.

Served on the Metro Lansing Fire Chiefs Advisory Board for Training.

Developed and assisted in the instruction of several firefighting and related courses (see *Training Report* section).

Was inducted as the Secretary/Treasurer for the Western Michigan Association of Fire Chiefs.

Appointed to the position of Treasurer for the Eaton County Fire Chiefs Association.



Life-Saving Awards Presented to Several General Motors Employees

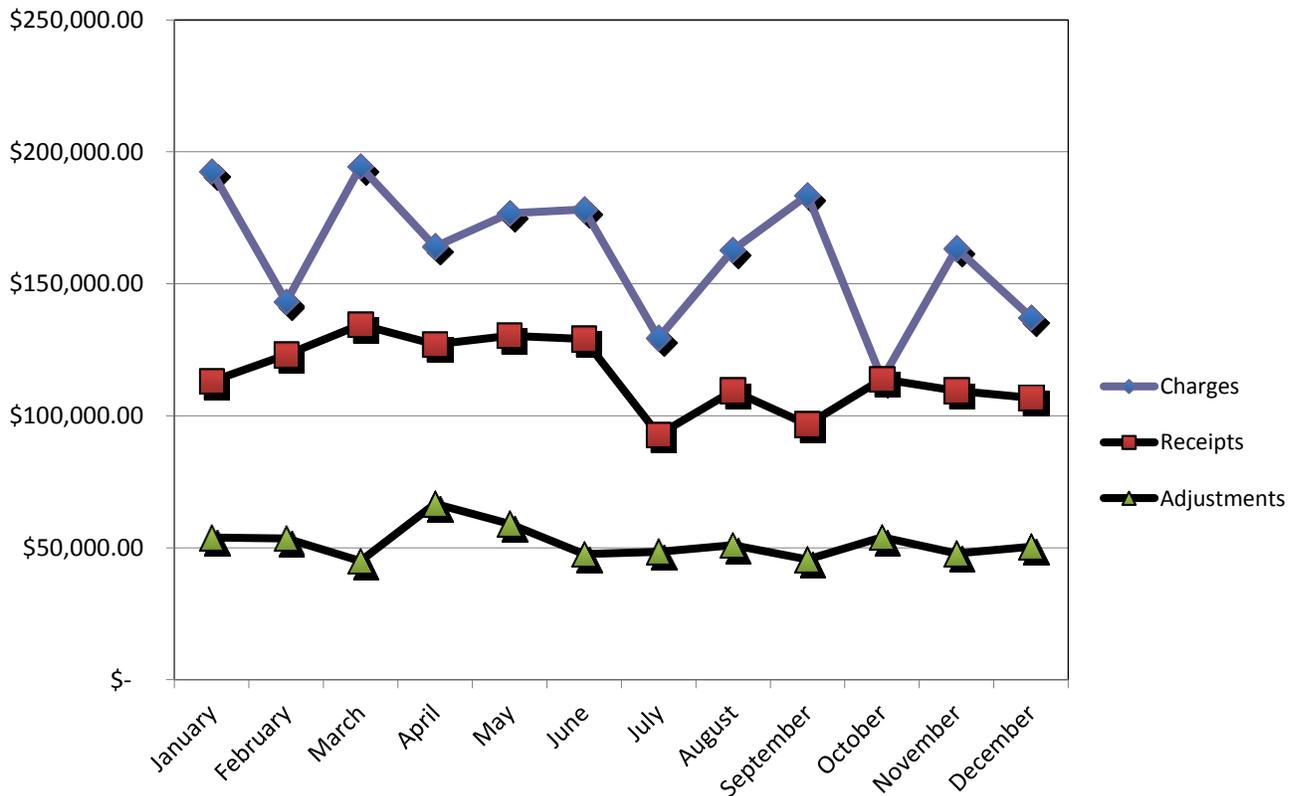
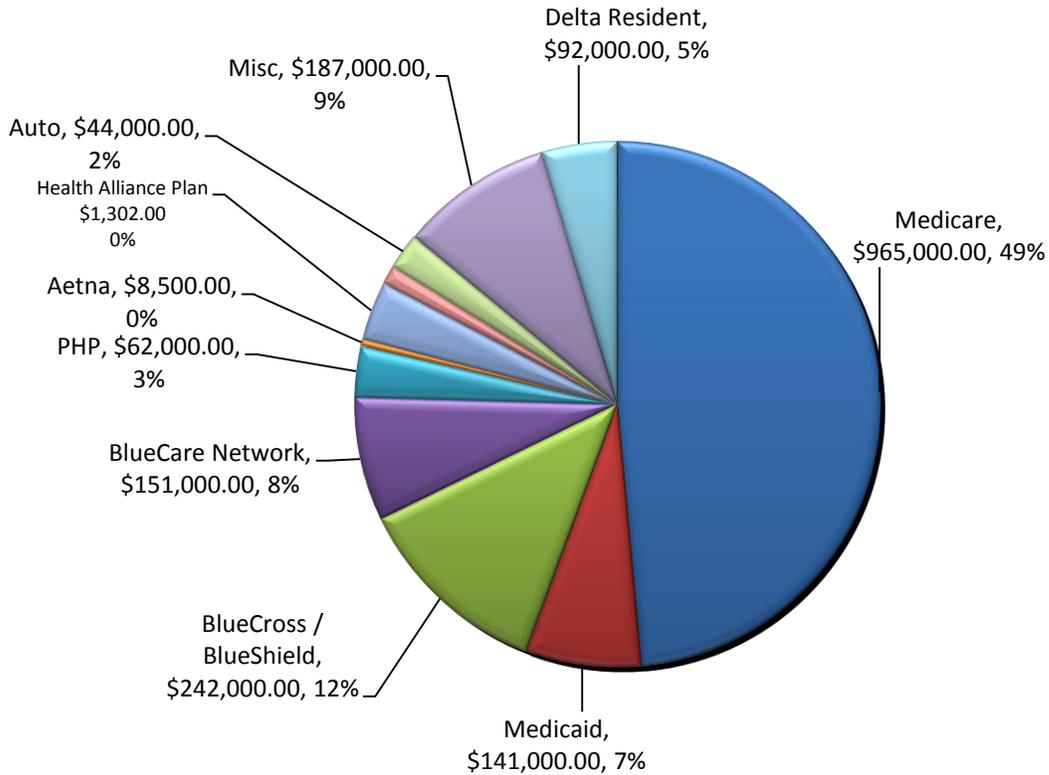
FIRE DEPARTMENT STAFFING

As of December 31st, 2011 Delta Township Fire Department personnel consisted of one fire chief, one fire inspector, two secretaries, 30 full-time shift personnel and 9 part-time personnel. Delta Township Fire Department personnel hold EMS licenses with the Michigan Department of Consumer & Industry Services.



AMBULANCE BILLING PROGRAM/ MEDICAL MANAGEMENT REPORT

In 2011, \$1,939,475.20 was billed and total collections of \$1,386,153.84 were received.



Charter Township of Delta

Fire Department

Account Review

2011

Month of Invoice	Charges	Receipts	Adjustments	Encounters
January	\$192,606.00	\$113,021.15	\$53,872.66	319
February	\$143,240.00	\$123,007.22	\$53,500.61	226
March	\$194,429.00	\$134,543.45	\$44,973.17	302
April	\$164,036.10	\$127,097.59	\$66,584.73	244
May	\$176,647.20	\$130,291.68	\$59,056.87	280
June	\$178,171.30	\$129,100.25	\$47,598.41	273
July	\$129,424.50	\$92,852.30	\$48,446.17	206
August	\$162,868.10	\$109,394.92	\$50,915.10	248
September	\$183,606.40	\$96,643.83	\$45,582.55	293
October	\$113,840.10	\$113,956.76	\$53,946.55	172
November	\$163,372.90	\$109,431.77	\$47,791.27	276
December	\$137,233.60	\$106,812.92	\$50,422.88	212

TOTAL	\$1,939,475.20	\$1,386,153.84	\$-	\$622,690.97	3051
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2011

Charges	\$1,939,475.20	Average monthly charge.....	\$161,622.93
Receipts	\$1,386,153.84	Average monthly receipt.....	\$115,512.82
Adjustments	\$622,690.97	Average monthly adjustment.....	\$51,890.91
Bad Debt	\$45,182.92	bad debt, write off to collection	
Encounters	3051		

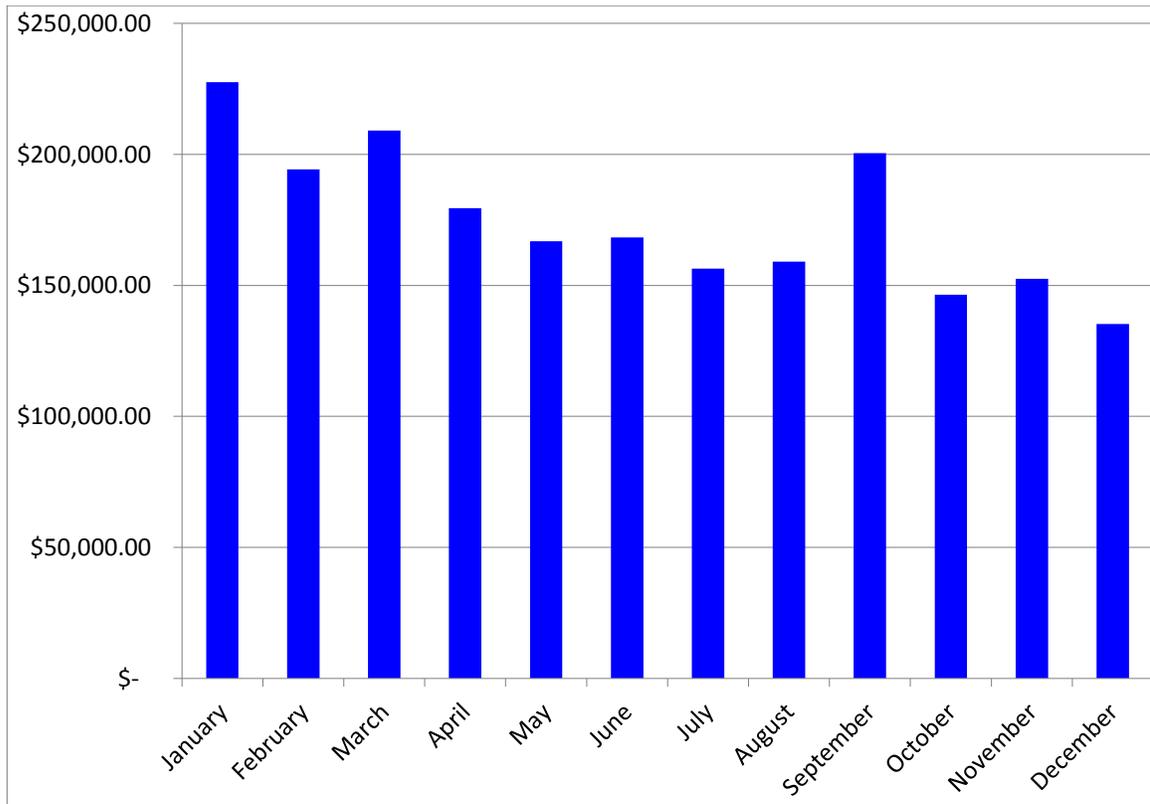
2010

		<u>\$ Difference</u>	<u>% Difference</u>
Charges	\$2,016,669.00	\$(77,193.80)	-4%
Receipts	\$1,363,998.28	\$22,155.56	2%
Adjustments	\$568,242.98	\$54,447.99	10%
Bad Debt	\$47,095.39	\$(1,912.47)	-4%
Encounters	3105	-54	-2%

	<u>2011</u>	<u>2010</u>	<u>\$ Difference</u>	<u>% Difference</u>
Avg. Charge	\$635.69	\$649.49	\$(13.81)	-2.1%
Avg. Receipt	\$454.33	\$439.29	\$15.04	3.4%
Avg. Adjustment	\$204.09	\$183.01	\$21.09	11.5%

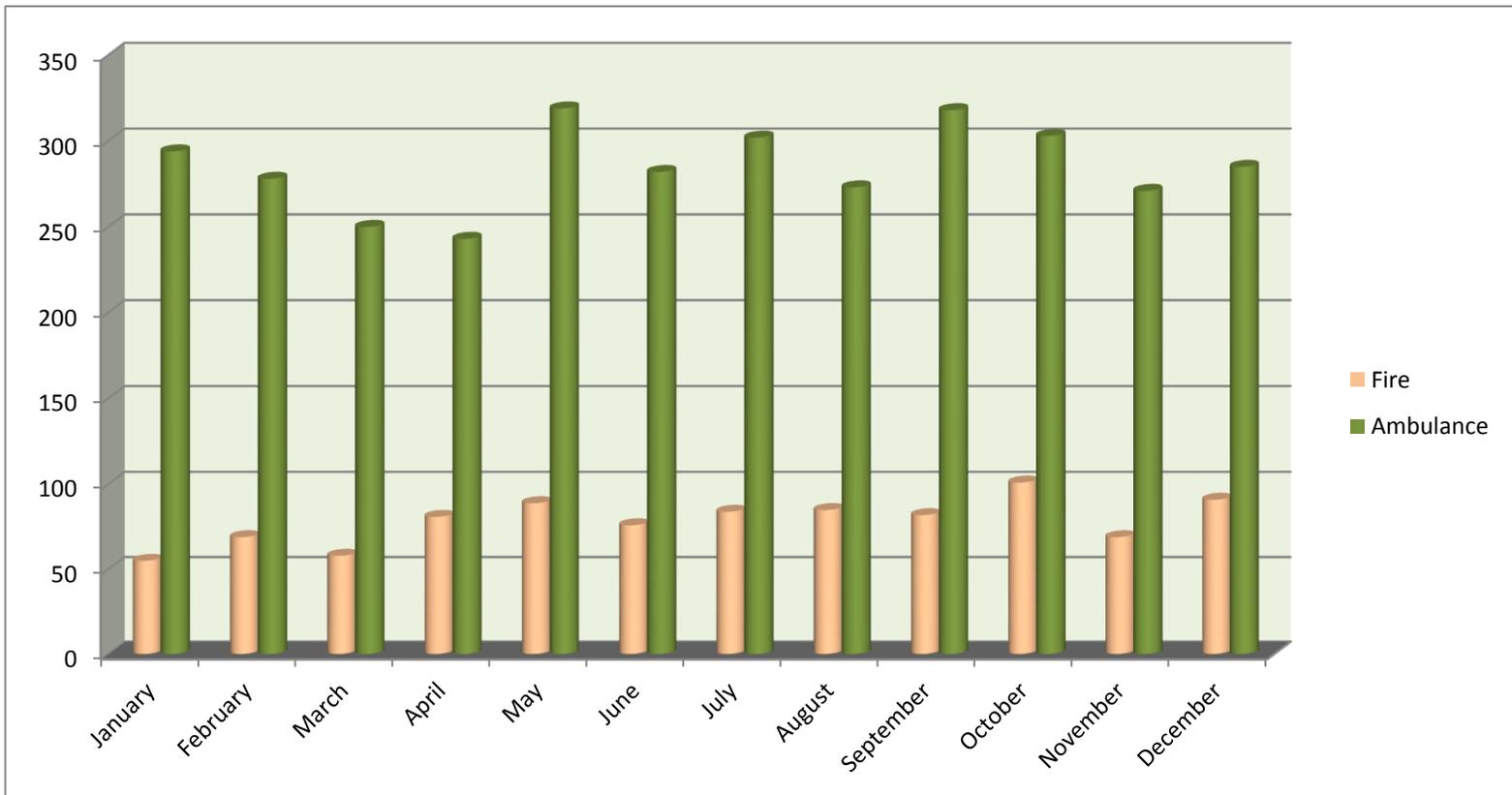
Collection		
Recovery	\$25,251.92	\$23,339.00

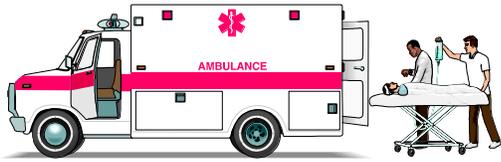
2011 Accounts Receivable





2010 COMPARISONS





DELTA TOWNSHIP FIRE DEPARTMENT
EMS RESPONSES

2011 Statistics													
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	TOTAL
911 Tones	317	312	317	286	293	275	281	264	316	283	257	278	3479
Station No. 1	198	184	251	206	167	169	173	139	187	162	128	138	2102
Station No. 3	111	121	60	79	120	105	102	123	125	116	125	137	1324
RESPONSES	309	305	311	285	287	274	275	262	312	278	254	277	3429
A131	65	26	14	17	13	32	21	8	17	20	9	8	250
A132	137	46	30	104	29	88	129	75	143	117	77	121	1096
A133	38	95	39	62	19	78	44	15	31	93	7	4	525
A134	43	94	130	21	119	49	23	56	27	25	42	13	642
A135	18	36	91	78	101	26	52	106	90	18	9	17	642

TRAINING ACCOMPLISHMENTS

The Delta Township Fire Department is a full-service emergency response agency. As such, Delta Township Fire Department's personnel respond to a variety of emergency calls ranging from medical emergencies to car accidents, structure fires and hazardous materials incidents.

To effectively accomplish these tasks, department personnel train on a daily basis within our organization as well as with all of our mutual aid partners. In addition, the Delta Township Fire Department is a member of the Metro Lansing Area Technical Rescue Team along with Meridian Township as well as the Cities of Lansing and East Lansing. These agencies train and respond together on a variety of technical rescues throughout Ingham, Eaton, and Clinton counties. This collaborative effort is directed by the four fire chiefs in these communities and is supported by the municipal and township leaders.



Ice Rescue Training

TRAINING

Listed below you will find training for the Delta Township Fire Department in the following categories: Emergency Medical Services, Firefighting, Hazardous Materials, Technical Rescue, Fire Prevention and Fire Education exceeding more than 4,000 hours of training:

- ACLS
- Aerial Ladder Operations
- Aerial Operations on Various Apparatus
- Air Monitoring/Decon
- Airway
- Allergic Reaction
- Apparatus Operations
- Back Boarding
- Basket Operations
- Building Construction
- Building Construction
- Cardiac Emergencies
- Chain of Command
- Collapse
- Communication Training
- Company Level Incident Command
- Confined Space
- CPR
- Dealing with the Difficult Employee
- Disaster Planning/Triage
- Drafting and Jet Siphoning
- Driver Recertification
- Driver's Training and Recertification
- Fast Attack Mode/Positive Pressure Attack
- FDC Operations
- Fire Alarm Systems
- Firefighter Safety
- Fire Suppression Systems
- Firefighter Survival and Self-Rescue
- Foam Operations
- Friction Loss/Hydraulics
- General Motors Utilities (Paint Facility Review)
- Ground Ladders
- Ground Operations
- Hazardous Materials Operations
- Haz-Mat Flame Ionization Detector
- Haz-Mat Ops-Air Monitoring
- Haz-Mat Technician
- Haz-Mat Trailer Review
- Ice/Water Rescue
- ICS
- Incident Command System
- Introduction to Drivers Training
- Ladder Operations
- Lightweight Building Construction
- Maps/Streets
- Meijer Warehouse Haz-Mat Training (Exercise)
- Meth Lab Hazardous Response
- Monitors/Knots
- Patient Assessment
- Pediatric Assessment
- Platform Operations
- Positive Pressure Ventilation
- Preserving Evidence
- Pumping Ops
- Rapid Intervention Team Training
- Relay Pumping
- Rescue/Winch
- Ropes/Knots
- SCBA Skills and Confidence Course
- SCBA Training
- Search & Rescue
- Suppression Systems
- T-416 Setup/Basket Operations
- Tanker Pumps Operations/Drafting
- Tanker/Tender Operations
- Trench Rescue
- Tri-County Protocol Update Review
- Various SOG/TCEMCA Protocols
- Ventilation
- Water Rescue
- Water Rescue/Boat Ops
- Water Supply/Tanker Operations
- Weather/Tornado Systems
- Workplace Violence



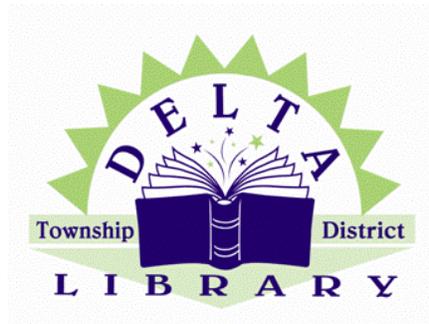
Advanced Rope Rescue Training

RETIREMENT

During 2011 the fire department celebrated the service of retired Fire Chief Victor C. Hilbert. We express our sincere appreciation for his 26 years of service and extend our best wishes for many happy years of relaxation and good health during his retirement.



2011



REPORT TO THE BOARD OF TRUSTEES

MISSION STATEMENT

“To provide library resources, services, and programs necessary to meet the evolving educational, recreational, and informational needs of the community.”

DICK MILLIMAN RETIRED FROM THE BOARD JULY 2011



LIBRARY BOARD OF TRUSTEES

Michael D. Moore
Chairperson

Cindy Peruchietti
Vice Chairperson

Ross Wilson
Treasurer

Colleen Weinfeld
Secretary

Marie Papciak
Trustee

Carol Walker
Trustee

LIBRARY STAFF

Full time positions:

Library Director

Cherry Hamrick

Assistant Library Director

Mary Rzepczynski

Youth Services Librarian

Becky LeBoeuf

Adult Services Librarian

Tom Moore

Circulation and MeLCat Supervisor

Pat Ewing

Processing and Cataloguing

Stephanie Conarton

Part time positions:

Executive Assistant

Keri Litwiller

Adult Services Library Assistants

JoAnn Buck

Claudia Cheyne

Jessica Goodrich

Technology

Erica Gupton (shared with the Township)

Brad Covert

Robert Silvernail

Currently vacant position

Youth Services Library Assistants

Robert Chartrand

Marta-Kate Jackson

Janice Keen

Kate Prusick

Circulation Clerks

Carol Dietz

Cindy Long

Sean O'Brien

Emily Rocha

Vicki Sandstrom

Judy Scaggs

Cris Schafer

Eileen Zimmerman

Processing Staff

Assistant

Christine Wrzesinski

Clerk

Shannon Silvernail

Library Pages

Danielle Austin

Haley Kluge

Emily Nichols

Diana Sanchez

Rachel Weinfeld

Custodial Staff

Darrell Greenhoe

Farhad Ibrahim

STATISTICS

Circulation: **340,003**

MeLCat items borrowed: **20,121**

MeLCat items loaned: **22,597**

Number of items owned: **65,419**

Audio downloadables : **1,657**

eBooks: **4,606**

Library card holders: **28,340**

Website visits: **118,599**

Twitter followers: **806**

Facebook followers: **470**

Staff hours of training: **620**

YOUTH SERVICES

Total number of programs: **309**

Total attendance: **9,359**

ADULT SERVICES

Programs offered: **281**

Attendance: **2,219**

Reference transactions: **22,194**



MeLCat delivery



Delta Crafters



Chess Program



Diary of a
Wimpy Kid book and movie party



Home Brew
program

RACE EVENTS IN 2011

6th ANNUAL RUN FOR READING



The April event had **300** participants and it was wonderful to have so much space in the building as runners and walkers from all over central Michigan and other states participated.



As always, the Kids Fun Run is popular, too!



FOURTH ANNUAL JINGLE BELLE 5K FOR WOMEN

This December race continues to attract women from all over Michigan, and a few other states!



The entire Township benefits from this race, with hotels, restaurants, and stores seeing race participants during the weekend.

All participants got jingle bells to wear on their shoes, a pair of fleece gloves with the race logo, and other items that are donated by local businesses. Over 70 volunteers helped with the race, and display space was provided to 8 non-profit groups during the morning of the race.

Each year Santa is on hand, too!



TOWNSHIP DEPARTMENT COOPERATION

The Library contracts with the Township for several services. These include the Parks for grounds and snow plowing; Accounting for payroll and bill paying; Manager's Office for Human Resources and IT.

For big events like the races, it takes a lot of cooperation from many Township Departments.

Parks Department provides manpower for course set up and tear down and recycling; **Utilities** provides hundreds of cones and arrow trucks; **Eaton County Sheriff Department** keeps the participants safe on the streets; the **Fire Department** has an ambulance on standby, and of course the **Library staff** helps in so many ways. The races are truly Township events!



LIBRARY SPACE

The Library building has been a wonderful community space, as reflected in the visits to the Library-averaging 16,000 a month- and in the use of the rooms for many non-profit group meetings, study groups, tutoring, etc. The 4 rooms that can be reserved are all reserved frequently every week, with **841** non-Library room reservations in 2011.

NEW IN 2011

Ereaders continue to grow in popularity and to keep pace with that major trend the Library, in conjunction with the Woodlands Cooperative, vastly increased the holdings of eBooks and downloadable audio books in 2011. The collection grew from a beginning collection in 2010 of 394 eBooks and 754 downloadable audio books to a 2011 collection of **3,484** eBooks and **1,435** audio downloadable books

The Library also circulates eReaders, currently 3 Nooks are available, with a variety of titles on each device. More eReaders will be added in 2012.

FRIENDS OF THE LIBRARY

As always, the Friends are an integral part of the Delta Township District Library. The Friends bookstore continues to be a major draw in the mid-Michigan area, and income from the bookstore directly returns to the Library.

In 2011 the Friends accomplished a goal of having the biggest number of members- **over 1,000!** This is a very high number for a library this size, and reflects the community pride in the building as well as appreciation and enjoyment of the bookstore and Friends' funded programs.

Increased hours for the bookstore as well as raising the prices in 2011 helped the Friends earn even more money for Library programs.

Some of the ways the Friends help the Library include:

- volunteering at many Library events
- full funding for:
 - Teen programs
 - Summer Reading
 - Books by mail
 - Value Line subscription
 - Teen Read Week
 - National Library Week
 - Book Page subscription
 - Downloadable audio and eBooks
 - Mango languages
 - Rotating Large Print collection
- Partial funding for:
 - Adult and Youth audio books
 - Run For Reading
 - Jingle Belle 5k

Manager's Office

It is the primary responsibility of the Manager's Office to carry out the goals and objectives of the Township Board and to manage the daily operations of the Township.

The Information Technology Activity has been an integral part of the Manager's Office. The goals and accomplishments specifically assigned to this activity are also accepted under the umbrella of the Manager's Office.

TRAINING HOURS

The total number of training hours for (FTE) full-time employees in the areas of skill set, customer service, and certification was 6,917 hours.



FOIA RESPONSES

The department received thirty-two FOIA requests in 2011 of which all were completed.

AGENDAS PREPARED

Staff prepared twenty-three agendas for the Township Regular Board meetings, and twelve agendas were prepared for the Township Committee of the Whole meetings held in 2011.

LIQUOR LICENSES PROCESSED

Staff processed the following liquor licenses in 2011:

Revoked Mantiff Lansing Hospitality, LLC's liquor license due to incidents and events that had occurred which threatened the health, welfare and safety of the township's citizens, visitors and public safety personnel at 7711 W. Saginaw Highway.

Approved the transfer of a Class C liquor license from Delta M.P. Inc. to J&ST Development, LLC in September, 2011.

Approved the transfer of a B-Hotel liquor license to USAland Global LLC d/b/a Ramada Hotel in November, 2011.

Approved a New Small Wine Maker License and Micro Brewer license for Eaglemonk Brewing Company, Inc. in December, 2011.

IT REQUESTS

The IT Department received over 1,200 IT requests during 2011. 90% of Help Desk calls were resolved within 8 hours.

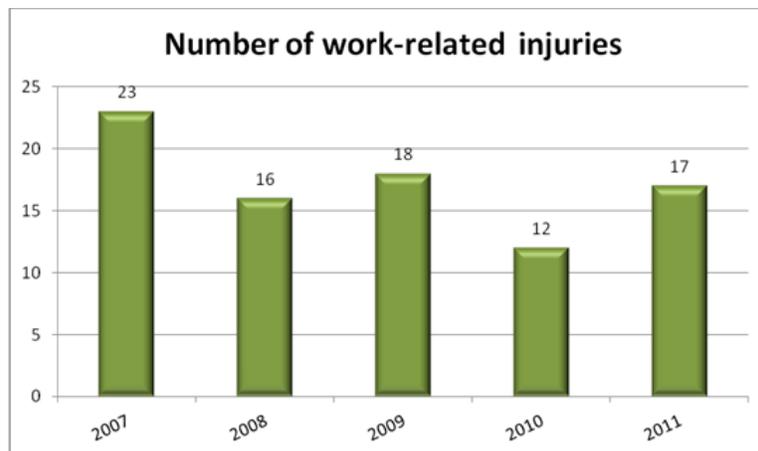
There were 170,980 hits on the township website, and 13,447 hits on GIS.deltami.gov.

IT staff spent a total of 10 hours supporting the elections in 2011.

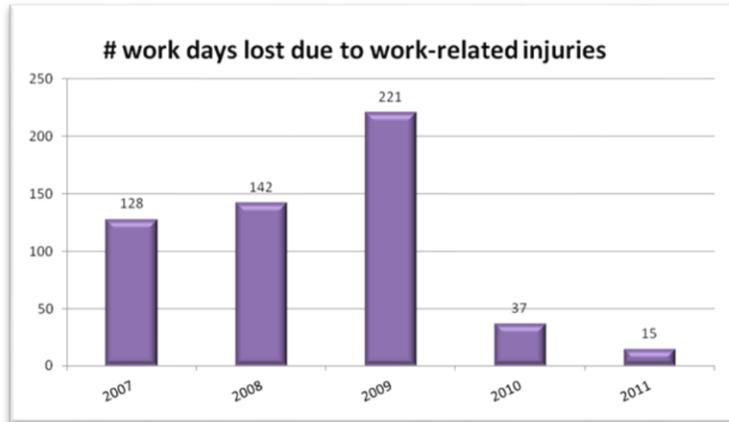
WORKERS COMPENSATION

The number of works days lost in 2010 was thirty-seven. There were only fifteen work days lost in 2011, resulting in a 59.46% decrease over the previous year.

In 2010, there were twelve employees injured; seventeen injuries were reported in 2011 resulting in a 41% increase.



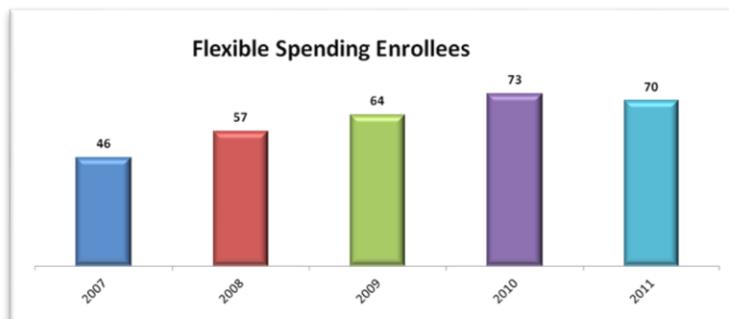
There were twelve injuries in 2010, compared to seventeen injuries in 2011, which is a slight increase of 4.16%.



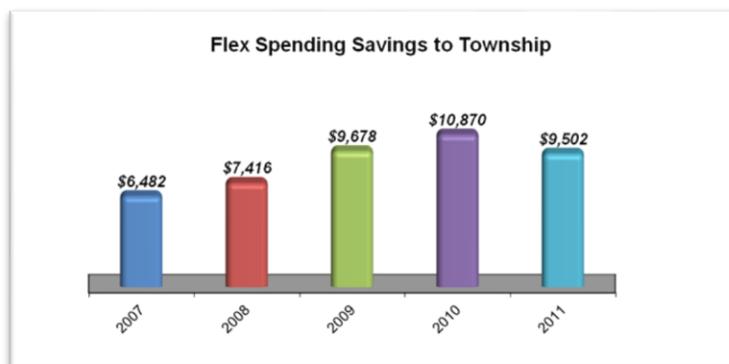
The Township successfully switched occupational health service providers from Work Health to Sparrow Health Systems who offered lower service fees.

FLEXIBLE SPENDING ACCOUNTS

Enrollment decreased in the Flexible Spending Plan accounts from seventy-three in 2010, to seventy in 2011.



Flex spending savings to the Township decreased by 1.43% from \$10,870 in 2010 to \$9,502 in 2011.

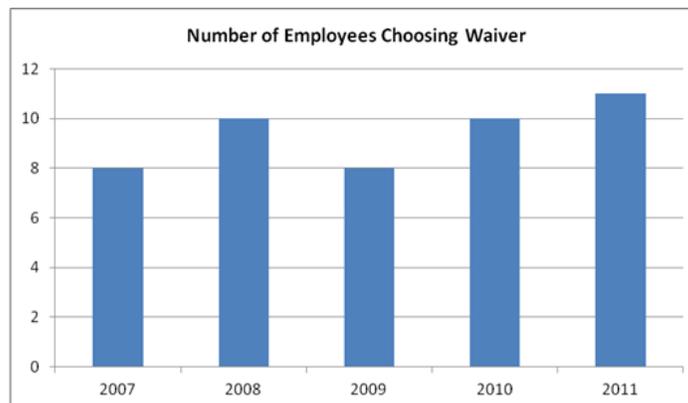
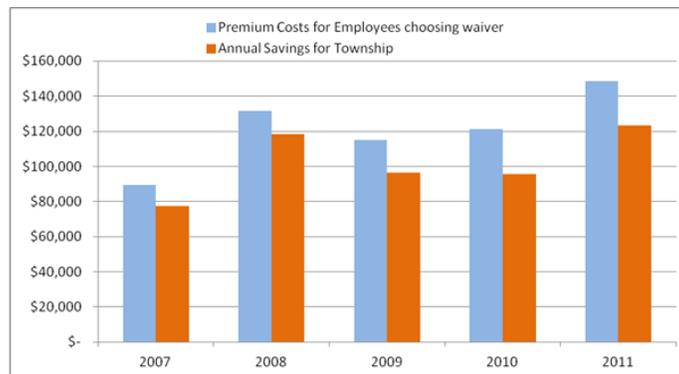


HEALTH SAVING ACCOUNTS

In 2012, eighty-three employees enrolled in the Health Savings Plan, which is 86.46% of the workforce, with nineteen employees enrolled in the Flexible Spending Plan. A total of 102 employees are currently enrolled in a pre-tax savings plan.

INSURANCE

In December of 2011, staff replaced the current BCBS coverage with a high deductible insurance plan for all employees. By doing so, the department was able to consolidate the employee manual from two manuals (one for employee hired prior to May, 1, 2005, and another for those hired after that date) into one employee, which covers all employees.



Delta Dental was replaced by Met Life to provide dental insurance benefits, for all eligible full-time employees and retirees who elect the optional coverage, effective April 1, 2011.

WELLNESS PROGRAM

Deputy Township Manager, Jen Roberts, led the Wellness Program Committee, which ultimately provided a recommendation to implement the Wellness Program that now exists.

REGIONAL MEETINGS/EVENTS

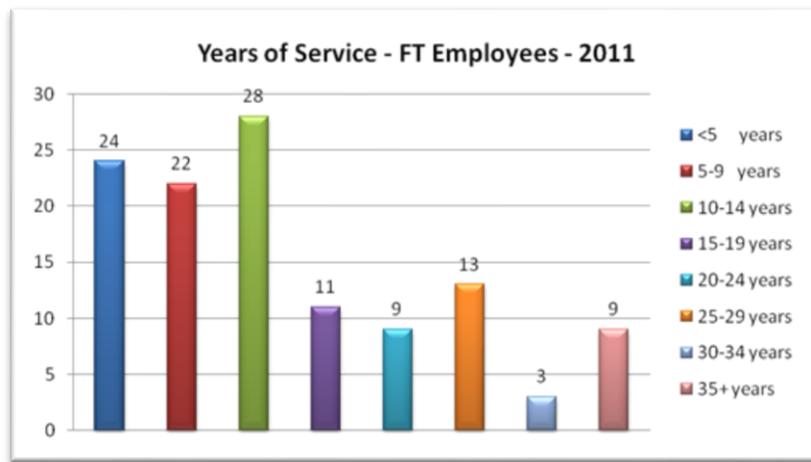
Staff continues to meet monthly at LEAP with other economic development professionals. The Township Supervisor and Manager maintain active participation and attendance at LEAP's Board meetings.

The Township Manager is a member of the Michigan Municipal League's Finance Committee and the EATRAN Board.

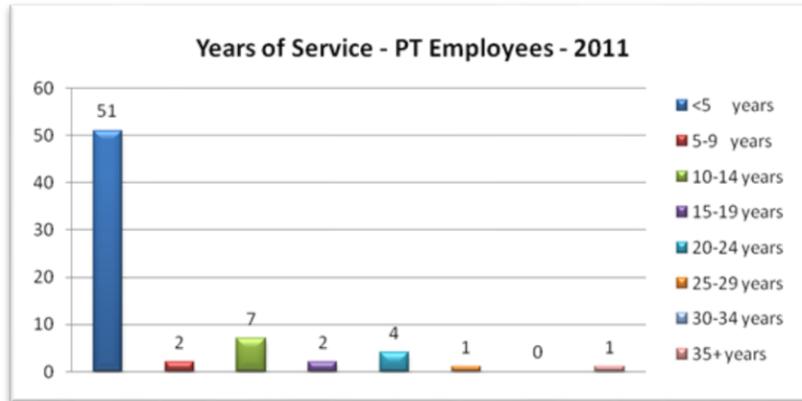
Jen Roberts co-chaired the 2012 Delta Side Community Business Expo. Planning for this event began in March of 2011. Bi-weekly meetings were held at Delta Township for this event.

EMPLOYMENT INFORMATION

In 2011 Delta Township employed 119 full-time personnel. Of the 119 employees, 73 have been employed for 10 years or more.



Delta Township also employed 68 part-time personnel during 2011, of which 15 have been employed for 10 years or more.



Ed Reed was chosen to fill the vacated Economic Development position in 2011, which was open due to Susan Pigg’s acceptance of another position outside of the Township.

Chief Victor C. Hilbert retired in January 2011. Chief John Clark was hired as a replacement, and was also appointment as the New Emergency Management Coordinator.

Fire Captains Jeffrey Oates and Mark Covert retired in February, 2011.

Janice Vedder, Township Clerk, submitted her resignation in September, 2011. Mary Clark was appointed as her replacement in October, 2011.

SAGINAW HIGHWAY RECONSTRUCTION PROJECT

In February 2011, staff met with area businesses along Saginaw Highway regarding the proposed Saginaw Highway Reconstruction Project’s affect on their business. During these visits they provided a timeline for the reconstruction, and discussed possible temporary signage that might help them out during the reconstruction. This project was completed in September 2011.

2011



PARKS AND
RECREATION

REPORT TO THE BOARD OF
TRUSTEES

CEMETERY YEAR END REPORT

2011

Routine Functions of Both Cemeteries

In 2011, 80 burial spaces were sold and there were 74 burials. As usual, marker foundations were poured, settled graves were repaired, equipment and buildings were maintained, and leaves and snow were cleared away. Mowing and trimming around markers was done throughout the growing season.

Hillside Cemetery Projects

Several trees and shrubs were trimmed that had become overgrown or unsightly.

Delta Center Cemetery Projects

Because of car damage done to the fence along St. Joe Highway we took the custom made fence from the western boundary and replaced it with chain link fencing and the custom fencing went where the damage was done. Trees were also removed in the older section that were rotted and damaged from storms.

2011 Performance Objectives

2011 Strategic Plan Related

Be proactive in approach to policy making and responsive to opportunities in and cost efficiencies of Township provided services.

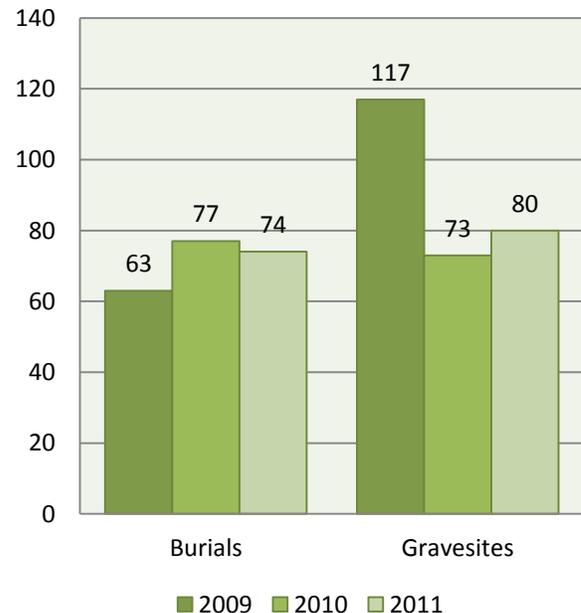
- The operation is constantly being reviewed for improved efficiency and changes made as opportunities arise.

Actively promote and encourage legislation change that will impact the Township positively through memberships and participation with such organizations such as Michigan Townships Association, Michigan Municipal League, and other such organization.

- Cemetery staff continue to be active in the Michigan Association of Municipal

Cemeteries. This association helps the cemetery operation keep up with the latest trends in cemetery operation and legislation.

Burials and Gravesites



HALL AND GROUNDS

2011

All Buildings

Custodial staff maintains 67,068 square feet in the Administration Building, Community Center, Enrichment Center, Sheriff Substation, and Waverly East Intermediate Pool. There are 33 offices, 28 restrooms, 2 locker rooms, 7 meeting rooms, and 6 classroom/public rental areas.

Annual flowers were planted and maintained. Holiday decorations were displayed. General maintenance, cleaning, and snow and ice removal were done in all buildings except the fire stations.



Administration Building

- Shampooed carpets.
- Washed outside windows twice.
- Steam cleaned all bathroom grout and stairs.
- Retiled and grouted upper level women's restroom.
- Maintained the grounds.
- Repaired wallpaper seams.

Community Center

- Shampooed chairs.
- Shampooed carpet four times.
- Scrubbed and waxed dance floor, kitchen, and downstairs floor.
- Replaced switches and plugs.
- Patched, repaired, and painted the interior.
- Maintained the grounds.
- Replaced some doors.

Collected over \$33,000 in rental fees.

Enrichment Center

- Washed outside windows.
- Shampooed carpets.
- Shampooed chairs.
- Installed new light fixtures in the north wing.
- Finished remodel of the art room.
- Maintained the grounds.
- Repaired the dance room floor.

Collected over \$7,000 in rental fees.

Sheriff Substation

- Shampooed carpet.
- Washed outside windows.
- Touch up painting.
- Maintained the grounds.
- Replaced many ballasts and light fixtures. Modified for better lighting and efficiency.

Fire Station #1

- Maintained the grounds.

Fire Station #2

- Maintained the grounds.

Fire Station #3

- Maintained the grounds.

Waverly East Intermediate Pool

- Power washed women's locker room.
- Utilized auto scrubber on pool deck.
- Cleaned out all of the drains.

Library

- Grounds maintenance and snow removal.

Welcome to Delta Sign

The landscaping around the "Welcome to Delta" sign on Saginaw Highway was handled by our Cemetery maintenance staff.

PARKS AND RECREATION

2011

Township Parks 2011

All Parks

- Routine maintenance, mowing, and snow removal.
- Routine equipment repair and maintenance.
- Replaced old grills and picnic tables as needed.
- Power washed, painted and stained picnic tables, bleachers, docks, signs, bathrooms and shelters.
- Added engineered wood chips to all playground safety surfaces.
- Performed routine safety inspections of all playgrounds.
- Removed dead ash trees and trimmed trees where needed.
- November snow storm clean-up of damaged trees.

Sharp Park

- Back filled and seeded the new path.
- Enclosed the swings and added engineered wood chips.
- Installed new lighting (phase 3) at diamond 3 (contractor and staff)
- Installed new parking blocks lining the entry road of the park.
- Repaired tennis courts.
- Repositioned base anchors on fields 3-6 due to statewide softball rule changes.



Grand Woods Park

- Graveled two existing parking areas.
- Installed new parking blocks in several areas.
- Built ten new car parking spaces
- Installed limestone path from parking area to the pavilion.
- Widened entrance to the park.



Erickson Park

- Re-crowned and built up fields with stone dust.
- Repositioned base anchors on fields 7 and 8 due to statewide softball rule changes.

Delta Mills

- Replaced broken parts and a tube on the playground equipment.
- Installed security lights to the shelter area.
- Repositioned base anchors on field 1 due to statewide softball rule changes.

Hunter's Orchard Park

- Resurfaced gravel section.
- Installed culvert to help with spring flooding.
- Pavement repair up to the dock.

PARKS AND RECREATION

2011

Hawk Meadow

- Several beautification projects performed by volunteers.
- Cross country ski trail developed.
- Brought in gravel and installed a culvert to eliminate wet spots over the trail.

Player's Club

- Only routine maintenance at this site.

Lake Delta

- Dock repair at the attachment section on both docks.

LeLand Park

- Only routine maintenance at this location.

Colt Elementary School

- Re-surfaced t-ball field
- Established soccer fields (moved from Waverly East Intermediate).

East/West Pathway

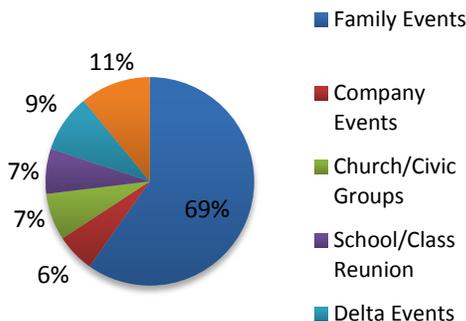
- Installed gates, trash cans, and signs along the path.

In 2011, a total of \$15,440 in picnic shelter rental fees was collected.

Staff

- Maintained their certifications as fork lift operators.
- Renewed their Commercial Driver's Licenses.
- Renewed their Certified Pesticide Applicator's Licenses.
- Renewed the Certification as a Playground Safety Inspector through the National Playground Safety Institute.
- Special Events – participated in the set up and take down for the Delta Rocks! Family Festival and the 42nd Annual Delta Township Fireworks Celebration.
- Assisted the Delta Township District Library with the two 5K races sponsored by the Library.
- Performed all of the inspection, mowing, and billing involved in the enforcement of the Noxious Weed Ordinance. There were 154 lots inspected of which 26 were deemed not to be in violation of the ordinance. 128 lots were sited for violation and the staff eventually mowed 39 of these lots. The remaining lots were mowed by the owner.
- Parks maintenance supervisor retired, position will remain vacant.

2011 Shelter Usage



PARKS AND RECREATION

2011

Athletics 2011

Athletic Programs

Adult Summer Softball - Delta Township Leagues – 79 teams
DNRE League – 7 teams
Methodist Church League – 8 teams
Adult Coed Sand Volleyball – 16 teams summer, 7 teams fall
Adult Fall Softball – 32 teams
Adult Kickball – 15 summer teams, 6 fall teams
Spring Youth Soccer – 375 players
Fall Youth Soccer – 274 players
Youth Boys Baseball – 98 players
Youth Girls Softball – 65 players
Youth Coed T-Ball – 191 participants
Youth and Adult Golf Classes – 33 participants, 111 sessions purchased
Youth Tennis Lessons – 41 participants
Youth Coed Basketball – 130 participants
Tri-County Basketball 2011-2012 League – 3 teams – 35 players
Youth Basketball Camp – 128 participants



Aquatics 2011

Aquatics

Swim class registrations – 515
Adult aerobics participations – 13,308
Family Swim/Lap Swim participations – 3,027

Classes and Events 2011

Community Education Programs

Winter – 15 classes held – 91 participants
Spring – 10 classes held – 73 participants
Summer – 10 classes held – 39 participants
Fall – 15 classes held – 101 participants

Special Events

Community Partners in Health Walk @ Sharp Park – 10 participants
Daddy/Daughter Dance – 285 participants
Delta Rocks! Family Festival – approximately 15,000 participants
Eats & Treats with the Easter Bunny – 41 participants
Home Party Sale – 29 vendors, 150 attendees
July 3 Fireworks – approximately 30,000 spectators
Monster Mash Family Halloween Dance – 165 participants
Mother/Son Dance – 189 participants
Music in the Park – 300 spectators plus thousands for the July 3 fireworks
Nursery School Olympics – 250 participants
Pacers Walking Club – averages 140 walkers per month
Pint Sized Picassos – 304 participations
Santa's Hotline – 42 calls
Sweets & Treats with Santa – 135 participants
Touch a Truck Day – 36 trucks – 1,500 "touchers"

PARKS AND RECREATION

2011

Delta 39'er 50+ Programs 2011

39ers Programs

Lunches served – 4,248
Bingo participations – 4,000
Bridge participations – 1,188
Chair exercise participations – 4,523
Chair massage – 89
Christmas Party - 80
Euchre participations – 2,830
Pinochle participations – 626
Cribbage participations – 302
Blood pressure checks – 149
Foot care participations – 198
Yoga class participations – 657
Jazzercise Lite participations – 1,005
Lunch Bunch - 111

Travel Program

8 trips that included 207 participants – these trips were organized and supervised by our staff.



Summary

Adult and Youth Athletics

Our adult softball program remains the largest in the Greater Lansing area and is recognized for being well run. The department hosted the Michigan Amateur Softball Association's Men's class "D" and class "E" slow pitch qualifiers and Men's class "C" and "D" states which brought a total of 38 teams into the area for two weekends of softball.

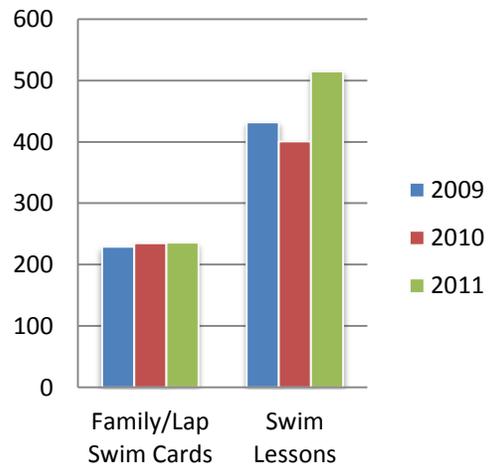
Adding the four year old age group to the t-ball program has proved to be a success with the t-ball programs growing in numbers in 2011. Youth basketball is continuing the tradition of providing the fundamentals with its' unique program objectives.

Aquatics

The aquatics program is staying steady with participation numbers. Programs are constantly being adjusted and new classes are being added to keep up with the demand. We have continued to advertise and rent the pool to outside groups for birthday parties, boy scout groups, etc. We continue to do all we can to keep this fantastic resource open.

This was our second full year of operation and we are very pleased with the progress in the program. Our revenue is offsetting the costs of operation, maintenance, and the lease.

Aquatics



PARKS AND RECREATION

2011

39'ers Program

The 39'ers program remains strong with overall participation increasing slightly compared to 2010 levels. Our move is proving to be an improvement to the program. Our expanded program offerings have helped in our participation levels and our participants experience. The chair exercise program that the department was able to take over from Sparrow continues to be a very well attended program. We will continue to offer new programs as well and work to improve existing ones.

Community Education Programs

The classes offered by our staff are always of the best quality. We continue to offer a variety of classes each quarter and continue looking at offering other types of classes whenever possible.

Special Events

Special events continue to be a strong area of recreation programs. After each event we look at ways to improve or alter the event to keep our list of offerings fresh.



Parks, Recreation, and Cemeteries Commission

The Parks, Recreation, and Cemeteries Commission are very active in promoting the Department. They are instrumental in raising funds for the fireworks and coordinating the Sponsor Appreciation Area during the event. In spite of the tight economy the Commission not only met their fund raising goal, they exceeded it by \$2,000. They also provide needed assistance on several of the department's special events. This group also acts as a sounding board for staff when situations arise and additional input is needed. The Commission sets the priorities of the Capital Improvements Program and reviews and makes recommendations for the departmental budgets.



RECYCLING

2011

Routine Functions

The Clerk's Office distributes information to the public and works with the Eaton County Resource Recovery to apply for grants.

Parks and Recreation handles the day-to-day operations and special programs.



Year Round Recycling

Granger Company picks up and processes the plastic, glass, tin cans/aluminum, paper, newspaper, cardboard, and yard waste. They collected 1795 cubic yards of yard waste during yard waste collection days (April through November). Granger and all of the other recycling companies we work with collected 503.98 total tons of recyclable materials for the year including special programs.

Portland Iron and Metal collects our scrap metals. They collected 38.59 tons of metal during the year.

Spring Clean-Up

In 2011 the program formerly known as de-junking was changed by eliminating the trash collection portion of the program. In its place a two day free spring yard waste collection was held. During that program 340 cubic yards of yard waste was collected for Delta residents. This program was staffed by the Eaton County Sheriff's Department Community Work Crew.

De-Leafing

This year the program ran from October 22 through December 3 (12 service dates). A total of 6169 vehicles were processed, including 760 vehicles on our heaviest day alone! 520 cubic yards of yard waste were collected.

This program is also dependent on the Eaton County Sheriff's Department Community Work Crew supplying labor.

Freon Collection

There were two times during 2011 that a Freon collection program was held at no cost to township residents. In the spring (at the same time as the spring clean-up) 103 Freon containing appliances were collected. The program was held again in September with 22 appliances collected.

Christmas Tree Recycling

An estimated 1200 trees were chipped and will be used for trail surface or erosion control.

RECYCLING

2011



2011 Objectives

- *To maintain yearly intake by offsetting loss in newspaper collection with increased volumes. As of the summer we are now able to take plastics 1-7, which will allow us to collect more materials. To continue Delta Township's annual recycling events: De-Leafing, Spring Yard Waste Clean-up and Propane Tank/Freon Appliance Collection. These events were held in 2011.*
- *To continue to coordinate recycling activities with those offered by Grand Ledge, Eaton County, and the City of Lansing. The director is a member of the regional recycling group that meets several times a year to discuss recycling issues and opportunities.*
- *To continue to explore the availability of grants that expand recycling opportunities and promote the Township's recycling efforts. This is an ongoing project.*

- Newspaper – 290,300 lbs
- Mixed Paper – 262,100 lbs
- Cardboard – 104,460 lbs *
- Boxboard – 72,720 lbs
- Clear Glass – 63,980 lbs
- Brown Glass – 5,180 lbs
- Tin Cans – 37,260 lbs
- Mixed Plastic – 63,000 lbs
- Yard Waste – 1,795 cu yds
- CFL Light Bulbs – 42 lbs
- Scrap Metal – 77,180 lbs
- Bicycles – 3,080 lbs
- Cell Phones – 181 lbs
- Batteries – 9,685 lbs
- Ink Cartridges – 176 lbs
- Polystyrene – 18,780 lbs
- Household Grease –
Approximately 500 gallons

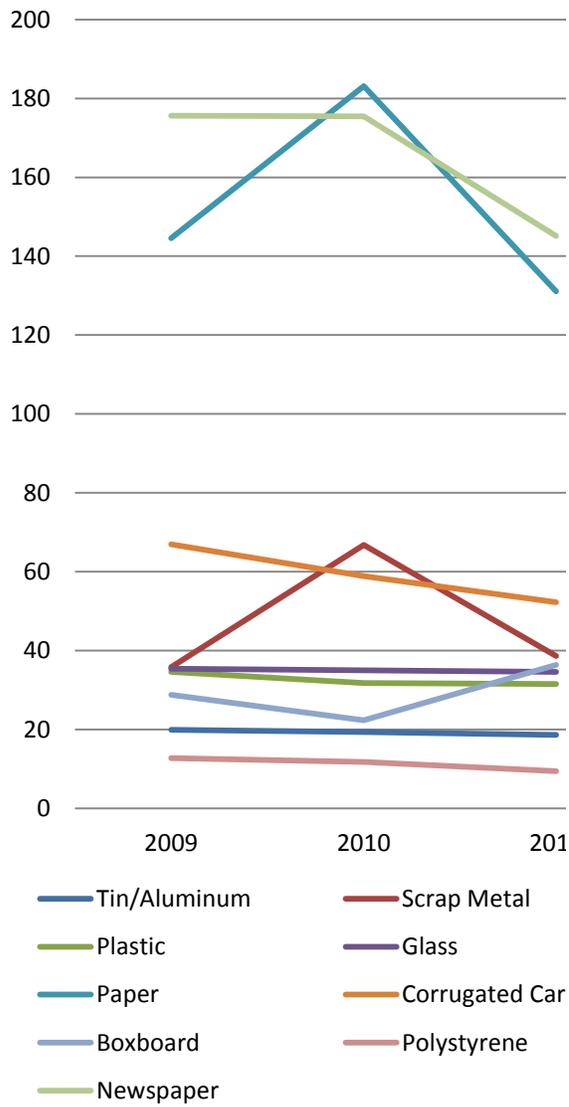
*Granger estimated amount

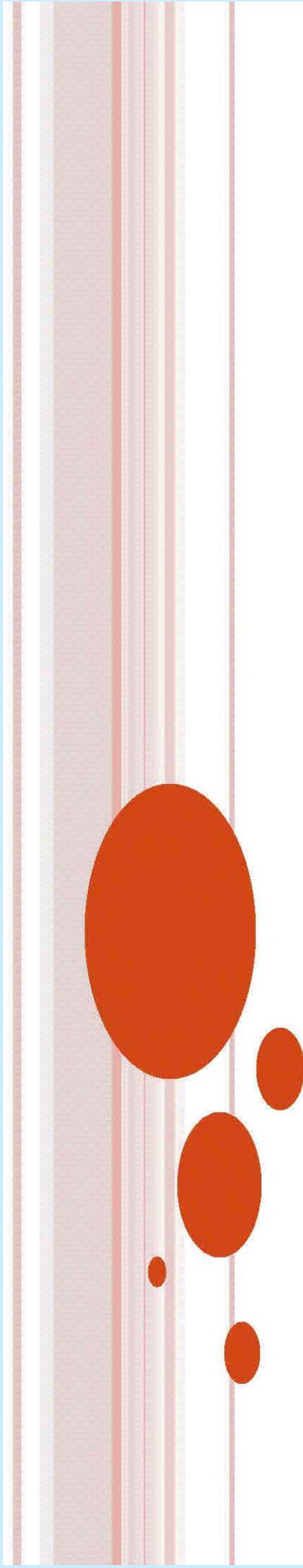
Volumes Collected at the Recycling Center

RECYCLING

2011

Recycling Items Measure in Tons





**DELTA TOWNSHIP
UTILITY DEPARTMENT
2011 ANNUAL REPORT**

**THOMAS L. MORRISSEY
DIRECTOR OF UTILITIES**

UTILITY DEPARTMENT SUMMARY FOR 2011

In 2011, we had 4 major projects we accomplished. 3 were completed and 1 is still under construction, which is the Saratoga Lift Station.

The first was the Lansing Road Lift Station. The pneumatic ejector pods were found to have holes in the bottom and were un-replaceable. Because of such a small work site, we had to find a way to construct a new station. We used the existing steel structure as a vertical casing and placed a concrete manhole (5 foot diameter) inside the structure. This saved extensive digging and cost. Once the manhole was installed, we installed 2 Gorman-Rupp submersible pumps inside. The contractor was Mackenzie Co. and Utility Department staff built the control panel.

The next project is the rebuilding of Saratoga Lift Station. This project is currently under construction with Davis Construction being the contractor. The project calls for replacing the pneumatic ejector station with a submersible pump station with future connection for an equalization basin. It will have a new cast-in-place, concrete structure with 2 submersible pumps. We are also reusing the existing generator. The station is projected to be in service February 1, 2012, with site restoration in the spring.

The Radio Read system was in the first year of installing end units. In 2010 we installed the infrastructure with the next 4 years installing approximately 9,000 end units. At the end of 2011, we have installed 2,600 units being slightly ahead of schedule.

The Utility Department along with the Township Hall (General Fund) purchased 2 Chevrolet Volts. The Utility Volts is primarily used by the Director. The Township Hall Volts is used by the Community Development Department for inspection purposes. The 2 vehicles are a great asset to Delta as they are very fuel efficient for Township use.

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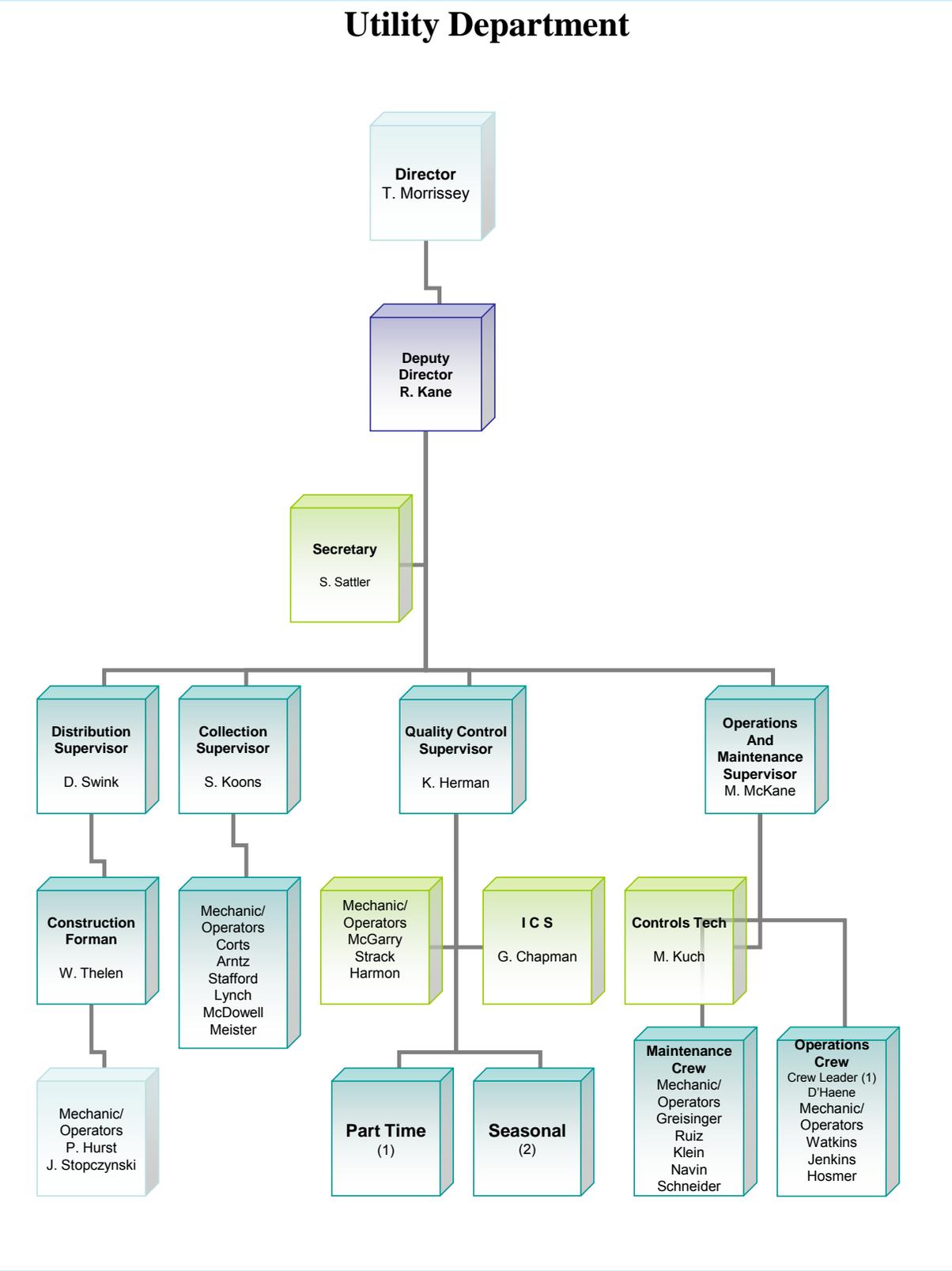
UTILITY DEPARTMENT

MISSION STATEMENT

*The Utility Department believes in
the efficient use of resources
to protect the public's health and welfare
by providing safe, aesthetically pleasing water,
in sufficient amounts and pressures,
to meet domestic needs and
fire flow requirements and
by conveying and treating
the sanitary sewage
generated by our customers.*

ORGANIZATIONAL CHART

Utility Department



2011 ACCOMPLISHMENTS

WASTEWATER

LIFT STATION UPGRADES

Sanitary sewers flow by gravity through underground piping to a treatment facility. Once the sewers get so deep or the topography of the land does not allow the sewage to flow by gravity, the sewage is lifted vertically by using a “lift station.” There are several types and configurations of lift stations depending on volume, height of lift and personal preferences.

Lansing Road and Saratoga lift stations were air-ejector type stations, meaning they used air to actually lift the sewage. Compressed air is generated onsite using compressors and then cycled through a pod to force the sewage up and out through a force main. These air-ejector stations are high maintenance and very inefficient means to lift or pump sewage

Both stations were converted into a more energy efficient submersible centrifugal pump station. This design uses pumps powered by electricity that pumps the sewage directly up through the force main.

LANSING ROAD LIFT STATION

The Lansing Road lift station is very small site and the depth of lift there was not adequate space to build a new wet well pump vault. To work around this, the old station can was gutted and then lined with concrete by using a precast manhole and installing the pumps within.



Original station equipment: Two 7.5 hp 3 phase 480 volt electric motors driving two Quincy 240 air compressors.

New equipment: Eliminate the compressors and use two 4.5 hp 3-phase 480 volt electric submersible pumps.

SARATOGA LIFT STATION

The Saratoga lift station site is small but the Township was able to purchase land adjoining the station site so we could build a typical submersible station wet well pump vault and corresponding meter and valve vault. This station was first designed to have an equalization basin included with the station but the cost was too great with the current hydraulic flows and uncertain future growth in this area, so it is being built without the equalization basin. However, all of the controls and piping has been built for a future addition of the basin when required.



Original station equipment: Two 7.5 hp 3 phase 480 volt electric motors driving two Quincy 240 air compressors.

New equipment: Eliminate the compressors and use two 6.5 hp 3 phase 480 volt electric submersible pumps.

WASTEWATER TREATMENT PLANT DIGESTER HEAT EXCHANGER #3 SLUDGE PUMP

The digester heat exchanger #3 works with the large primary digester and does the majority of the workload of getting the sludge up to digestion temperature. The original sludge transfer pump for this exchanger was installed during the 1986 plant expansion. This pump had a double, mechanical seal set up that was difficult to maintain and the volute casing was getting paper thin. The new pump is of different manufacture and uses a typical non-lubricating seal and is a true four inch pump design.



LIGHTING UPGRADE

The Utility Department worked with the Lansing Board of Water and Light to utilize their Hometown Energy Savers Program. We entered into the program to upgrade the T-12 inefficient fluorescent lighting throughout the Wastewater Treatment Plant to the new T-8 lamps and received a onetime energy savings rebate payment of \$1,180.00.

TV TRUCK AND EQUIPMENT

Late spring and early summer, we worked with the City of Grand Ledge for several days to TV a portion of their sewer lines using our TV equipment and one operator.

VEHICLE MAINTENANCE SHOP FURNACE



The original furnace for heating the Vehicle Maintenance Shop lunchroom and bathroom was a large two stage gas furnace that was way too large to heat these two areas. The replacement furnace is a much smaller single stage gas furnace with a programmable thermostat.

FORD TRANSIT CONNECT

The Utility Department Control Technician performs its own Supervisory Control and Data Acquisition (SCADA) development and maintenance. This service routinely incurs a substantial amount of miles put on a vehicle. In the past, we allocated a standard fleet 1/2 ton cargo van to perform this task; however, since fuel economy is still in the forefront, we replaced the van with a fuel-efficient Ford Transit Connect van. The vehicle miles per gallon will be monitored closely to evaluate the effectiveness of this change.



LARGE ACCOMPLISHMENTS IN 2011

1. Cleaned and coated all four primary clarifiers
2. Refurbish #1 & #2 final clarifiers
3. Cleaned 35 foot primary digester
4. Refurbish aeration tanks # 4, 5, & 6
5. Re-landscape several lift stations with new shrubbery
6. Repainted 235 fire hydrants throughout the Township
7. Paint various building walls and floors through out the Utility Department
8. Recondition primary tank #1 with new sprockets, chain, and flights
9. Re-lamp all four UV disinfection units
10. Install second energy efficient gel cycling compressed air dryer
11. Build control panel for Lansing Road lift station
12. Build control panel for Saratoga lift station
13. Participated in the Lake Michigan tributary study
14. Rebuilt salt odor control blower
15. Replaced all four WWTP raw lift force main link seals
16. Replace panel view controller at General Motors booster station
17. Several large repairs on our big equipment: hydraulic cylinders, steering boxes, wheels, etc.
18. Replace distribution water feed control valve from single phase drive to a three phase drive
19. Install new air conditioner in WWTP administration server room
20. Replaced one of the two mixers in control box #3
21. Pulled both bar screens to clean and adjust
22. Five building distribution circuit breakers at the WWTP were cleaned and inspected
23. Replaced Snow Road lift station flow meter
24. Review and update all equipment records
25. Replaced lift station pump cradles for River Ridge #2 pump and Thomas L #1 pump
26. Performed maintenance on all Township vehicles
27. Painted various lift station exterior control panels and cans

2011 ACCOMPLISHMENTS (CONTINUED)

DISTRIBUTION SYSTEM

REBUILD 2 TRAFFIC CONTROL ARROW BOARDS

This project required the stripping down of all the equipment, sandblasting of all the electrical equipment, sandblasting the entire framework, priming and repainting all the metal.



Stabilizer supports were welded to the frames on all 4 sides of both arrow boards to improve the ease of use and safety of operations. New tail and running lights were installed. Reflective decals were added.



REPAINT TRAILER-MOUNTED AIR COMPRESSOR

The air compressor was stripped down, sand-blasted, primed and repainted. New tail lights and reflective decals were added.



2011 ACCOMPLISHMENTS (CONTINUED)

SAFETY, EDUCATION & TRAINING

GENERAL TRAINING

The Utility Department has approval from the Michigan Department of Environmental Quality (MDEQ) for continuing education credits (CEC's) for several of its in-house training programs. Currently, the Department has approval for three 30 hour classes and several of its safety classes. The approvals are for Utility Department employees that hold either a water license or wastewater license within the State of Michigan. Every three years employees must earn a certain number of CEC's in order to maintain their respective license. Currently, the Department has **twelve employees** who hold various **water licenses** and **seventeen employees** who hold various **wastewater licenses**.

On September 20, 2011 Governor Snyder signed House Bills 447 and 448 into law. These became Public Act 147 and 148 and had an effective date of September 21, 2011. These bills contain specific details with regards to the new Operator Training Certification program fee package. By signing these bills into law employees of the Township must now pay to write licenses as well as pay a renewal fee every three years to maintain them. In addition, any institution that has an approved course must pay a fee every three years in order to maintain its approval. Currently, the Utility Department has seven approved courses that we must now pay a \$50.00 fee for every three years to obtain renewal.

For the past six years the safety training classes have been used to renew the licenses of employees who hold a D license and also help supplement CEC's for employees who hold all other water and wastewater licenses. In 2011, four employees renewed their licenses in wastewater and eight employees renewed/earned their licenses in water. In 2012 there are two employees who will need to renew their wastewater license and one employee who needs to renew their water license.

SAFETY INSPECTIONS

1. Safety inspections were performed throughout the year on the following equipment:
2. Toyota Large Forklift: A total of six inspections were performed this year.
3. Toyota Small Forklift: A total of six inspections were performed this year.
4. Mitsubishi FG 20N Forklift: A total of six inspections were performed this year.
5. Allis Chalmers Forklift: A total of six inspections were performed this year.
6. Aerial Lift Platform: A total of six inspections were performed this year.
7. Ladders: Portable ladder inspections were performed in December 2008 and December 2010. The next time they need to be inspected will be in the fall of 2012.

SAFETY COMMITTEE MEETINGS

The Utility Department held two safety committee meetings. These meetings were held in March, and June of 2011.

SAFETY, TRAINING & EDUCATIONAL CLASSES

The following internal safety training/training classes were given from January 2011 – December 2011:

1. Machine Guarding – All Utility Department Employees
2. Respiratory Protection – All Utility Department Employees
3. Confined Space Entry Training – All Utility Department Employees
4. MSA Meter by Orion – All Utility Department Employees
5. Security Awareness Training – All Utility Department Employees
6. Storm Water Pollution Prevention – All Utility Department Employees
7. HunterLift (Aerial Lift Platforms) – All Utility Department Employees
8. Drug Free Workplace Policy – All Utility Department Employees
9. Class A & B Wastewater License – One Utility Department Employee
10. Class C & D Wastewater License – Two Utility Department Employees

DEPARTMENT PERSONNEL

PERSONNEL LIST

Title	Name	Hire Date
Director of Utilities	Morrissey, Thomas L.	03-25-1974
Deputy Director of Utilities	Kane, Richard L.	05-21-1984
Distribution Supervisor	Swink, David	07-16-1974
Operations & Maintenance Supervisor	McKane, Michael	09-18-1984
Collections Supervisor	Koons, K. Scott	03-31-1998
Water Quality Supervisor	Herman, Kenneth	03-08-1999
Distribution Foreman	Thelen, Wayne	04-08-1986
Controls Technician	Kuch, J. Matthew	05-01-1995
Industrial-Commercial Specialist	Chapman, Graham	11-11-1985
Crew Leader/Mechanic Operator	D'Haene, David	02-06-2008
Department Secretary	Sattler, Sharon	07-08-1971
Mechanic Operator	Arntz, Daniel	11-22-1999
Mechanic Operator	Corts, Michael	04-04-1990
Mechanic Operator	Greisinger, Aron	10-27-1997
Mechanic Operator	Harmon, James	08-26-2002
Mechanic Operator	Hosmer, James	12-16-2004
Mechanic Operator	Hurst, Peter	10-16-2000
Mechanic Operator	Jenkins, David	02-20-1990
Mechanic Operator	Klein, Michael	09-05-1989
Mechanic Operator	Lynch, William	01-03-2008
Mechanic Operator	McDowell, Philip	09-03-2002
Mechanic Operator	McGarry, Patrick	11-07-1988
Mechanic Operator	Meister, Bradley	06-16-2003
Mechanic Operator	Navin, Tyler	01-03-2005
Mechanic Operator	Ruiz, Gabe	05-30-1995
Mechanic Operator	Schneider, Patrick	06-11-1979
Mechanic Operator	Stafford, Michael	12-17-2006
Mechanic Operator	Stopczynski, Johnathan	09-01-2000
Mechanic Operator	Strack, Justin	08-25-1997
Mechanic Operator	Watkins, Scott	02-04-2003

STATE LICENSES HELD BY PERSONNEL

EMPLOYEE NAME	WASTEWATER	WATER
Graham Chapman	C,D	S3
Mike Corts		S4
Dave D’Haene	B,C,D	S4 & D4
Aron Greisinger	C,D,L1	S2
Kenneth Herman	C,D	S1
Jim Hosmer	B,C,D	
Pete Hurst	B,C,D	S1& F4
Dave Jenkins	B,C,D	
Rick Kane	A,B,C,D	S3, D2 & F3
Mike Klein	C,D	
Scott Koons	C,D	
Pat McGarry		D1 & S1
Mike McKane	B,C,D	
Bradley Meister		S4
Tom Morrissey	B,C,D	
Tyler Navin	C,D	
Pat Schneider	C,D,L1	
Johnathan Stopczynski	C,D	S1
Justin Strack	C,D	
David Swink		D1 & S1
Wayne Thelen		D3 & S1
Scott Watkins	C,D	

A, B, C, or D = Wastewater Treatment Certificates (A is highest level)
 D1 thru D4 = Limited Treatment Operators Certificates
 F3 thru F4 = Water Filtration Certificates
 L1 = Lagoon System Certificates
 S1 thru S4 = Distribution System Operators Certificates

Kenneth Herman, Rick Kane and Tom Morrissey also hold State Certification for Storm Water Management – Industrial Site A-1i.

Additionally, Kenneth Herman, Graham Chapman and Justin Strack hold several Pesticide Applicators Licenses: MDA Pesticide Certificate, Core Requirements, 3A Turfgrass, 3B Ornamentals, 5B Microbial Pest Mngt., and 6 Right-of-Way.

LICENSES HELD BY PERSONNEL

AUTOMOTIVE MECHANICS LICENSING

Automotive mechanics licensing is controlled by the State of Michigan, Secretary of State's office. The licensing is required for people wishing to practice in the field of automotive mechanics. There are several areas in which to write an examination. Upon passing the written exam, licenses are granted to practice in that category. The Utility Department has several employees that are licensed auto mechanics. They are as follows:

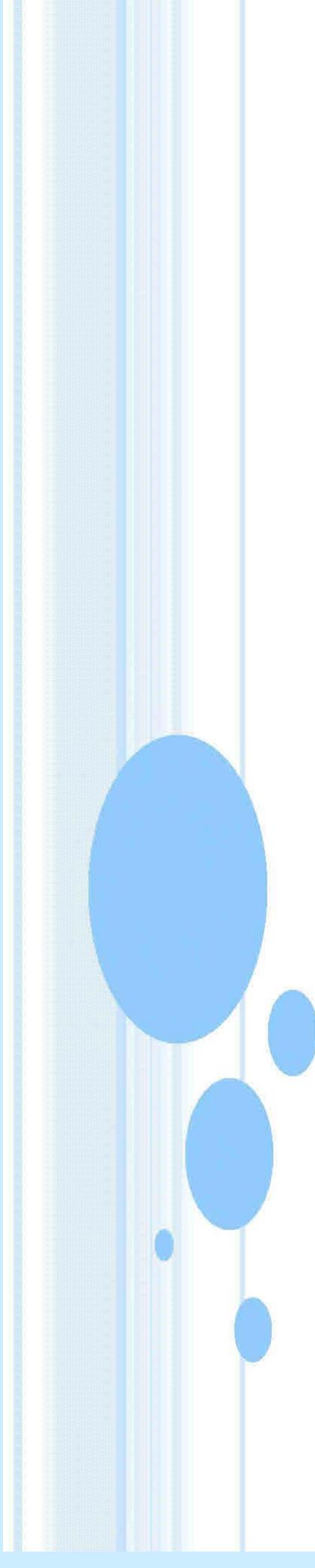
K. SCOTT KOONS

1. Diesel Engine (Trucks)

TOM MORRISSEY

1. Gas Engine (Auto)
2. Gas Engine (Truck)
3. Diesel Engine (Truck)
4. Electrical Systems (Auto)
5. Electrical Systems (Truck)
6. Heating and Air Conditioning
7. Engine Tune up (Auto)
8. Brakes & Braking System (Auto)
9. Brakes & Braking System (Truck)

AUTO = ANY VEHICLE UNDER 10,000 GVWR
TRUCK = ANY VEHICLE OVER 10,000 GVWR



**DELTA TOWNSHIP
UTILITY DEPARTMENT**

**DISTRIBUTION SYSTEM
2011 ANNUAL REPORT**

DISTRIBUTION SYSTEM

GENERAL BACKGROUND

The Primary Goal of the water distribution system of the Delta Charter Township Utility Department is to maintain safe and clean drinking water for our 9,108+ customers. We work very closely with the Michigan Department of Environmental Quality (MDEQ) to meet the weekly, monthly, and quarterly and annual sampling requirements.

The water distribution system operates on a daily basis year round. We maintain 8 standby wells, 3 ground storage tanks with pump stations, 2 elevated water towers, and a Water Operations facility. Delta Township purchases treated water from the Lansing Board of Water and Light, so the wells are being maintained for an emergency water supply only. In addition to storage facilities, the distribution system consists of 209 miles of water main and approximately 1,969 fire hydrants. Approximately 7.71 miles of water main are cast iron pipe or approximately 3.69%.

In 1999, when the Township started monthly billing for water and sewer rather than quarterly, the Township contracted with the Board of Water and Light to read our water meters at the same time they read their electric meters. Although employees were freed from the tasks of reading meters and flushing the water system, these man hours are now utilized in many other ways with the continued growth of Delta Township. Due to the monthly billing, the Township experienced an increase in the number of turn offs for delinquent bills.

As in the past, the Water Division continues to install water service lines, to assist customers with routine turn on/off requests, and to repairs fire hydrants, main breaks, service line leaks, and other various appurtenances throughout the water system in general. We also serve as a trouble-shooting service for customers with a variety of plumbing problems and with high water/sewer bills

With the lagging economy, fewer water service lines were being installed in new homes over the past few years. Many homeowners have lost their jobs and homes. This has placed more demand on the resources of the Water Division. More homes and businesses than ever in the past were being turned off when they could not be sold and were vacated. The number of turn offs for nonpayment has increased. The worst increase was in 2006, when GM closed 2 plants in Lansing Township. When customers walk away from homes, often these homes are not properly winterized. Eventually the water is turned off for nonpayment, but often the plumbing and meter have already been damaged. Employees receive numerous calls to schedule appointments to turn water back on, to reset meters, and to replace frozen meters. When a home is sold from one customer to another, we typically just obtain a final reading from the meter and no appointment or additional work is needed.

We have also experienced an increase in the number of service calls from various sources. As apartment complexes and commercial buildings age, we are finding more and more valves inside these building that are breaking. This requires us to turn off the water outside so valves inside can be replaced. Often times the water has never been turned off to that building, so finding the valve outside may involve quite a bit of time or if the location is known, it may be difficult to

turn the old valve. These service calls are received all hours of the day because the water has been turned off to a building and maintenance people are unable to restore service to an entire apartment building. The information that follows will expound on the above-mentioned topics.

CHART OF THE NUMBER OF MILES OF WATER MAIN

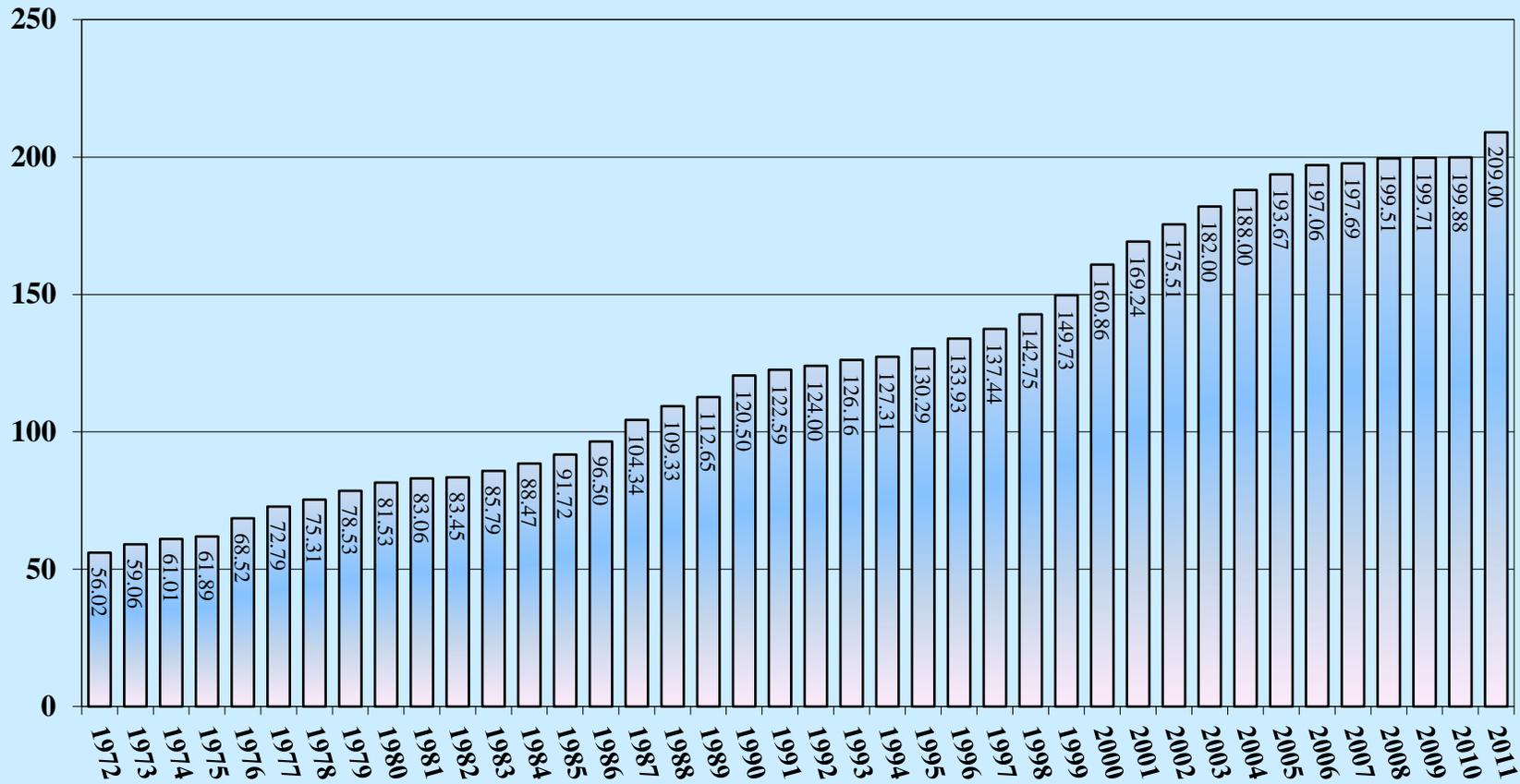
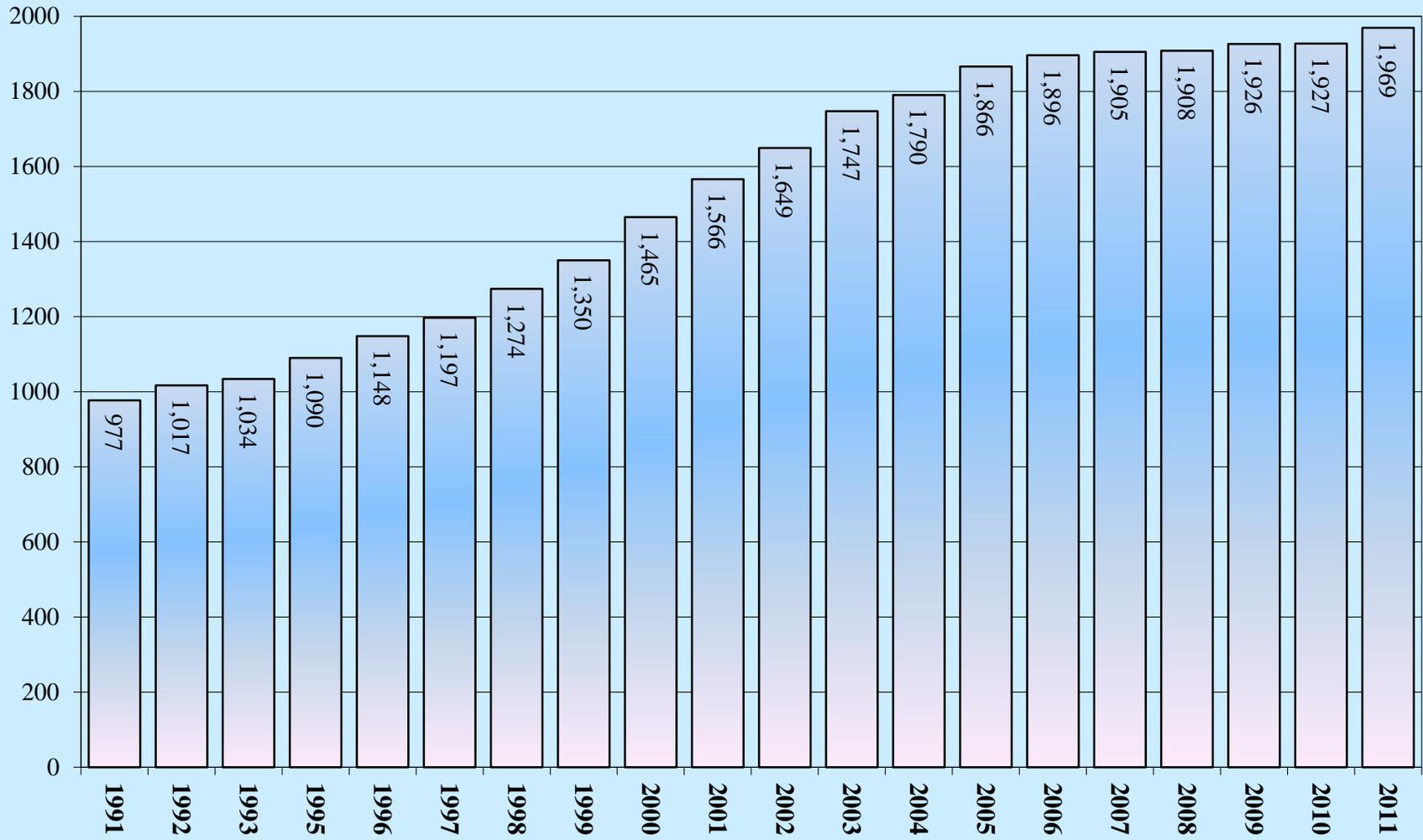


CHART OF THE NUMBER OF FIRE HYDRANTS



WATER SAMPLING PROGRAM

Each year the Utility Department is required by the Michigan Department of Environmental Quality (MDEQ) to collect a variety of water samples for analysis. Most routine samples are taken to the Board of Water and Light lab for analysis and results were submitted to the MDEQ as required. Other specialized samples that are required are sent to a lab that is capable of properly analyzing these samples. Following is a list of the water samples collected and the required number of samples:

WATER SYSTEM MONITORING:

Bacteriology Sampling - In January of 1997, due to the tie-in with the Board of Water and Light, the MDEQ reduced the required number of monthly, bacteriological samples to be collected by Delta Township from 20 to 16 samples. Although the number of required samples was reduced, the Utility Department continued to collect 20 each month to best monitor our system. In other words, we are continuing to collect 240 collect samples yearly when 192 are required. This year, we again collected the 240 routine bacteriological samples all of which were negative.



Starting in 2005, when the bacteriological samples are collected, we now are required to measure the residual disinfectant levels at the same collection points and to report the average chlorine residual to the MDEQ.

Lead And Copper Sampling –Delta Township is required to collected 6 Lead and Copper samples every 3 years between June 1 and September 30. Samples were again required and collected in 2011 and were sent to the Lansing Board of Water and Light lab to be analyzed. The results were within the action levels stated in the Michigan Safe Drinking Water Act 1976, P.A. 399, as amended. The sample results were forwarded to the MDEQ as required.

Corrosion Control – The Delta Township Utility Department collects 2 samples quarterly at our sample sites for the Board of Water and Light. These samples are part of the Lansing area’s compliance with the lead and copper rule of the Michigan Safe Drinking Water Act (1976, P.A. 399).

T.T.H.M. – The Lansing Board of Water and Light collects Total Trihalomethanes samples collected from the distribution system to measure the by-products of chlorination, chloroform, dichlorobromomethane, chlorodibromomethane and bromoform. The State requires these samples be taken by the entity that chlorinates the water for the water system.

STANDBY WELL MONITORING

Wells No. 4, 5, 6, 8, 9, 10 & 11 are being routinely monitored and are kept on standby for future emergencies only. Well 7 is still out of service indefinitely.

Quarterly Bacteriological Sampling - This and every year we are required to collect a sample for Total Coliform Bacteria at each well quarterly. Results from all collections were negative. We are also required to measure the residual disinfectant level at each sample point. Monthly averages are also reported to the MDEQ.

Partial Chemistry – Partial Chemistry samples include nitrate, nitrite, fluoride, and sodium. We were required to collect this sample each year at each well due on September 30. This year samples were collected in July.

Volatile Organic Compounds – We are required to sample each well for Volatile Organic Compounds once every 3 years. These samples were collected in July 2009 and will again be required by September 30, 2012.

Complete Metals – We are required to sample each well for Complete Metals once every 9 years. Samples were collected in July 2009 and will again be due September 30, 2018 for all wells with the exception of Well 10 which will be due by September 30, 2012.

Arsenic – We were required to sample for Arsenic every 3 years. Samples are due again September 30, 2012 for all wells except Well 8 is due September 30, 2013 and Well 9 will continue to be tested quarterly. Collection of quarterly samples is required until four consecutive quarters test within the allowable limit.

SOC – Pesticides – Starting in 2006, the MDEQ requires the Township every 3 years to check each well sample for SOC - Pesticides. Samples were collected in July 2009 and will again be required by September 30, 2012.

SOC – Herbicides – Starting in 2006, the MDEQ requires the Township every 3 years to check each well sample for SOC - Herbicides. Samples were collected in July 2009 and will again be required by September 30, 2012.

SOC – Carbamates – Starting in 2006, the MDEQ requires the Township every 3 years to check each well sample for SOC – Carbamates. Samples were collected in July 2009 and will again be required by September 30, 2012.

Gross Alpha (Radiological) Samples – The MDEQ requires us to sample some wells once every 6 years with the exception of two wells where we are only required to sample every 9 years. Samples were required and collected for Wells 6, 8, 9, 10 and 11 by September 30, 2011. Samples are not due for Wells 4 & 5 until September 30, 2014. As in the past, these samples have been analyzed by the Underwriters Laboratory as these samples cannot be analyzed by the Lansing Board of Water and Light or the MDEQ Laboratory.

Radium 226 & Radium 228 – The MDEQ requires a sample from each well for Radium 226 & Radium 228 every 3 years. In 2010, one sample was required for each well except Well 8 where quarterly samples have been required since February 2007. All required samples were collected.

Radium 226 & Radium 228 samples cannot be analyzed by the Lansing Board of Water and Light laboratory. When collected, these samples are shipped to the Underwriters Laboratories in South Bend, Indiana, for analyzing.

The results of all samples collected by Delta Township are sent to the MDEQ as required. Results of any or all of these samples stated here can be made available upon request by contacting the Distribution System Supervisor, David Swink. The Delta Township water system did **not exceed any M.C.L.** set by the MDEQ in this year.

CROSS CONNECTION CONTROL PROGRAM

Cross connection of the water system is a potentially serious problem. Properly installed and maintained backflow protection devices greatly reduce the risk that water of questionable quality may backflow or back-siphonage into the township system. Currently, there are 897 commercial locations in the Delta Township Utility Department Cross Connection database. Of these 897 locations, 93 are unoccupied and/or closed. Over 368 of these locations have one or more testable backflow prevention devices. From these locations 613 backflow protection devices were tested for 2011.

Residents of Delta Township can be confident that the public water supply is adequately protected from unintended contamination. Actual cross connection problems are rare and when encountered are treated with the greatest urgency. During 2011 our inspections found no instances of a cross connection to the Township's water supply. Inspection frequencies are either yearly, every 3 years or every 5 years based on the type of business and whether they have testable backflow devices present on their piping system.

The primary way in which cross connections are prevented is by insuring that building plumbing is correctly installed during construction or when remodeling of an existing location takes place. Some of the procedures in place to make sure that backflow protection is correctly installed and maintained include:

1. The building department performs review of blueprints and inspections of piping connections during construction. Preliminary review of the blueprint allows for identification of areas where backflow protection has been included and may allow for areas to be identified where additional protection is needed. During construction and prior to occupancy the building is inspected to make sure the specified backflow protection device(s) are properly installed.
2. Once the building is occupied the building is specifically inspected for backflow protection by the Utility Department. A walk through of the building is conducted with attention given to crucial areas of water use. The backflow protection in these areas is documented, and the unique information on the testable protection devices is recorded and entered into a Cross Connection Database.
3. Inspection information is then entered into the Cross Connection database. As the testable devices are entered a testing frequency is assigned depending on the potential seriousness of the contamination risk. The database will be frequently referenced and updated to make sure that protection device records are up to date and have been tested within assigned program time frames.
4. The building owner receives notification from the Utility Department as the devices on the premises require testing. A licensed plumber who has been certified to test backflow devices is contacted by the owner to test the testable devices. A copy of the test report is forwarded to the Utility Department to confirm the ongoing safe operation of the installed device.

5. Existing locations are periodically re-inspected to insure that changes in plumbing systems are noted, new or changed devices are recognized and recorded, and that any potential cross connections are identified and addressed.

For the year 2011, 386 onsite inspections were performed. Most township business owners are now familiar with the requirements of the program, so the testing of devices proceeds smoothly most of the time. There will always be turnover of owners and designated contact people each year which requires an element of educating new people about backflow protection, and helping them to be familiar with the testing requirements. As 2011 came to a close there were approximately 18 locations for which testing reports were still needed. We are working with representatives of these businesses to receive the necessary device test reports.

WATER METERS

CHART OF NUMBER OF METERS IN USE EACH YEAR 1996 - 2011

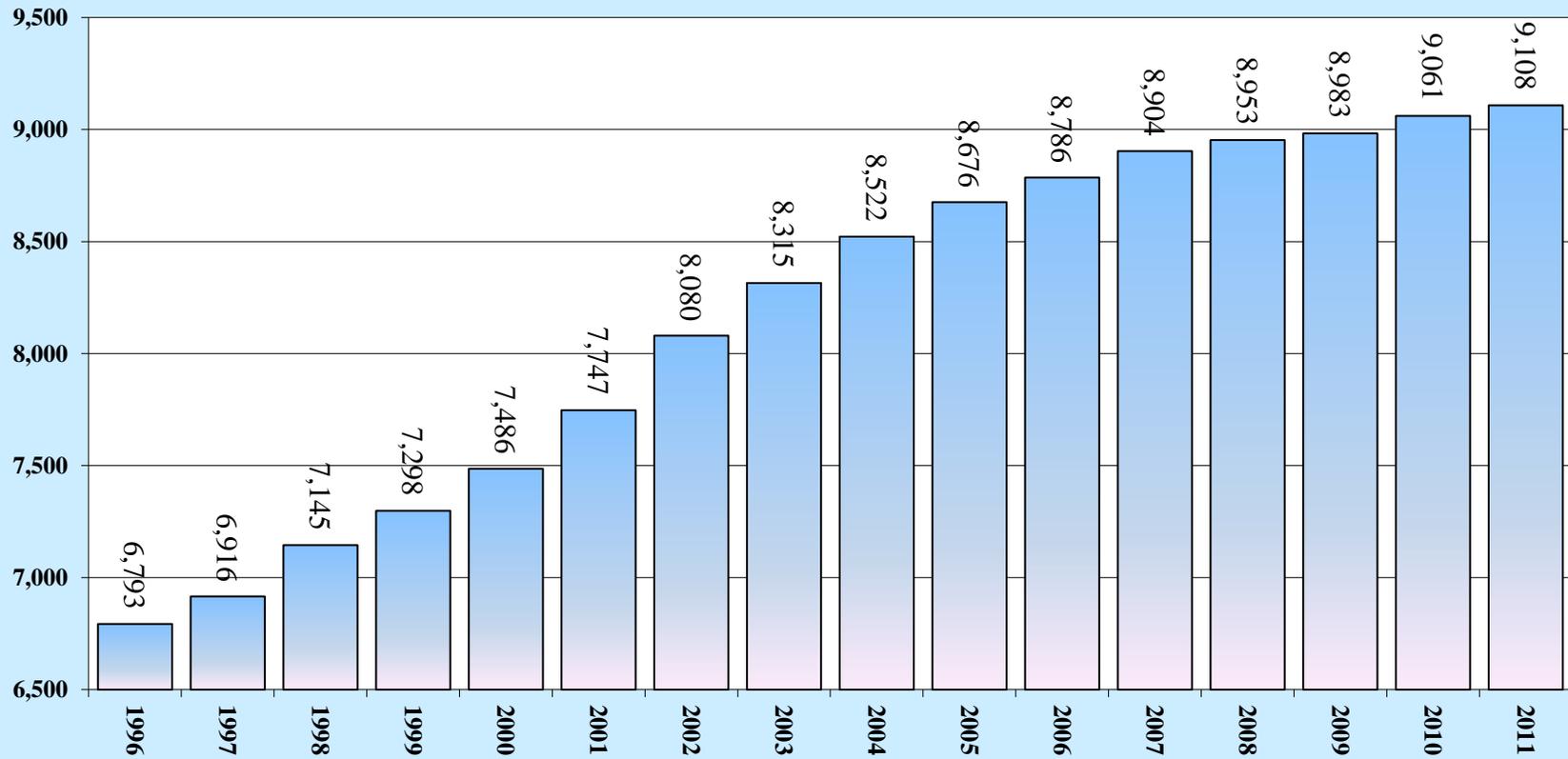
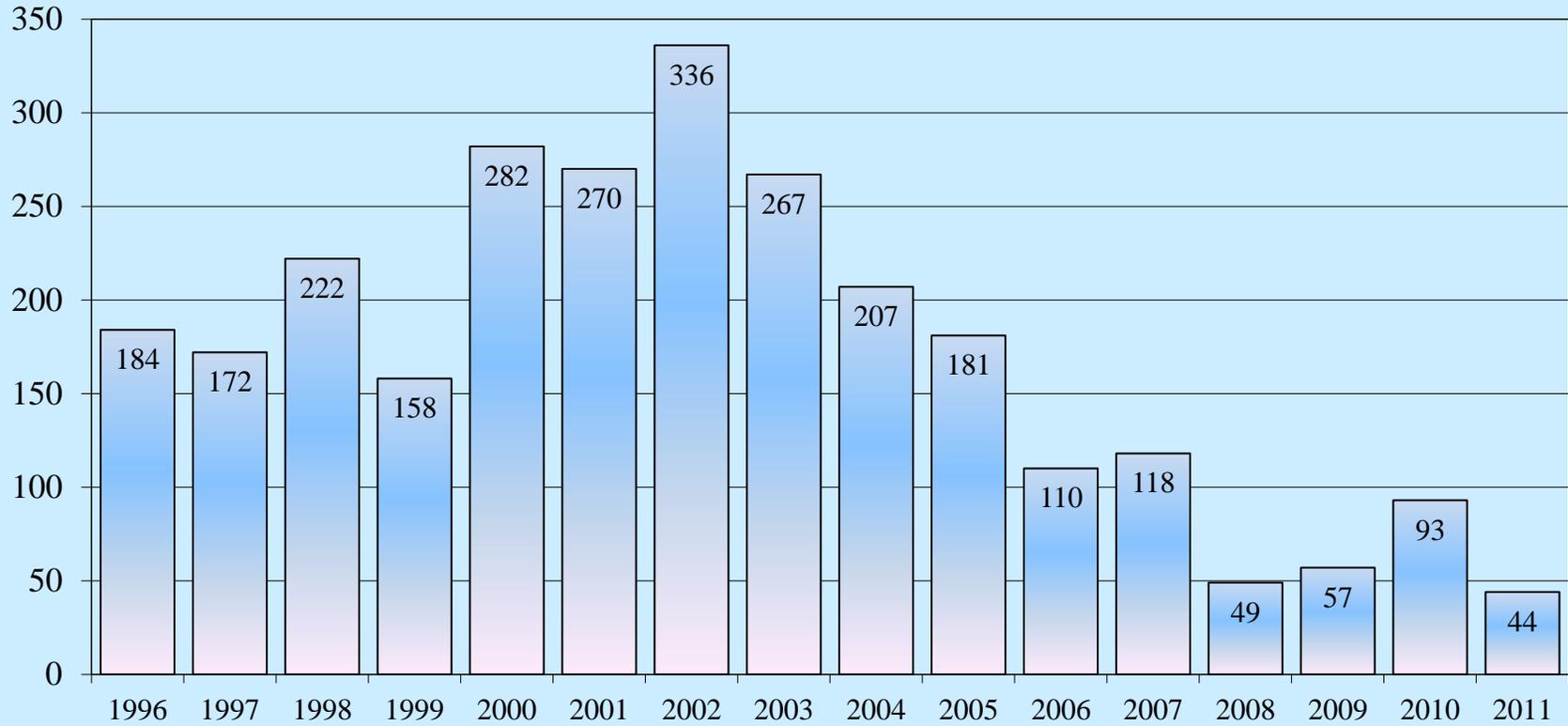


CHART OF NEW METER INSTALLATIONS 1996 - 2011



RADIO READ SYSTEM

PHASE II – EXPANDED SERVICE

In 2010, the Utility Department purchased software and equipment needed to set up a radio read system for reading water meters. The new system will read each meter at designated intervals. Reads are accessible to staff for routine monthly billing and final & new customer billing. Personnel will no longer need to go to each meter location to obtain readings after radio read devices are installed.



After the computers and antenna were operational, the Utility Department installed radio read devices (end units) at various locations throughout the Township to test the system. Once the system was tested, additional radio read devices were installed on difficult-to-read meters and all meters west of I-96, south of I-496, and north of the Grand River. By the end of 2010, a total of 312 radio read devices were installed, and by the end of 2011, a total of 2,645 devices were installed, which means 29 percent of the 9,108 water meters in the Township have radio read devices.

The initial start-up cost is already being offset by the decrease in the cost to have Lansing Board of Water and Light meter readers read water meters each month. This cost will continue to decrease as more radio read units are installed. In addition, the reads obtained through the radio read system have already been extremely useful to staff when assisting customers with trouble-shooting consumption problems.



CHART OF METERS WITH AND WITHOUT END UNITS



WATER SERVICE INSTALLATIONS

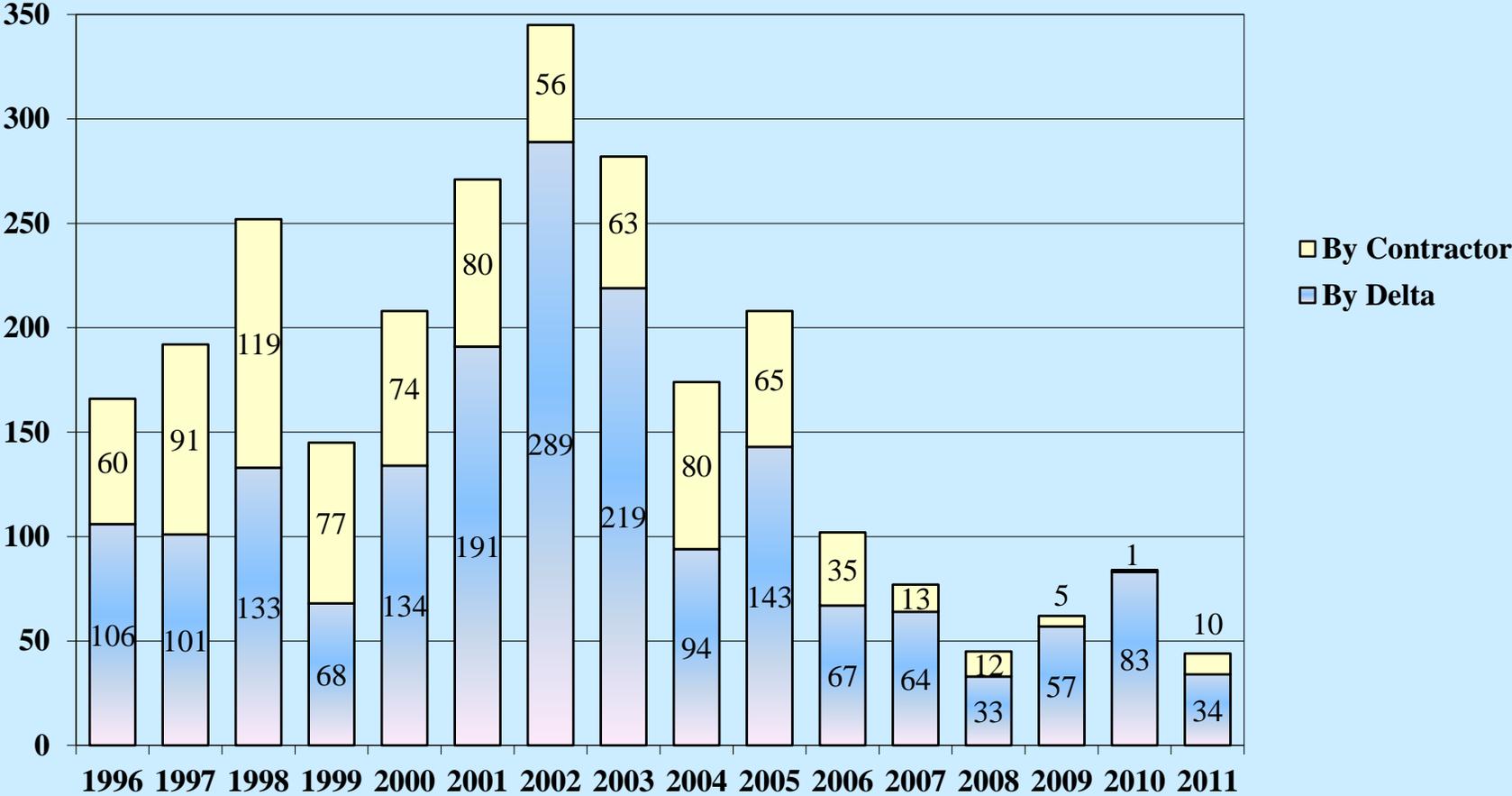
In 2011, 44 water services were installed in Delta Township. This total is down from 84 in 2010, 62 in 2009 and 45 in 2008. The totals were considerably high in 2002 and 2003 because new water mains were installed in areas where numerous homes already existed. In the last several years, construction and sale of new homes has declined due to the drop in the housing market in this state.

The Utility Department installs water services to residential, single-family homes and starting in 2009 also installs to commercial. Of the 44 services installed in Delta Township this year, the Utility Department installed 34 and contractors installed 10 of the services for commercial, multi-residential, and industrial facilities. Of the 34 installed by Delta, 8 water services were in existing buildings and 26 were in new construction.



The number of installations in existing homes & businesses was down this year to 8. This number was 12 in 2010, 26 in 2009, 12 in 2008 and 7 in 2007. This number has remained low possibly because many homes owners are choosing to keep their wells until the well is no longer operational rather than connect to public water, which may be due partly to the economy.

CHART OF WATER SERVICE INSTALLATIONS BY DELTA'S CONTRACTORS 1996 – 2011



WATER SYSTEM MAINTENANCE

HISTORY OF REPAIRS

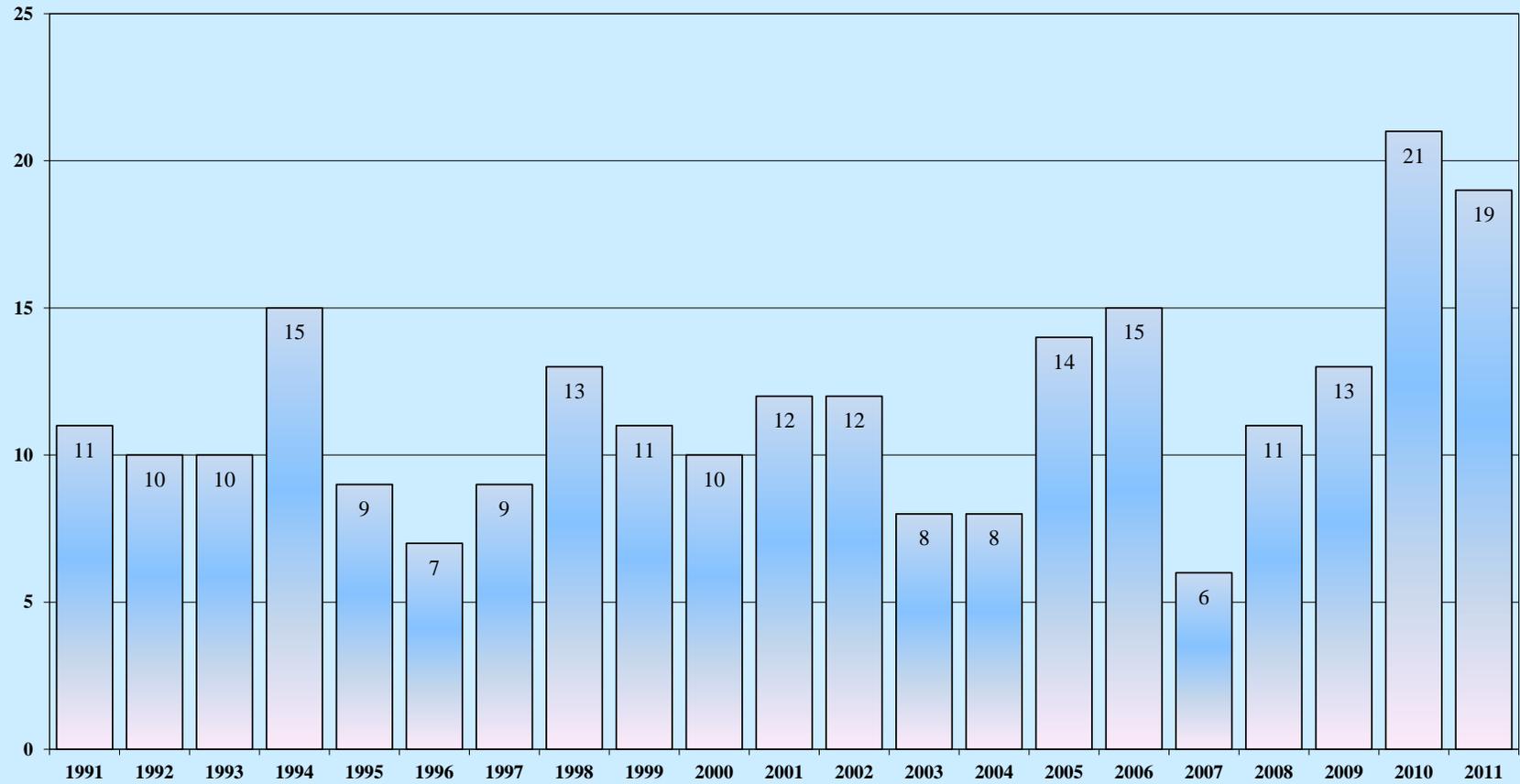
<i>TYPE OF REPAIR</i>	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>	<i>2011</i>
Main Breaks	10	12	12	8	8	14	15	6	11	13	21	19
Service Line Leaks	9	9	10	15	10	11	12	11	9	8	6	12
Frozen Service Lines*	0	1	0	1	0	1	0	0	0	0	1	0
Frozen Meters	12	9	5	30	17	12	10	19	14	21	4	12
Fire Hydrant Repairs/Replacement*	6	5	2	6	9	13	4	6	7	16	17	3
<i>TOTAL REPAIRS</i>	<i>37</i>	<i>36</i>	<i>29</i>	<i>60</i>	<i>44</i>	<i>51</i>	<i>41</i>	<i>42</i>	<i>41</i>	<i>58</i>	<i>49</i>	<i>46</i>

The increase in frozen meters in 2009 may be attributed to the downturn in the economy. Over the past few years, many properties have been abandoned due to foreclosure or businesses closing. When this occurs, buildings are not always winterized properly to protect the meter and plumbing inside.

* In 2001, the frozen service line was at 6411/6415 W. Saginaw. Due to the widening of Creyts Road just south of Saginaw, this line was then shallow and froze. In 2005, these service lines were abandoned and the water main was plugged. This building was demolished for the construction of a new Walgreen store.

CHARTS OF WATER MAIN BREAK

Number of Water Main Breaks



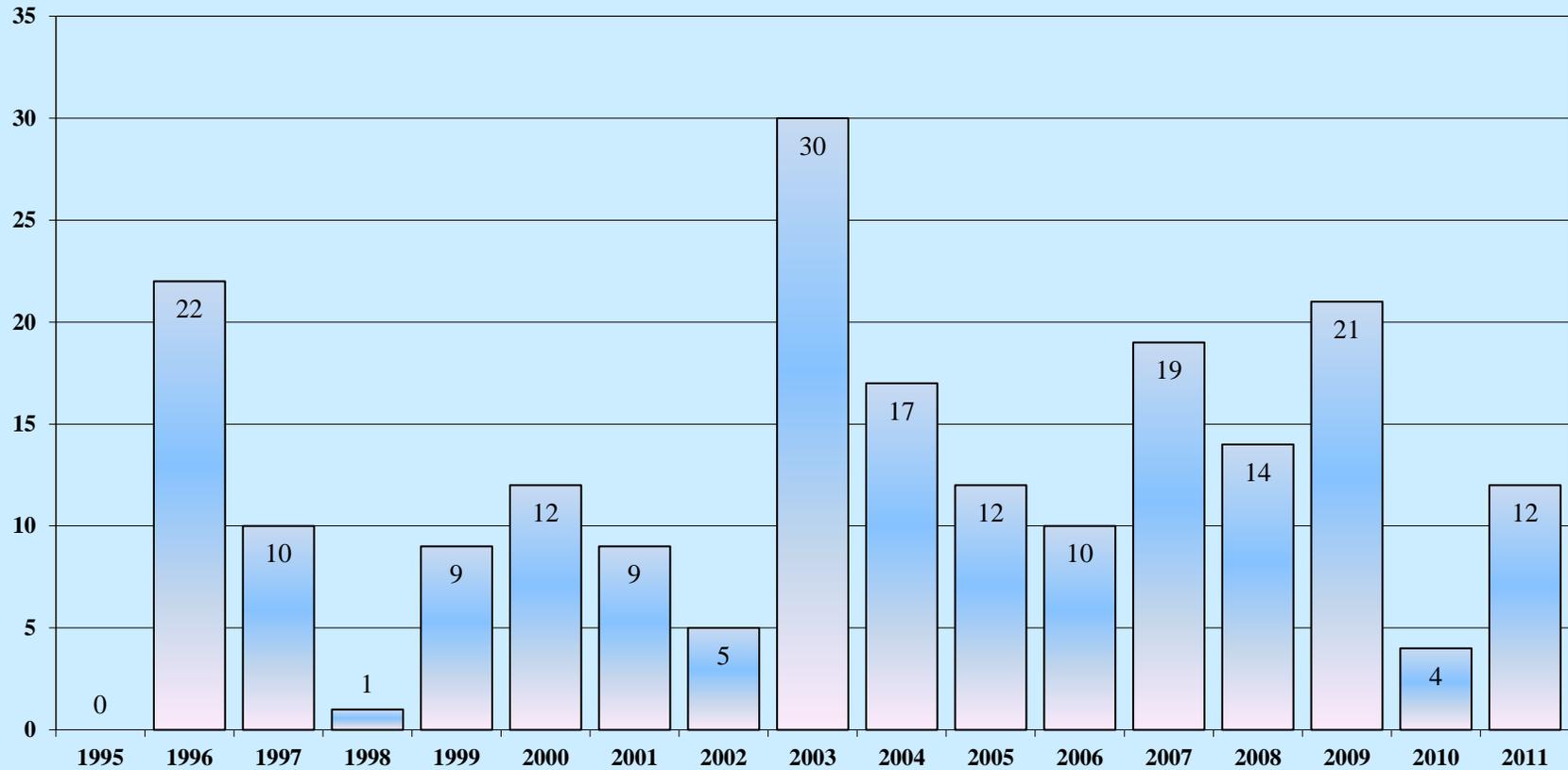
CHARTS OF SERVICE LINE LEAKS

Number of Residential Water Service Line Leaks



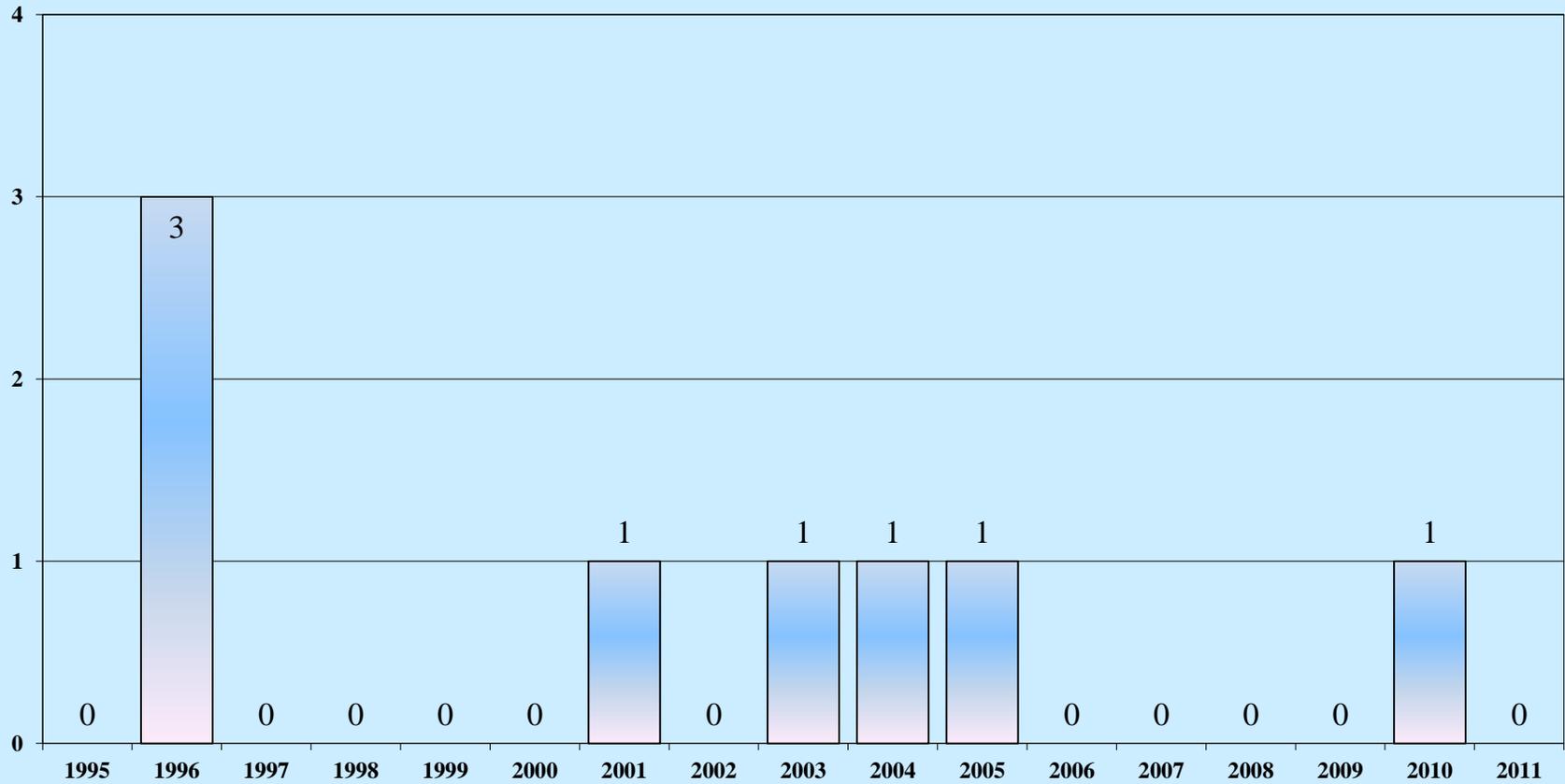
CHARTS OF FROZEN WATER METERS

Number of Frozen Water Meters



CHARTS OF SERVICE LINE LEAKS

Number of Frozen Water Service Lines



CHARTS OF FIRE HYDRANTS REPAIRED/REPLACED

Number of Fire Hydrants Repaired/Replaced

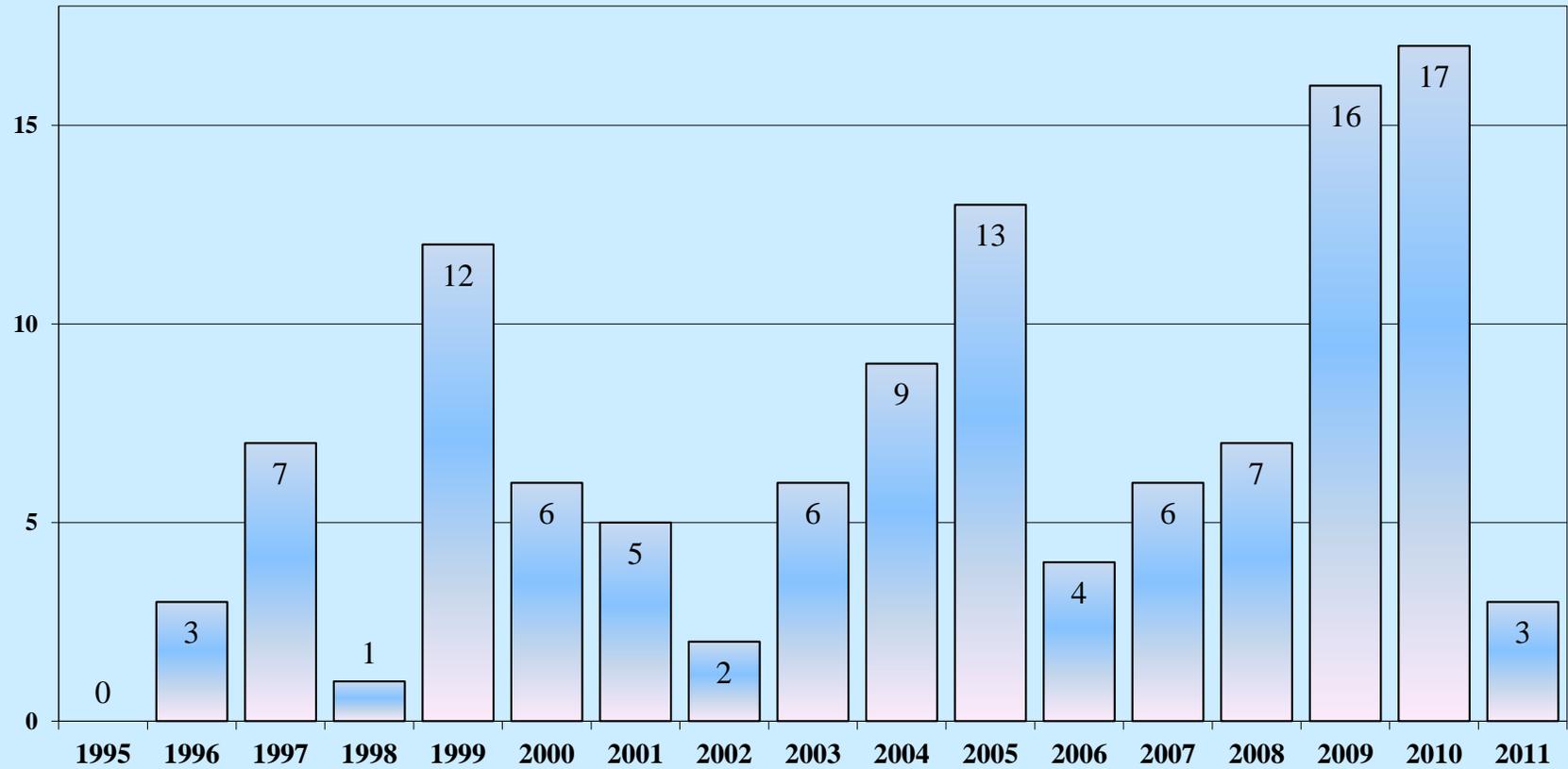
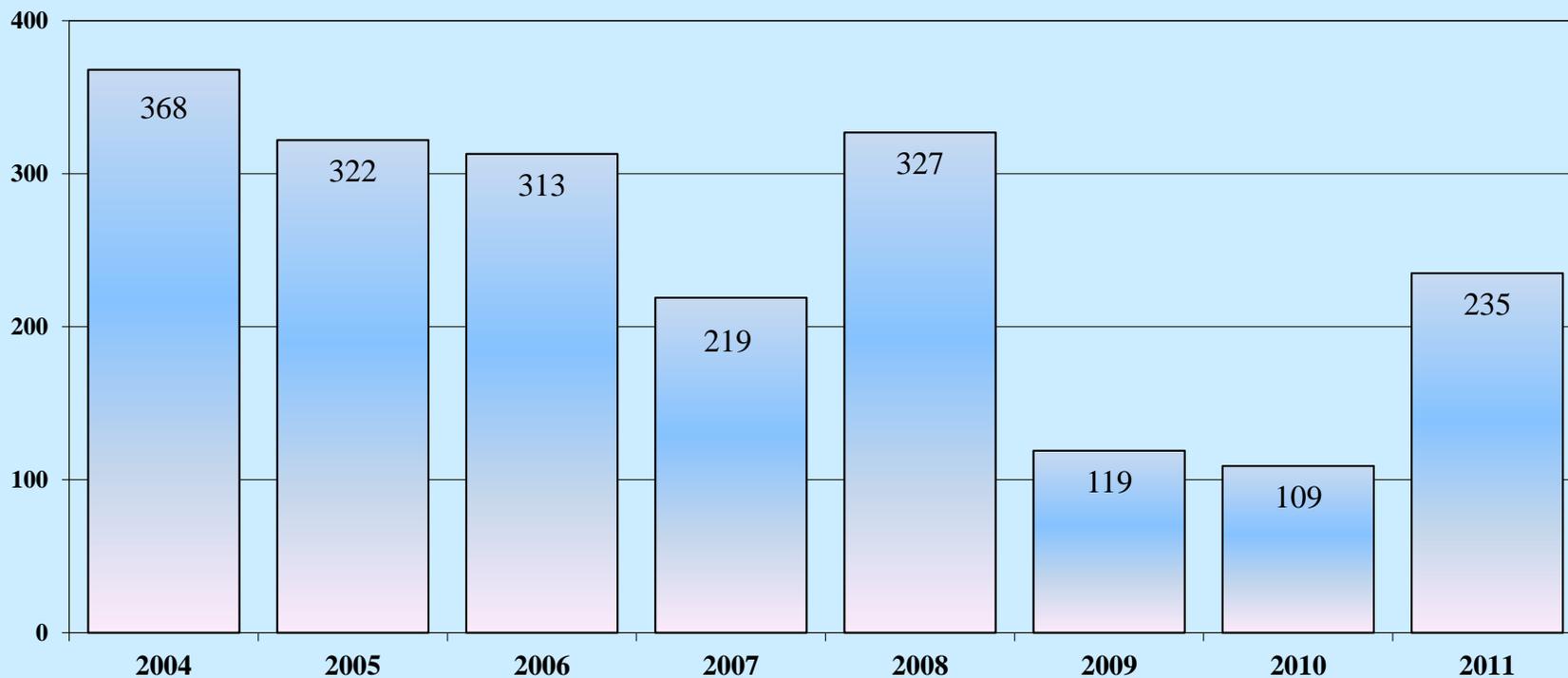


CHART OF FIRE HYDRANT PAINTING YEARLY



The Utility Crew worked on maintaining and painting numerous fire hydrants located throughout the Township. Before each hydrant is painted, the valve is exercised and the cap is greased. Then the old paint is stripped off, rust is removed, and the hydrant is painted with 2 coats of primer and 1 or 2 coats of finish yellow industrial enamel paint.

WATER MAIN BREAKS

ADDRESS	DATE	REG HOURS	OT HOURS	HOLIDAY HOURS	TOTAL HOURS	MATERIALS COST
Claiborne 4120	1/8/2011	6.0	28.5		34.5	\$ 1,524.76
Creyts S 428	1/12/2011	45.0	35.0		80.0	2,442.40
Saginaw W 5330 (N of Younkers)	1/13/2011	48.0	24.5		72.5	3,442.05
Elmshaven 422	2/3/2011	26.5	20.5		47.0	358.76
Arlene 4213	2/20/2011	24.0	48.0		72.0	1,860.28
Marcia S of 116	3/10/2011	14.0	39.0		53.0	1,587.01
Opaline btwn 1601 & 1604	3/29/2011	4.0	39.0		43.0	1,784.54
Michigan W 4344	5/8/2011	14.0	42.0		56.0	10,125.49
Michigan W 4434	5/8/2011	0.0	56.0		56.0	9,901.95
Willow W 5901	7/22/2011	25.0	48.0		73.0	4,281.00
Canal N 215 (In front of)	8/4/2011	48.0	21.0		69.0	6,605.67
Northport	8/6/2011	6.0	16.0		22.0	368.83
Chris J Dr 1004	9/12/2011	0.0	39.5		39.5	3,657.30
Scarlett 509	10/10/2011	24.0	47.5		71.5	2,865.20
Leland 415	10/13/2011	22.5	8.3		30.8	1,189.76
Saginaw W 6008	10/28/2011	10.2	0.0		10.2	1,395.00
Claiborne 4120	12/2/2011	4.0	28.5		32.5	1,231.00
St Joe W 4220	12/9/2011		53.3		53.3	1,235.50
Canal N (S of Saginaw)	12/15/2011	64.0	35.0		99.0	2,578.61
Totals		385.2	629.6	0.0	1014.8	\$ 58,435.11

SERVICE LINE LEAKS

ADDRESS	DATE	REG HOURS	OT HOURS	TOTAL HOURS	MATERIALS COST
Lawrence J Pkwy 12307 *	1/16/2011	45.0		45.0	\$ 48.50
Cranberry Court 4508	2/24/2011	20.0		20.0	963.50
Stoney Point 1620	2/25/2011	20.0		20.0	1,499.62
Michigan Ave 4344	4/17/2011	27.0		27.0	60.02
Mulberry 5819 *	4/22/2011	4.0		4.0	10.30
Palisade 4929	5/19/2011	15.0		15.0	18.88
Saginaw W 7420 (Domestic)	9/12/2011	25.0		25.0	603.40
Saginaw W 7420 (Fire Suppression)	9/12/2011	25.0		25.0	176.20
Shiloh Way 6731 *	9/24/2011	10.0		10.0	84.76
Sherman 511 *	11/3/2011	4.0		4.0	69.00
Canyon Trail 4833	11/7/2011	15.0		15.0	185.10
Geraldine 5132	11/11/2011	6.0		6.0	45.95
Totals		216.0	0.0	216.0	\$ 3,765.23

* Indicates that this service line was hit by a contractor.

Contractors were invoiced for these costs.



Left is a photo of the repair that was made at 1620 Stonepoint, which involved the removal of a square of the driveway approach. On February 25, 2011.

FROZEN METERS

ADDRESS	DATE	REG HOURS	OT HOURS	HOLIDAY HOURS	TOTAL HOURS	MATERIALS COST
Saginaw W 4244	1/27/2011	1.0			1.0	\$ 125.00
Robins Road 1117	2/25/2011	1.0			1.0	125.00
Mt Hope W 6111 #Kiln	3/18/2011	1.0			1.0	125.00
Waverly N 603 #8	4/11/2011	1.0			1.0	125.00
Jade 451	4/25/2011	1.0			1.0	125.00
Park Meadows 200 #Spr	6/1/2011	1.0			1.0	225.00
Park Meadows 238 #Spr	6/1/2011	1.0			1.0	225.00
Saginaw W 5801 #Spr	6/29/2011	1.0			1.0	625.00
Green Meadows 105	8/24/2011	1.0			1.0	125.00
Michigan Ave 4021	9/13/2011	1.0			1.0	125.00
Saginaw W 4233	12/13/2012	1.0			1.0	125.00
Mt Hope W 6111 #Kiln	12/14/2012	1.0			1.0	125.00
Totals		12.0	0.0	0.0	12.0	\$ 2,200.00

Note: Delta Township does not absorb the cost of replacing frozen water meters. Our customers are responsible for ensuring that meters do not freeze and pay to replace them when frozen.

FROZEN SERVICE LINES

ADDRESS	DATE	REG HOURS	OT HOURS	TOTAL HOURS	MATERIALS COST
				0.0	0.0
Totals		0.0	0.0	0.0	0.0

No materials costs for the frozen service in 2010.

FIRE HYDRANT REPAIRS

LOCATION	DATE	REG HOURS	OT HOURS	TOTAL HOURS	MATERIALS COST
Willow at Creyts *	3/28/2011	6.0	2.0	8.0	\$ 181.45
Saginaw W 5510 *	7/19/2011	72.0		72.0	1,915.00
Mt Hope Hwy W 5420 *	12/5/2011	6.0	2.0	8.0	210.00
Total Hours		84.0	4.0	88.0	\$ 2,306.45

* Hydrants Hit by Vehicles.

OTHER PROJECTS

I-96 Interchange Reconstruction



In 2011, the interchange of I-96 at West Saginaw Highway was rebuilt. Saginaw was widened and two of the clover leaf entrance ramps were removed and replaced with left turn lanes on Saginaw Highway to enter the expressway. In addition, Saginaw was widened considerably, which required the Township to move two fire hydrants back to allow for the widening.

LOCATION	PROJECT	DATE	REG HOURS	OT HOURS	TOTAL HOURS	MATERIALS COST
SW Corner Saginaw-Commercial	moved hydrant	3/10/2011	80.0		80.0	\$ 1,032.00
Saginaw E of 8205	moved hydrant	3/16/2011	72.0	9.0	81.0	1,370.27
Total Hours			152.0	9.0	161.0	\$ 2,402.27



Saginaw Highway Reconstruction

The reconstruction and widening of Saginaw included widening Canal Road to accommodate two lanes turning from Saginaw onto Canal Road. This widening required the projects listed below. The picture on this page are work along the west side of Canal north of Saginaw Highway.



LOCATION	PROJECT	DATE	REG HOURS	OT HOURS	TOTAL HOURS	MATERIALS COST
Saginaw W 7404	moved sample point	9/6/2011	12.0		12.0	\$ 93.00
Saginaw W 7404	moved hydrant	9/7/2011	42.0		42.0	1,029.00
Saginaw W 7416	moved hydrant	9/21/2011	24.0		24.0	1,002.77
NE Corner of Saginaw-Canal	remove hydrant & replace valve box	9/27/2011	31.0		31.0	49.27
SW cor Admini. at Canal	install hydrant & main line valve	10/4 & 10/5/11	80.0		80.0	3,639.80
SW cor Admini. at Canal	removed main valve & fix a valve	10/7/2011	72.0		72.0	1,393.37
NW cor Admin at Canal	removed hydrant	10/18/2011	36.0		36.0	2,538.00
Total Hours			285.0	0.0	285.0	\$ 9,652.21



Gettysburg Area Storm Drain Rehab

LOCATION	PROJECT	DATE	REG HOURS	OT HOURS	TOTAL HOURS	MATERIALS COST
Roundtop	lowered main	8/12/2011	4.0		4.0	0.00
Meade 239	lowered service	8/18/2011	2.0		2.0	49.04
Gettysburg 540	lowered service	8/28/2011	4.0		4.0	146.20
Charleston 504	lowered service	10/13/2011	2.0		2.0	104.12
Yorktown 7408	lowered service	10/27/2011	5.0		5.0	56.78
Charleston & Sherman	lowered main	11/1/2011	8.0		8.0	0.00
Charleston 603	lowered service	11/2/2011	4.0		4.0	56.78
Charleston 611	lowered service	11/2/2011	4.0		4.0	67.30

MISS DIG REQUESTS

MONTHLY TOTALS BY TYPE OF TICKET FOR 2011

The Miss Dig program requires the Utility Department to stake all existing water lines including mains and service lines for underground contractors, homeowners, and other utility companies. Following are the statistics for this year:

	Emergency	Normal	Rush	Short	Totals
January	11	51	5	5	72
February	9	24	5	9	47
March	12	139	6	7	164
April	11	198	5	9	223
May	22	233	16	14	285
June	28	204	22	15	269
July	19	195	27	16	257
August	16	212	34	15	277
September	12	188	26	24	250
October	22	169	34	25	250
November	11	112	6	9	138
December	14	73	10	11	108
Totals	187	1,798	196	159	2,340

Emergency = We must respond ASAP - 24 hours-a-day, 7 days-a-week. These requests often require the answering service to call employees in to work after hours.

Normal = we are to stake water lines for a job site within 72 hours.

Rush = we must respond quickly. Staking is usually needed within a few business hours. These are requests where the original Miss Dig ticket information may have changed.

Short = we must respond quickly. Staking is usually needed within a few business hours. These are requests where callers were unable to give required 72-hour notice

Total = Total of all categories for each month.

MONTHLY TOTALS 2001 – 2011

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
January	175	99	80	75	64	111	134	73	66	37	72
February	124	93	68	90	55	77	71	71	85	42	47
March	182	194	140	149	109	179	130	103	129	204	164
April	326	391	378	325	313	266	226	241	242	294	223
May	469	354	384	377	376	287	288	224	213	263	285
June	331	332	381	327	293	289	246	235	215	251	269
July	338	338	487	345	298	244	232	238	216	280	257
August	372	396	302	309	323	283	205	186	164	234	277
September	321	331	363	289	345	234	229	155	182	202	250
October	306	400	358	272	289	275	252	227	191	172	250
November	225	229	180	209	243	161	149	108	137	159	138
December	105	124	171	105	98	87	83	71	71	66	108
Totals	3,274	3,281	3,292	2,872	2,806	2,493	2,245	1,932	1,911	2,204	2,340

In 2006, the number of permits issued for new construction seen a decline that seemed to follow the drop in the economy. For this reason, we believe we experienced the first decline in Miss Dig ticket requests since 1996.

CHART OF TICKETS BY CLASSIFICATION

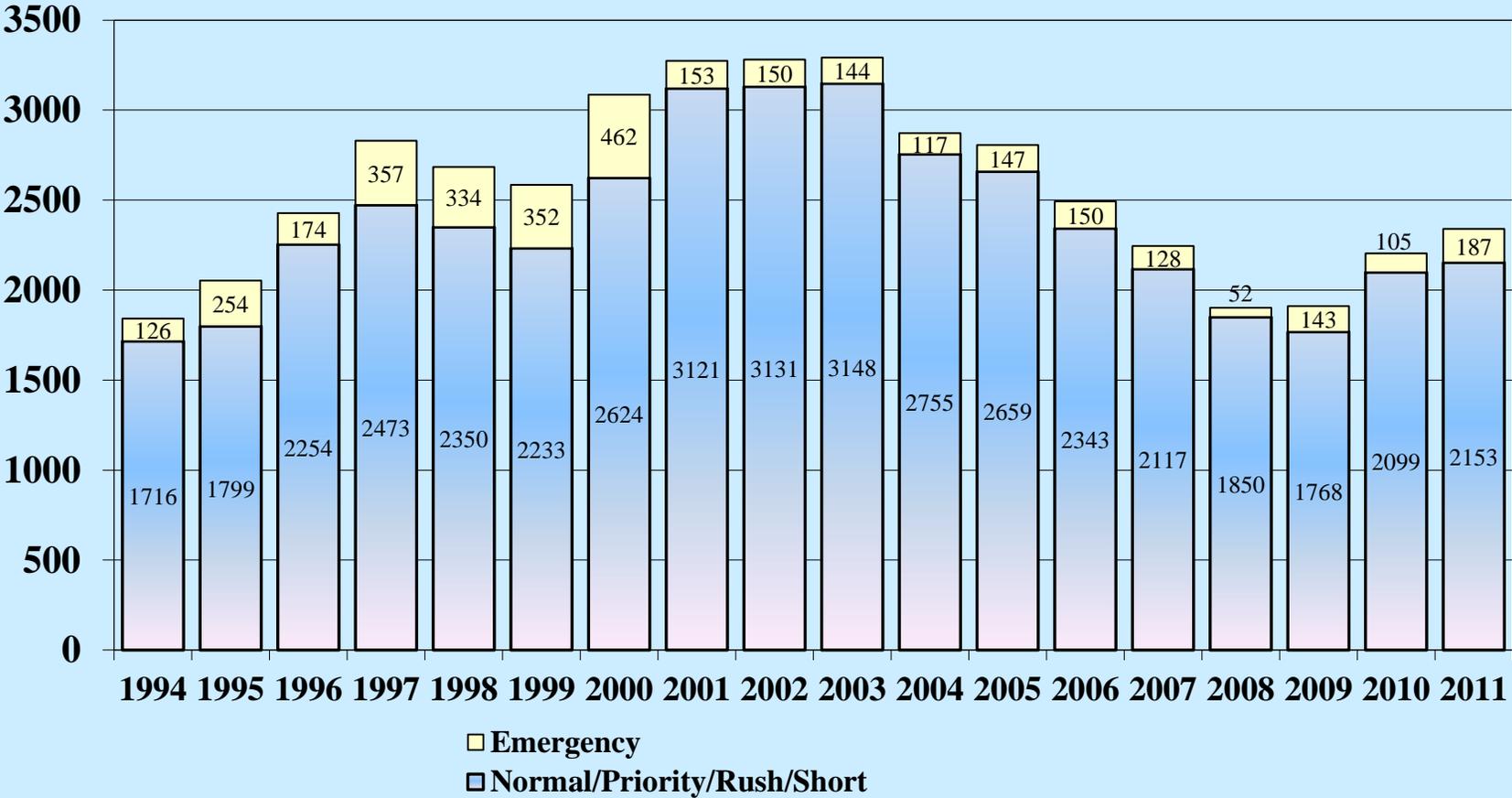
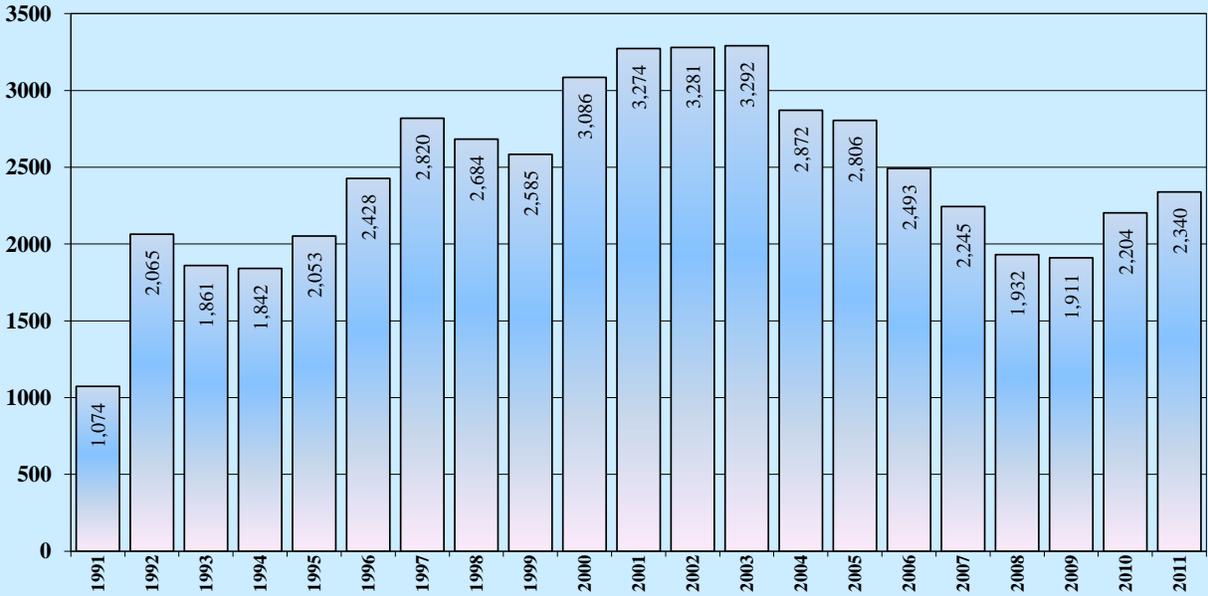


CHART OF MONTHLY MISS DIG TICKET TOTALS FOR 2011



CHART OF YEAR TOTALS



TURN OFFS FOR NONPAYMENT

MONTHLY TURN OFF TOTALS FOR 2011

	Total	Physically	Percent
	On List	Turned	Turned
January	75	69	92%
February	0	0	N/A
March	66	58	88%
April	45	39	87%
May	53	49	92%
June	53	45	85%
July	30	28	93%
August	53	47	89%
September	65	55	85%
October	52	51	98%
November	58	55	95%
December	64	58	91%
TOTAL	614	554	90%

The difference between the turn off list and physically turned off is due either to people who came in and paid when the crew arrived to turn them off or to a physical problem that prohibited the water from being turned off at that time.

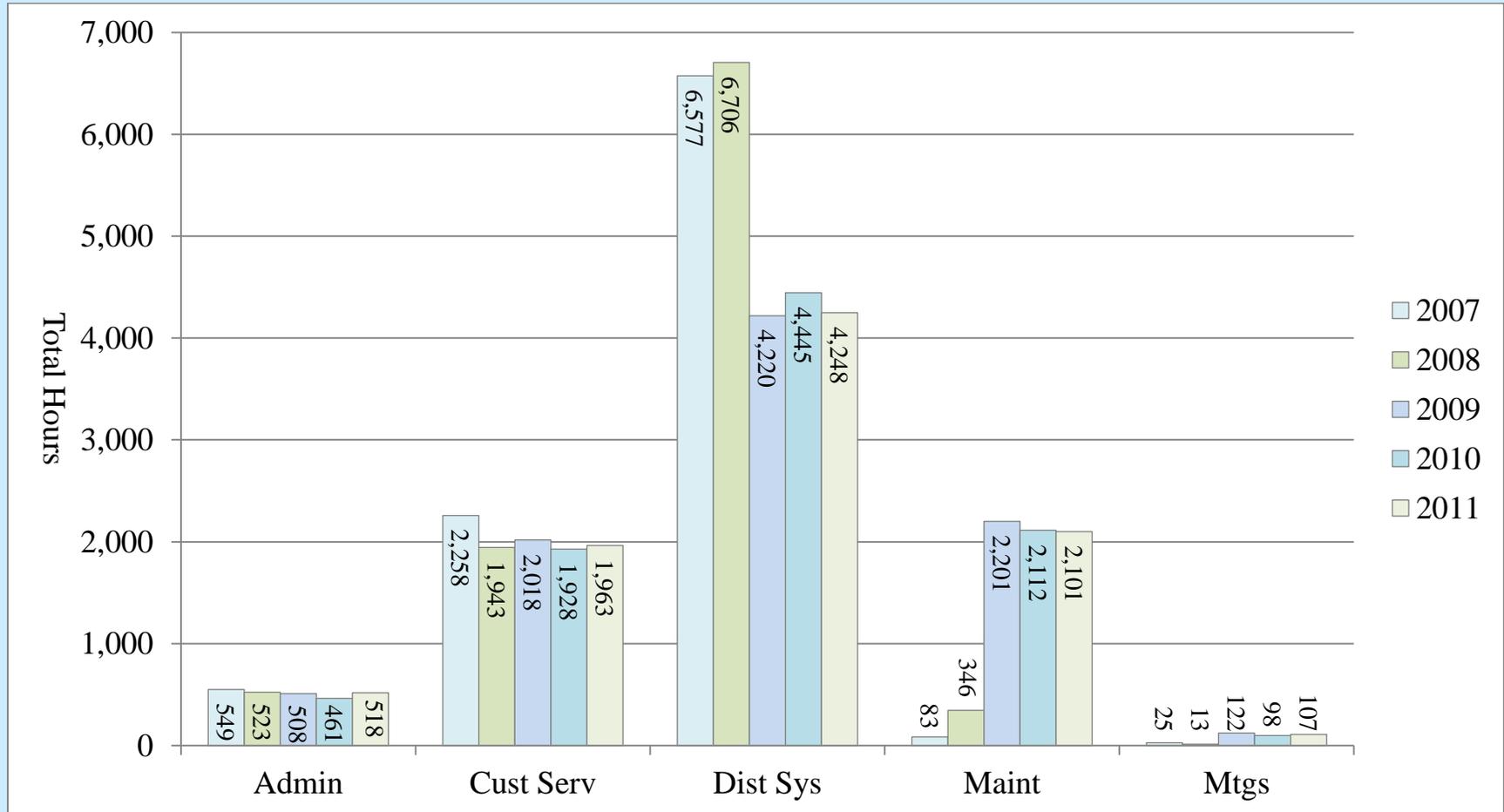
The total number of accounts being placed on the delinquent account list has dropped partially due to the Accounting Department adjusting the parameters used to determine which accounts need to be turned off each month.

CHART OF TURN OFF TOTALS 1999 - 2011

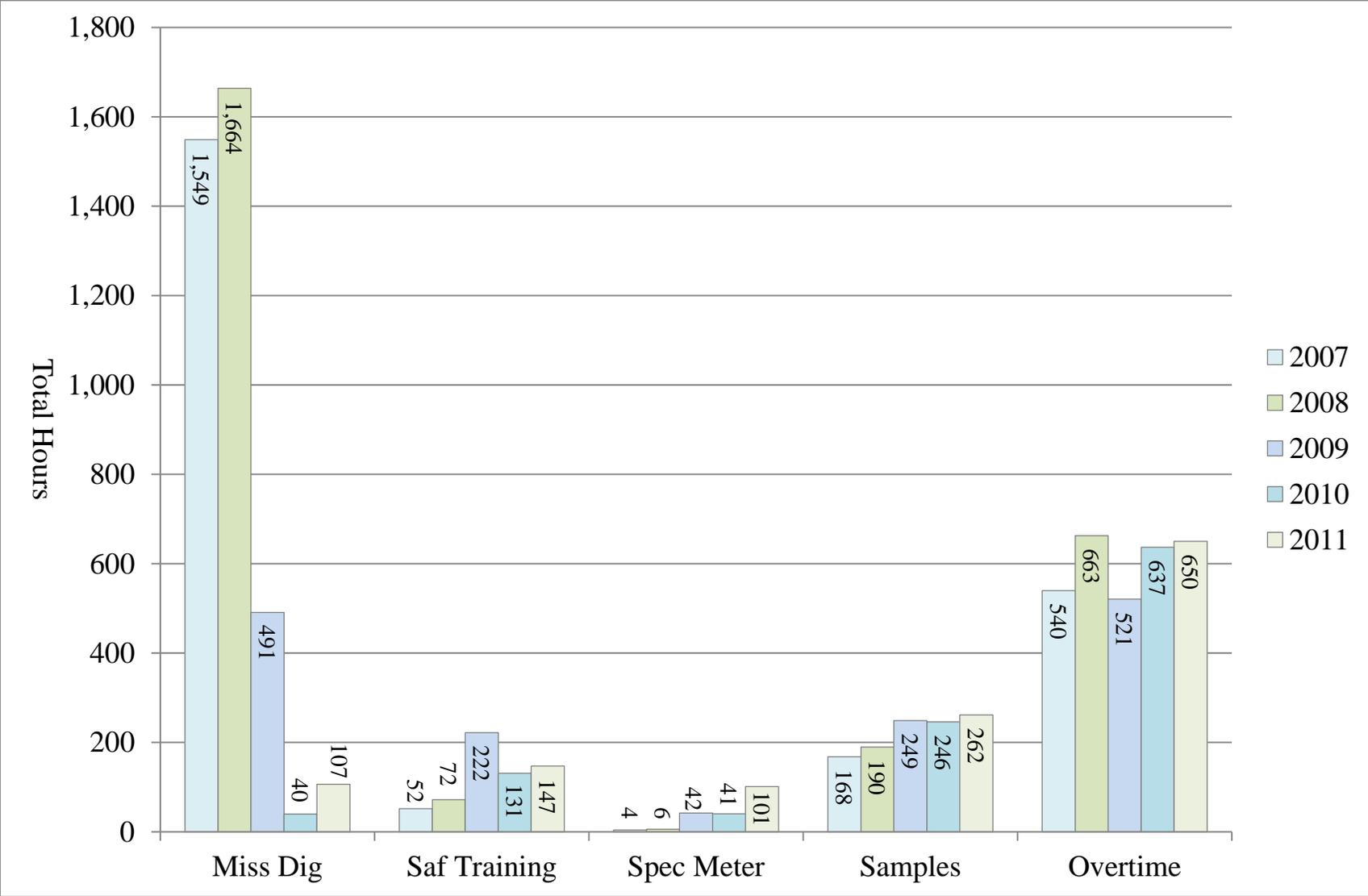


DISTRIBUTION SYSTEM PERSONNEL TIME ALLOCATION

CHARTS OF 2009 DISTRIBUTION SYSTEM PERSONNEL TIME ALLOCATION 2007 THRU 2011



CHARTS OF DISTRIBUTION SYSTEM PERSONNEL TIME ALLOCATION (CONTINUED)



2010 ANNUAL WATER QUALITY REPORT

The following Water Quality Report was mailed to our water and sewer customers in June of 2011. It is being reprinted here for those customers that may not have received it or others who may not be a water customer, but may be interested in the quality of the water. If there are any questions concerning the report, please contact Thomas L. Morrissey at (517) 323-8570 Ext. 309.

Dear Customer:

We are pleased to present the thirteenth annual report summarizing the quality of the drinking water provided to you during the past year. The "Consumer Confidence Report" is required by the Safe Drinking Water Act (SDWA). It tells you where your tap water comes from, what our tests show about it, and includes other things you may wish to know about drinking water.

We encourage public interest and participation whenever decisions that impact our community's water quality are made. The Township Board of Trustees meets the first and third Monday of each month at the Township Administration Building, 7710 W. Saginaw Highway, Lansing. The meetings start at 6 p.m. and are open to the public.

THE BOTTOM LINE

During 2010, your Delta Township drinking water met or exceeded all quality standards issued by the U.S. Environmental Protection Agency (EPA) and the Michigan Department of Environmental Quality (MDEQ).

WATER SOURCE

Delta Township owns and operates its own water system. However, we do not have a water treatment plant. We purchase softened water from the Lansing Board of Water & Light. This approach allows our customers the advantage of clean, conditioned drinking water at a lesser cost than the Township could provide by building its own water treatment plant. And, instead of competing for use of the same resources, Delta Township and the BWL work together to share and protect our groundwater.

The BWL draws water from 118 wells, drilled about 400 feet into the earth's surface. The source of this plentiful supply is an underground aquifer called the Saginaw Formation, which underlies much of the mid-Michigan region. Water from the wells is transported through large transmission mains to one of two conditioning plants. There, a process removes about 80 percent of the water hardness. The softened water is then chlorinated, fluoridated, filtered, and stored in reservoirs for distribution to our customers.

PROTECTING YOUR WATER SUPPLY

Communities throughout mid-Michigan rely on the Saginaw Formation for their drinking water and are working cooperatively to manage and protect it. We're also working with other cities, townships and planning agencies to develop a regional wellhead protection plan. The plan is designed to keep pollution hazards away from current and future well sites.

During 2003, MDEQ conducted an assessment of vulnerability of our aquifer to impacts from human activities. Because there are several known and potential sources of contamination in and near the BWL wellhead protection area, the aquifer in this region has been assessed as "highly

susceptible” to contamination. If you desire more information on this local Source Water Assessment, contact Utility Director Thomas Morrissey at 517-323-8570.

IMPORTANT INFORMATION ABOUT LEAD

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from material and components associated with service lines and home plumbing. Delta Township is responsible for providing high-quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water testing methods, and steps you cant take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

HOW TO READ THESE TABLES

The following tables show the results of our water quality tests. Every regulated contaminant we detected in the water, even in the smallest traces, is listed here. The tables contain the name of each substance, the highest level allowed by regulation (MCL), the ideal goals for public health (MCLG), the amount detected, the usual sources of such contamination, footnotes explaining our findings, and a key to units of measurement.

The State allows us to monitor for certain contaminants less than once per year because the concentration of these contaminants are not expected to vary significantly from year to year. All the data are representative of the water quality, but some are more than a year old.

The tables do not list hundreds of contaminants we tested for but did not detect.

Key to Table:

- AL** **Action Level:** The concentration of a contaminant, which if exceeded, triggers treatment or other requirements that a water system must follow.
- MCL** **Maximum Contaminant Level:** The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
- MCLG** **Maximum Contaminant Level Goal:** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
- MRDL** **Maximum Residual Disinfectant Level:** The highest level of a disinfectant allowed to drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
- MRDLG** **Maximum Residual Disinfectant Level Goal:** The level of a disinfectant in drinking water below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination.
- PPM** **Parts Per Million,** or milligrams per liter (mg/l)
- PPB** **Parts Per Billion,** or micrograms per liter (ug/l)

Substances we measured at the Water Conditioning Plant

Substance	Unit	MCL	MCLG	Highest Detected Level	Range	Major Sources	Violation ?
Barium	PPM	2	2	0.02	0.02 to 0.02	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits	No
Fluoride	PPM	4	4	0.94	0.94 to 0.94	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories	No

DISINFECTANTS AND DISINFECTION BY-PRODUCTS

The BWL adds chloramine to its water at the conditioning plant to protect against bacterial growth. Chloramine is used rather than other disinfectant options because it minimizes the number and level of chlorination by-products, persists better in the distribution system, and leaves little or no unpleasant odor and taste. The following table lists the chloramine levels and disinfectant by-products created by the reaction of the BWL’s chloramine treatment and naturally occurring organic compounds. The chloramine levels were measured at the water plant tap and the disinfectant by-products were measured in the distribution system.

Substance	Unit	MCL	MCLG	Average Detected Level	Range of Detected Levels	Major Sources	Violation?
Haloacetic Acids (HAA5)	PPB	60	NA	3.2	2.6 to 3.7	By-product of drinking water chlorination	No
Total Trihalomethanes (THMs)	PPB	80	NA	2.8	2.7 to 3.1	By-product of drinking water chlorination	No
Chloramine	PPM	4	4	2.25	1.9 to 2.4	Water additive used to control microbes	No

UNREGULATED CONTAMINANTS

Unregulated contaminants are those that have no MCL or MCLG but are monitored for the purpose of providing information to MDEQ and EPA on their occurrence.

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Availability of Monitoring Data for Unregulated Contaminants for Lansing Board of Water & Light.

Our water system has sampled for a series of unregulated contaminants. Unregulated contaminants are those that don’t yet have a drinking water standard set by EPA.

The purpose of monitoring for these contaminants is to help EPA decide whether the contaminants should have a standard. As our customers, you have a right to know that these data are available. If you are interested in examining the results, please contact Thomas Morrissey at 517-323-8570 or at Tmorrissey@utility.deltami.gov .

Substance	Unit	Average Detected Level	Lowest Detected Level	Highest Detected Level	Major Source	Violation?
Sodium	PPM	69	69	69	Natural constituent of groundwater	No

Radon: We last monitored for radon in 2000. The results were between 140 and 150 picoCuries per liter (pCi/l). This is a relatively low level for groundwater, which contains radon gas that has dissolved into the water from surrounding soils. A proposed EPA Rule for radon, since withdrawn, would have established maximum contaminant levels of between 300 to 4,000 pCi/l for public water supplies. Radon is a radioactive gas that you can't see, taste, or smell. It is found throughout the United States. Radon can move up through the ground and into a home through cracks and holes in the foundation. Radon can build up to high levels in all types of homes. Radon can also get into indoor air when released from tap water from showering, washing dishes, and other household activities. Compared to radon entering the home through soil, radon entering the home through tap water will in most cases be a small source of radon in indoor air. Radon is a known human carcinogen. Breathing air containing radon can lead to lung cancer. Drinking water containing radon may also cause increased risk of stomach cancer. If you are concerned about radon in your home, test the air in your home. Testing is inexpensive and easy. Fix your home if the level of radon in your air is 4 pCi/l or higher. There are simple ways to fix a radon problem that aren't too costly. For additional information, call your state radon program or EPA's Radon Hotline (800-SOS-RADON).

Radium 226 and 228: We monitored for both Radium 226 and Radium 228 in 2003 and did not detect either.

GENERAL HEALTH INFORMATION PROVIDED BY EPA

To ensure that tap water is safe to drink, EPA prescribes limits on the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include:

- A. Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- B. Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- C. Pesticides and herbicides, which may come from a variety of sources such as agriculture, storm water runoff, and residential uses.
- D. Organic chemical contaminants, including synthetic and volatile organics, which are by-products of industrial processes and petroleum production, can also come from gas stations, urban storm water runoff and septic systems.

- E. Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities. In order to ensure that tap water is safe to drink, EPA prescribes regulations, which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

Some people may be more vulnerable to contaminants in drinking water than is the general population. Immune-compromised persons, such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants, can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium are available from the Safe Drinking Water Hotline (800-426-4791).

NATIONAL PRIMARY DRINKING WATER REGULATION COMPLIANCE

For more information about our water quality, please contact Utility Director Thomas Morrissey at 517-323-8570. Learn more about Delta Township utilities at www.deltami.gov. Learn more about the Lansing Board of Water & Light water system at www.lbwl.com. For more information about safe drinking water, visit the U.S. Environmental Protection Agency (EPA) at www.epa.gov/safewater/.

DISTRIBUTION SYSTEM CAPACITY

WATER PURCHASED EACH MONTH IN 2011

Measured in Gallons

	Michigan Ave TN-1122	Delta Driver Drive TN-1123 TN-1124		Monthly TOTALS
January	95,650,000	0	785,629	96,435,629
February	76,928,571	1,915	690,857	77,621,343
March	107,829,654	3,448	707,381	108,540,483
April	105,839,394	0	680,000	106,519,394
May	107,921,505	2,654	864,591	108,788,750
June	133,911,828	24,772	1,331,075	135,267,675
July	158,974,713	153,383	1,682,908	160,811,004
August	147,116,196	244,644	1,363,183	148,724,023
September	118,725,183	90,667	1,060,334	119,876,184
October	101,641,379	0	756,207	102,397,586
November	89,688,362	0	652,878	90,341,240
December	90,230,357	0	698,842	90,929,199
Totals	1,334,457,143	521,483	11,273,886	1,346,252,512

**WATER PURCHASED/PRODUCED
MONTHLY TOTALS 2007 – 2011**

	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>	<i>2011</i>
January	96,238,286	92,662,000	82,523,742	96,160,200	96,435,629
February	92,275,286	90,084,148	77,469,536	84,573,200	77,621,344
March	99,540,941	95,691,448	84,214,874	87,106,520	108,540,482
April	99,941,545	89,644,159	84,327,452	94,737,180	106,519,394
May	124,874,864	107,568,691	96,209,411	120,861,000	108,788,751
June	149,433,964	131,127,000	110,574,718	122,256,800	135,267,676
July	176,675,573	146,943,740	131,203,750	169,238,060	160,811,004
August	165,577,155	167,504,380	132,640,113	169,881,540	148,724,023
September	124,261,931	146,803,539	145,327,053	124,173,400	119,876,184
October	114,649,238	96,535,510	98,034,018	103,108,900	102,397,586
November	98,463,401	88,425,500	84,727,970	91,206,180	90,341,240
December	95,854,589	86,632,165	91,108,804	97,652,620	90,929,199
TOTALS	1,437,786,773	1,339,622,280	1,218,361,439	1,360,955,600	1,346,252,512

CHART OF AVERAGE MILLION GALLONS PER DAY 1975-2011

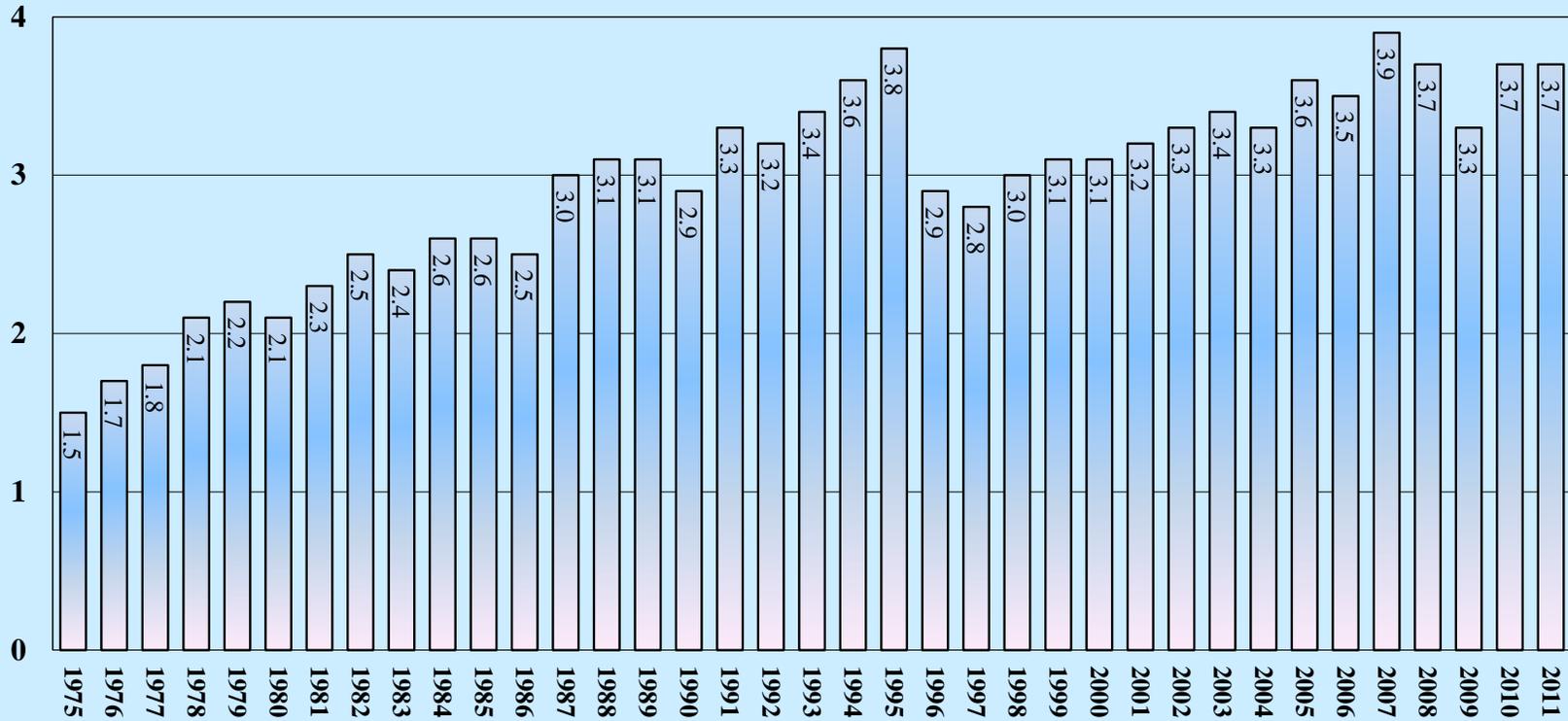


CHART OF MILLION GALLONS PER MONTH IN 2011

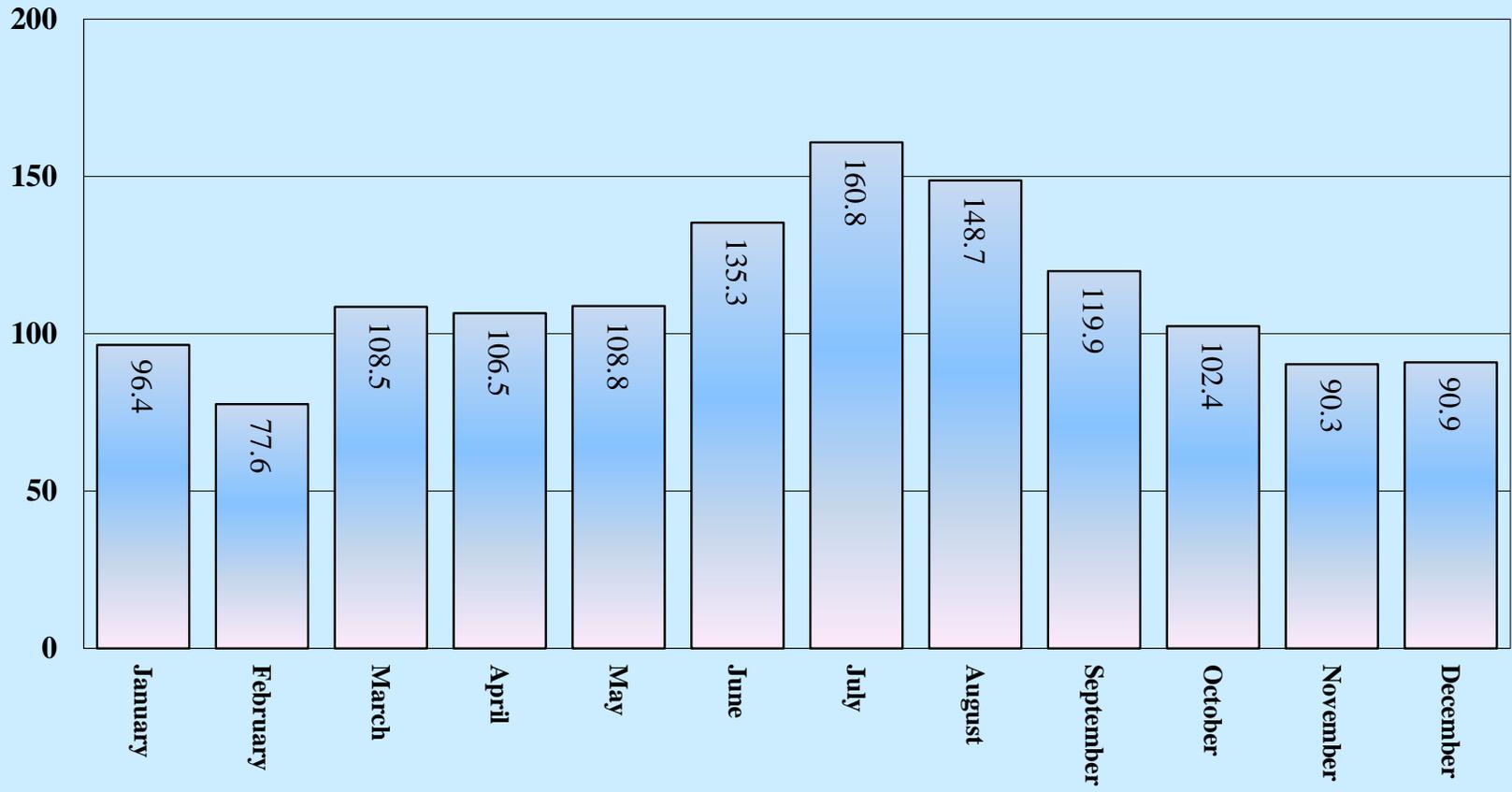


CHART OF WATER PURCHASED 1995- 2011 – YEARLY TOTALS

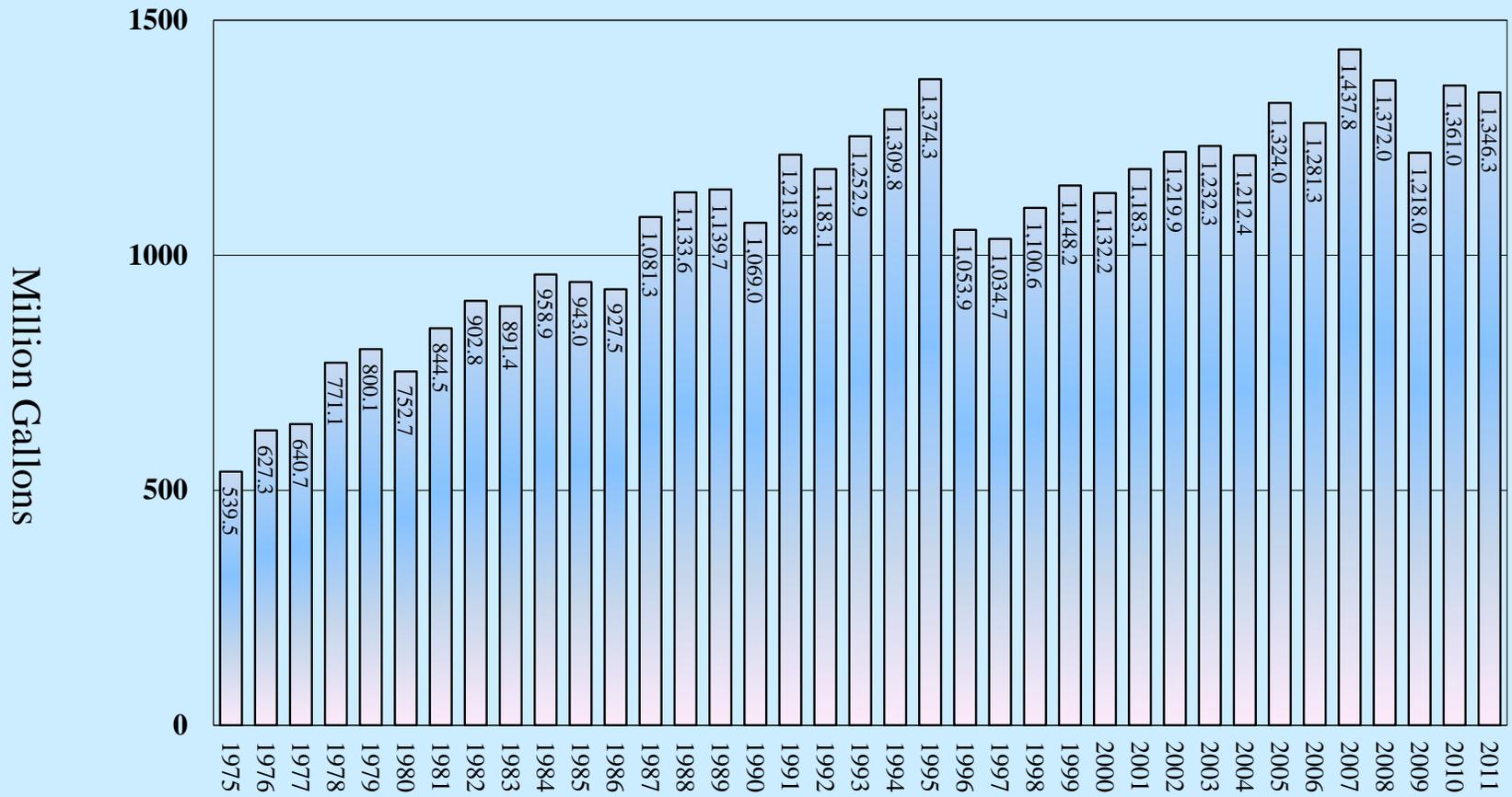


CHART OF MONTHLY COMPARISON OF WATER PURCHASED 2007- 2011

Average Million Gallons per Day

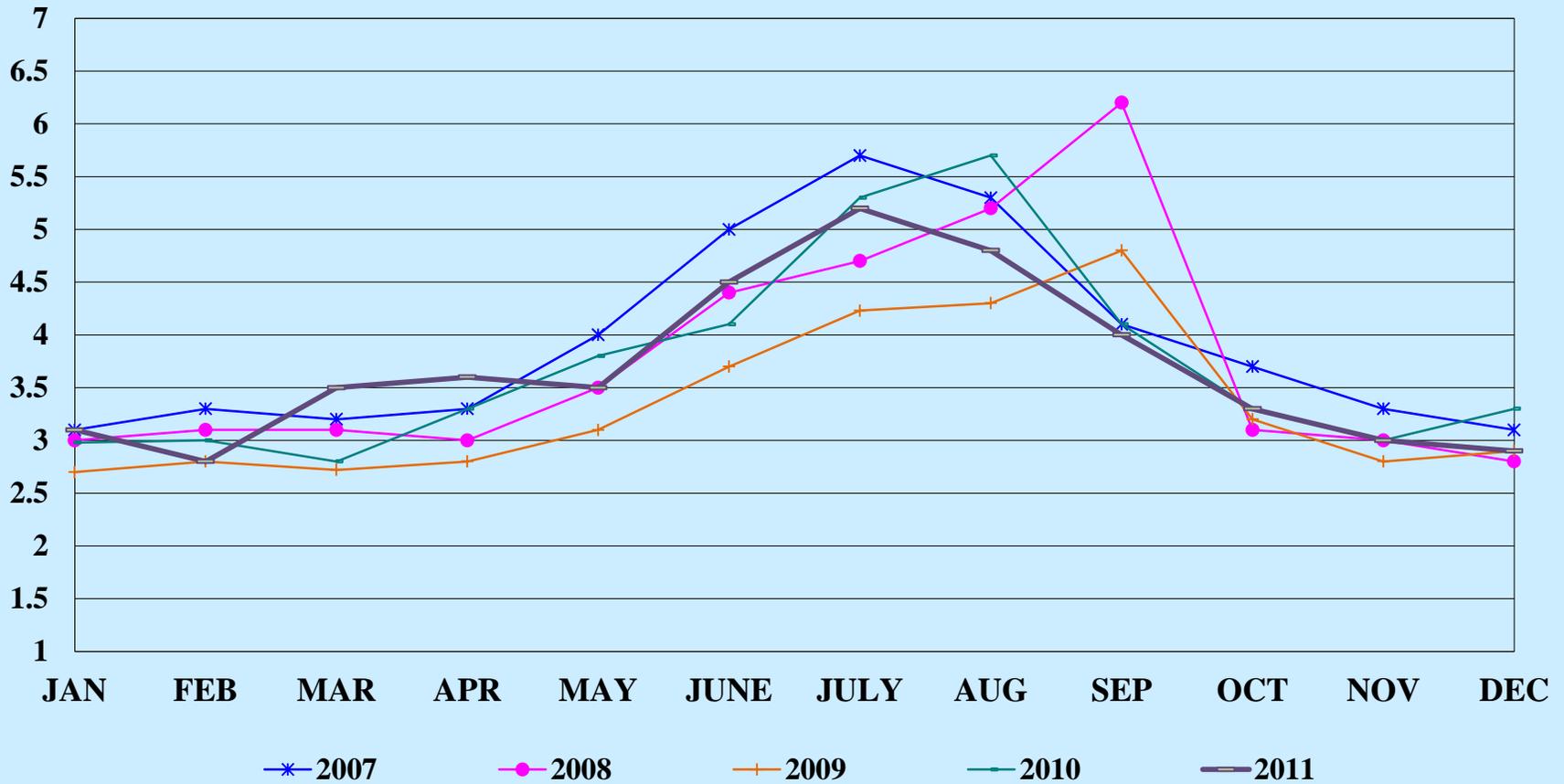


CHART OF DAILY PEAK & LOW DEMAND

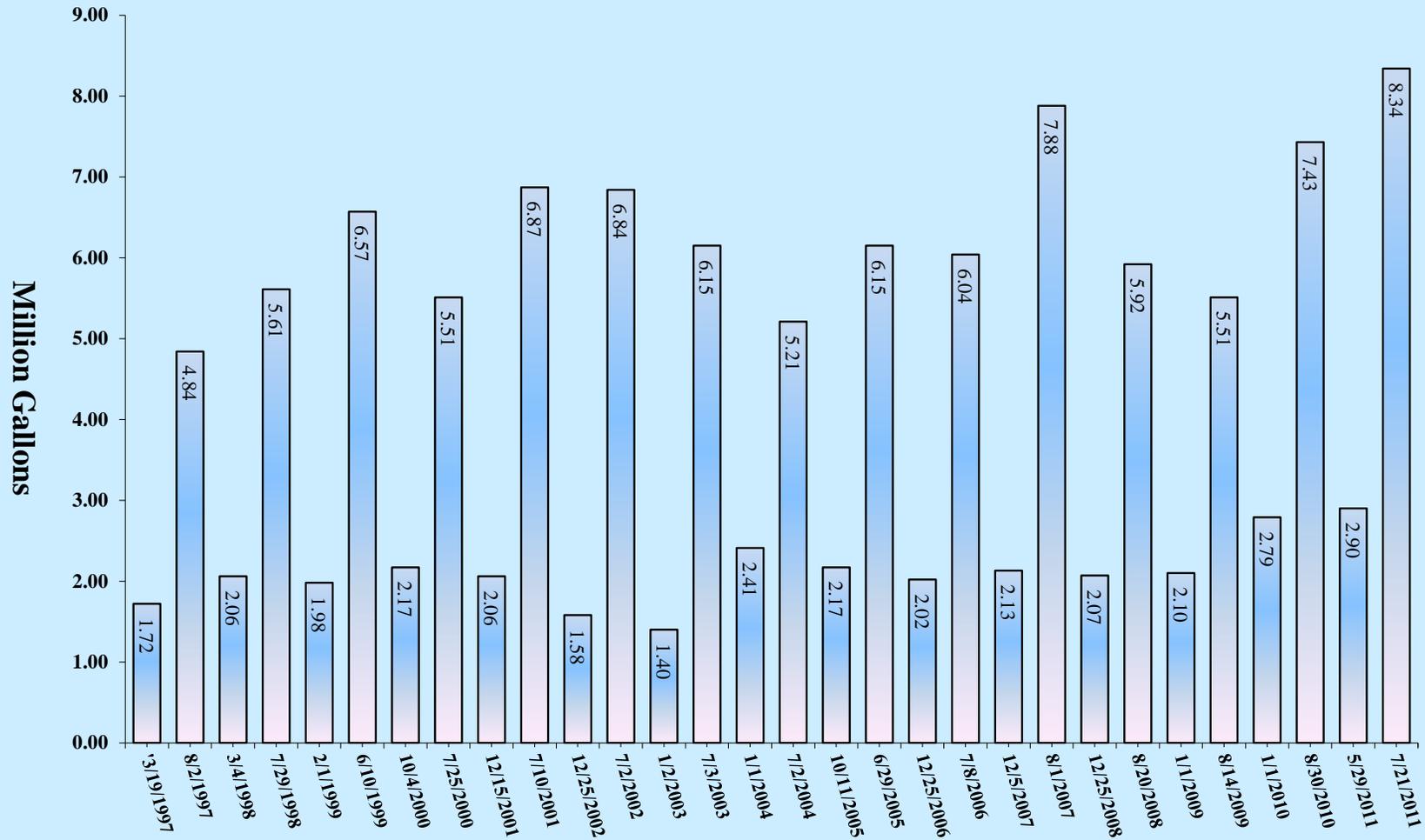


CHART OF WATER PURCHASED/PRODUCED – MAXIMUM, AVERAGE & MINIMUM 1998-2011

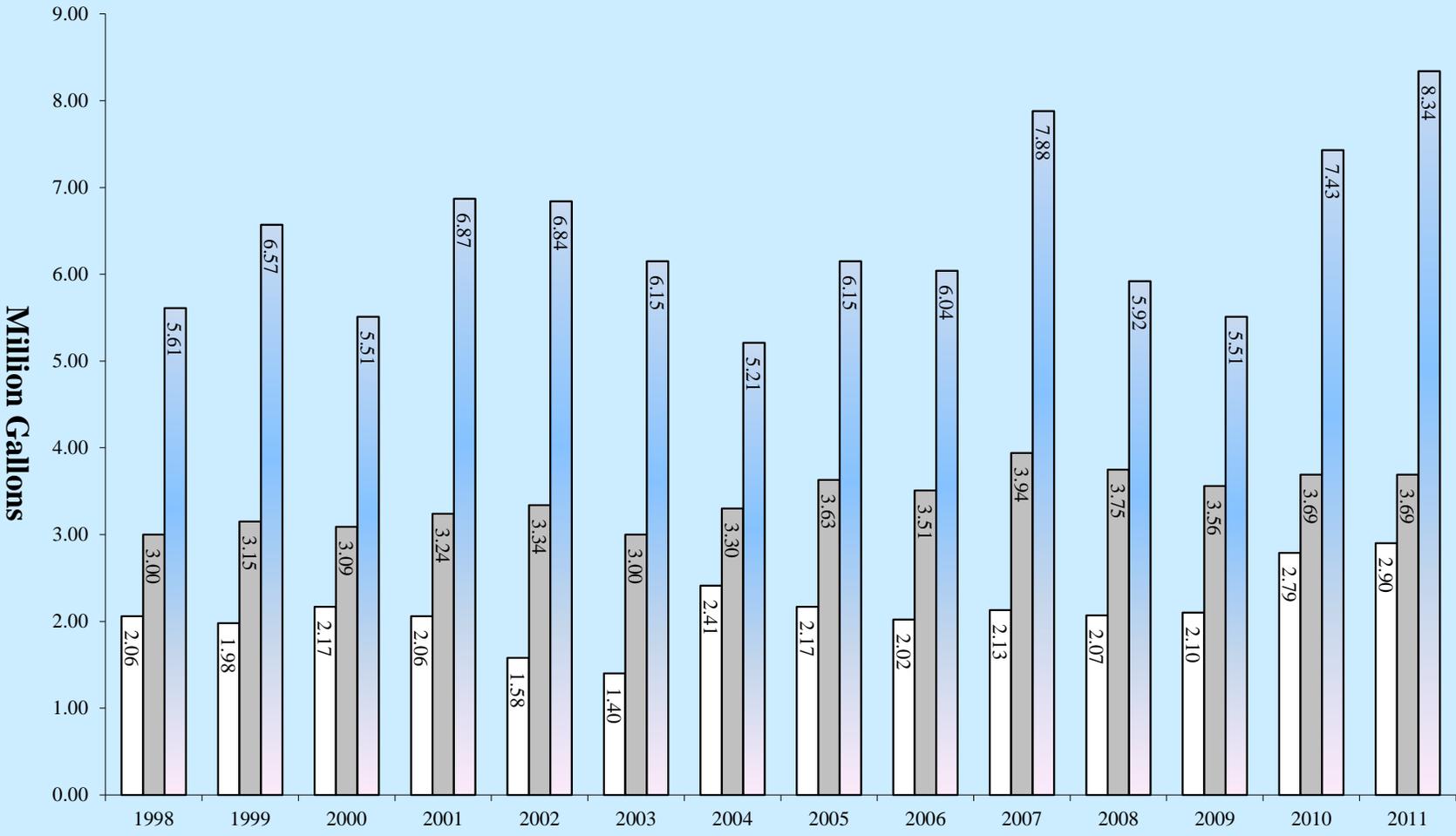


CHART OF MAXIMUM HOUR FLOW

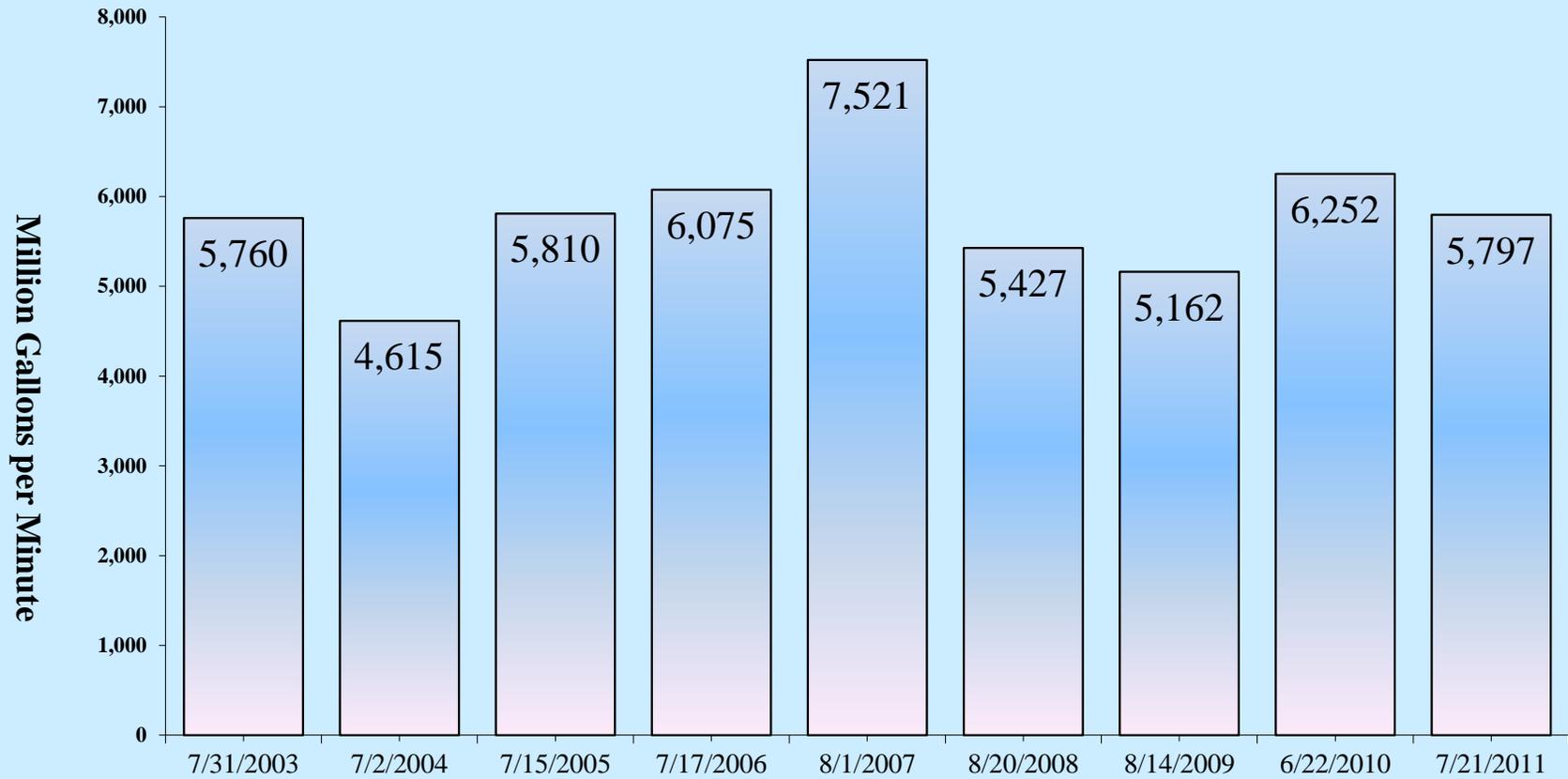
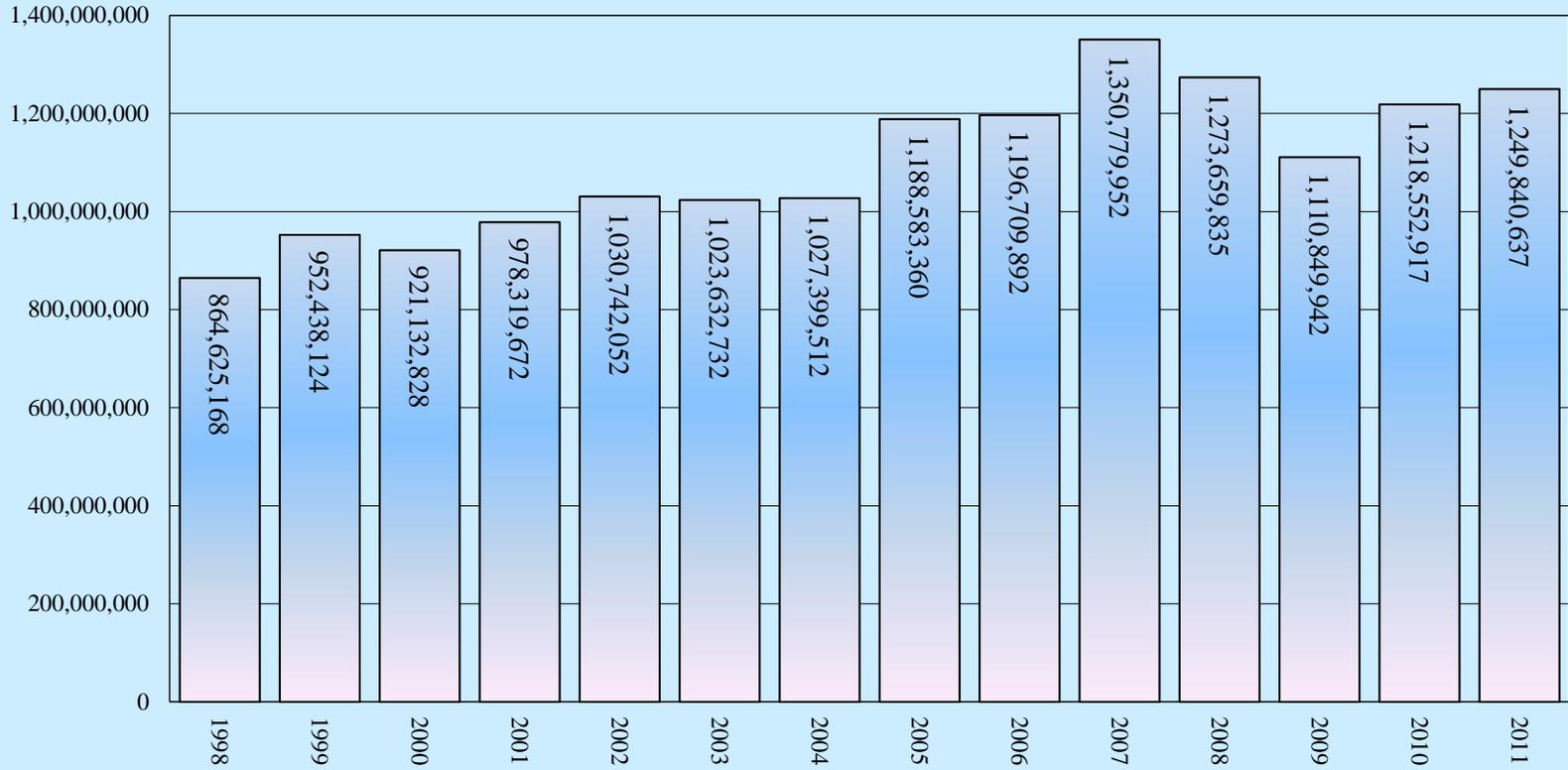


CHART OF TOTAL GALLONS SOLD 1998 - 2011



LOST REVENUE

A large percentage of the water purchased from the Board of Water and Light (BWL) is metered and sold to Delta Township water customers. However, a small percentage of the water purchased from BWL is used for other purposes or is unaccountable lost water.

The percentage of lost water during the past three have been considerably less than what was recorded in the past. The decrease shown may be partly due to more complete and accurate record keeping. In addition, staff has made every effort to investigate and repair any system leaks as promptly as possible.

More detailed information has been included in this report to provide a better understanding of lost water. This information provides a better understanding of unaccountable lost water. The following are the calculation used to determine Unaccountable Lost Water from 1997 through this year.

Accountable Metered Water is water sold to our customers. The amount of Accountable Metered Water is deducted from the amount of water Delta Township purchases from the Board of Water and Light to determine the amount of unmetered water that is either lost or accountable being used for flushing, fire training, etc. Information on the amount of water purchased monthly from BWL is in this report.

Unmetered water is the difference between the amount of water purchased from the BWL and the amount that is sold to our customers.

Accountable Unmetered Water is water that is lost due to main breaks and service line leaks, water system flushing, fire flow testing, new construction testing and flushing, fire fighting, and Fire Department training. These estimated figures are used on the following sheets used to calculate the amount of unmetered water that is lost each year.

Unaccountable Lost Water is water that is not sold to customers or estimated as accountable. Reasons for Unaccountable Lost Water include inaccurate estimates of unaccountable water, inaccurate meters, and other uses that are unknown to the Department. Starting in 1998, we make every effort to gather as much complete and accurate information as possible to estimate unaccountable water to reduce the amount of lost water reported. Although the accuracy of our water meters is 99 to 100 percent, a small percent of the water that flows through a meter is not billed back to customers. (This inaccuracy of the water meter is within the guidelines of the AWWA standards for meter accuracy, which is 98.5 to 101.5 percent.) In addition, other uses of unaccountable water include leaks in the system that are unknown and water that is used by the public without authorization. Although every attempt is made to monitor unauthorized use, it is still a problem that we will continue to attempt to eliminate.

2011 LOST WATER FUND REVENUE CALCULATIONS

Water Sold in Cubic Feet	167,052,043	
Gallons sold to customers via CF meters	1,249,549,282	
Gallons sold via temporary meters	123,504	
Gallons sold via bulk water station	167,851	
Total Water Sold		1,249,840,637
Gallons Purchased from BWL		1,346,252,512
Total Gallons Water Not Sold		96,411,875
Less Accountable Unmetered Water (See Below)		14,089,440
Total Gallons Unaccountable Lost Water		82,322,435
Total Revenue Lost this year		\$ 246,314.30
PERCENT UNACCOUNTABLE		6.11%

ESTIMATED ACCOUNTABLE UNMETERED WATER

	Water Division	Fire Dept.*	Engineering	Totals
January	720,000	0	0	720,000
February	8,869,770	0	0	8,869,770
March	700,000	0	0	700,000
April	550,000	0	0	550,000
May	630,000	4,000	0	634,000
June	40,000	0	0	40,000
July	260,000	0	20,560	280,560
August	480,000	0	0	480,000
September	430,000	0	0	430,000
October	622,000	0	1,500	623,500
November	185,000	0	2,000	187,000
December	570,000	0	0	570,000
Station 1 Mtr	XXX	4,050	XXX	4,050
Station 3 Mtr	XXX	560	XXX	560
TOTALS	14,056,770	8,610	24,060	14,089,440

* Fire Department totals include water used to fight fires and training.

CHART OF PERCENT OF REVENUE LOST ANNUALLY 1990 - 2011

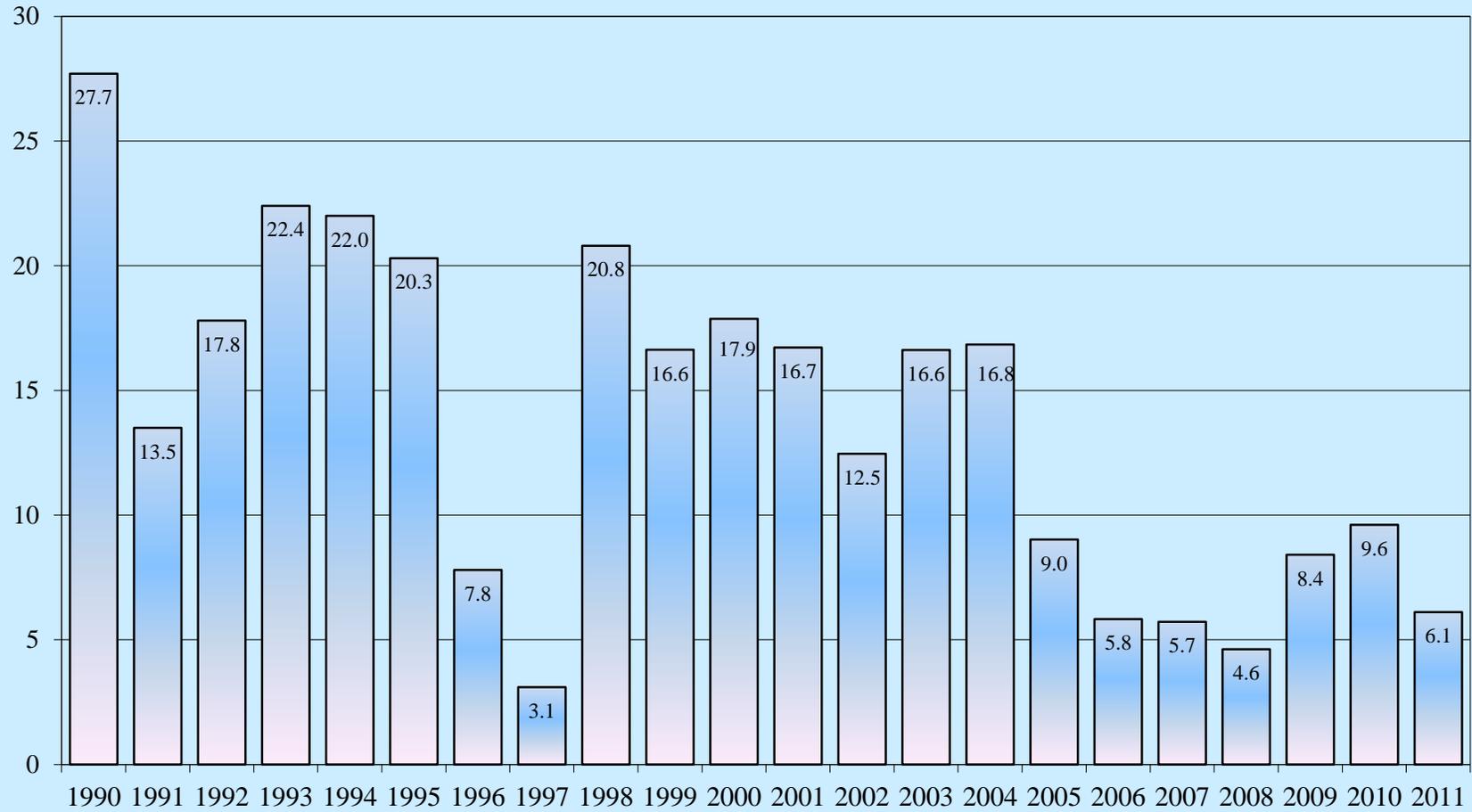


CHART OF WATER NOT SOLD

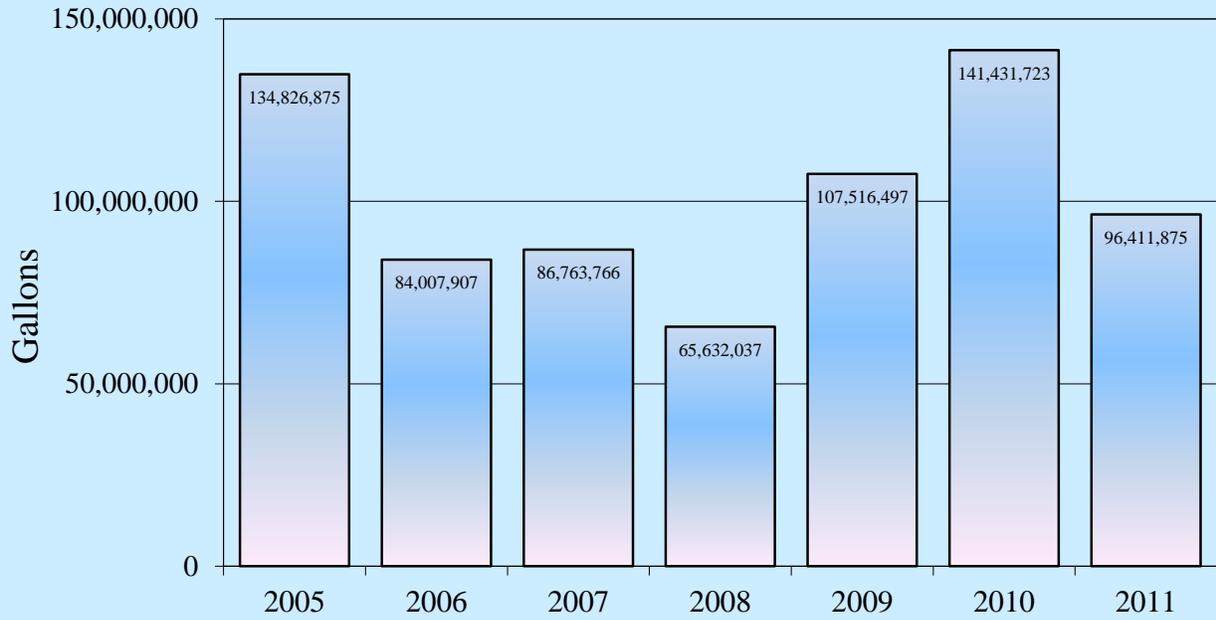
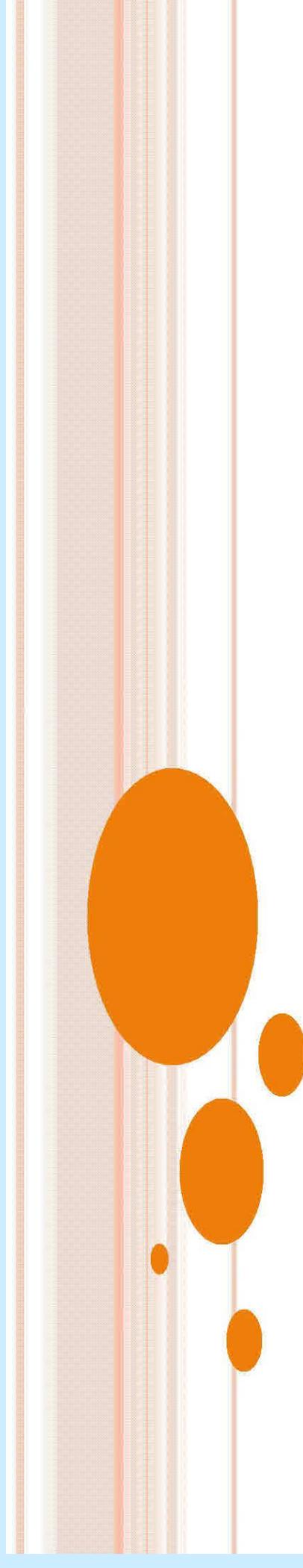


CHART OF WATER REVENUE LOST ANNUALLY FROM WATER NOT SOLD





**DELTA TOWNSHIP
UTILITY DEPARTMENT**

**WASTEWATER
2011 ANNUAL REPORT**

WASTEWATER

TREATMENT PLANT PROCESS

During 2011, the wastewater facility treated 1.80 billion gallons of sewage (4.93 million gallons per day). The process must operate every minute of every day for obvious reasons; we do not "shut down" ever. This requires staff, energy, chemicals, and equipment every day regardless of the weather to carry out the purpose of the treatment plant.

The primary purpose of the Wastewater Division is to convey the sanitary sewage from the customer to the treatment plant for proper processing, and to run the other programs required by the DNR, EPA, and OSHA in regard to wastewater treatment and employee safety. These programs include Household Hazardous Waste, Biosolids Application, Industrial Pretreatment, Groundwater Remediation, Storm Water Permits, Right-To-Know, Sewer Cleaning, TVing and Smoke Testing, Infiltration and Inflow, Odor Control and many others that are safety related. The treatment facility operates under an NPDES Permit issued by the state and federal governments, and we are required to have an NPDES for the storm water running off this site. We are part of a group application with other treatment plants

I realize that few people understand the basics of a treatment plant; therefore, I am including the following basic process description to aid in the understanding of what takes place at the treatment facility.

The treatment plant consists of preliminary treatment, primary treatment, two stages of biological treatment, two stages of digestion, ultraviolet disinfection, solids dewatering and chemical treatment.

The treatment process operates 365 days a year without interruptions caused by weather or holidays. During high flows or inclement weather, additional manpower is needed for routine checks and changes in the treatment process to achieve optimum stability and efficiency. The plant works with a series of treatment processes (one following immediately after another). If one treatment process drops in efficiency, it will greatly affect the stage of treatment following it. The treatment is accomplished by physical, biological, chemical and bio-chemical reactions. It is a living entity that must be constantly monitored and attended to, or it will start to die within minutes if the environment is unsuitable.

The preliminary treatment is a physical process consisting of mechanical bar screens and grit tanks, which remove the non-treatable material into a hopper where it is stored until it is taken to the landfill. Due to its harsh environment, this area needs constant cleaning and preventative maintenance to avoid expensive or major repairs.

The primary treatment is another physical process involving four large rectangular tanks with scrapers on the bottom to remove sludge and scrapers on the top to remove grease. The sludge is pumped to the anaerobic digesters for further processing, and the grease is removed by the addition of a bio-enzyme.

The first biological stage (Oxidation Towers) involves two large circular towers that are approximately 30 feet in depth. The inside of these structures are filled with a plastic media that supports a biological growth, which is necessary to remove the organic matter of oxygen-depleting wastes in the sewage. Sewage is sprayed over the media by means of distribution

arms. The sewage trickles down through the media and is collected into troughs and channeled out of the towers. These towers must be checked daily, with orifices and media being cleaned as needed. After the towers, there are clarifiers to separate the biological mass from the water. The solids in the bottom are pumped to an anaerobic digester for further treatment, and the floatables are removed and taken to the landfill.

The second biological stage (Activated Sludge) consists of six rectangular tanks that have air diffuser grids on the bottom. Using high-volume, low-pressure blowers, air is forced through the diffusers up through the sewage within these tanks, allowing oxygen to transfer and mixing action to occur. These tanks promote a free-swimming biological mass that feeds on the sewage, removing the biochemical oxygen demand and ammonia. From these tanks, the sewage flows into four final clarifiers; these clarifiers are physical treatment, which removes the biological mass. Samples are analyzed continuously in the laboratory, to ensure that the proper treatment conditions are being met.

There are four ultraviolet units used for disinfection; the treated water flows through these units and the ultraviolet light radiation destroys pathogenic organisms. The water is channeled down a cascade for re-aeration and then discharged into the Grand River.

Chemicals are added to precipitate the phosphorus out of the sewage and condition the sludge before the dewatering process. Acids for cleaning and disinfectants are in constant use around the treatment facility.

Anaerobic digestion consists of one preheat digester and two primary digesters. These digesters are heated and mixed to promote good sludge digestion. The by-product of digestion is the production of methane gas. Secondary digestion consists of two floating cover digesters (gas holding), which serve to decant the water from the sludge and the storage of methane gas. Methane gas is burned in the boilers, which heats the digesters and surrounding buildings and burns in a generator to provide heat and power to drive a blower for the second stage biological treatment.

The biosolids (sludge) that settle to the lower half of the secondary digesters is pumped to the press area. In sludge conditioning tanks, chemicals (lime and ferric chloride) are added to condition the sludge so the water will separate from the solids. The press operates at 200 pounds per square inch of pressure to remove about 50% of the water from the sludge, forming a dry cake. The dry cake is conveyed to the storage area until the appropriate time for applying on farmers' fields.

The nature of sewage and its by-products is to corrode or destroy almost everything it contacts. Preventative maintenance is a never-ending program throughout the entire treatment plant. Daily, weekly and monthly maintenance are performed on equipment, tanks and structures to ensure proper operation and extend its useful life. Tanks are routinely dewatered and inspected for needed repairs; and protective coatings are applied. This is very difficult at times as some repairs are done live; in that, we may not be able to shut down equipment because we would not be able to meet our treatment requirements. The use of computers has been very useful in scheduling maintenance as well as other tasks and record keeping.

With three separate odor control units, we are able to minimize the odors from hydrogen sulfide and ammonia from various areas within the plant. These units function electrically and chemically to scrub the air that is transported through ductwork from the various points in the plant.

A laboratory on site is necessary for proper control of the process. Tests are run during the day on certain processes and composite samples are analyzed daily.

These parameters include:

pH	Total Suspended Solids
Dissolved Oxygen	Total Volatile Suspended Solids
Biochemical Oxygen Demand-5	Fecal Coliform Bacteria
Ammonia-Nitrogen	

The analytical data generated from these tests are used to determine the adjustment of the various processes within the plant to achieve optimum treatment efficiency.

To ensure that all the data generated in the laboratory is reliable, a Quality Assurance/Quality Control Program was developed internally that meets all the guidelines outlined in the EPA Standard Methods 21st edition. This program includes; scheduled and unscheduled maintenance on analytical equipment, inventory of glassware and chemicals utilized in the laboratory and analytical procedures. All analyses are calculated for reliability using various equations before the data is reported to state and federal governments.

I am sure that everyone is aware that we operate under an NPDES Permit issued by the DEQ for our sewage. We will also have an NPDES for the storm water running off of the plant site.

That concludes the description of the treatment function. Please recognize, it does not contain everything the Department is responsible for or all activities performed.

SEWER MAINTENANCE

We are responsible for the operation, maintenance and replacement for approximately 173.4 miles of sanitary sewer and 19 pumping stations. These systems must operate at all times and in all weather conditions, to prevent sewage from backing into resident's homes.

These are on-going projects for proper operation of the sanitary sewer system.

- **SMOKE TESTING** -- Smoke testing is performed on the sanitary sewer collection system areas that were suspect to I & I (Inflow & Infiltration). The procedure for smoke testing is to place smoke generators into manholes with blowers and force the smoke through the sanitary piping. Some of the possible cross connections are catch basins, clean out caps (removed or broken), down spouts, manhole covers, and yard drains.

This is an on-going program conducted during the summer months.

- **CLOSED CIRCUIT T.V.** -- In this program, a closed circuit TV camera is placed in the sanitary system to visually inspect the piping for cracks, broken pipe, cross connections, house lead location, etc. Any problems located are evaluated on the type of repair required, grout cracks, dig up and replace pipe, etc.

- DYE TESTING -- Dye testing is used to locate cross-connections between storm and sanitary sewers. A green or red non-toxic dye is placed in either storm or sanitary piping, and visually checked to see if it flows into the opposing collection system indicating a cross-connection.
- SANITARY CLEANING -- Cleaning of the sanitary sewer is accomplished by the use of a high-pressure Vactor. A one-inch hose is placed in the sanitary manhole and high-pressure water forces the hose and cleaning nozzle to the next manhole (approx. 400'). As the hose and nozzle are pulled back, a cleaning action takes place with high-pressure water (1,200 - 2,000 psi). Approximately one half of the system is cleaned each year (approximately 88 miles).

This is an on-going program to prevent back-ups within the sanitary collection system.
- SPECIAL MANHOLE CHECKS -- There are several locations within the collection system that require special attention. These are problem areas that are inherent to backups because of sags in the sanitary piping. These areas are checked bi-weekly to ensure they are flowing properly, and they are cleaned four to six times a year to lessen the possibility of backups occurring.
- GENERATOR RUN CHECK -- At the present time, we have a standby generator at each of our 20 lift stations. These generators are exercised bi-weekly; that is, a simulated power outage is performed to ensure the units start and run the station. These units are then left online for approximately 2 hours before line power is reestablished.

GROUNDWATER ABATEMENT

The Delta Township Wastewater Division receives water resulting from the clean up of contaminated groundwater. This type of discharge presents a number of problems because of the pollutants that may potentially be present in the water.

To avoid problems, we work closely with the project engineer who represents an individual clean-up operation. We have set strict discharge standards that closely model MDEQ guidelines for surface water discharge. For all future projects, we will be issuing a Temporary Discharge Permit that will set forth the conditions of discharge prior to any water entering a Township sewer. The duration of this permit will be for a maximum of 1 year. During this time, the owner will have to apply for his own NPDES Permit from the DEQ and then cease discharge into the Township Collection System.

BIOSOLIDS MANAGEMENT PROGRAM

Land application of wastewater treatment sludge (biosolids) onto agricultural land is one of the most successful recycling programs in the state of Michigan with the participation of 167 communities. Use of the sludge, as a partial fertilizer replacement, provides nitrogen, phosphate, lime, and organic matter, which are important nutrients for crop growth.

In its natural form, sewage sludge is very odorous and contains many disease-causing organisms. During digestion, the organic matter is digested to form methane gas and a solid residual that will not decompose further, destroying the disease causing bacteria. The sludge is pumped to presses where the excess water is removed, forming a dry cake. The cake is stored inside a building that is odor controlled (strong ammonia odor). Twice a year (spring and fall), the cake is applied to farmers' fields. In 2011, we applied approximately 3,310 cubic yards of sludge on farmers' fields within Delta Township and surrounding areas.

The Delta Township Wastewater Division is responsible for the management of the DEQ approved land application program, which includes the following areas:

- Administration,
- Regulatory correspondence and reports,
- Relationship with farmer participants in the program,
- Evaluation of, and on-going monitoring of, land used for application,
- Sludge analysis and inventory,
- Public relations within the community especially people located in proximity to application sites,
- Application of the sludge at the farm, and
- Follow up of fieldwork, crop growth, etc.

The Agricultural Land Application Program has benefited the Township in numerous ways; the most tangible being a reduction in landfill costs. In 2011, the Township saved approximately \$57,925 in landfill fees. By managing the program internally, we are able to closely monitor how the sludge is being applied. This is important because the Township, as the generator of the sludge, maintains on-going liability for the safe disposal of the material.

Department maintenance/operators are utilized for the application work and simply transferred from their regular job assignments to these duties during the application period. No additional manpower is required; therefore, no additional labor costs are necessary.

A close relationship is maintained between the farmers participating in the program and personnel of the Wastewater Division. This allows for efficient operation when new land areas are being added and application completed. If problems arise, they are more easily resolved because communication between the grower and the treatment facility is already established and on going.

As the Township grows, the present sludge management system will be able to keep pace with increased sludge disposal needs.

INDUSTRIAL PRETREATMENT PROGRAM

The Industrial Pretreatment Program allows Wastewater Division personnel to work with businesses and industries to reduce or eliminate pollutants at their source. Presently, the Commercial/Industrial Survey includes approximately 887 businesses.

Many commercial establishments require very little pretreatment. For restaurants, pretreatment consists of proper grease control and maintenance of grease traps. A photo-processor may be required to install and maintain a cartridge for the removal of silver, or to eliminate the discharge polluting materials into the sewer.

For larger businesses or industry pretreatment becomes more complicated. Depending on the business activity, the user may be placed on a permit, required to monitor wastewater pollutants, have a spill containment plan, or other pretreatment requirements as needed. As the requirements increase for a business or industry, the responsibility for that industry increases at the Township level. Permits are issued as a site-specific document to condition the waste being discharge from that location. Sampling is necessary to establish or confirm the level of pollutants present in a waste stream. Each discharger, who may have a significant impact on the treatment system or plant, is inspected to establish pollutant sources, storage areas for polluting materials, etc.

PLANT FLOW FOR 2011

January	116,000,000
February	116,000,000
March	196,000,000
April	188,000,000
May	227,000,000
June	152,000,000
July	143,000,000
August	140,000,000
September	121,000,000
October	128,000,000
November	118,000,000
December	155,000,000
Total Gallons	1,800,000,000

CHART OF 2011 PLANT FLOW

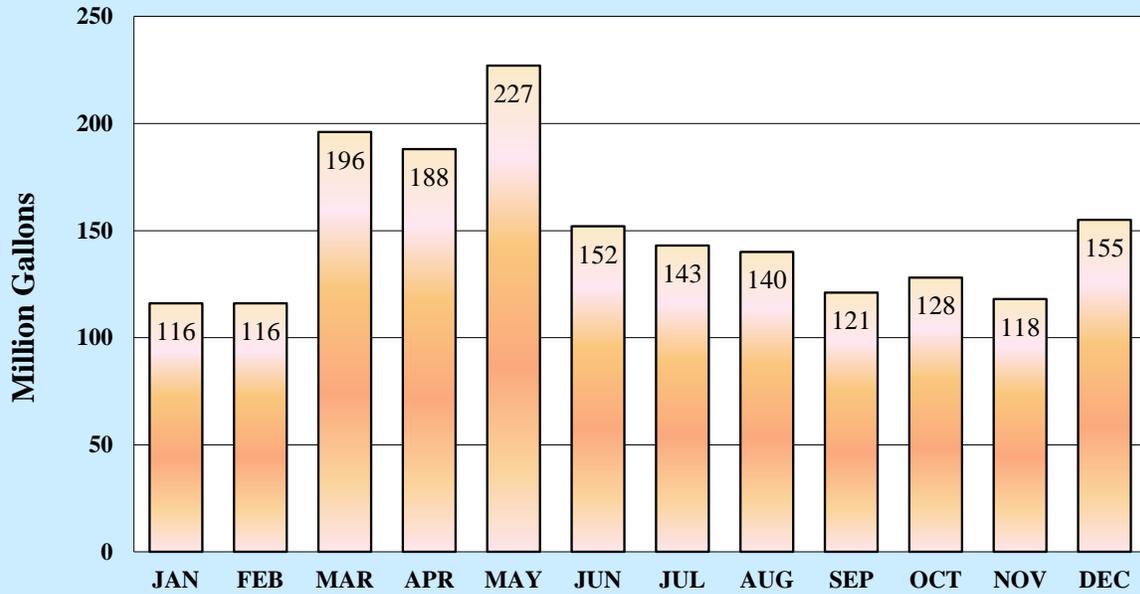


CHART OF PLANT FLOWS – FIVE YEAR TOTALS

**Plant Flows
Five Years Total Flows**

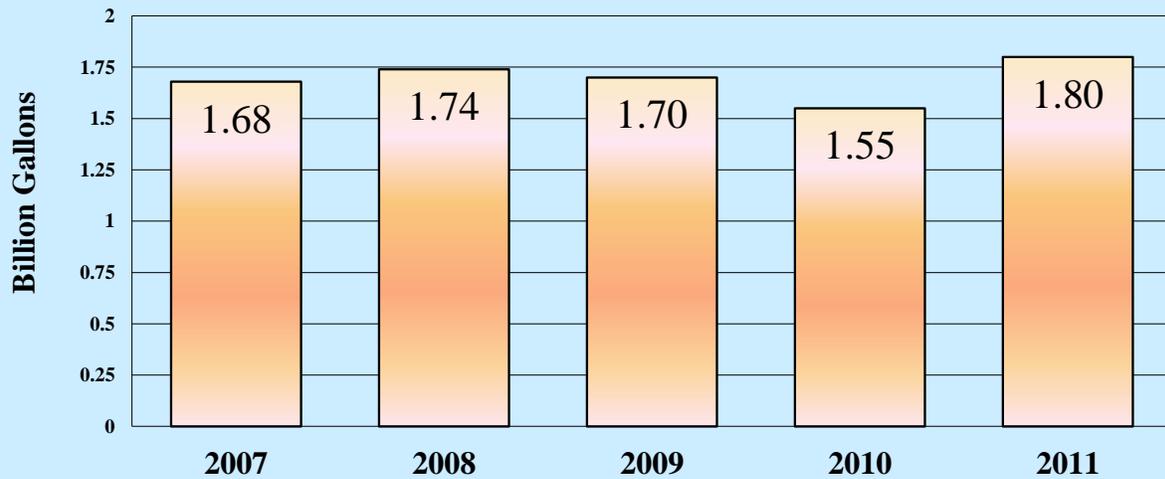
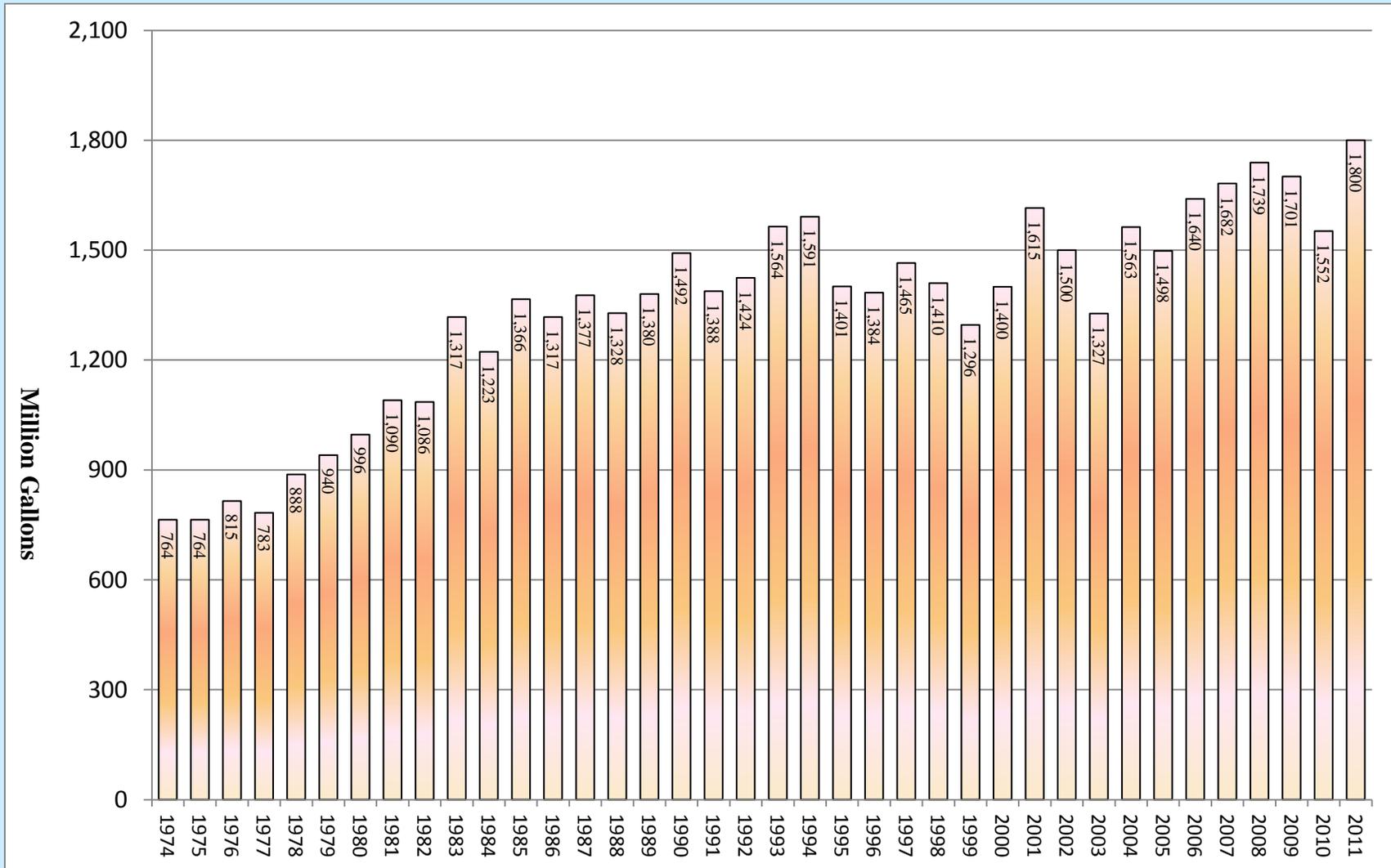


CHART OF WASTEWATER PLANT FLOW BY YEAR



BOD & SUSPENDED SOLID REMOVAL

	BOD Removal	Suspended Solids Removal
January	94%	94%
February	93%	95%
March	93%	93%
April	94%	93%
May	96%	93%
June	96%	95%
July	96%	97%
August	97%	95%
September	96%	95%
October	96%	94%
November	98%	98%
December	97%	96%
Average	96%	95%

CHART OF C.B.O.D AND T.S.S. REMOVAL

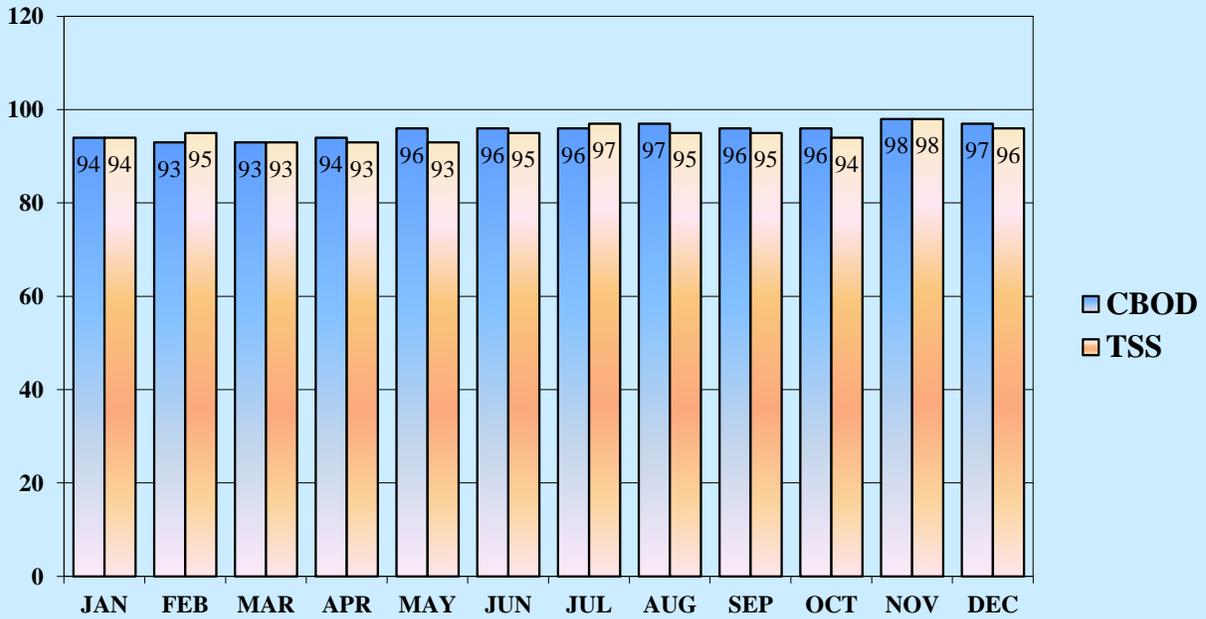


CHART OF CARBONACEOUS B.O.D.

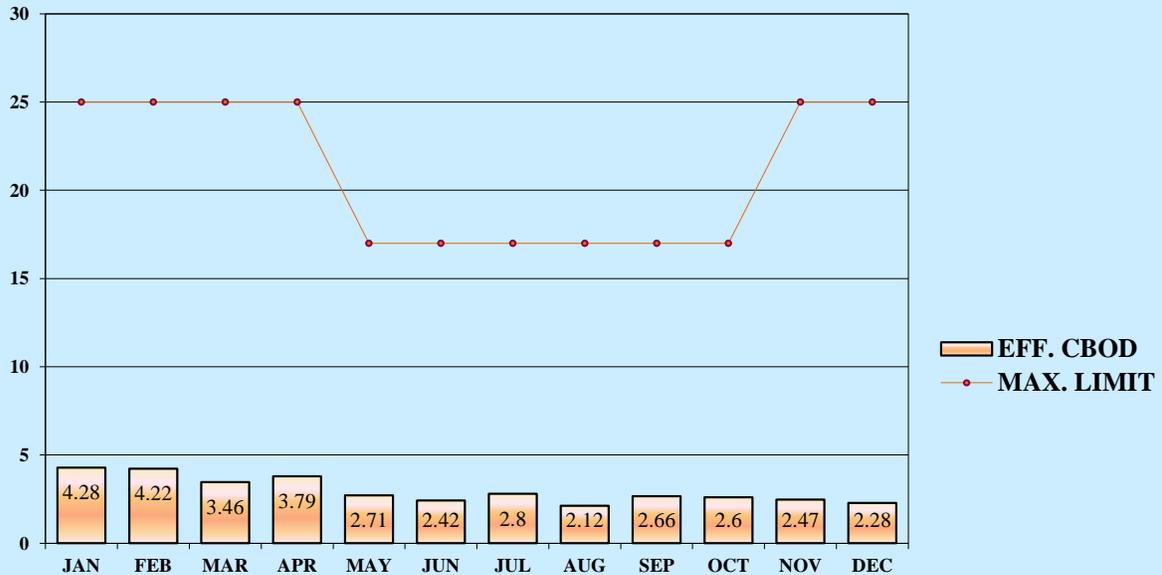


CHART OF SUSPENDED SOLIDS

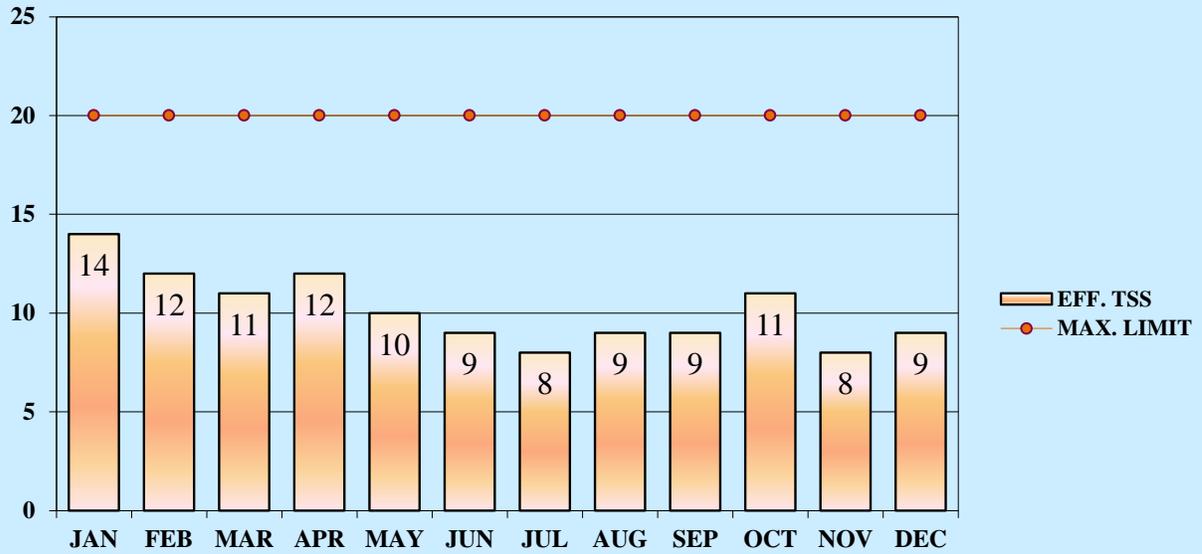


CHART OF FECAL COLIFORM

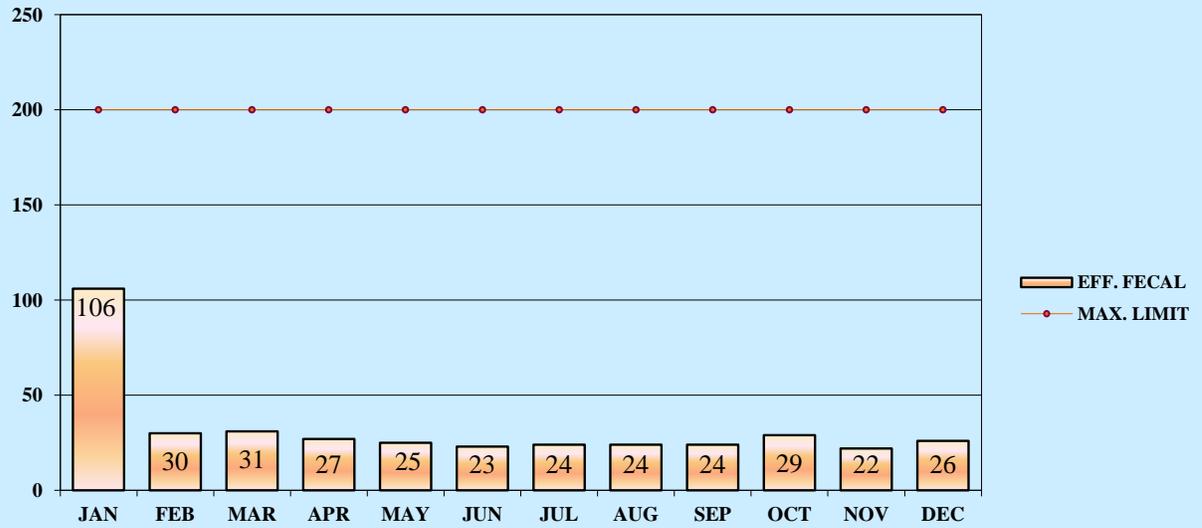


CHART OF AMMONIA NITROGEN

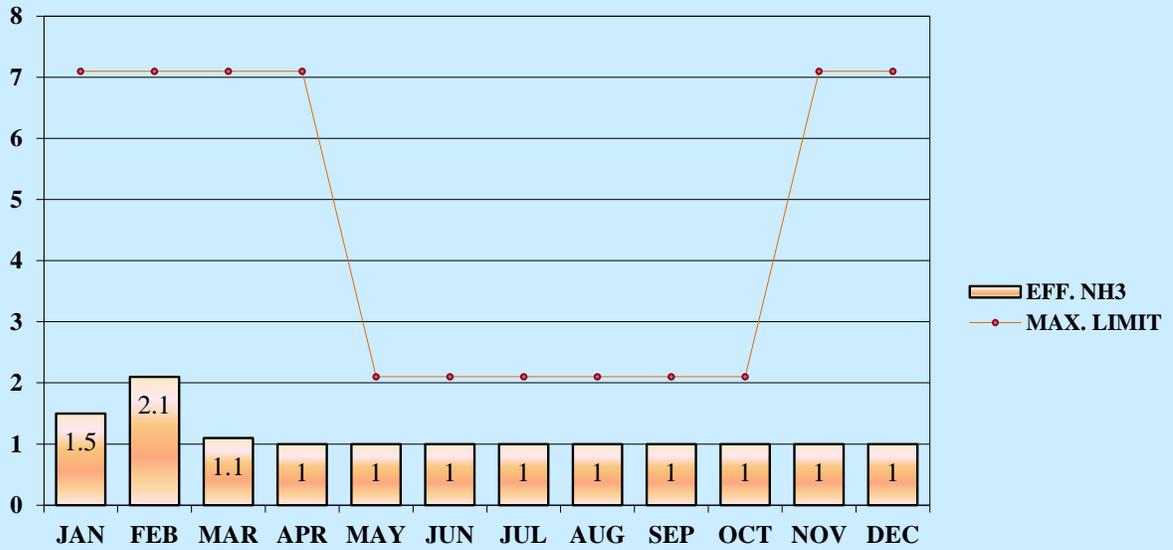


CHART OF PHOSPHOROUS

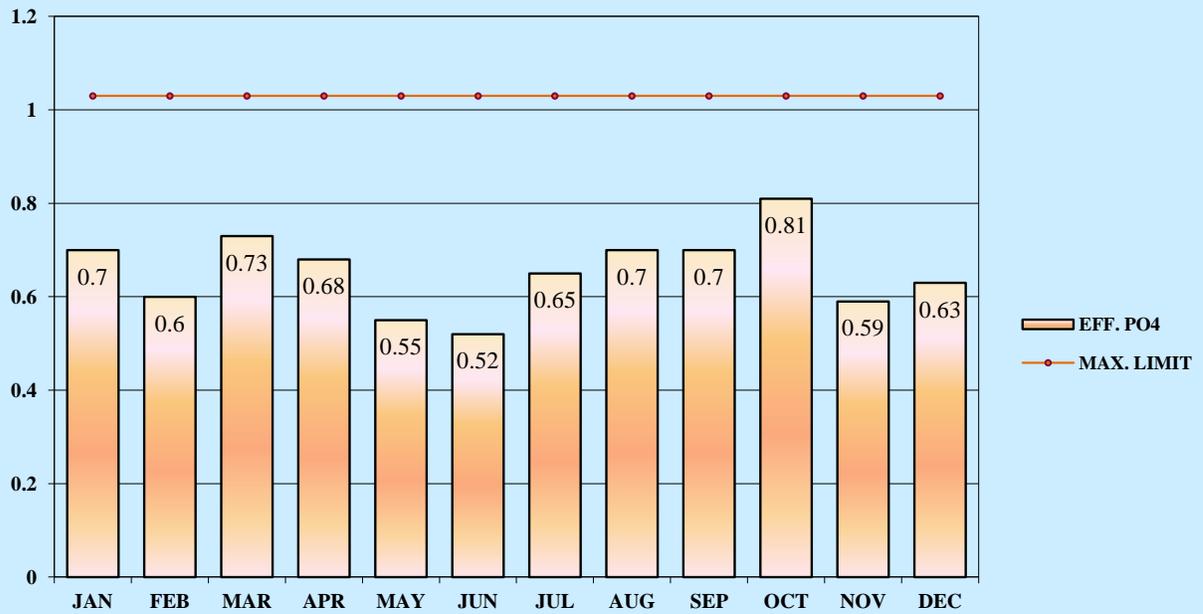


CHART OF DISSOLVED OXYGEN

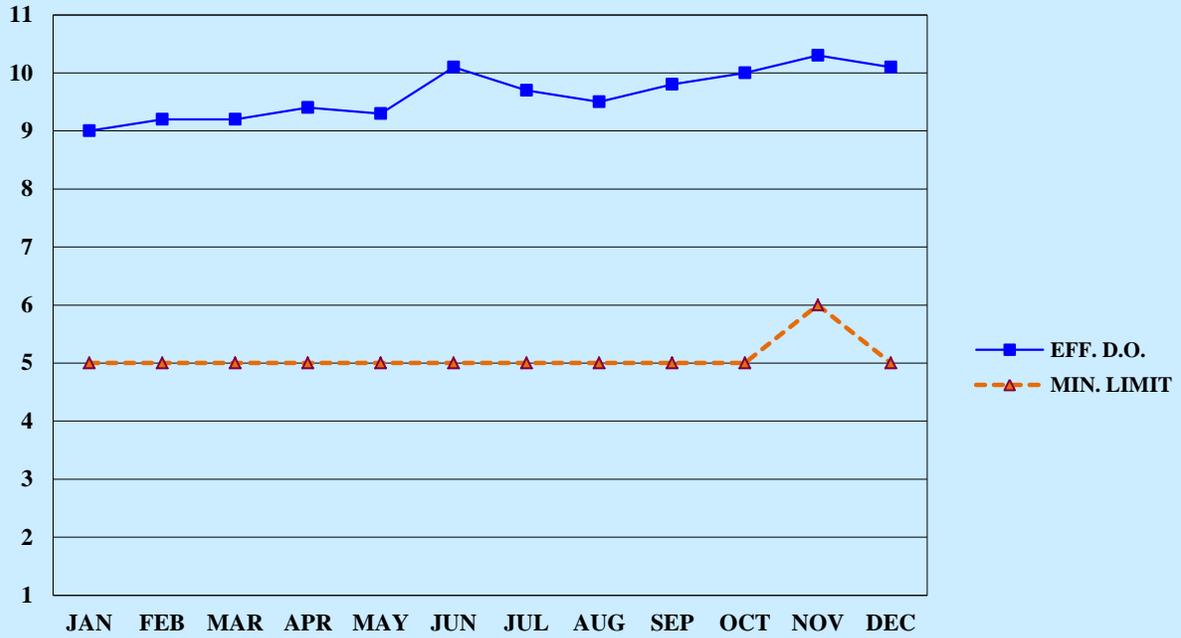
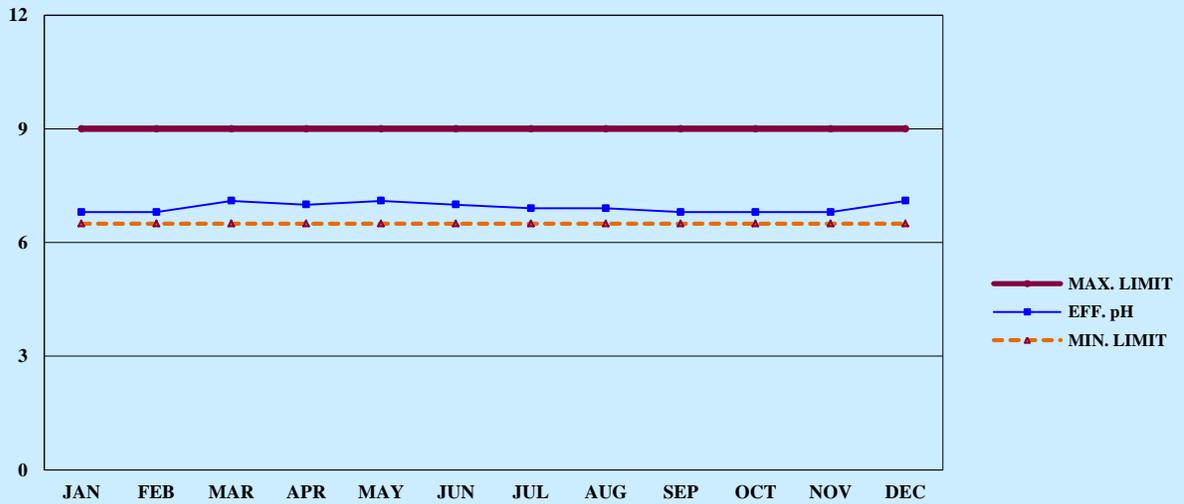


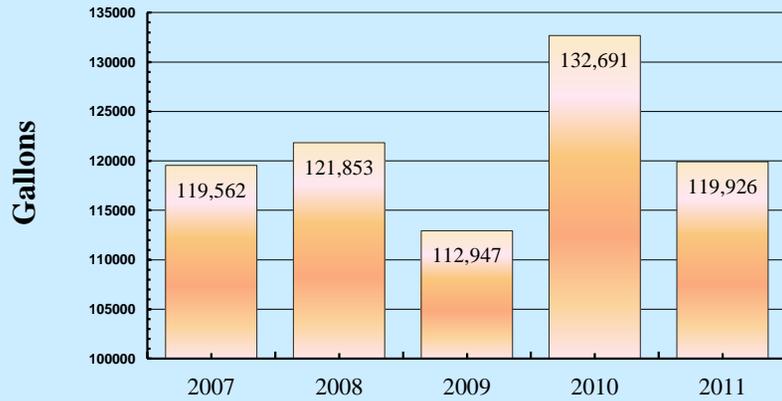
CHART OF PH



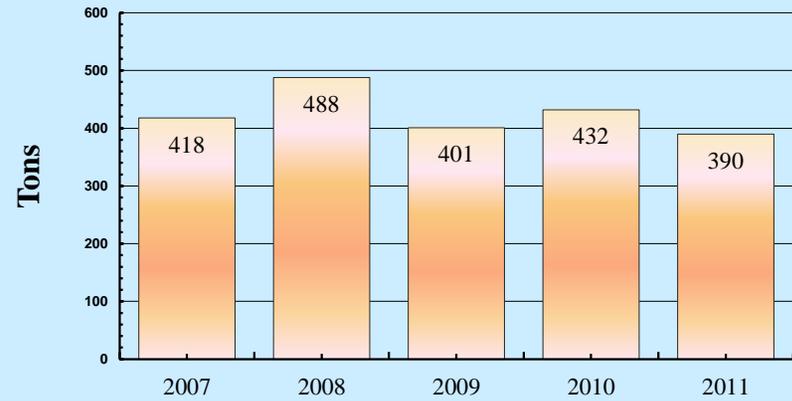
CHEMICAL USAGE FOR 2011

	Ferric Chloride	Lime	Salt (O.C.Unit)	Muratic Acid
	Gallons	Tons	Pounds	Gallons
January	10,383	30	200	120
February	9,579	30	200	105
March	10,017	30	900	41
April	10,344	60	200	75
May	11,655	30	500	68
June	10,389	30	200	98
July	9,652	30	700	266
August	9,771	30	1,400	70
September	9,402	25	0	15
October	9,741	25	700	60
November	9,471	35	1,400	98
December	9,522	35	0	45
Totals	119,926	390	6,400	1,061

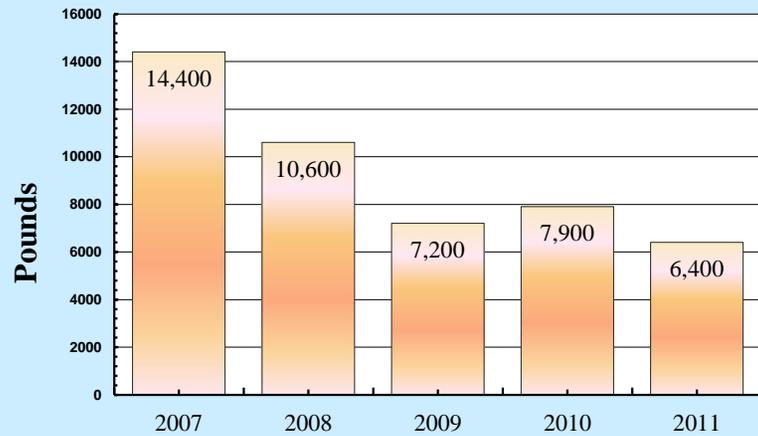
CHARTS OF 2007 - 2011 CHEMICAL USAGE



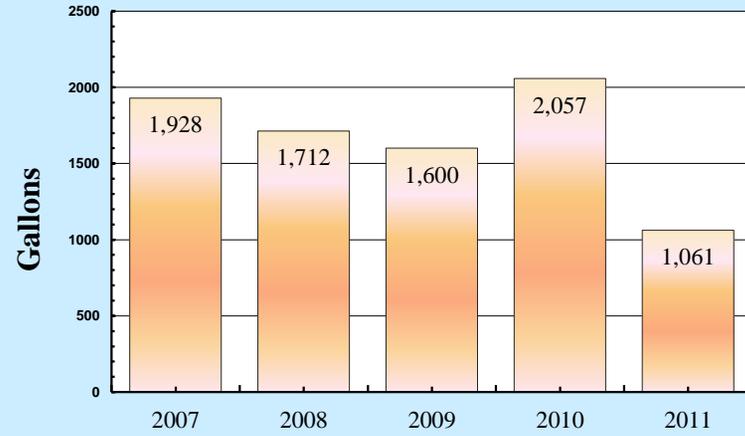
Ferric Chloride



Lime



Salt (Odor Units)

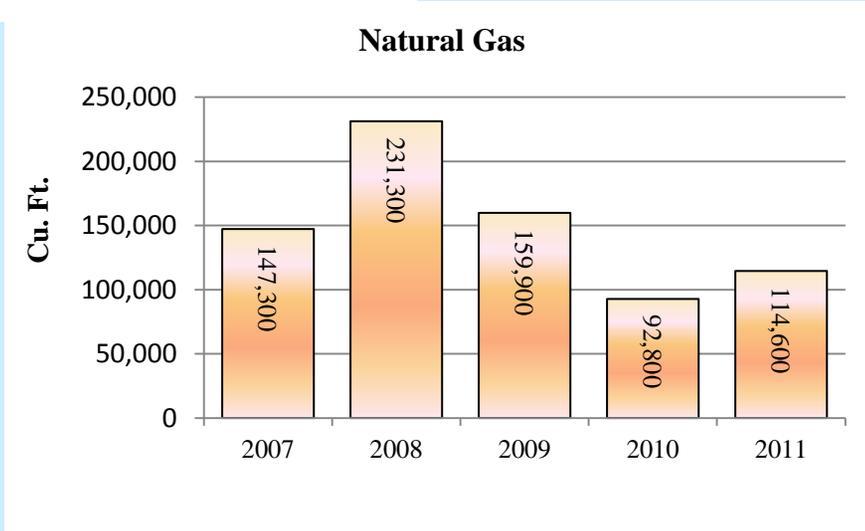
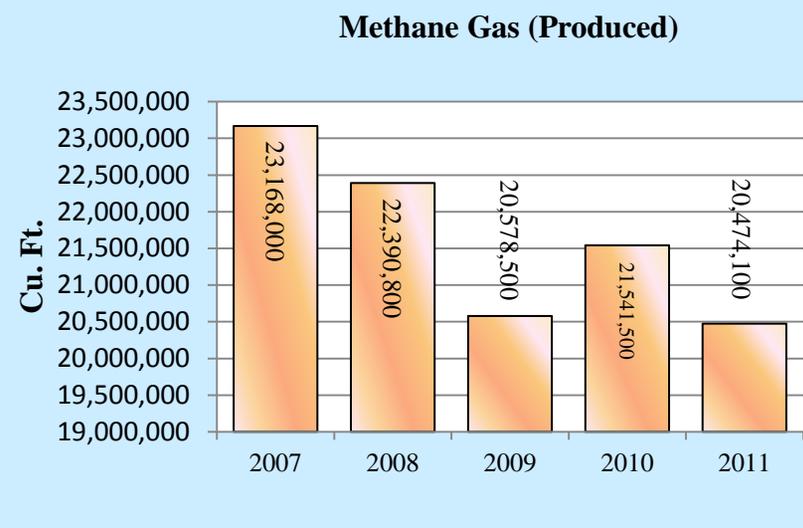
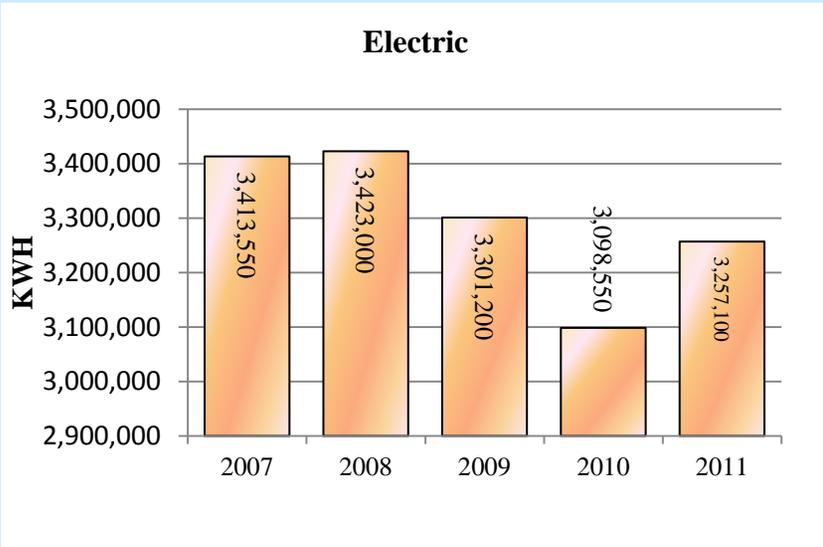


Muratic Acid

UTILITY USAGE FOR 2011

	Electric	Natural Gas	Methane Gas
	KWH	Cu.Ft.	Cu.Ft.
January	263,550	38,100	1,877,800
February	238,350	10,000	1,690,000
March	288,750	12,600	1,781,900
April	285,600	3,700	1,769,500
May	329,700	1,900	1,927,800
June	266,700	1,000	1,689,000
July	280,350	1,300	1,537,900
August	266,700	20,900	1,643,500
September	249,900	3,200	1,577,000
October	260,400	4,600	1,623,400
November	252,000	10,100	1,625,800
December	275,100	7,200	1,730,500
Totals	3,257,100	114,600	20,474,100

CHARTS OF 2007 - 2011 UTILITY USAGE



LIFT STATION PUMP HOURS & TOTAL FLOWS

	PUMP HOURS	TOTAL FLOW	DAILY AVERAGE
Belaire Hills	1,530	13,755,134	37,685
Cambridge *	937	11,769,566	32,245
Delta Market Dr.	1,059	17,258,513	47,284
GM Lift	0	185,165,000	507,301
Health Central	25	821,342	2,250
Lansing Rd. **	6,998	19,299,398	52,875
Mt. Hope	361	2,010,109	5,507
Old River Trail	1,542	5,083,170	13,888
River Ridge	1,494	48,453,124	132,748
Saratoga	4,222	10,496,035	28,756
Skyway	1,226	19,636,744	53,799
Snow Road***	739	6,842,394	18,746
Tammany on the Ponds	3,200	8,572,500	23,486
Thomas L (Station Totals)	5,844	158,252,302	433,568
Thomas L EB (only)		134,862,022	369,485
Thomas L Duplex (only)		12,523,056	34,310
Thomas L Triples (only)		10,867,224	29,773
Westcharme	163	2,058,823	5,641
Westland	330	4,995,967	13,688
Willow	5,832	165,025,207	452,124
Woldumar	300	1,013,347	2,776

* Flow meter malfunctioned Oct, Nov & Dec.

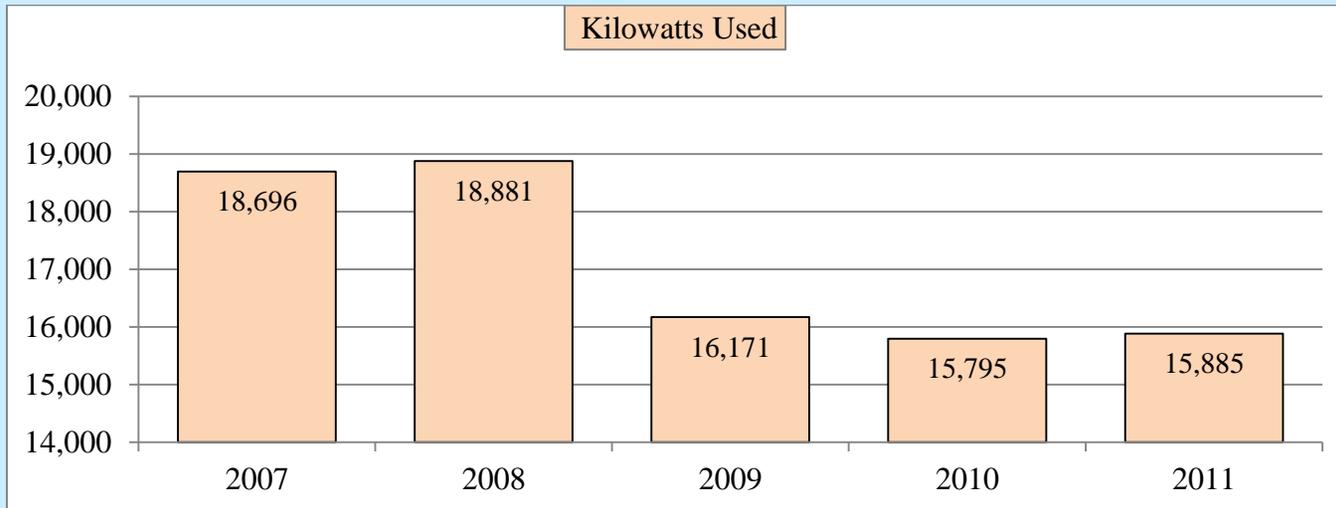
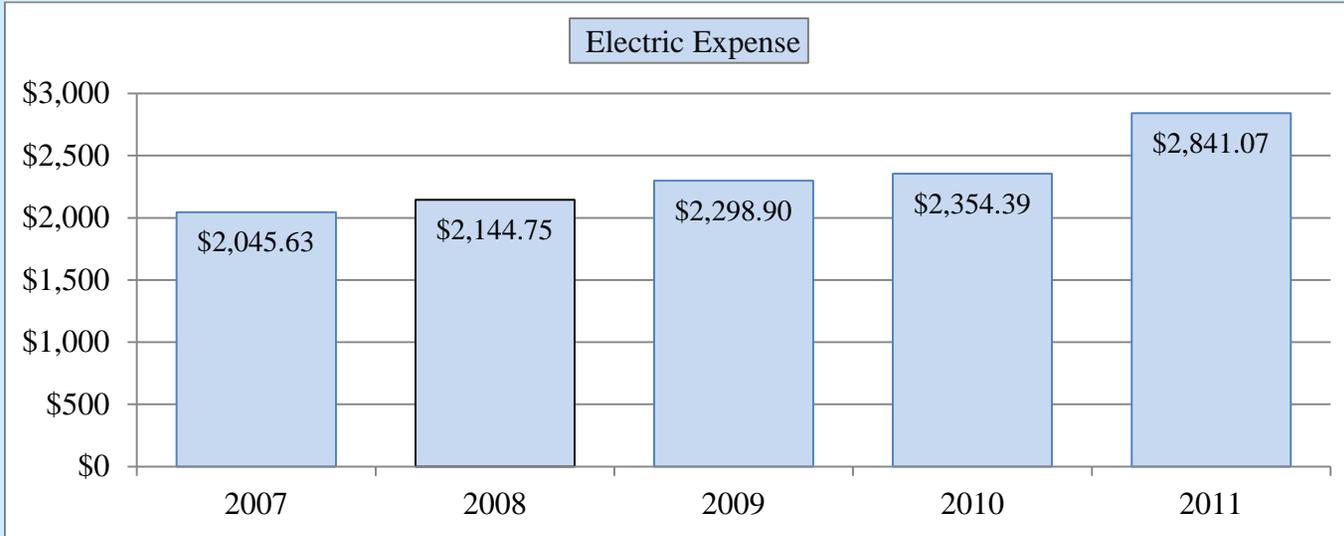
** Station malfunctioned 1/9/11.

*** Flow meter malfunctioned Jan thru May.

LIFT STATION ELECTRIC COSTS & KILOWATT USAGE

Lift Station	Yearly Electric Cost	KWH Used
Belaire Hills	\$2,841.07	15,885
Cambridge	\$2,213.13	17,284
Delta Market Dr.	\$2,435.00	19,091
GM Lift	\$4,992.00	45,006
Health Central	\$1,959.04	14,898
Lansing Rd.	\$4,185.17	34,874
Mt. Hope	\$932.84	5,704
Old River Trail	\$1,956.84	14,816
River Ridge	\$2,787.30	22,416
Saratoga	\$3,741.71	24,237
Skyway	\$1,497.76	10,609
Snow Road	\$1,520.15	10,986
Tammany on the Ponds	\$2,153.06	16,683
Thomas L	\$10,127.90	92,386
Westcharme	\$1,572.31	11,415
Westland	\$1,186.49	7,981
Willow	\$11,308.50	85,530
Woldumar	\$1,107.51	6,669
WWTP	\$277,737.77	3,253,874
TOTAL	\$336,255.55	3,710,344

CHARTS OF BELAIRE HILLS ELECTRIC COST & USAGE



CHARTS OF CAMBRIDGE ELECTRIC COST & USAGE

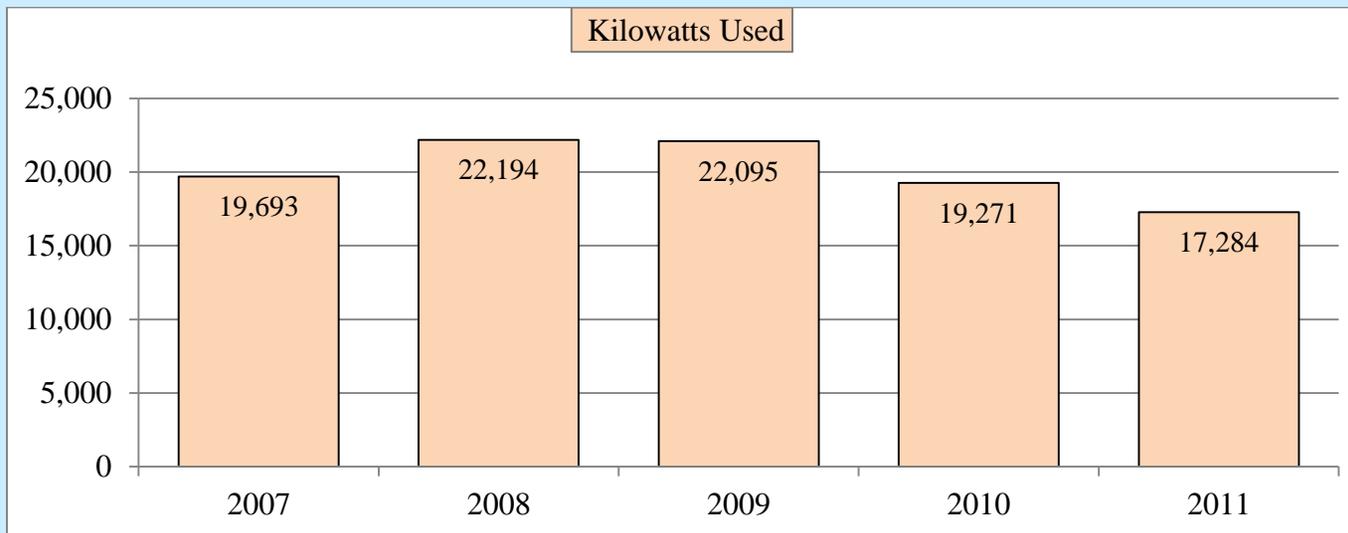
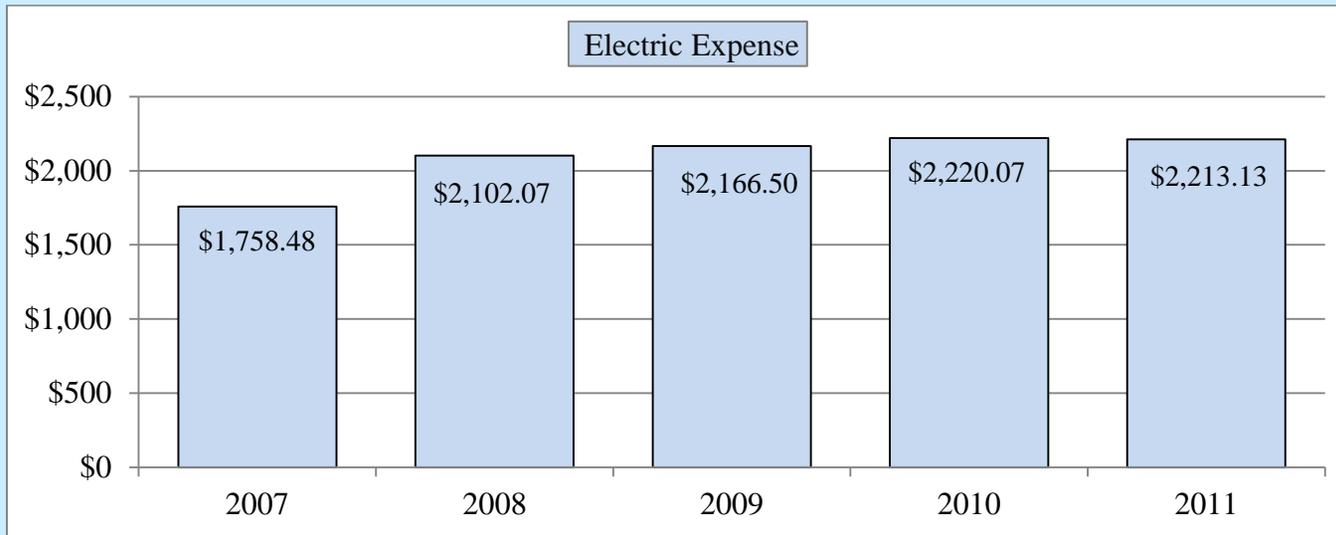
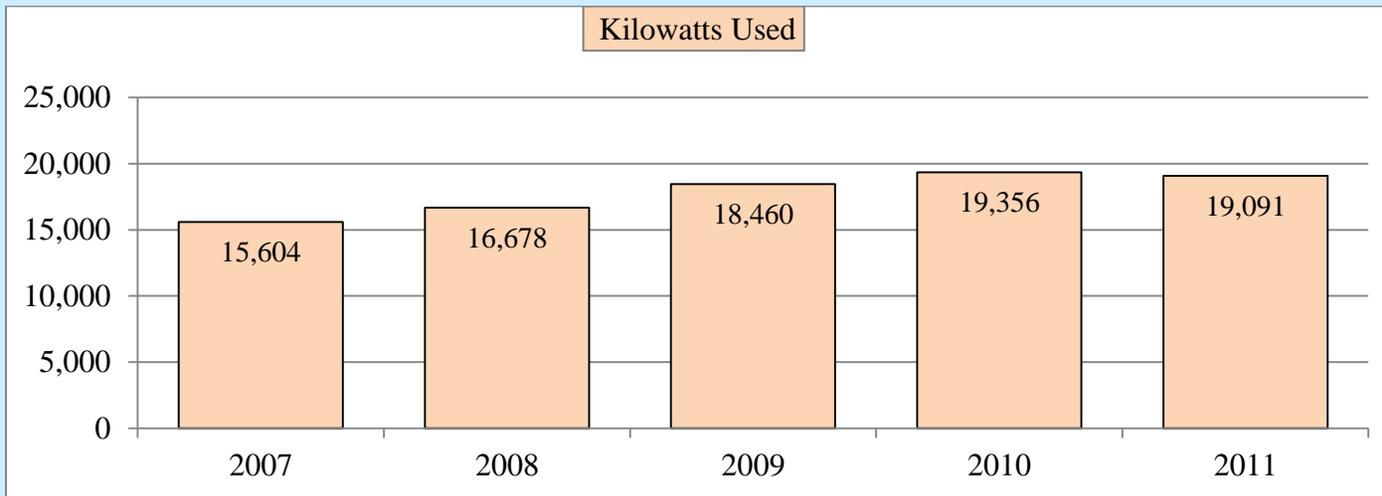
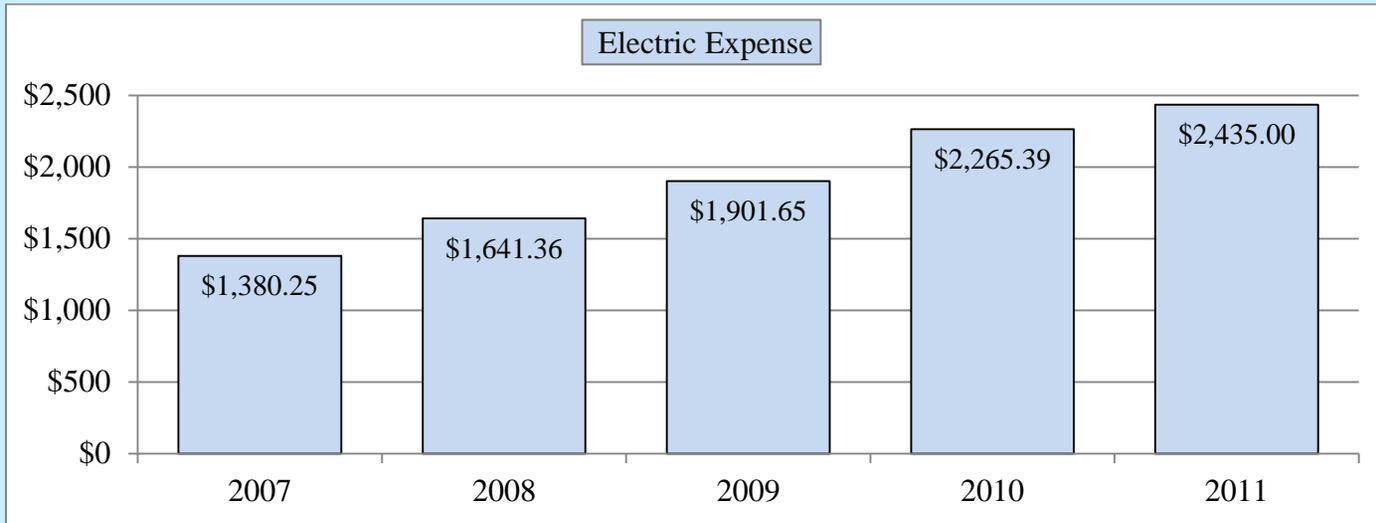
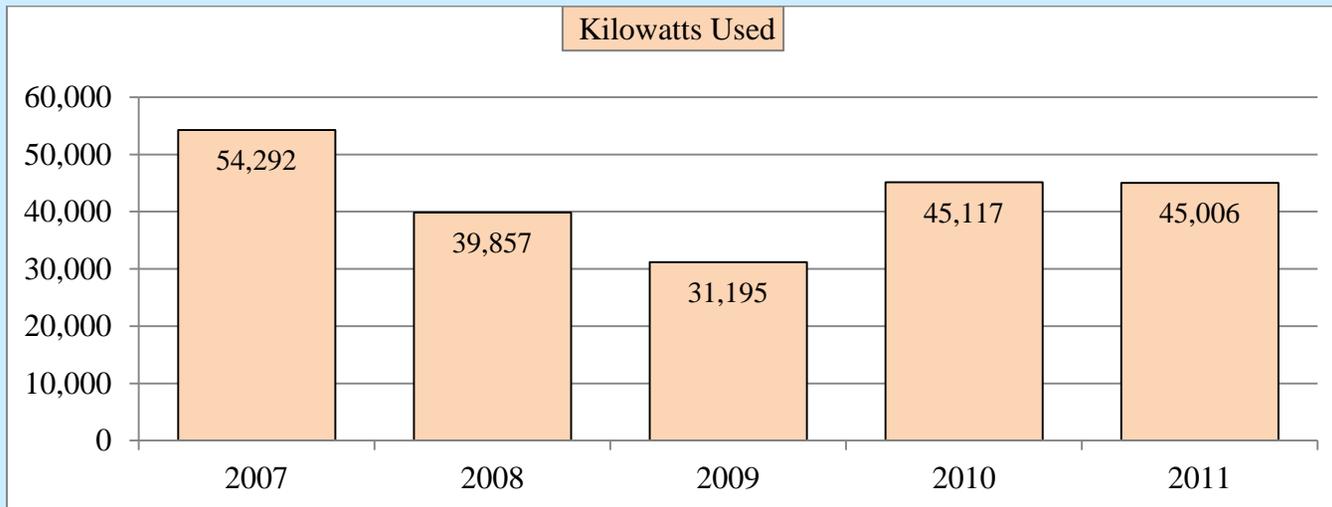
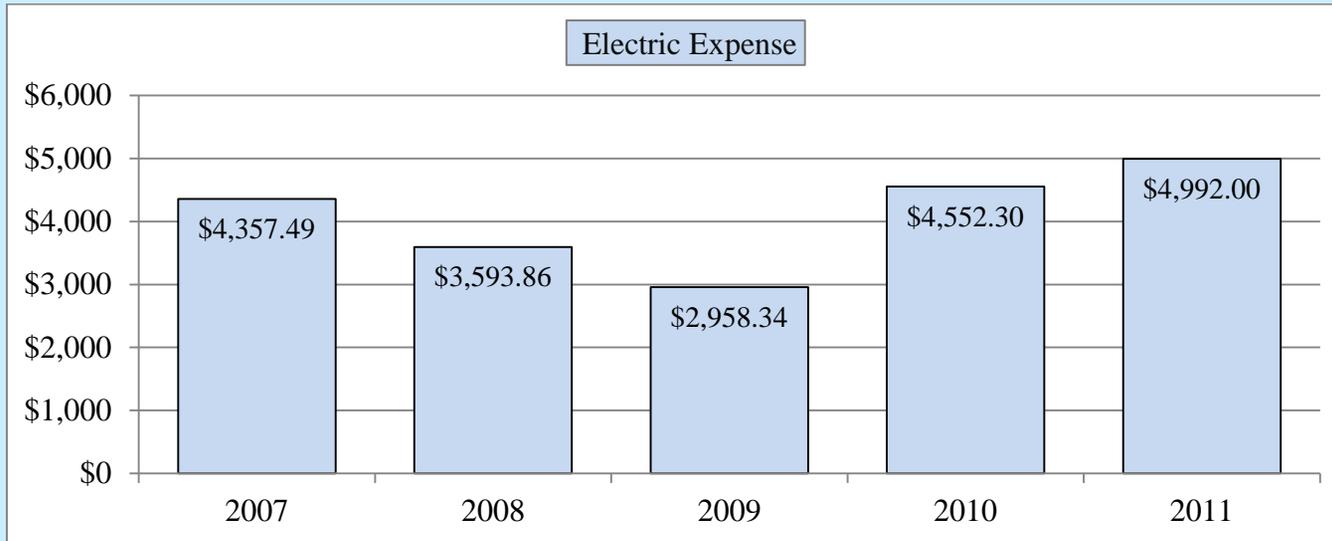


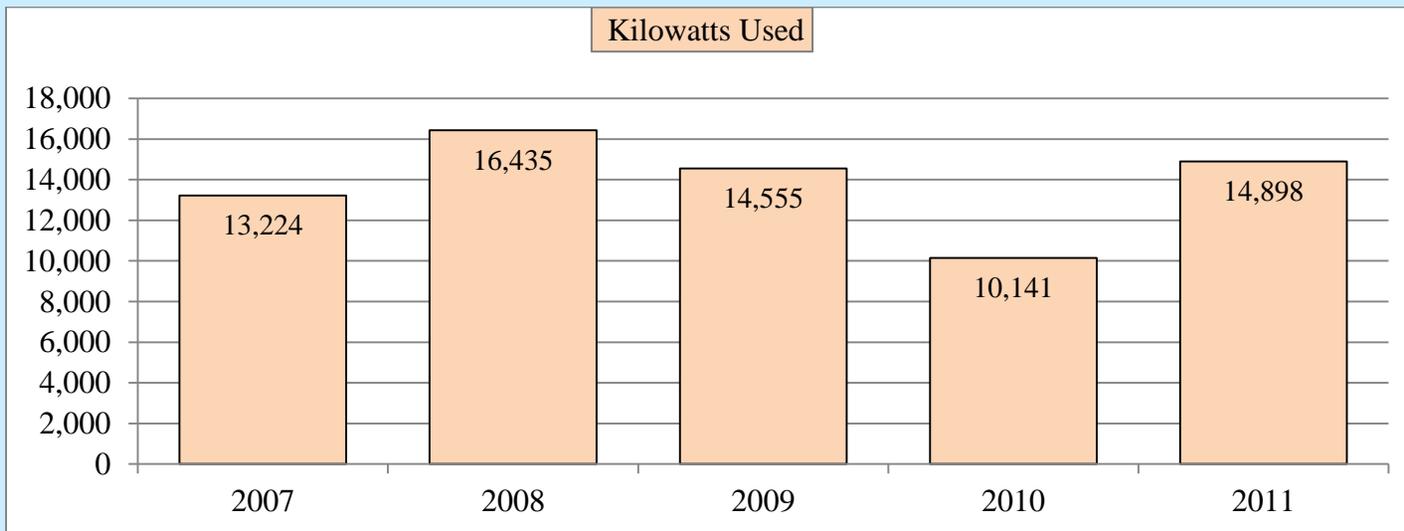
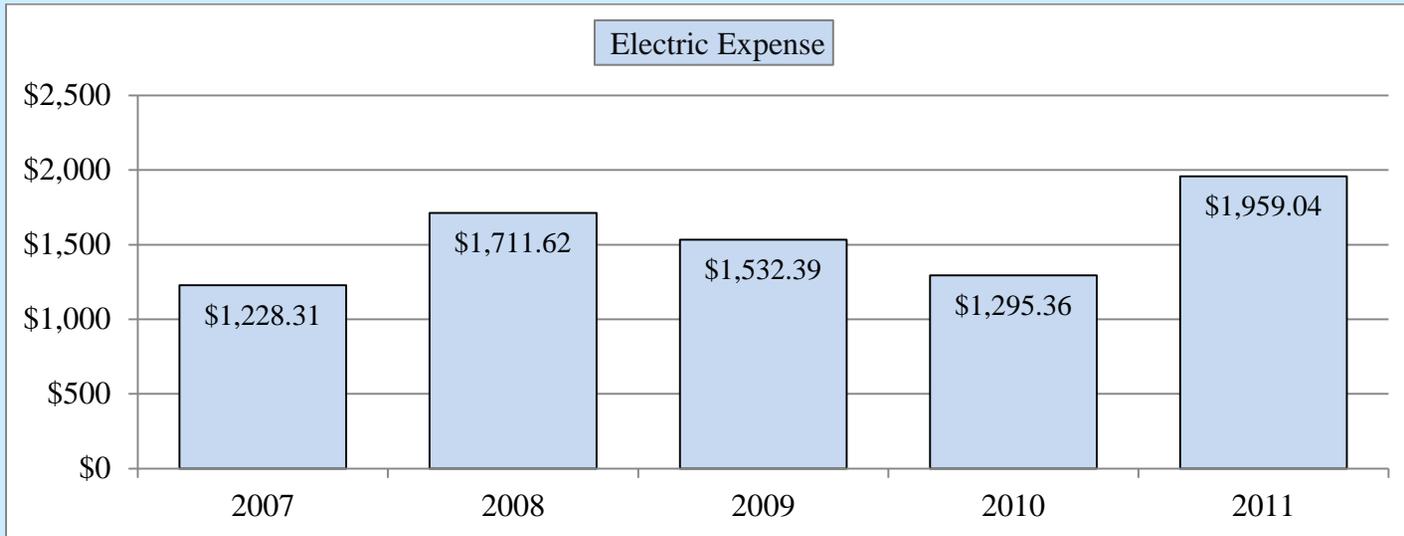
CHART OF DELTA MARKET DRIVE ELECTRIC COST & USAGE



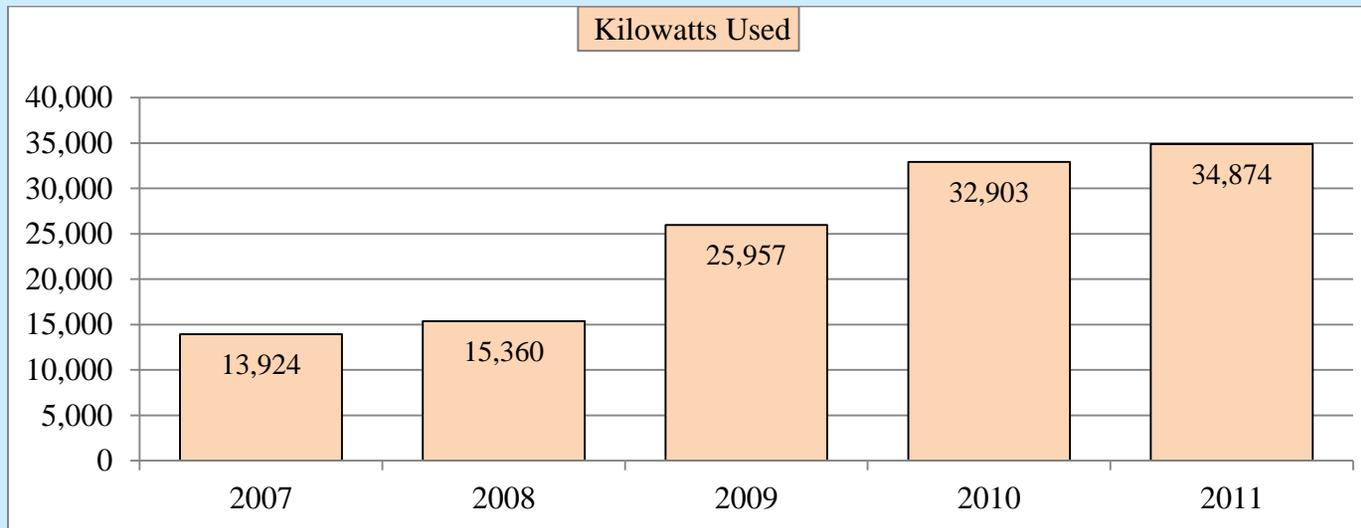
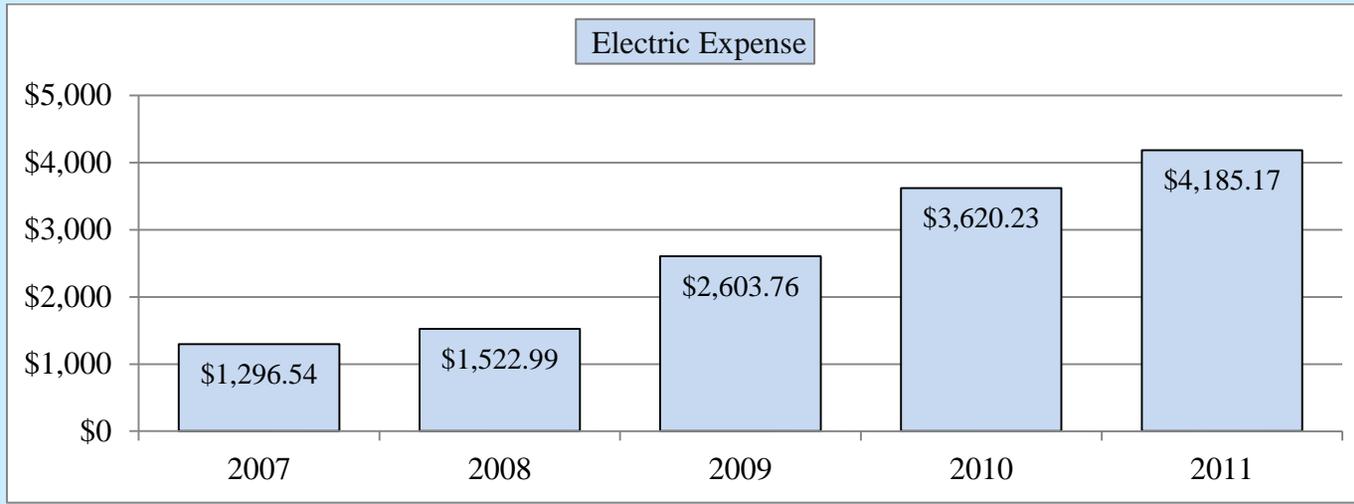
CHARTS OF GENERAL MOTORS ELECTRIC COST & USAGE



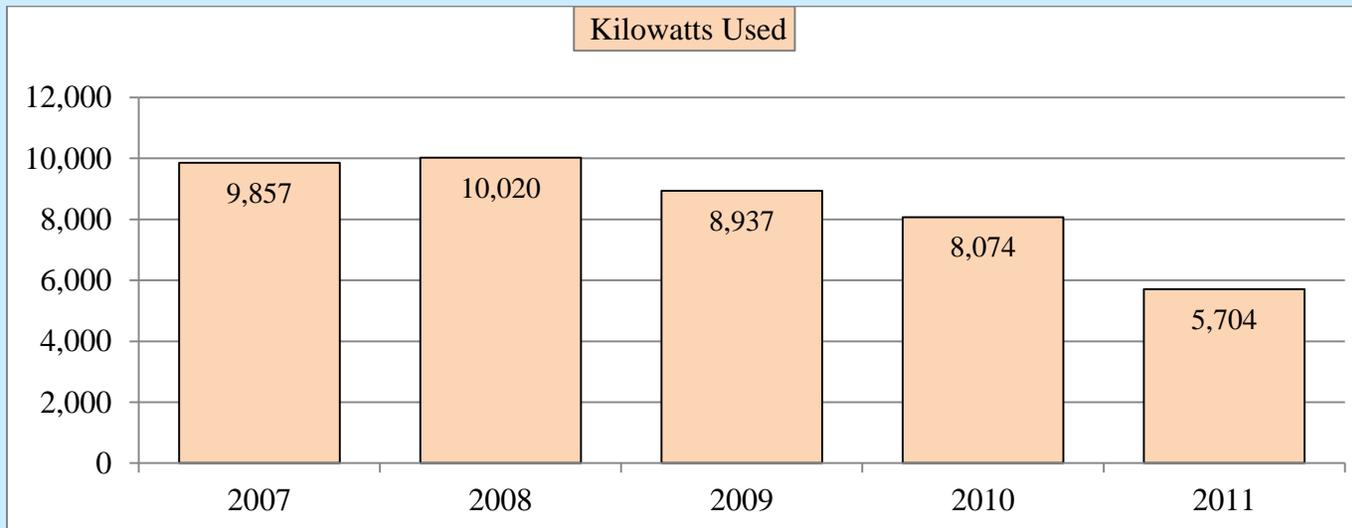
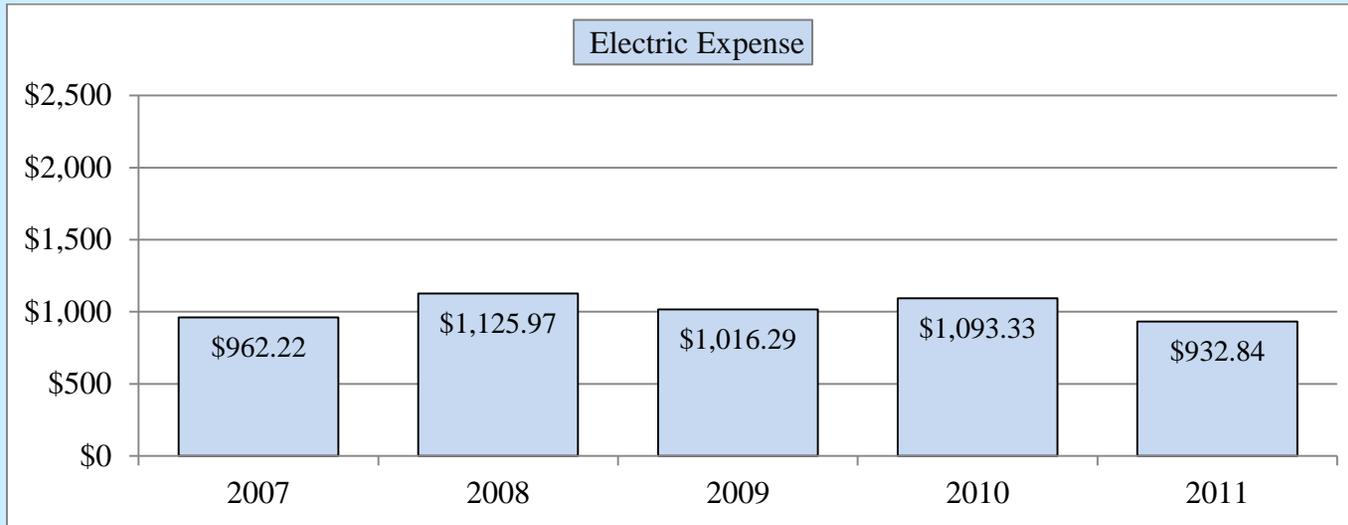
CHARTS OF HEALTH CENTRAL ELECTRIC COST & USAGE



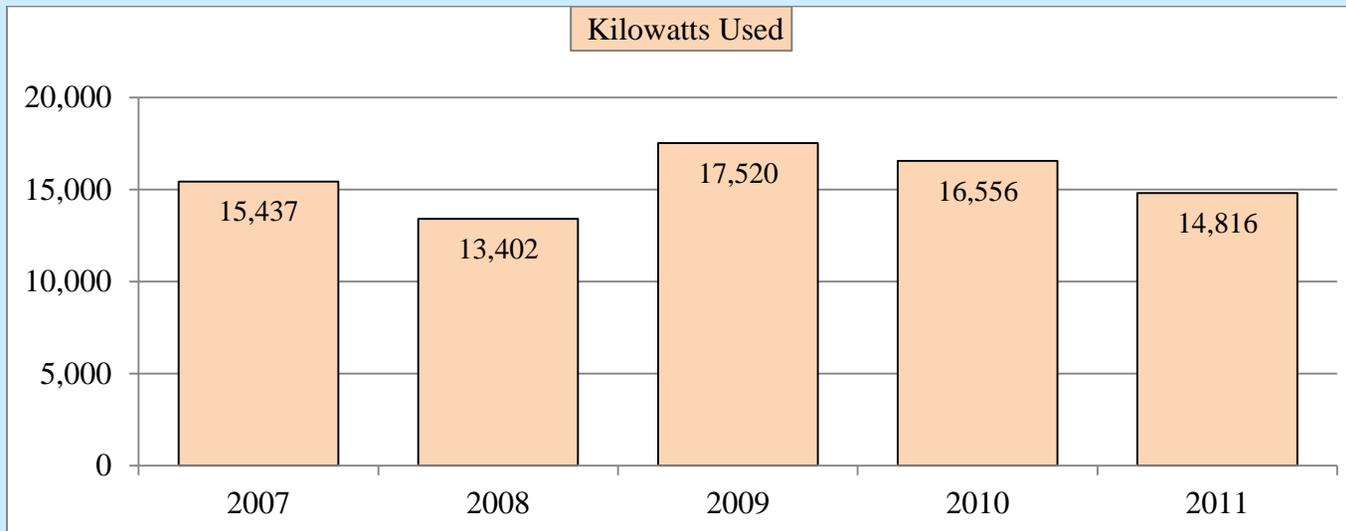
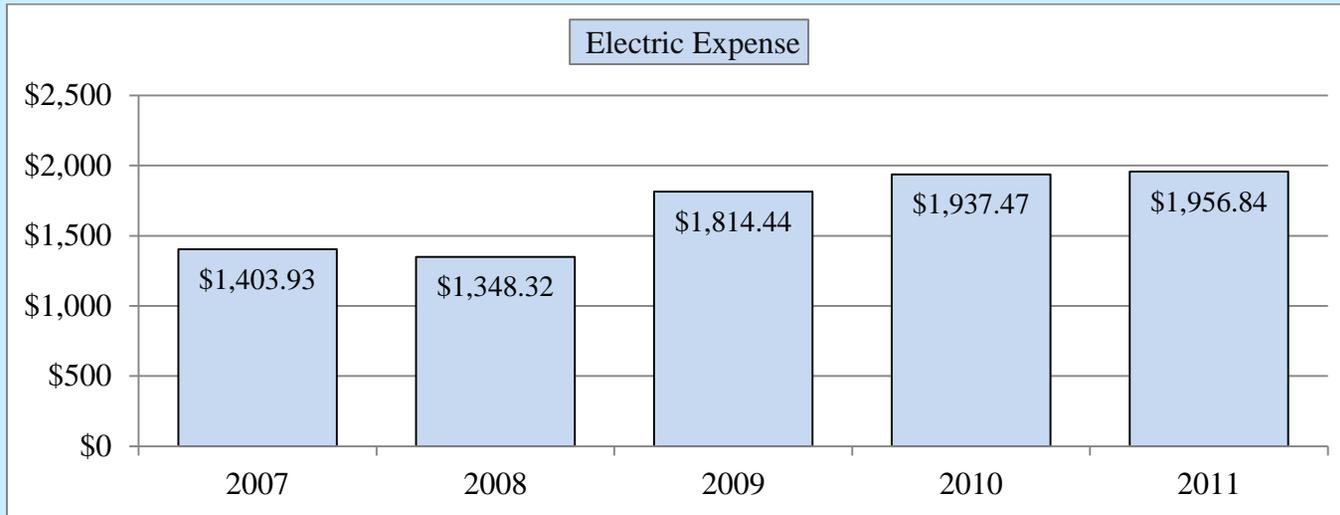
CHARTS OF LANSING ROAD ELECTRIC COST & USAGE



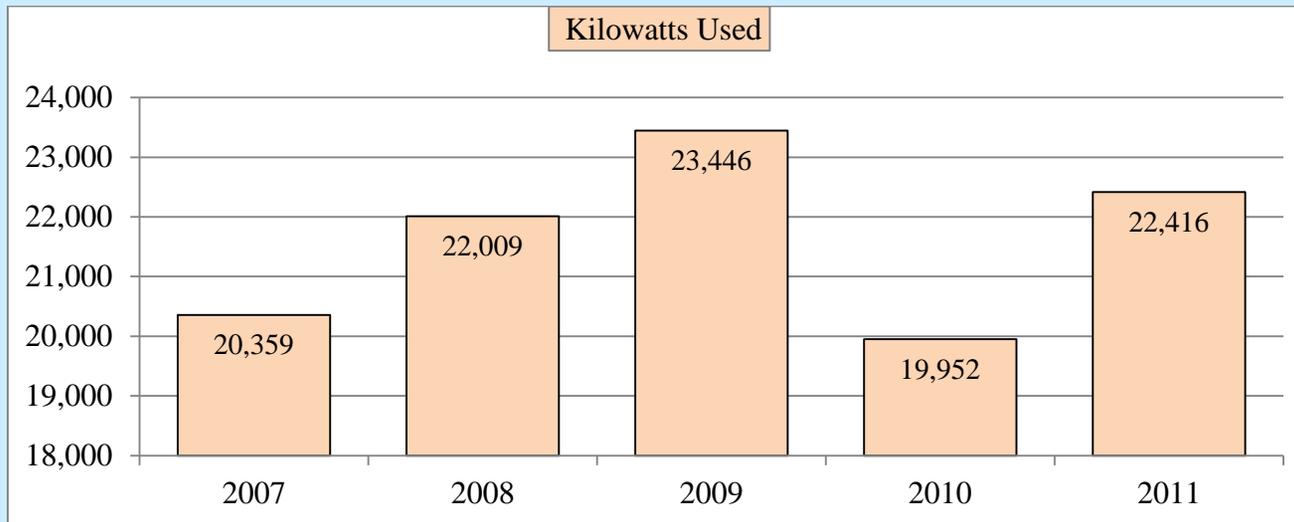
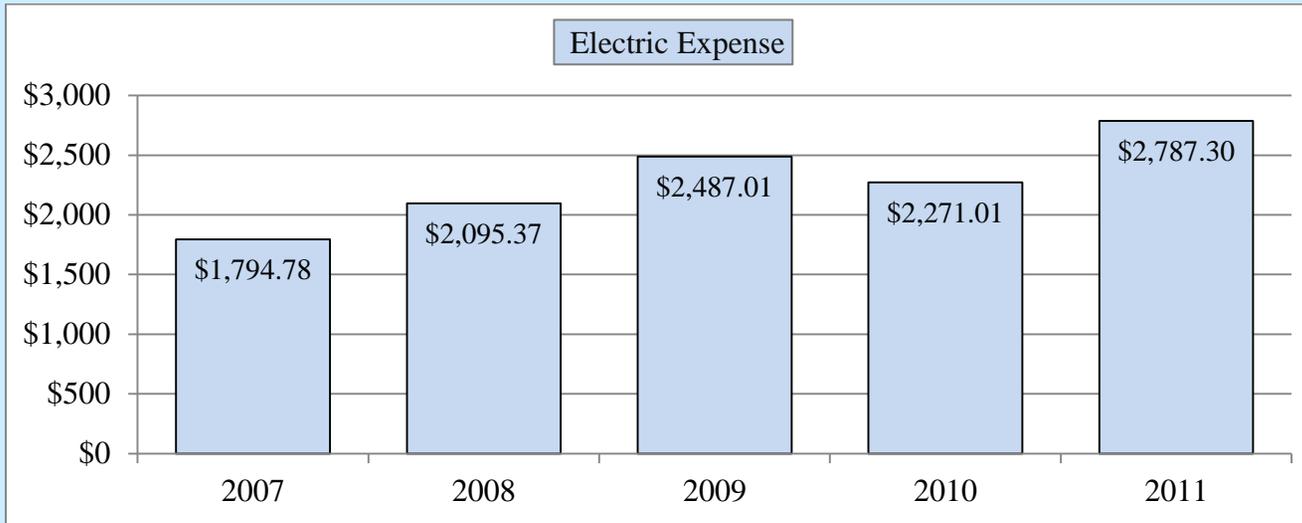
CHARTS OF MT HOPE ELECTRIC COST & USAGE



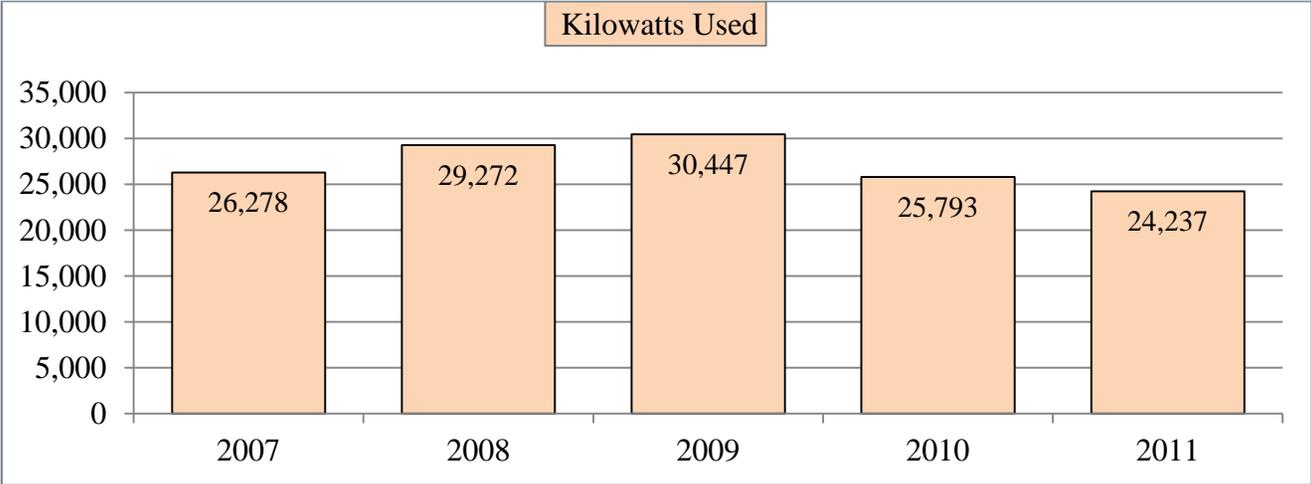
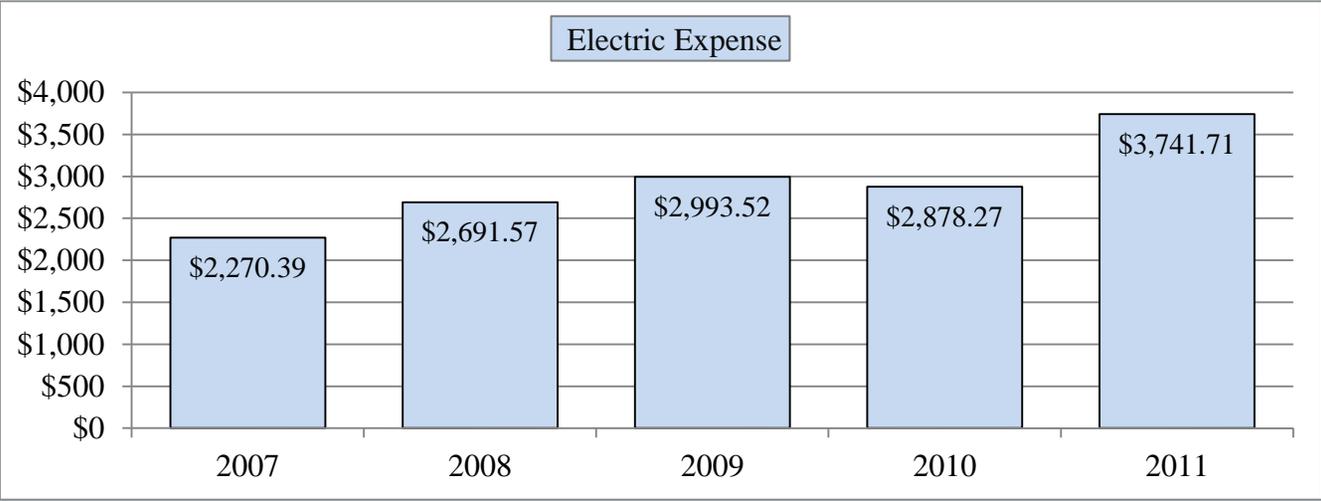
CHARTS OF OLD RIVER TRAIL ELECTRIC COST & USAGE



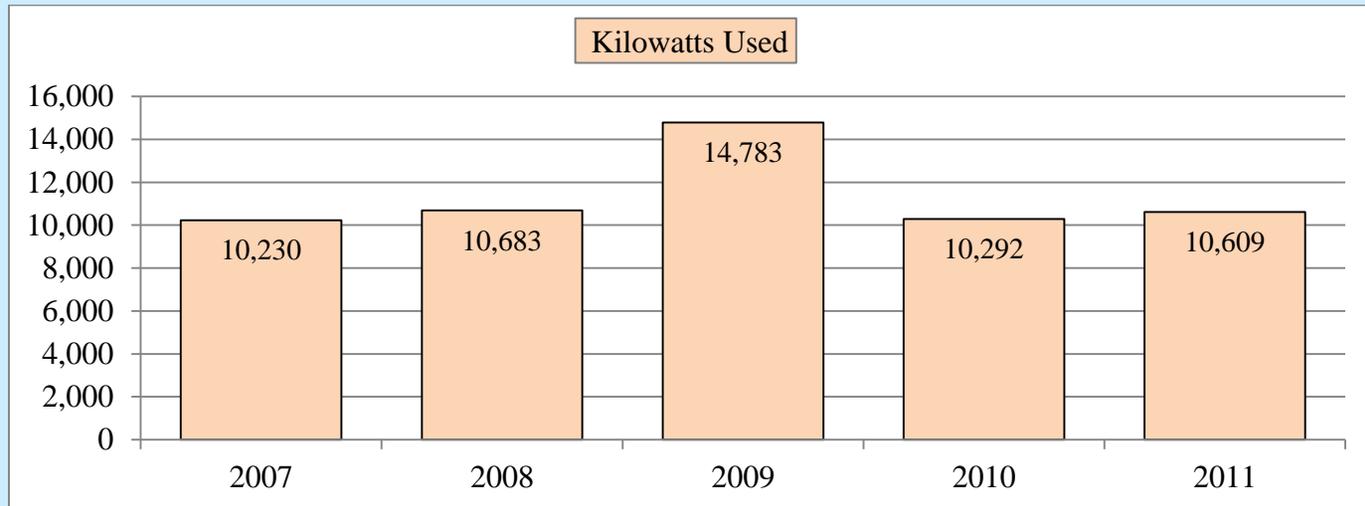
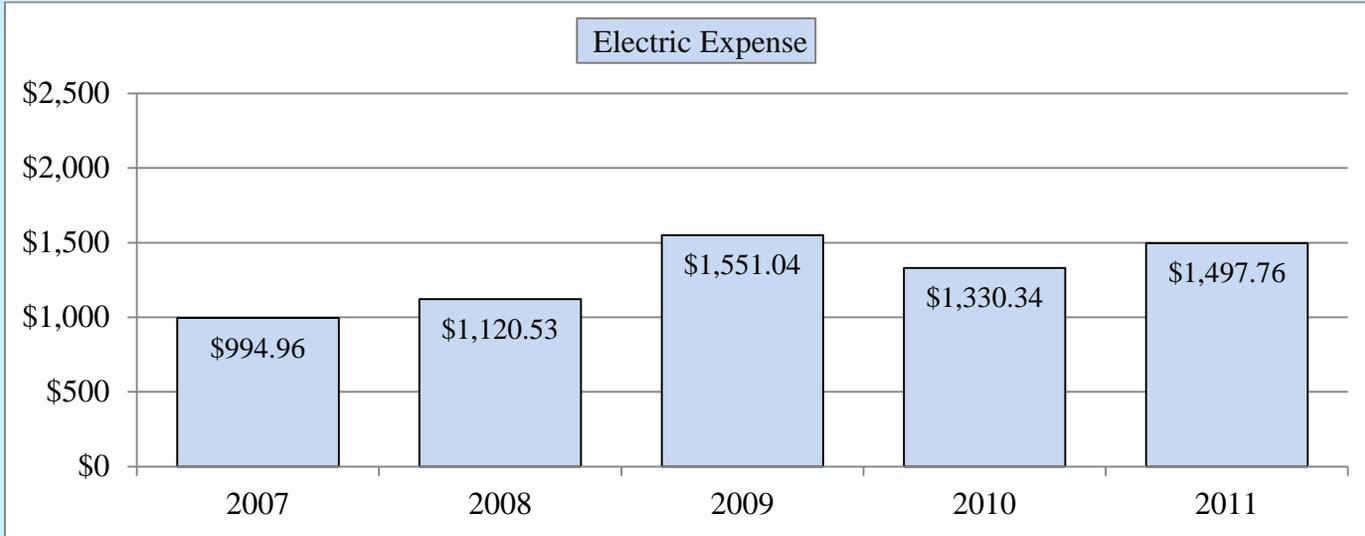
CHARTS OF RIVER RIDGE ELECTRIC COST & USAGE



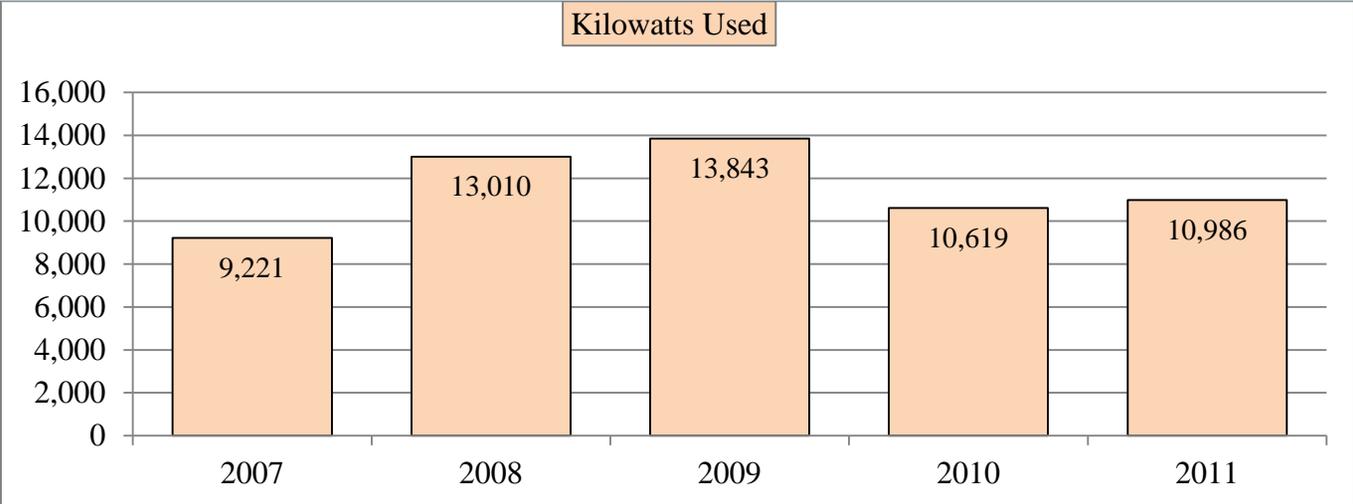
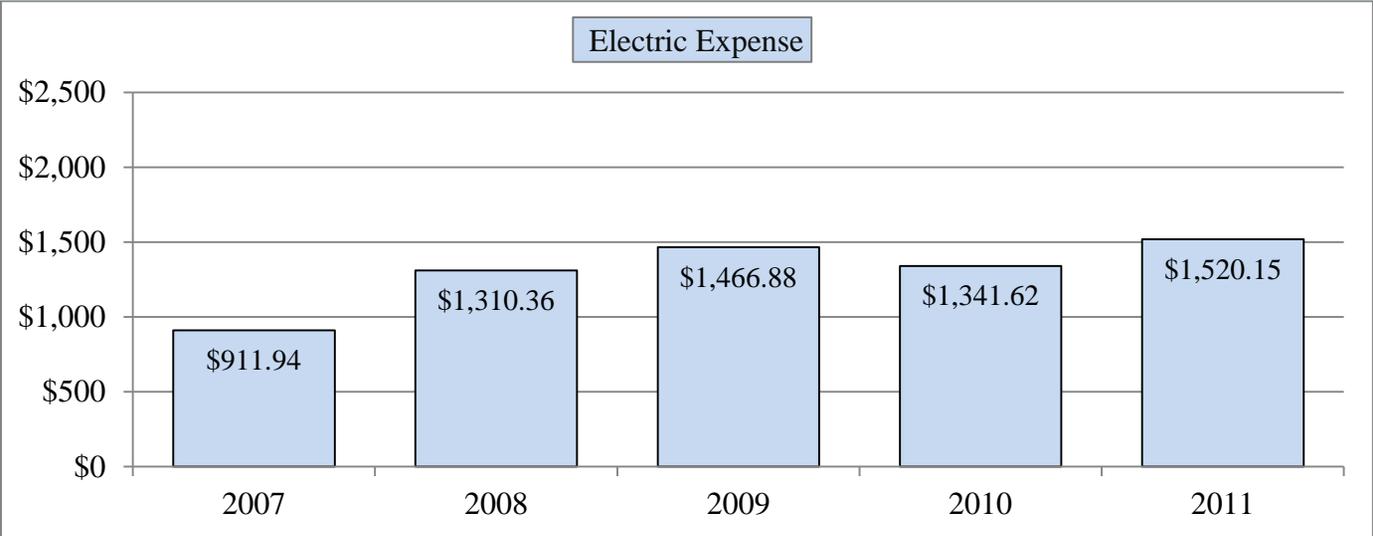
CHARTS OF SARATOGA ELECTRIC COST & USAGE



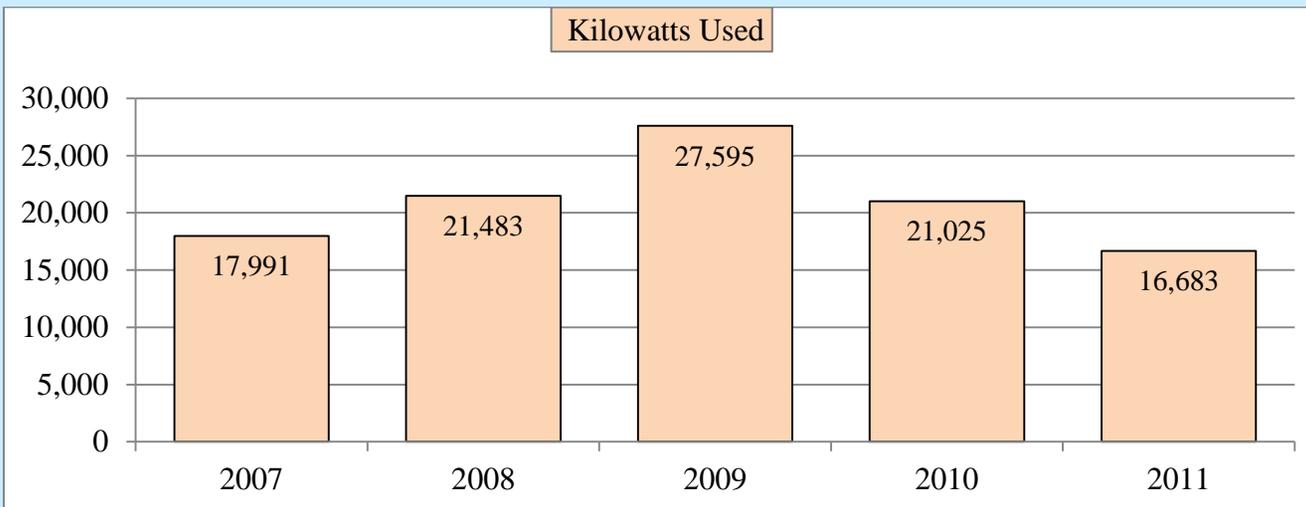
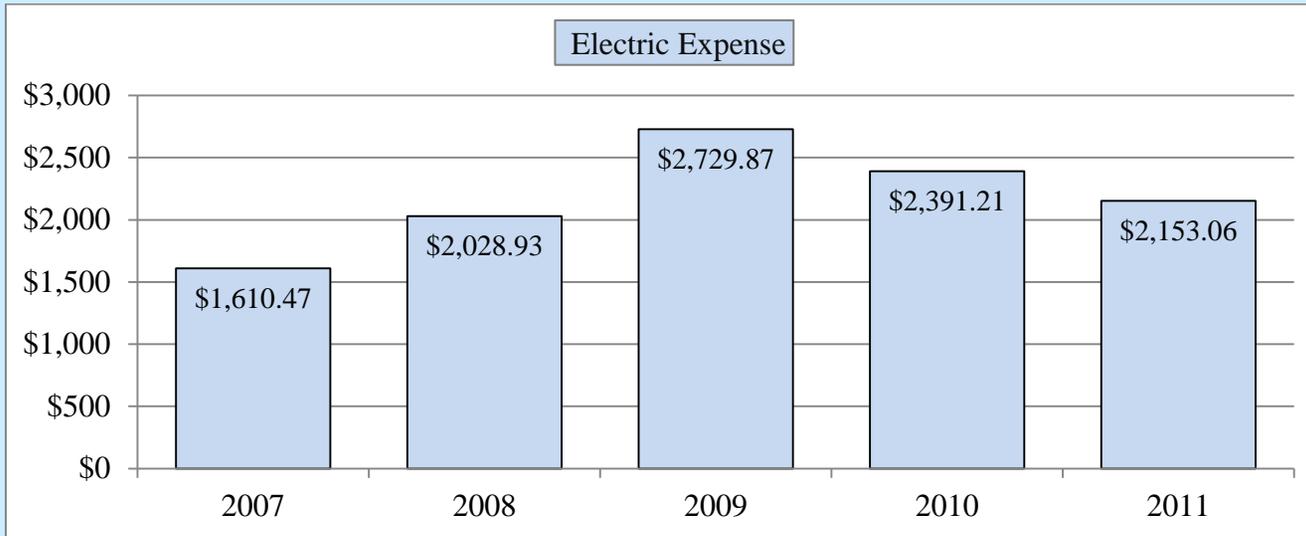
CHARTS OF SKYWAY ELECTRIC COST & USAGE



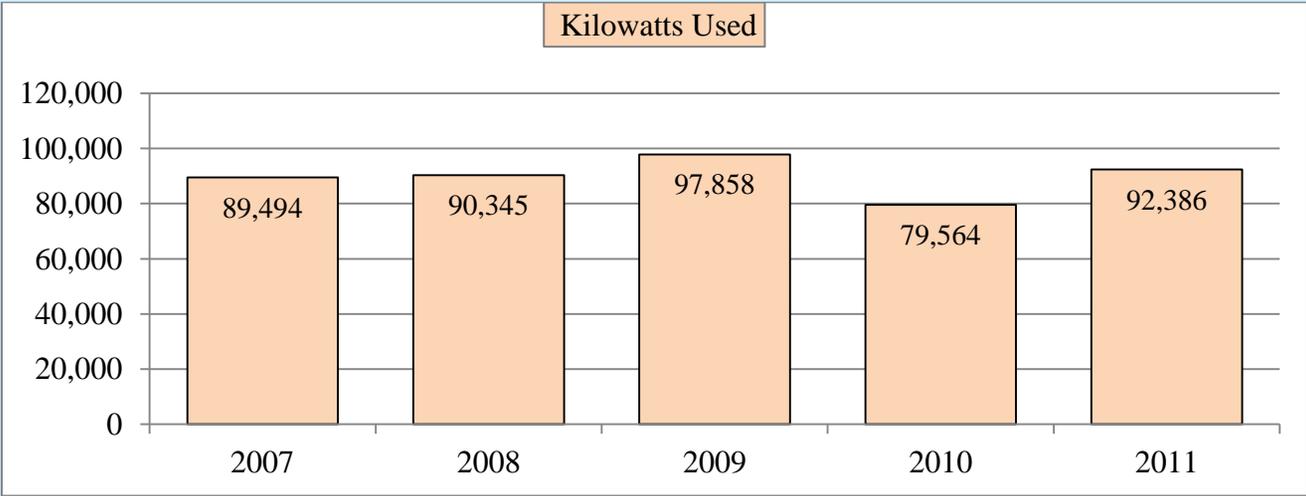
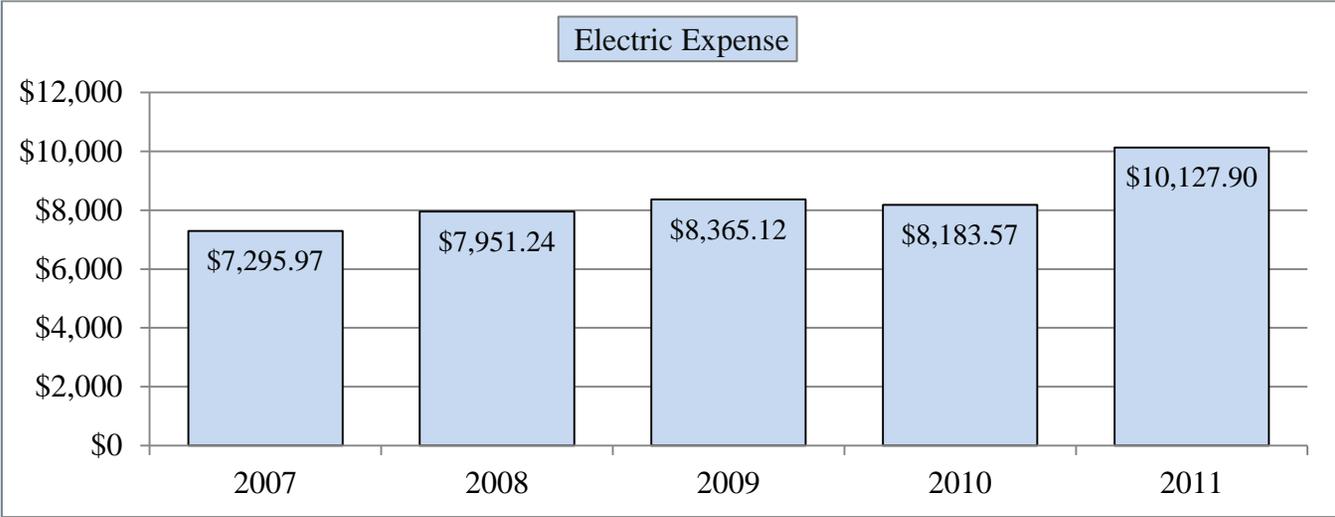
CHARTS OF SNOW ROAD ELECTRIC COST & USAGE



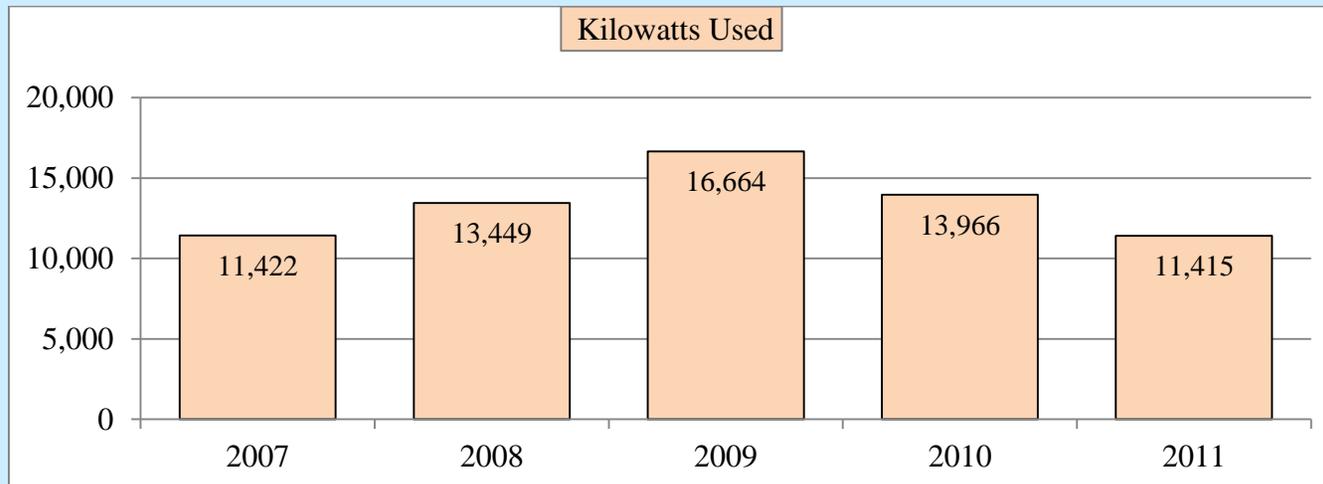
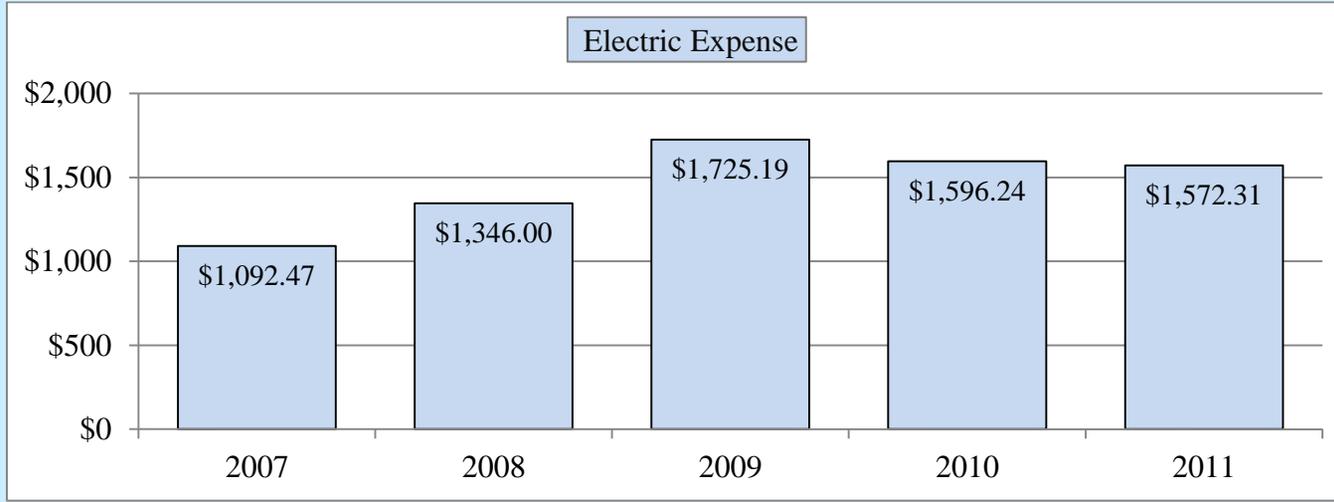
CHARTS OF TAMMANY ON THE PONDS ELECTRIC COST & USAGE



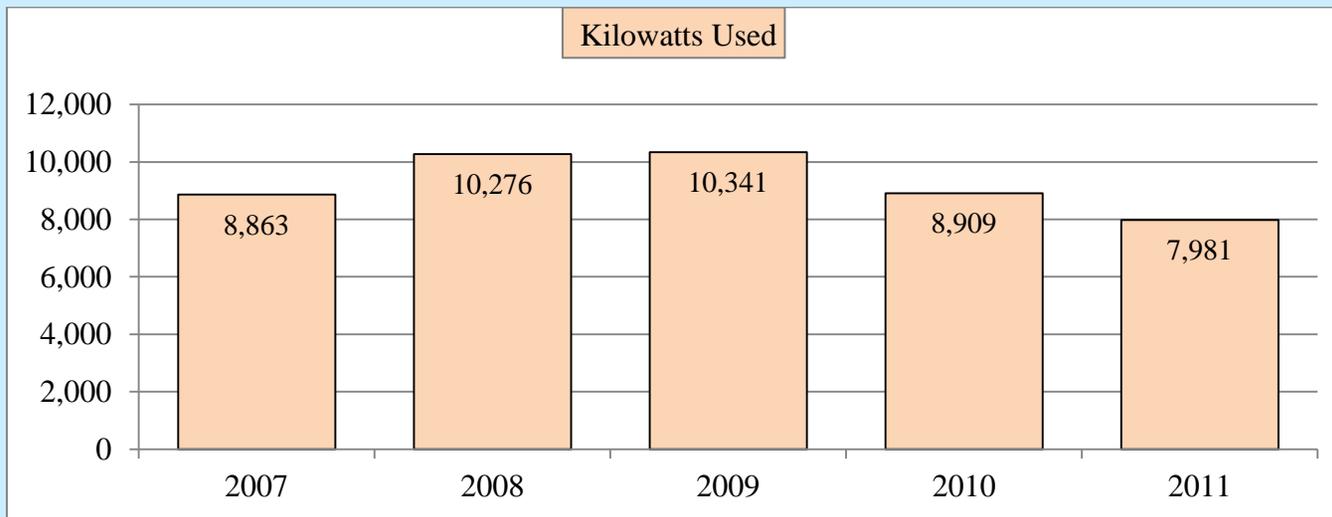
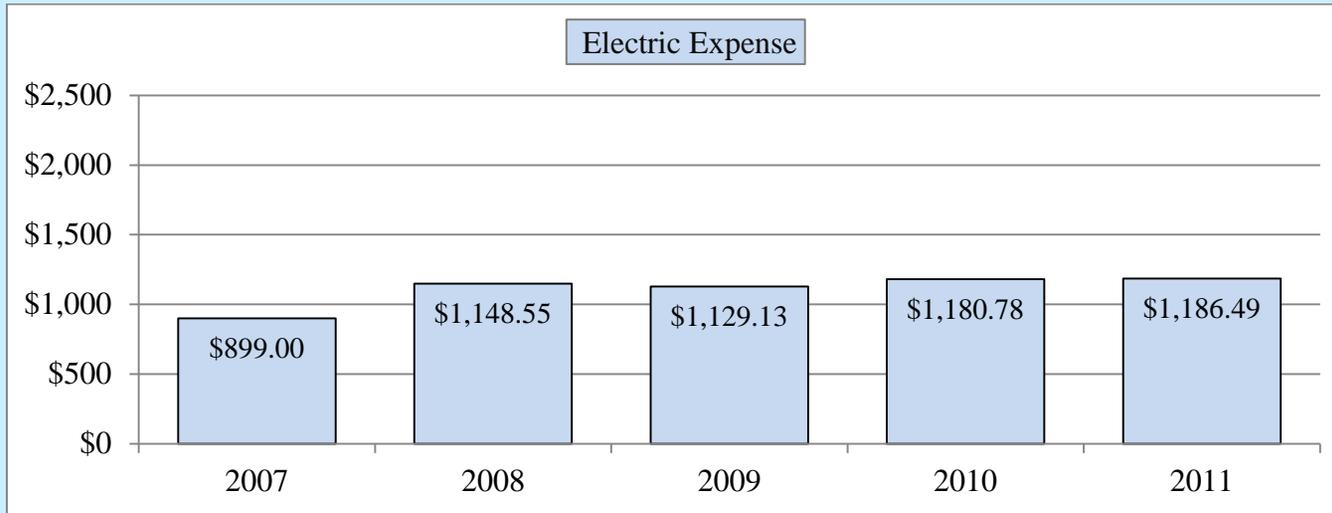
CHARTS OF THOMAS L ELECTRIC COST & USAGE



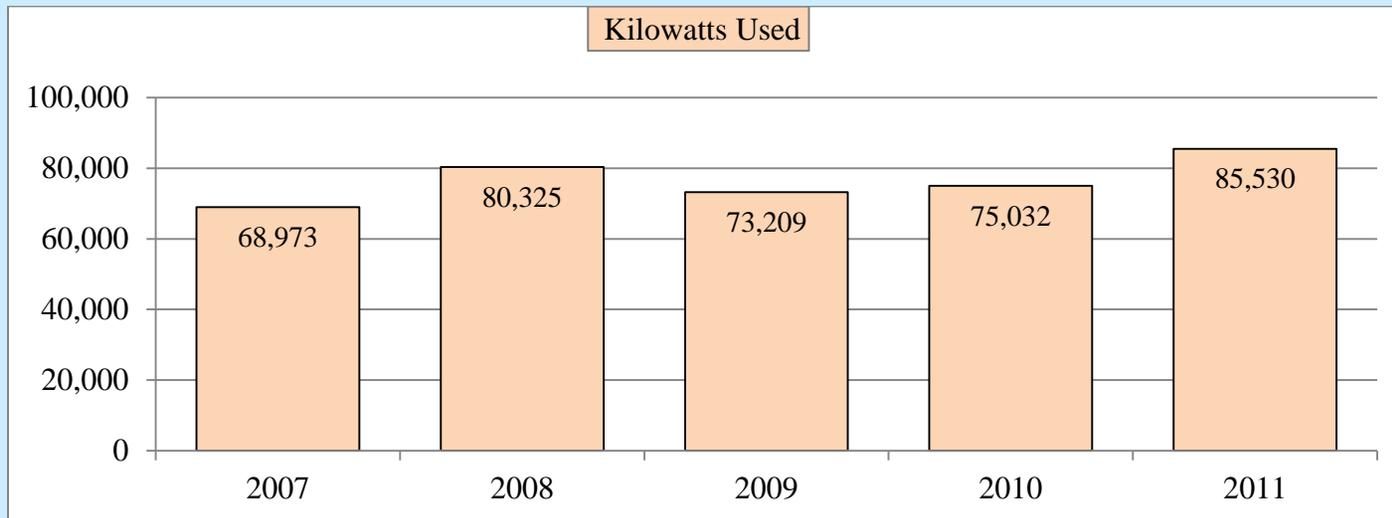
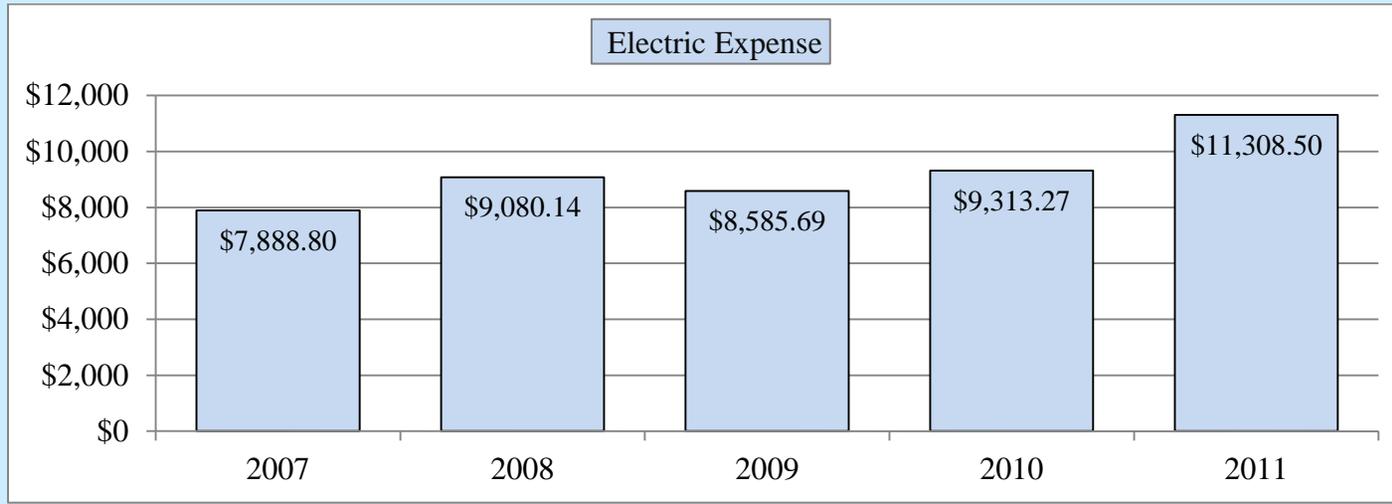
CHARTS OF WESTCHARME ELECTRIC COST & USAGE



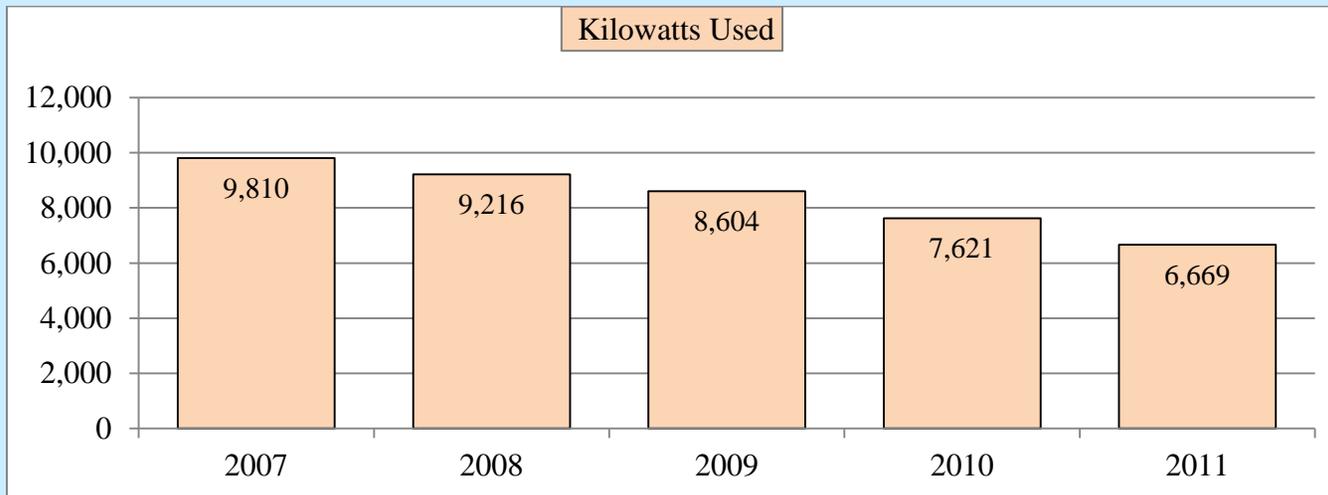
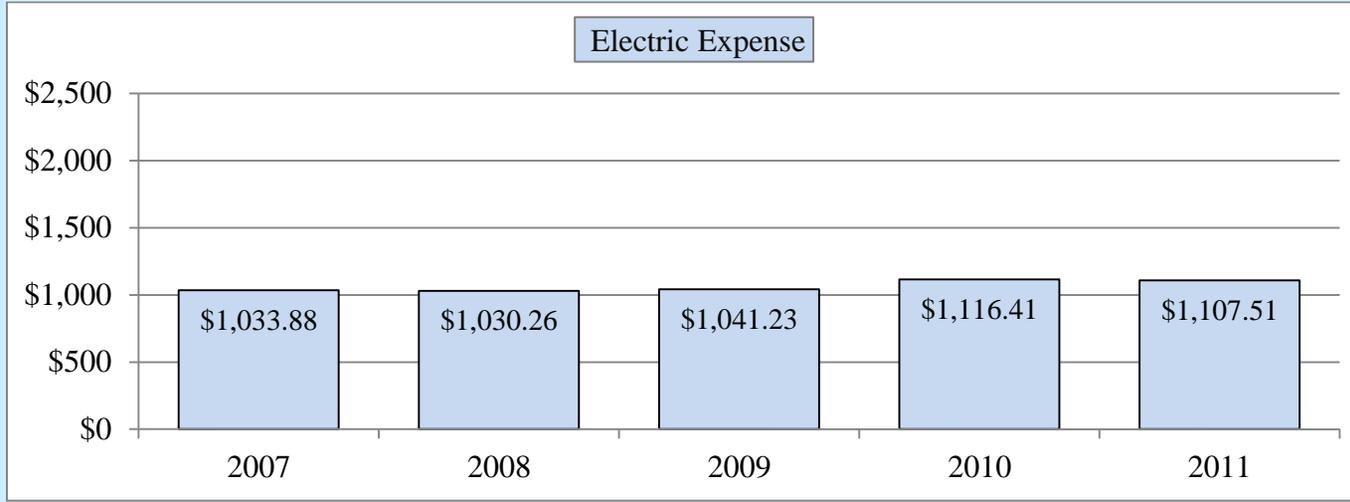
CHARTS OF WESTLAND ELECTRIC COST & USAGE



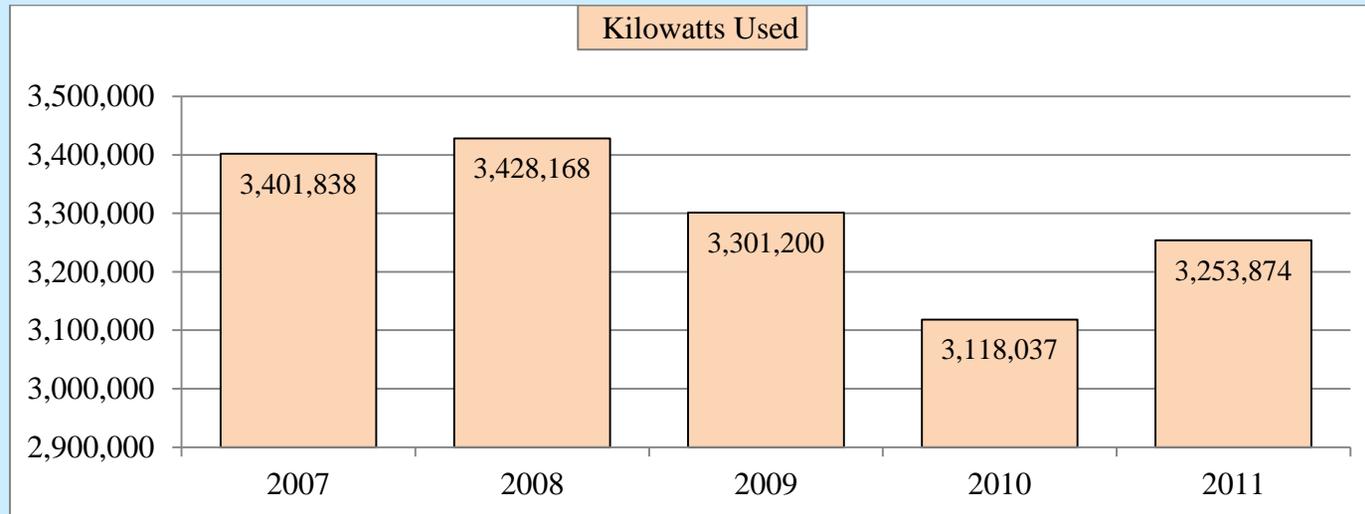
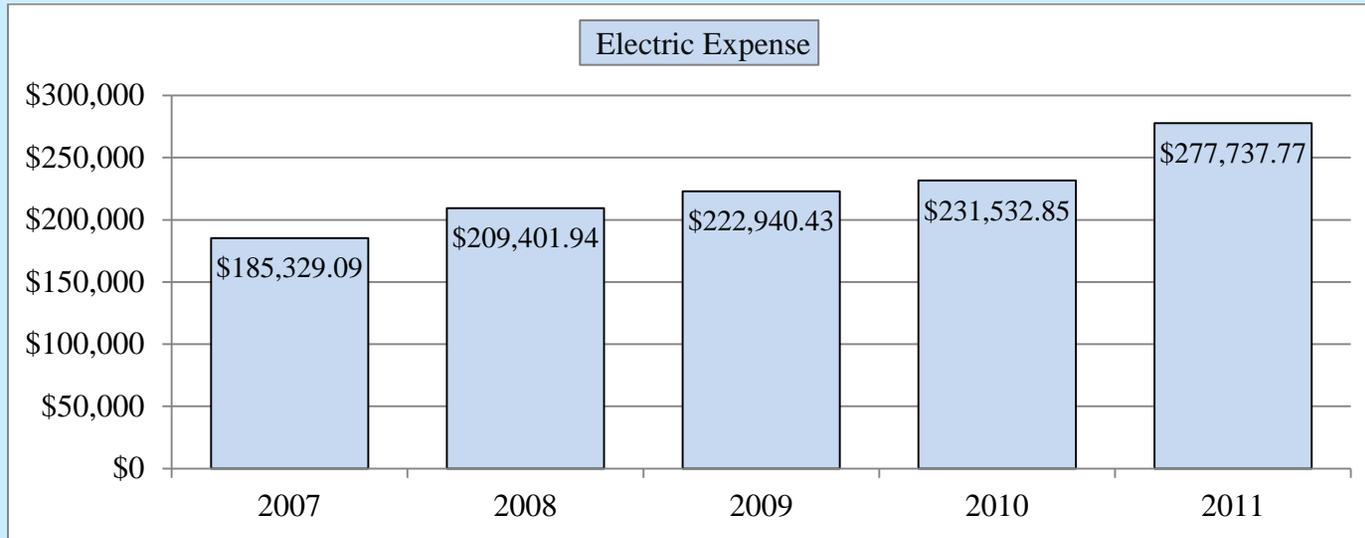
CHARTS OF WILLOW ELECTRIC COST & USAGE



CHARTS OF WOLDUMAR ELECTRIC COST & USAGE



CHARTS OF WASTEWATER TREATMENT PLANT ELECTRIC COST & USAGE



LOST REVENUE

CHART OF WATER NOT SOLD

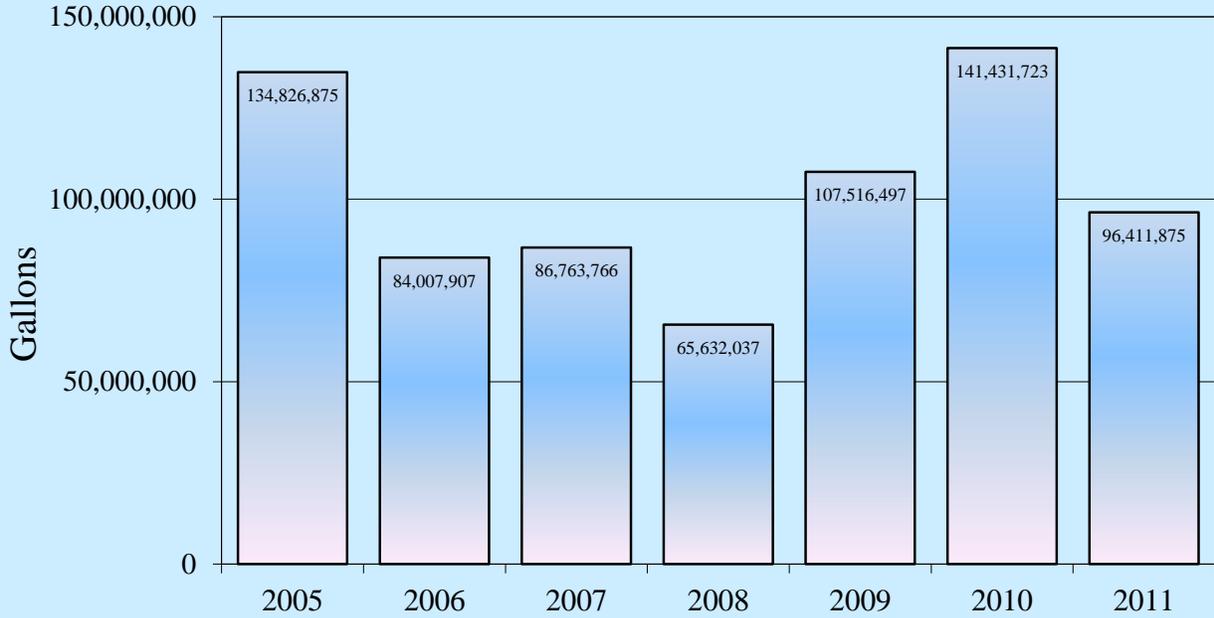
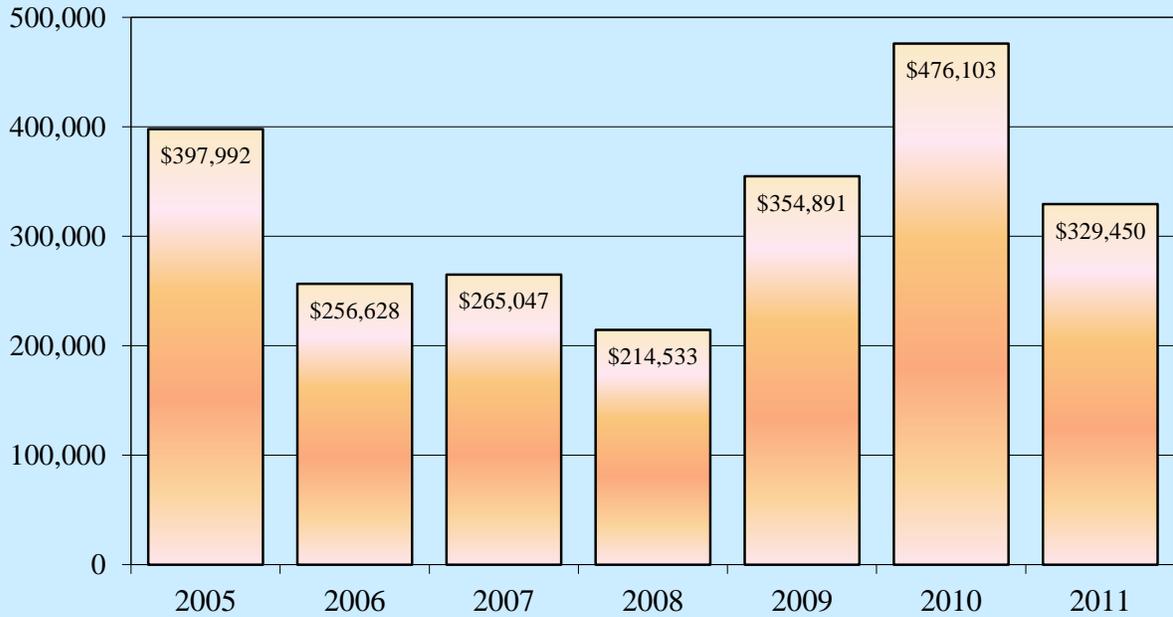
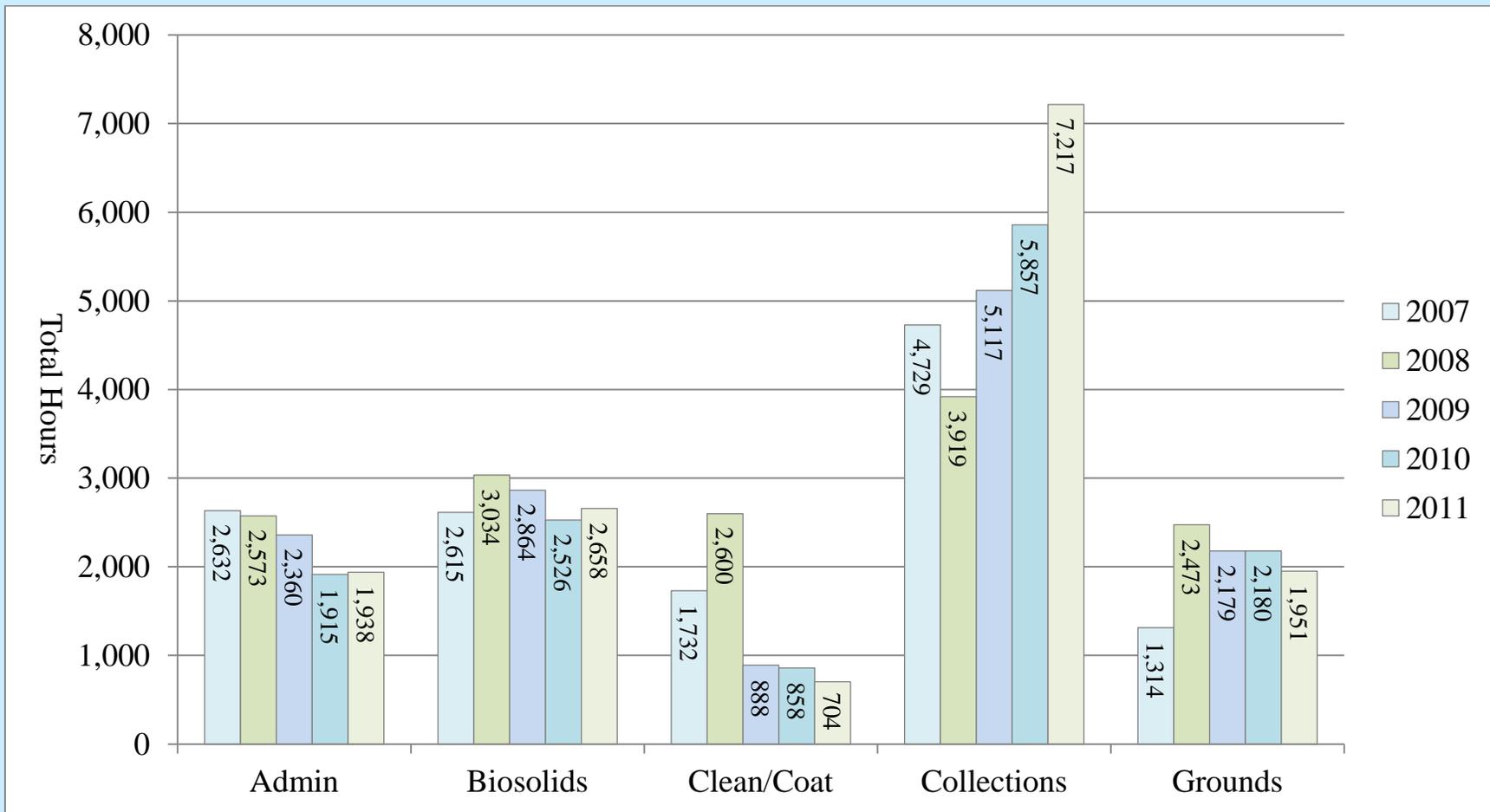


CHART OF SEWER REVENUE LOST ANNUALLY FROM WATER NOT SOLD

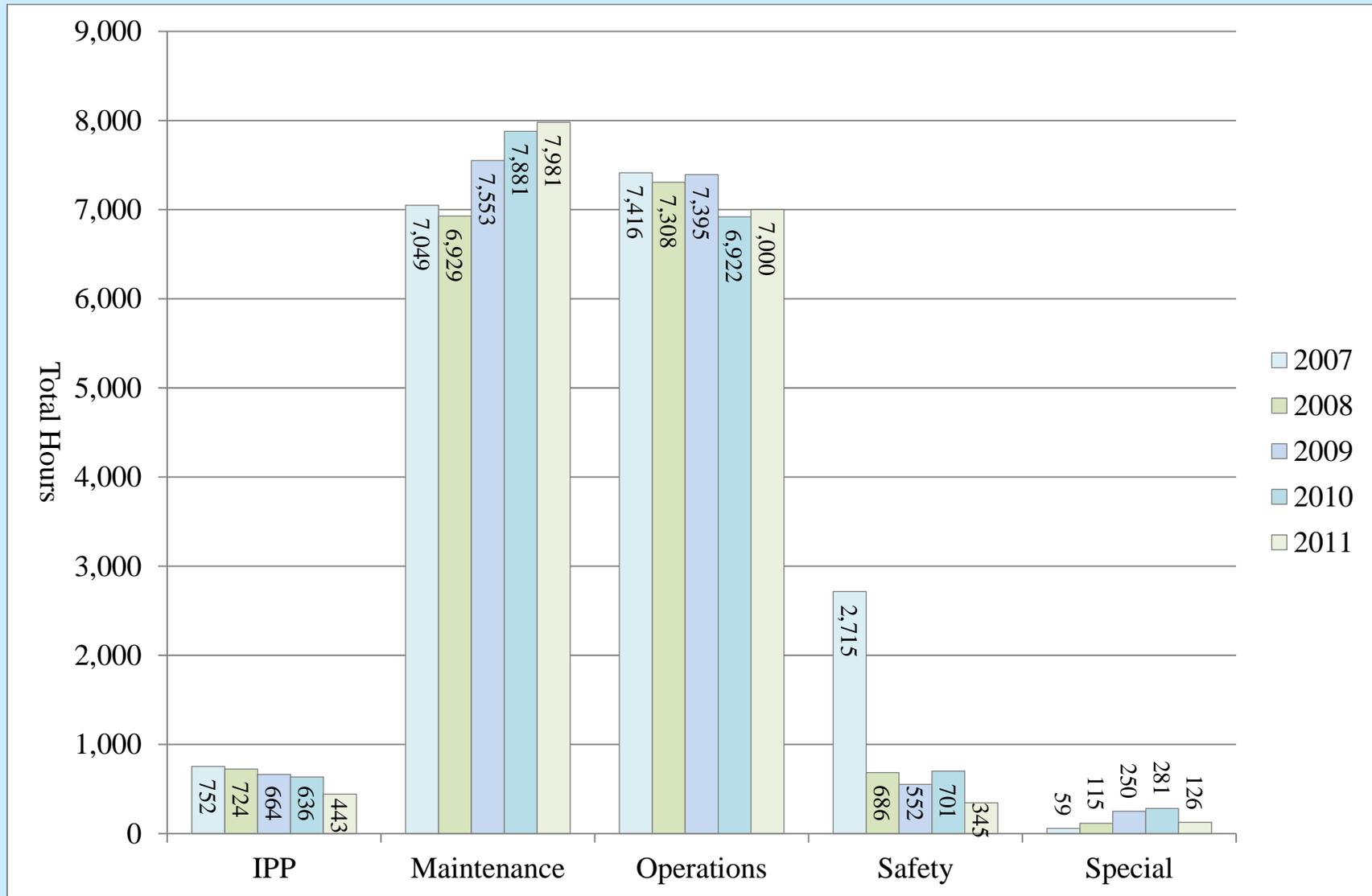


PERSONNEL TIME ALLOCATION

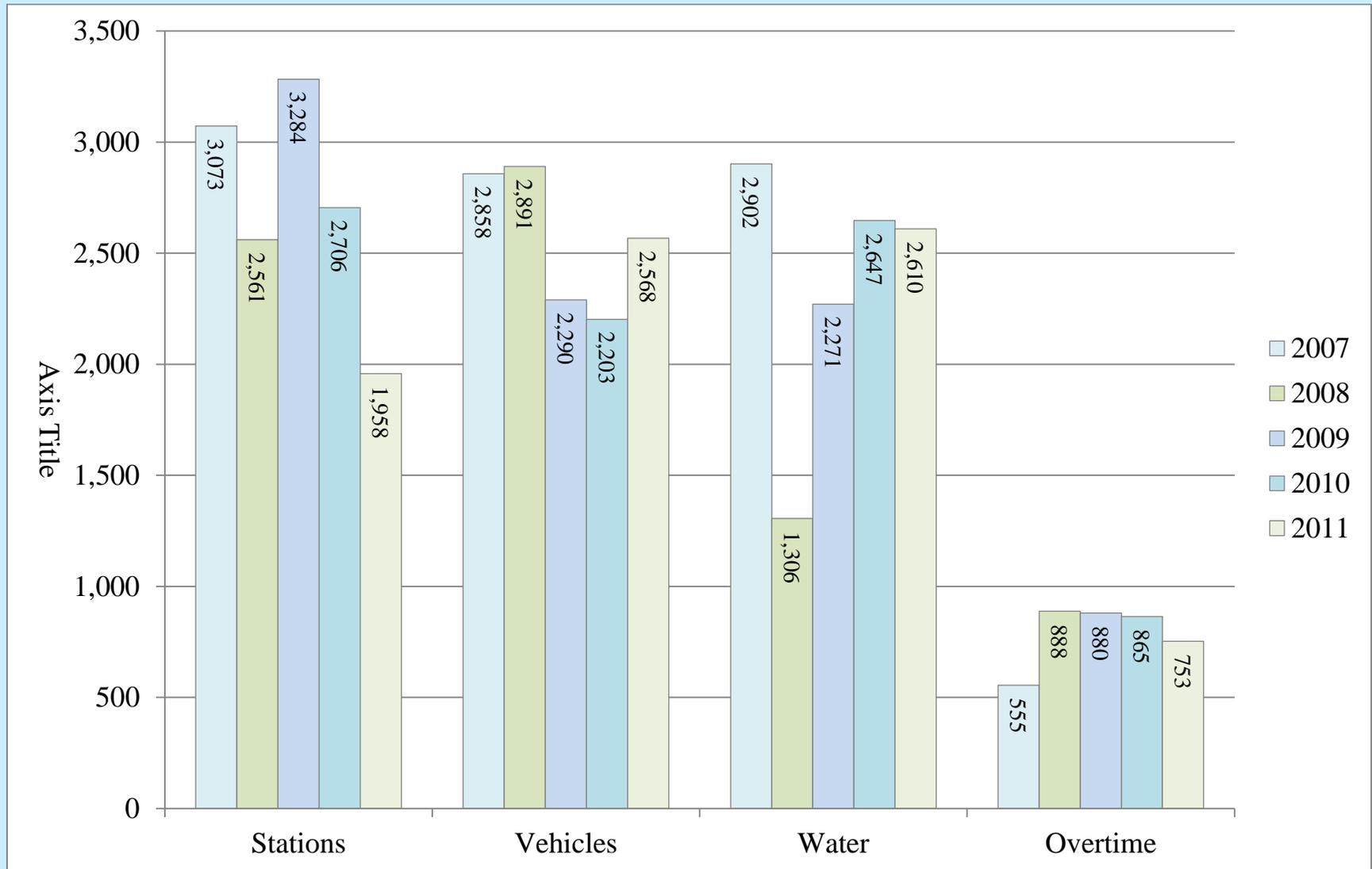
CHARTS OF WASTEWATER PERSONNEL TIME 2007 THRU 2011



CHARTS OF WASTEWATER PERSONNEL TIME ALLOCATION (CONTINUED)

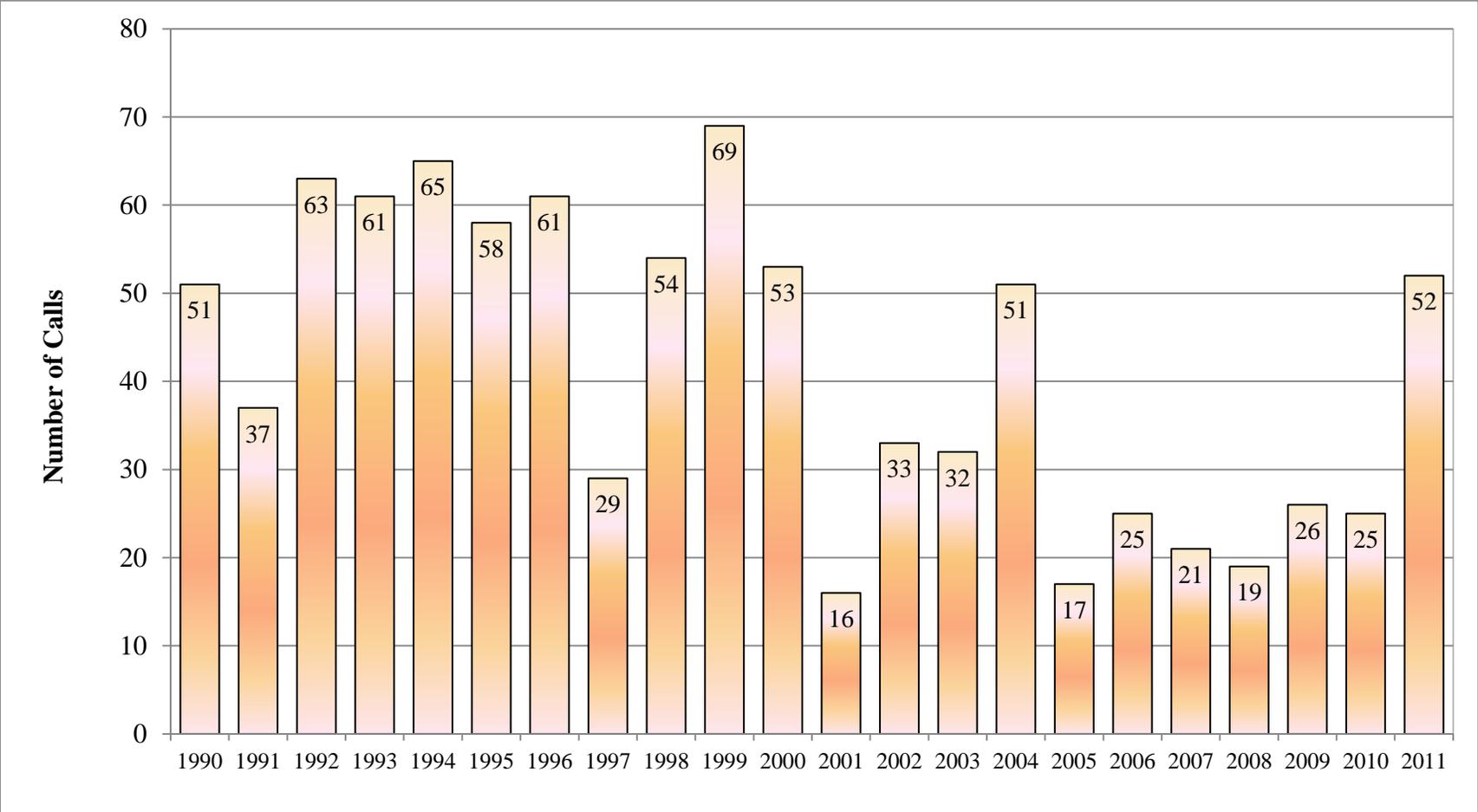


CHARTS OF PLANT TIME USAGE (CONTINUED)



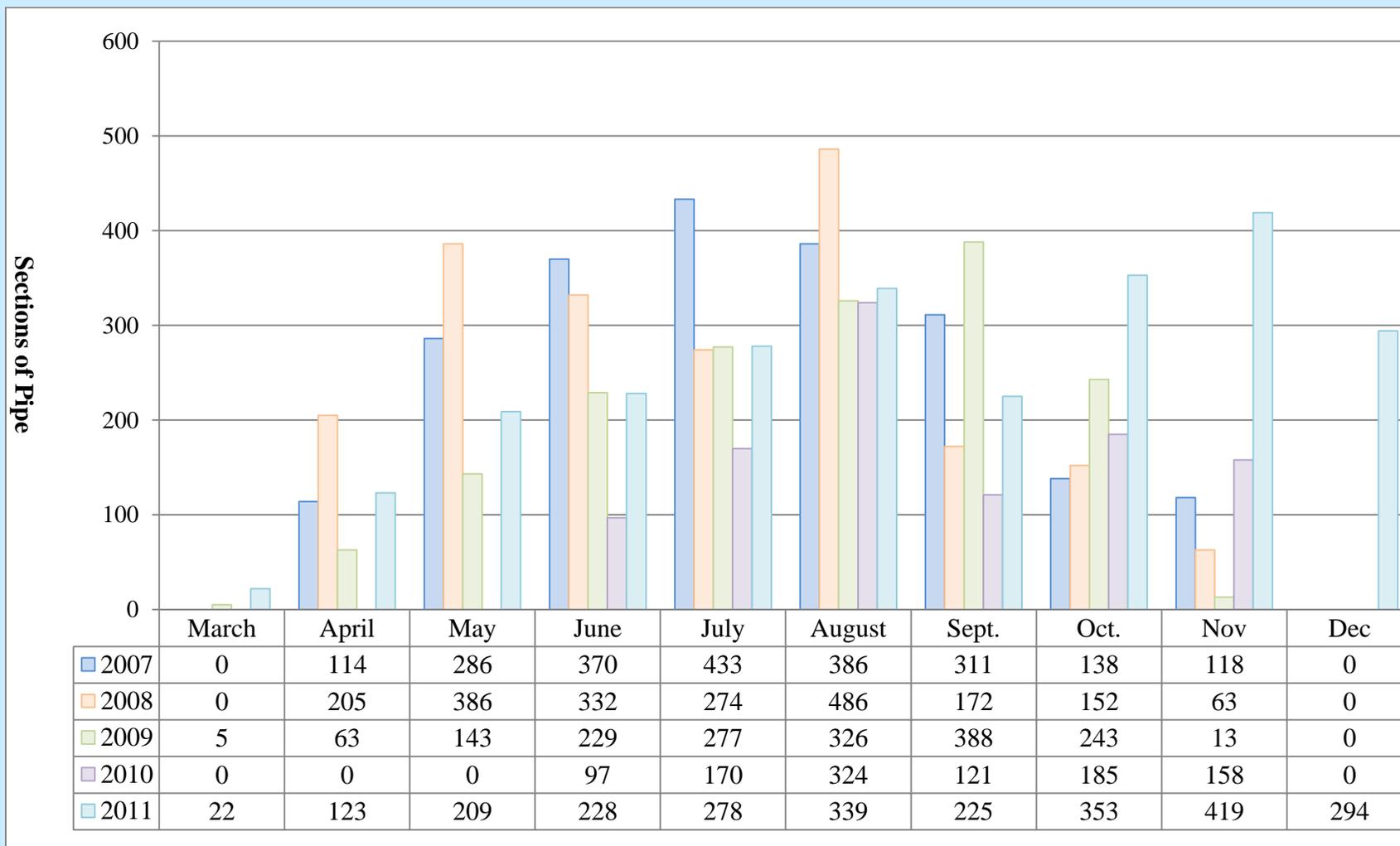
COLLECTIONS SYSTEM INFORMATION

CHART OF SEWER CALLS

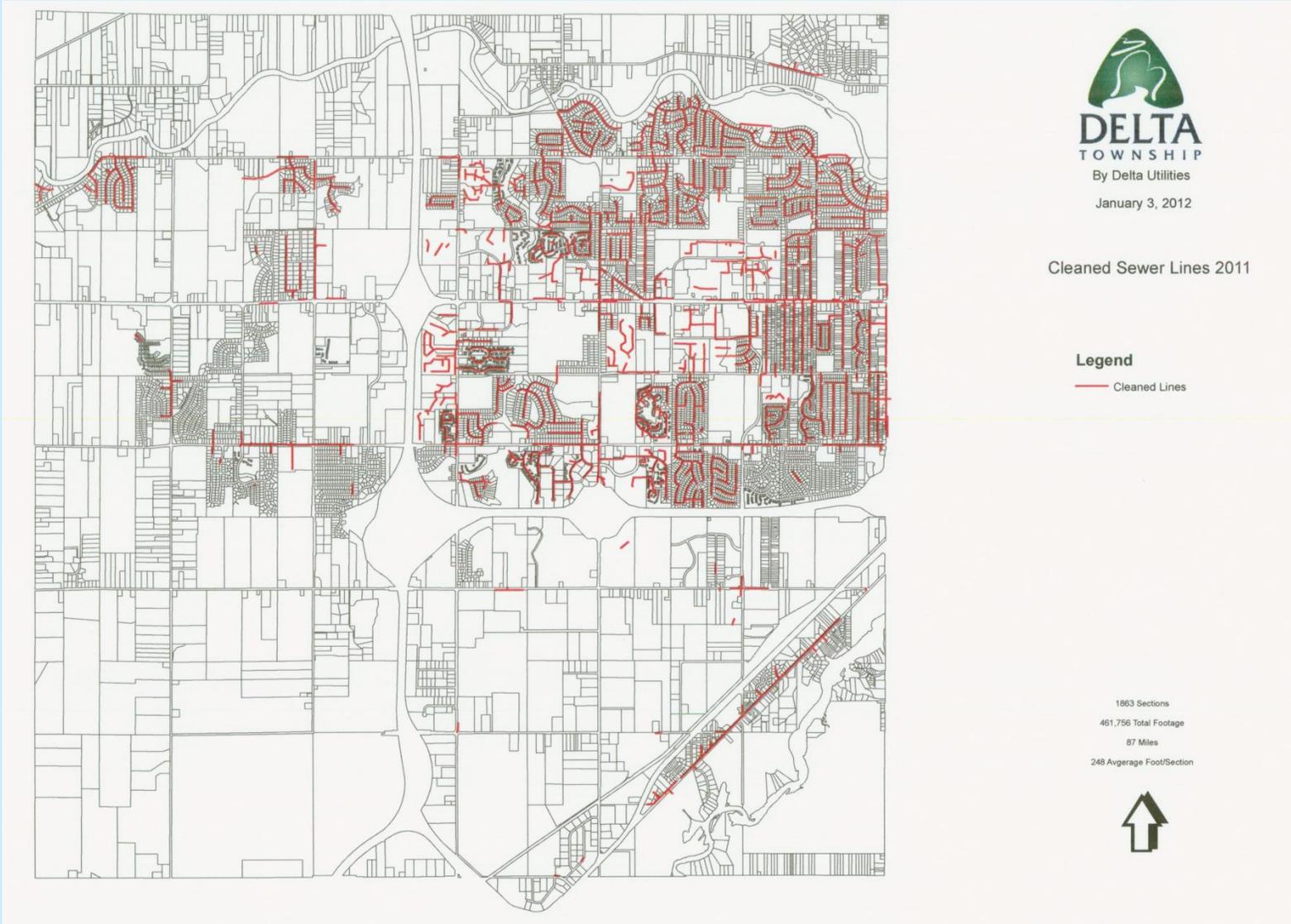


SEWER LINE CLEANING

CHART OF SEWER CLEANING COMPARISON BY YEAR 2007 – 2011



MAPS OF 2011 SEWER LINE CLEANING



VEHICLE INFORMATION

Vehicle #	Vehicle Description	Miles	Total Oil Used	Unleaded Fuel	Diesel Fuel
1061	1987 GMC Tanker	199.0	14.0	0.0	57.0
1064	1986 Ford Flatbed	215.1	13.0	0.0	67.0
1065	1986 GMC Dump Truck	1,642.0	3.0	105.0	60.0
1102	1994 Ford Swaploader	920.8	8.0	273.6	30.4
1127	1997 Ford F-250 4x4	2,409.0	7.0	267.9	0.0
1131	1998 GMC Savana C	4,840.9	7.0	524.9	0.0
1133	1998 GMC Savana K	4,478.0	8.0	501.0	0.0
1138	1999 Dodge Pickup	2,612.0	7.0	312.4	0.0
1156	2001 Dodge Pickup *	2,079.0	7.0	221.6	0.0
1157	2001 Dodge Pickup	1,732.0	8.0	245.4	0.0
1158	2001 Vactor	884.1	25.0	32.2	74.0
1163	2002 Dodge Pickup 2500	4,865.0	7.0	534.3	0.0
1167	2002 Ford Taurus **	2,341.0	5.0	100.7	0.0
1173	2003 Dodge 2500 H	4,424.0	7.0	610.9	0.0
1179	2004 GMC 2500 HD	7,544.0	7.0	850.2	0.0
1185	2005 Sewer Jetter	1,432.0	25.0	29.0	148.0
1194	2006 Chevy Silverado	3,893.0	7.0	225.5	0.0
1204	2007 Chevy Silverado	9,863.0	8.0	1,137.1	0.0
1205	2007 Chevy Impala ***	5,340.0	6.0	389.2	0.0
1217	2010 HHR Panel	8,237.0	6.0	472.2	0.0
1220	2011 Transit Connect ****	0.0	0.0	0.0	0.0
1222	2011 Chevy Volt *****	0.0	0.0	0.0	0.0
Year End Total		69,950.9	185.0	6,833.1	436.4

- * 1156 2001 Dodge pickup – sold 9/2011.
- ** 1167 2002 Ford Taurus – transferred to Admin. Bldg. 7/2011.
- *** 1205 2007 Chevy Impala – transferred to wastewater 12/2011.
- **** 1220 2011 Transit Connect – purchased 9/2011 & put into service 3/2012
- ***** 1222 2011 Chevy Volt (Electric Car) – put into service 12/2011

BIOSOLIDS MANAGEMENT PROGRAM

2011 ANNUAL BIOSOLIDS REPORT

INTRODUCTION

In an era of green energy, green construction, and green waste management, biosolids management has been ahead of the trend. The agricultural re-use of biosolids on crop land has been the “green” management option since the 1970’s, and for the past twenty four years Delta Township has managed the waste water treatment biosolids by applying the material as a fertilizer/lime source on agricultural land. Beginning in the fall of 1988 100% of the residual solid material generated from the waste water treatment process has been returned to farm land to modify soil pH, and improve fertility. Land application of biosolids is a beneficial partnership between the agricultural community and the township. Farmers benefit primarily through reduced fertilizer and lime costs. The township benefits from reduced biosolids management costs and through the “green” end use management of the biosolids.

Some of the management variables that are important for successful operation of the biosolids program are discussed below. These areas include, regulatory over site and fees, grower participation, public relations and acceptance, fertilizer value, and long term trends.

REGULATORY STRUCTURE AND ANNUAL FEE

The federal and state regulatory frame work provides the township with the structure to establish and maintain the biosolids management program in a legally compliant and publicly acceptable manner. The biosolids program has been very stable from a regulatory standpoint for a number of years. This does not mean the program is static. The national biosolids partnership and the Environmental Protection Agency continue to review biosolids impact, management practices, and the regulatory structure. To insure that biosolids management is accomplished each calendar year, a biosolids application report is filed with the Michigan Department of Environmental Quality that includes a total for the amount of biosolids applied for the year. The State of Michigan reviews the reports and determines a statewide total volume of biosolids applied from all of the reports. This total is used to calculate the annual fee/ton that must be collected to provide funding for the next year of program operation. The fee structure was established in a manner to encourage land application by rolling over any unexpended money left in the fund at the end of the fiscal year, and applying it toward the per ton fee for the subsequent year. The intention is for the biosolids application fee to remain lower than land fill fees thereby encouraging communities to land apply.

GROWER PARTICIPATION

One of the most important ingredients in the program is identifying, enrolling and maintaining a pool of local farmers who recognize the benefits of participation in the program and are therefore willing to commit land areas to land application. Over the 24 years of operating the program we have only had one farmer end their participation in the program and that was due to their retirement from farming and re-location out of the area. For the year 2011 we lost the use of approximately 285 acres due to a change in land use. We were able to replace some of this acreage by adding three new field areas. Each year we review the approved sites to make sure

that change in ownership and therefore the required application agreements are up to date. Following is a listing of approved application sites by county and township.

EATON COUNTY		
TOWNSHIP	TOTAL APPROVED FIELDS	TOTAL TILLABLE ACRES
Benton	12	33.
Windsor	6	361
Oneida	40	1,363
Delta	42	1,223
CLINTON COUNTY		
TOWNSHIP	TOTAL APPROVED FIELDS	TOTAL TILLABLE ACRES
Riley	9	401
Watertown	15	725
	TOTAL FIELDS = 124	TOTAL ACRES = 4,403

PUBLIC ACCEPTANCE

The public relations aspect of the program may be the single most important element in the long term success of the biosolids management program. From the very first season of land application we have attempted to maintain ongoing communication with the residents of Delta Township in the areas where we are operating in regard to the land application program. For a number of years the Utility Department has participated in public educational forums such as Greener Delta which allows representatives of the Utility Department to meet with citizens, and provide educational presentations on a number of environmental topics including biosolids application. Periodically an article concerning biosolids application is included in the township magazine. Even more important is the communication that occurs directly with residents and land owners who live in proximity to an application site. Prior to each period of biosolids application an information package is personally distributed to homeowners by representatives of the Utility Department. Often this information is supplemented by additional contact either over the phone or at the home of a concerned citizen. We attempt to make sure we provide the needed information, and answer every inquiry in regard to the biosolids program.

FERTILIZER VALUE & COST SAVINGS

The fertilizer value of the biosolids increased significantly through the spring of 2008 as a direct result of wildly fluctuating chemical fertilizer costs. The high production costs of 2007-2008, have lead farmers to become more efficient, and explore ways to stabilize costs where possible. Biosolids provide a proven alternative source for fertilizer inputs and lime as well as providing stable organic matter. This makes the application of biosolids increasingly attractive to local farmers. The current average nutrient analysis of Delta Township biosolids is as follows:

**BIOSOLIDS AVERAGE ANALYSIS
2005 THROUGH 2010**

The following analytical data represents the average contents of the biosolids that will be applied to agricultural land in your area. The US EPA has developed the maximum limits from over 20 years of research. These limits represent a conservative annual application rate and at no time will biosolids be applied which exceed any of these maximum values.

Constituent	Analysis in mg/kg	Maximum Annual Limit in mg/kg
Arsenic (As)	7.1	75
Cadmium (Cd)	0.84	85
Copper (Cu)	213	4300
Lead (Pb)	34	840
Mercury (Hg)	< 1.0	57
Molybdenum (Mo)	10.1	75
Nickel (Ni)	30.5	420
Selenium (Se)	2.7	100
Zinc (Zn)	494	7500
Nitrogen (N)	1.8%	Ag rate
Phosphorus (P)	1.55%	Ag rate
Potassium (K)	0.05%	Ag rate

The estimated fertilizer (N, P, K and lime) value for a dry ton of biosolids for 2011 is approximately \$44.50. An average 10 wet ton /acre application of biosolids has fertilizer value of approximately \$200.00/acre. The total fertilizer value of the biosolids generated in 2011 (2234 wet tons) is approximately \$46,800.00. Another important aspect of the biosolids application program is the money saved through the re-use of this material on land. The landfill cost increased in 2011 to \$17.50/yd. For 2011 approximately 3310 yards of material were applied. The cost to landfill, excluding labor and gas, would have been \$57,925.00 if it were to be done in this manner. This represents an increase of over \$10,000.00 from the previous year, if the township were to employ the landfill option.

LONG TERM CONDITIONS

We will remain watchful of regulatory changes and/or changes in public opinion toward biosolids application that could seriously affect our ability to operate the approved program. There are a number of trends and conditions that have been identified and are being monitored:

1. Agricultural production costs are not rising as quickly as they were in 2008, but overall production costs continue to increase. One of the most significant increases for many farmers is land rental. This makes the use of biosolids increasingly attractive as a way to reduce fertilizer and lime costs while increasing overall soil fertility.
2. Agricultural land remains readily available as is illustrated in the table contained in this report. We currently have over 4400 acres on 124 active sites committed to the program in 6 different townships. We are not actively seeking new fields, but additional fields are always added as they become available through our pool of active farmers.
3. Land management and crop planting trends continue to be an important factor in the ongoing success of the biosolids program. Farmers continue to explore new and more efficient ways to plant, manage and harvest crops. This requires the Utility Department to make sure land application adapts to work in cooperation with current crop management practices. This is especially true with current practices which attempt to use minimum tillage methods.
4. Our designation as the first EQ (exceptional quality) program in the state has benefited the operation in a number of ways including, reduced regulatory requirements, fewer site restrictions, and increased public acceptance. We will continue to maintain our exceptional quality biosolids. EQ has become the “trend” for biosolids management programs across the state, and throughout the country.

Biosolids application is one of the most successful resource recovery/recycling programs in the State of Michigan. It is also one of the most successful “green” programs as it provides an environmentally friendly system of management while eliminating the use of increasingly scarce landfill space. Biosolids application has virtually eliminated incineration as a disposal practice, and returns valuable nutrients to the land for the production of crops. The Delta Township Biosolids Program has a long history of environmentally sound biosolids management which helps to insure the long term success of the program.

INDUSTRIAL PRETREATMENT PROGRAM

2011 ANNUAL IPP REPORT

INTRODUCTION

The industrial pretreatment program operates with four major objectives. By looking at yearly progress and maintenance of these objectives a useful picture of the overall program effectiveness can be developed. Industrial Pretreatment Program objectives are as follows:

1. Identify and control potentially polluting materials in a manner that insures consistent compliance with the discharge standards of the federally issued discharge (NPDES) permit.
2. Identify and control the discharge of polluting materials into the Charter Township of Delta treatment system, to protect the sewer system, treatment plant, and worker health and safety.
3. Eliminate or limit the discharge of potentially polluting materials into the waters of the Grand River.
4. Maintain the quality of the wastewater treatment biosolids in a manner which allows for the most cost effective and environmentally beneficial end use management option.

The annual report for 2011 outlines progress made during the year to meet the stated objectives.

POLLUTANT CONTROL

The primary objective of the industrial pretreatment program is the identification and reduction or elimination of potentially polluting materials. Pollutants introduced into the treatment system have the potential to adversely impact the waste water treatment system. The Township treatment plant operates under a federal NPDES permit (National Pollutant Discharge Elimination System Permit). This permit requires the treatment of wastewater to consistently comply with stringent discharge limits prior to final release into the Grand River.

Metals

Delta Township maintains local limitations on 13 metals that could potentially be discharged for treatment. Local limits are carefully calculated thresholds which insure that these polluting materials will not be released from their source at concentrations that may prove to be toxic to the treatment process or the environment. Through the industrial pretreatment program, commercial/industrial customers are inspected and monitored to verify pollutants are being adequately controlled within the facility.

Mercury

One of the pollutants limited through the NPDES permit is mercury. Mercury is toxic to animals and humans at low levels, and because mercury accumulates in the environment it has become a high priority for regulatory control. Currently if mercury is detected above 1.3 ng/l (1.3 parts per trillion) the source must reduce this discharge to below the detection level. At such low detection levels it becomes difficult to identify and

eliminate potential sources of mercury, but we are making progress. One of the indicators for the reduction in discharged mercury is the treatment biosolids. The mercury level measured in the biosolids has averaged less than 1.0 mg/kg over the past three years. This represents the lowest level of mercury we have measured over the life of the program.

Dental Mercury

The primary source of low level mercury in the Township is being discharged from dental offices. At the end of 2008 regulation was passed in the State of Michigan to require the installation of equipment to remove low level mercury at most dental offices. Dental offices located within the township are aware of, and working to meet, the state requirements. All facilities are required by the new law to install amalgam separators by 2013. Offices are being provided with additional information and assistance as needed to evaluate amalgam separation equipment in preparation for installing the required units. For the year 2011 a number of offices have installed amalgam separators well in advance of the 2013 compliance date.

B. Fats Oils and Grease (FOG)

The discharge of FOG presents a special problem for the utility department, especially the vegetable oil based material. Food service establishments must be consistent in their management of FOG as it is the primary contributor to system blockages (sewer plugs). The Department works to make sure that grease control and the maintenance of grease interceptors (traps) is occurring at regular frequencies thereby reducing the discharge of these materials into the sanitary sewer system.

The discharge of petroleum based oil and grease also presents a significant problem as it can also lead to system blockages and may be an indicator of a larger pollutant discharge problem which may include flammable compounds such as gasoline. The discharge of flammable and/or explosive products into the sewer system is prohibited and this prohibition is strictly enforced.

C. Conventional Pollutants

By ordinance a number of potentially polluting materials have carefully calculated discharge limits. The Utility Department continually monitors and updates information regarding the potentially polluting materials received from commercial/industrial facilities to insure compliance with these limits. The makeup of the sources that discharge into the treatment system is continually changing. As businesses move into or out of the township, and processes within existing sources change the appropriate treatment standards are implemented and/or updated to insure industrial pretreatment program objectives are maintained. While we are beginning to see reductions in mercury levels, other limited pollutants have recently seen increases. This is a situation we are monitoring to make sure ordinance standards are continuously met.

D. Organic Pollutant Sources

The regulatory structure that provides the foundation for the approved program is continually changing. In the future we may be responsible for monitoring and controlling previously un-identified pollutants. One area of increasing concern is pharmaceuticals. Hormones, products that disrupt the endocrine system, antibiotics, and other compounds are now in the spot light due to their environmental persistence and adverse impacts to aquatic environment and life. We are monitoring this issue carefully now and will continue in the years ahead to make sure we are prepared to respond to this new challenge.

POLLUTANT DISCHARGE LIMITS

Up to date local limits are also fundamental in the day to day compliance with the Township's National Pollution Discharge Elimination System (NPDES) permit. Limits are updated in response to regulatory changes, or to adapt the sewer use ordinance to changing conditions within the contributing customer base. Local ordinance limits are reviewed every four years.

EXCEPTIONAL QUALITY BIOSOLIDS

The biosolids land application program provides the township with an environmentally responsible and cost effective management option. A separate report covering biosolids management in greater detail has been prepared and is included in the larger document. Delta Township has maintained the Class A/exceptional quality classification of the generated biosolids for over 10 years. Pollutant control through industrial pretreatment monitoring insures that none of the regulated pollutants will ever exceed the threshold values that would affect this standard and limit land application.

FINAL PROGRAM COMMENTS

The industrial pretreatment program provides needed protection for the township treatment system as well as the environment. Diligent monitoring of the treatment system in conjunction with the implementation of the codified ordinances insures ongoing compliance with the approved NPDES permit.