



Utility SBStat

December 7, 2017



Department Strategic Plan

Wastewater Treatment Plant Digester No. 2 Upgrade and Digester Gas Cleaning

- **Designer:** Greeley and Hansen
- **Contractor:** Grand River Construction
- **Cost of Construction:** \$5,930,037
- **Project Description:**
 - Upgrade Digester No. 2 at WWTP
 - Digester Gas Cleaning System
 - Updated Mechanical Piping and Equipment
 - Automation with Supervisory Control and Data Acquisition (SCADA) system



Wastewater Treatment Plant Digester Gas Utilization (Construction)

- **Designers:** Greeley and Hansen
- **Contractor:** Thieneman Construction
- **Cost of Construction:** \$754,000
- **Project Description:**
 - Mechanical Piping
 - Connect Cleaned Digester Gas to Raw Sewage Pump Engine #1
 - Connect Cleaned Digester Gas to CNG Fuel Station
 - Storage / Buffer Tank
 - Automation with Supervisory Control and Data Acquisition (SCADA) System



Project Updates Overview: Organic Resources

- The Q3 2017 Utility SB Stat meeting focused on cost recovery in the Organic Resources Department
- These categories were researched as follow up:
 - Mulch dying
 - Mulch and compost bagging
 - Partnerships
 - Fee Structure
 - Inter-departmental use



Project Updates: Mulch Dyeing

- Unit cost: \$15,000
- Water and electric source needed
- Colorant cost per tote: \$1,625
- Tote produces ~625 per cubic yard (CY)
- Cost per CY to dye: \$2.60
 - Excludes recovery cost



Mulch Dying Continued

- Mulch dying is a viable option
- Recovery cost + cost to dye: \$10.18 per CY
 - Excludes water and electricity sources
- Average cost dyed: \$32.57 per CY



Project Updates: Bagging Mulch/Compost

- No go from discovery process
- Current recovery cost: \$7.56/CY or \$0.28/CF(Cubic Foot)
- Average 2CF bag cost online = \$3-5
- Assume we sell 2CF bag at \$4 = \$54/CY
- Our cost without shipping and startup costs = \$25/CY



Project Updates: Bagging Mulch/Compost

- 1 quote obtained from bagging company
 - \$1.25/bag
 - Delivery in Michiana area = \$400 for a four-pallet order of bags
 - Warehouse inventory included



Ideas Being Considered

- Notre Dame Partnership
 - Interest in purchasing mulch for campus
 - [Mulch for lead poisoning pilot](#)
- Changing fee structure in 2018
- Inter-departmental use



Utility Topics to Assess

- How do people pay their bill?
- Who calls 311?
- What do they call about?



Payment

- One of the main things people want to do regarding the Utility is pay their bill
 - This is also one of the main things we want them to do
- There are many options for payment
- We know that these options have different costs to us and the customer



Batch Type Descriptions

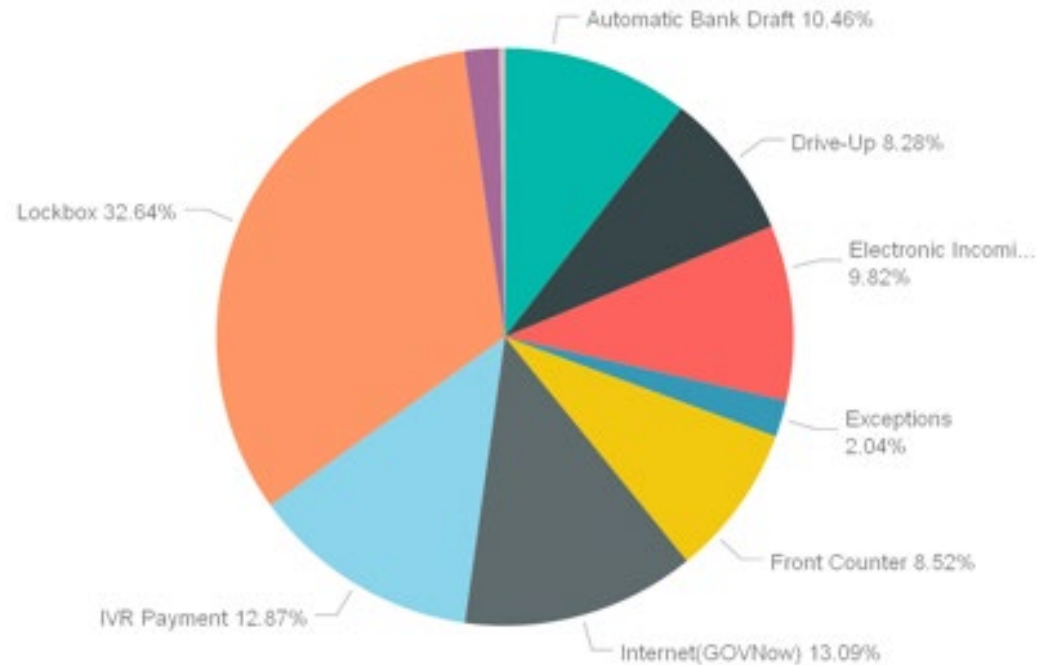
BD	AUTOMATIC BANK DRAFT FROM CHECKING OR SAVINGS ACCOUNTS
DU	CASH, CHECK OR CREDIT CARD PAYMENTS MADE AT CUSTOMER SERVICE OFFICE DRIVE-THROUGH
ET	FUND TRANSFER PAYMENTS THROUGH CUSTOMERS' BANKS, INCLUDING SOME WIRE TRANSFERS
EX	CHECK PAYMENTS MAILED TO BANK FOR LOCKBOX PROCESSING BUT RETURNED TO CUSTOMER SERVICE OFFICE FOR PROCESSING
FC	CASH, CHECK OR CREDIT CARD PAYMENTS MADE AT CUSTOMER SERVICE OFFICE FRONT COUNTER
IN	CREDIT CARD PAYMENTS MADE THROUGH UTILITY'S ONLINE PORTAL
LB	CHECK PAYMENTS MAILED TO AND PROCESSED BY BANK
MA	CHECK PAYMENTS MAILED TO AND PROCESSED BY CUSTOMER SERVICE OFFICE
ND	CHECK PAYMENTS LEFT IN NIGHT DROP DEPOSITORY
TX	CREDIT CARD PAYMENTS MADE OVER THE PHONE



Payment Batch Types

2014-2017 data

Count of Payment Type Description

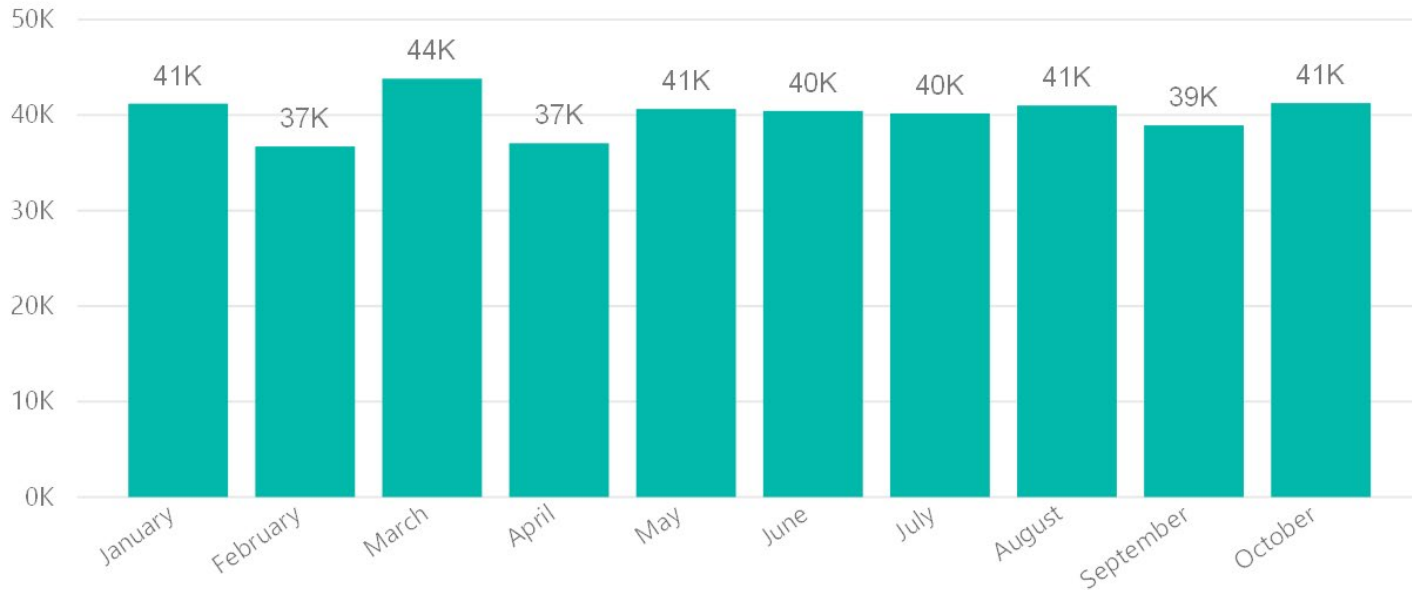


Tender Method

Jan. 2017-Oct. 2017 data

Count of TendMethod by MonthName and Batch Date Year

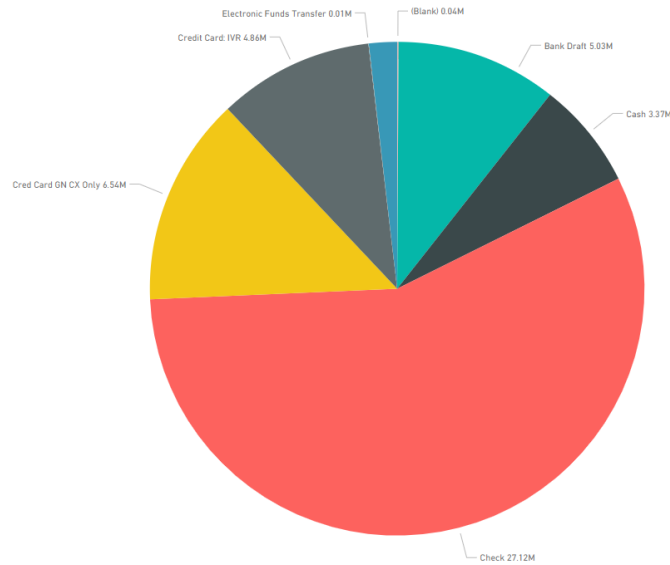
Batch Date Year ● 17



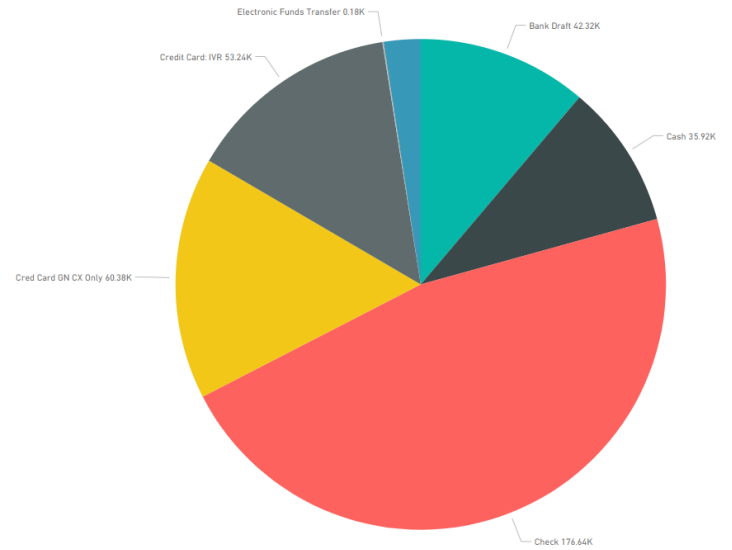
Tender Method

Jan. 2017-Oct. 2017 data

TENDERED AMOUNT BY TENDER METHOD DESCRIPTION



COUNT OF TENDER METHOD DESCRIPTION BY TENDER METHOD DESCRIPTION



Explanation of Maps

Hot/Cold Spot Map

- Cold spot (blue)= Spatial distribution of data is more dispersed, statistically significant clusters of low values
- Hot spot (red)= High spatial clustering, statistically significant clusters of high values
- Not significant (white) = random distribution

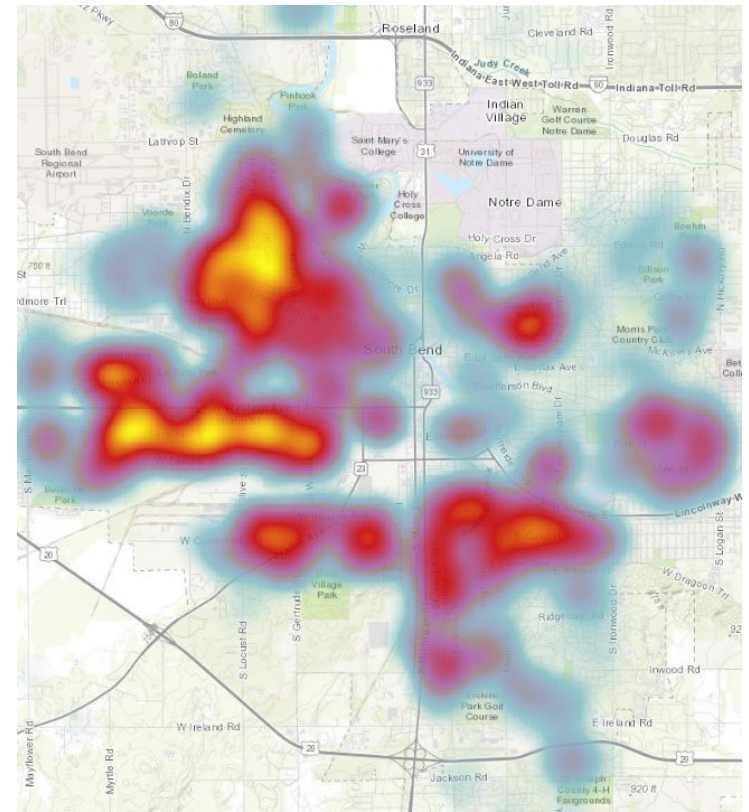
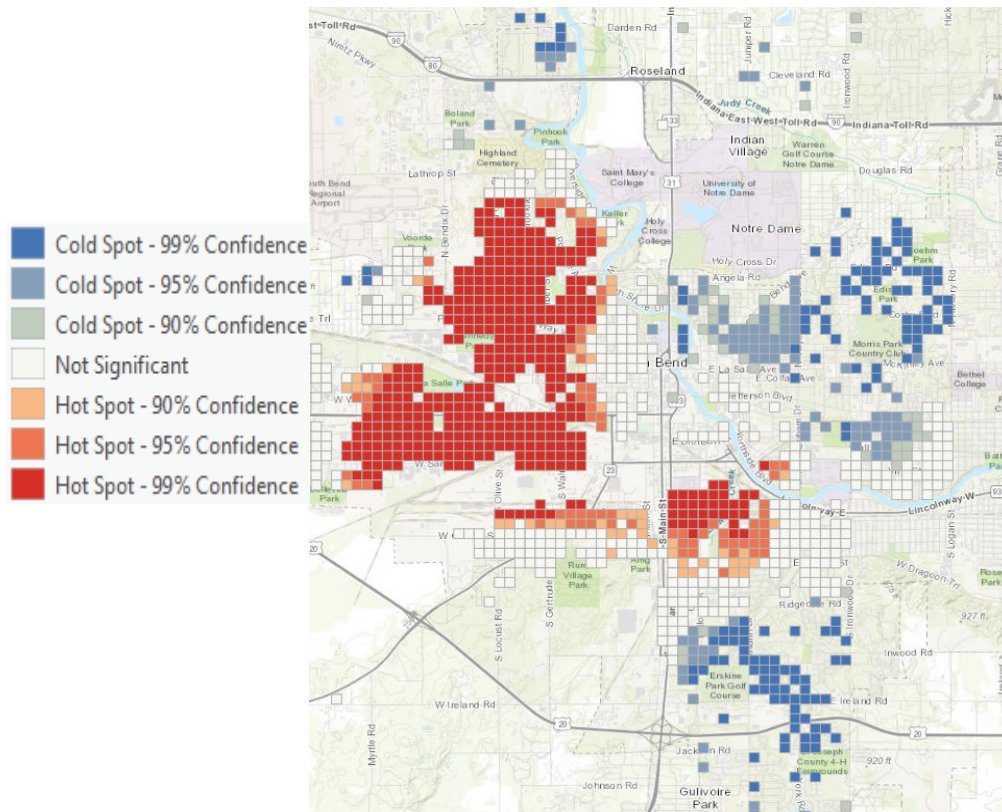
Heat Map

- Visualizes density of points
- Blue and purple colors signify low density of points
- Yellow and red colors signify high density of points
- Does not demonstrate statistical significance



Tender Method/Batch Type Heat Maps

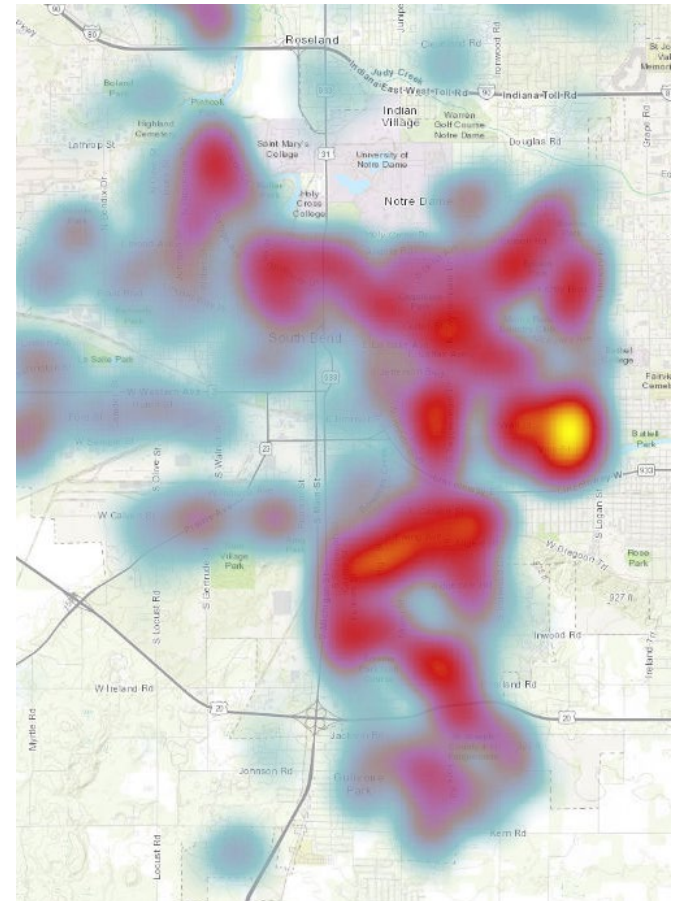
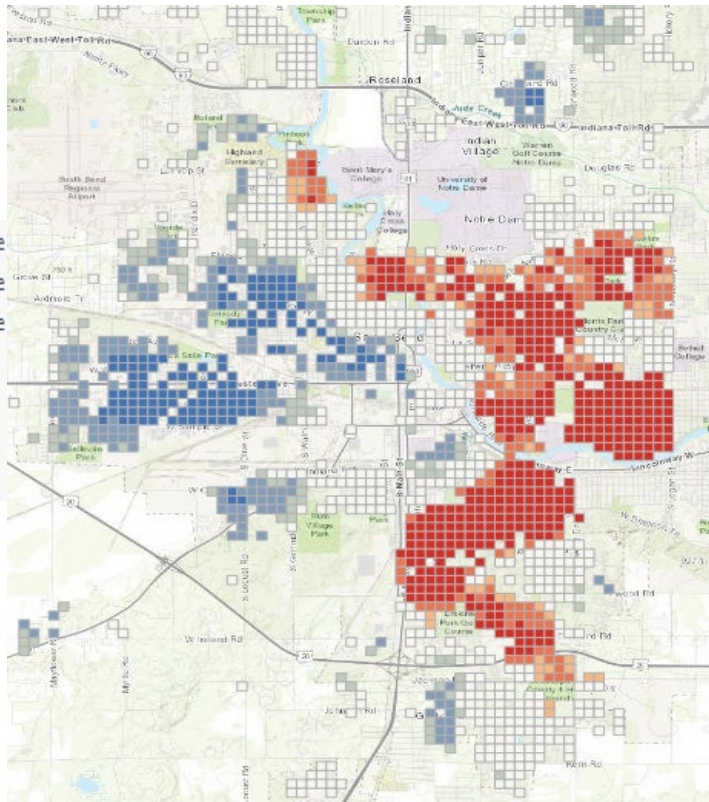
Cash Payment 2016



Tender Method/Batch Type Heat Maps

Credit Card GovNow (Online) Payment 2016

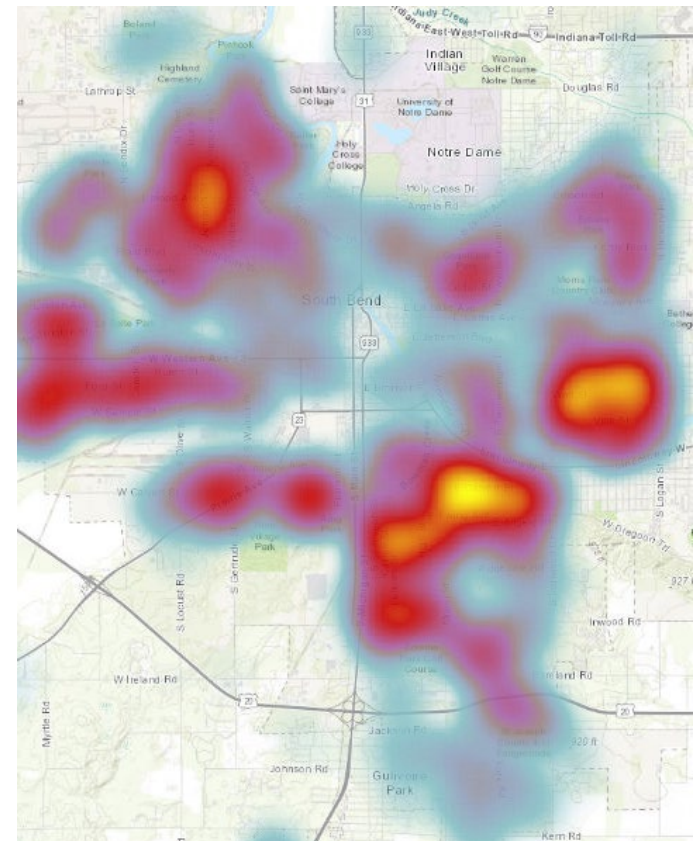
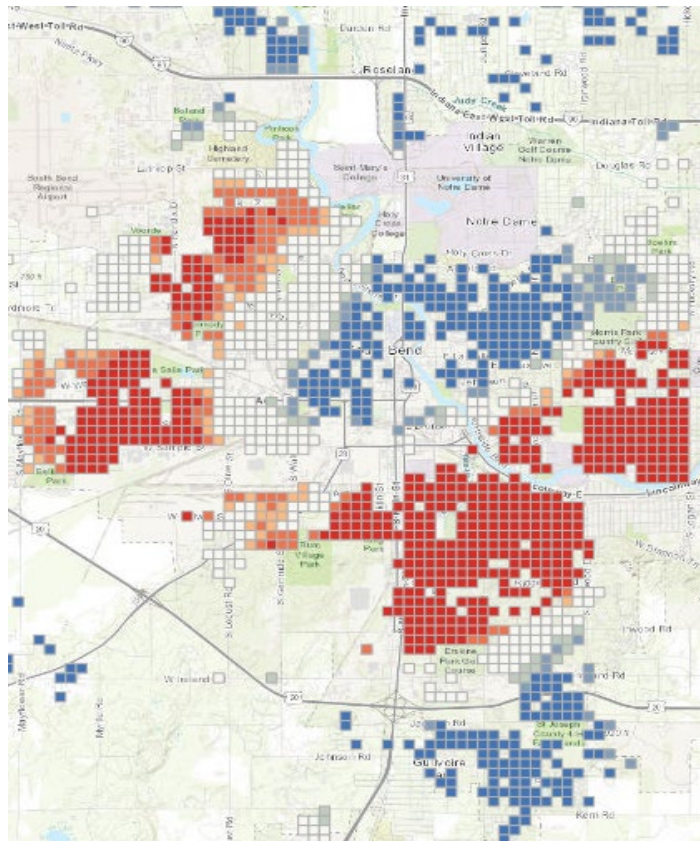
- Cold Spot - 99% Confidence
- Cold Spot - 95% Confidence
- Cold Spot - 90% Confidence
- Not Significant
- Hot Spot - 90% Confidence
- Hot Spot - 95% Confidence
- Hot Spot - 99% Confidence



Tender Method/Batch Type Heat Maps

Credit Card IVR Payment 2016

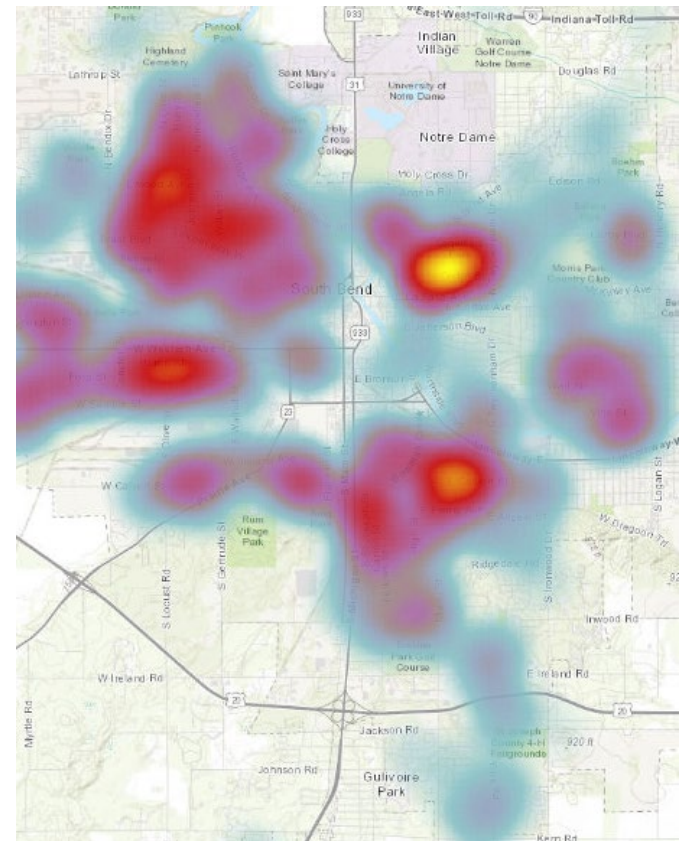
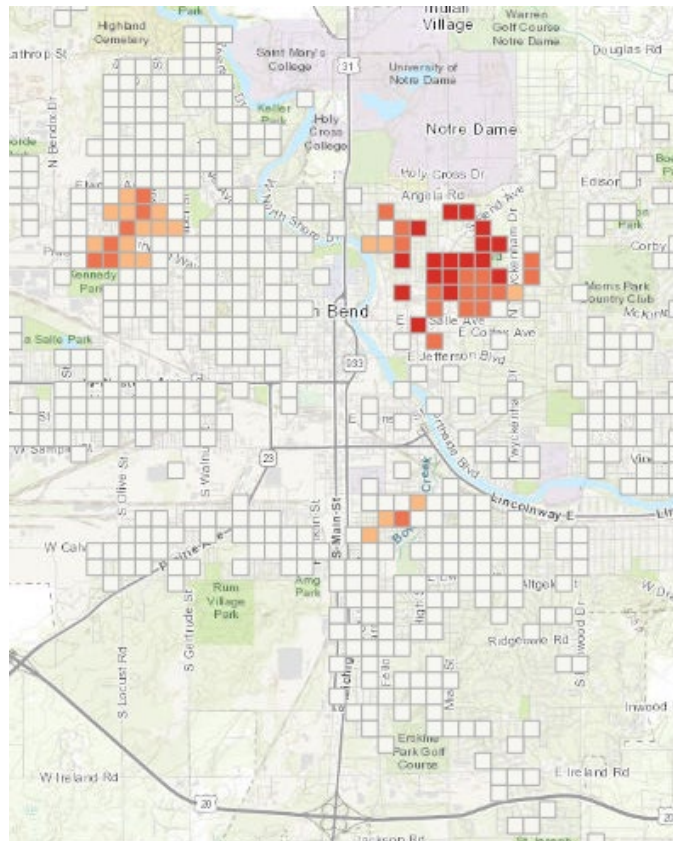
- Cold Spot - 99% Confidence
- Cold Spot - 95% Confidence
- Cold Spot - 90% Confidence
- Not Significant
- Hot Spot - 90% Confidence
- Hot Spot - 95% Confidence
- Hot Spot - 99% Confidence



Tender Method/Batch Type Heat Maps

Credit Card In-Office Payment 2016

- Cold Spot - 99% Confidence
- Cold Spot - 95% Confidence
- Cold Spot - 90% Confidence
- Not Significant
- Hot Spot - 90% Confidence
- Hot Spot - 95% Confidence
- Hot Spot - 99% Confidence



CITY OF SOUTH BEND

311 Calls

- What do people ask for help with?
 - 311 is one of the main ways utility customer contact us
 - Many calls are account-related
- Understand patterns
- Understand the customer experience better



CRM Call Types

Oct. 2016-Sept. 2017 data

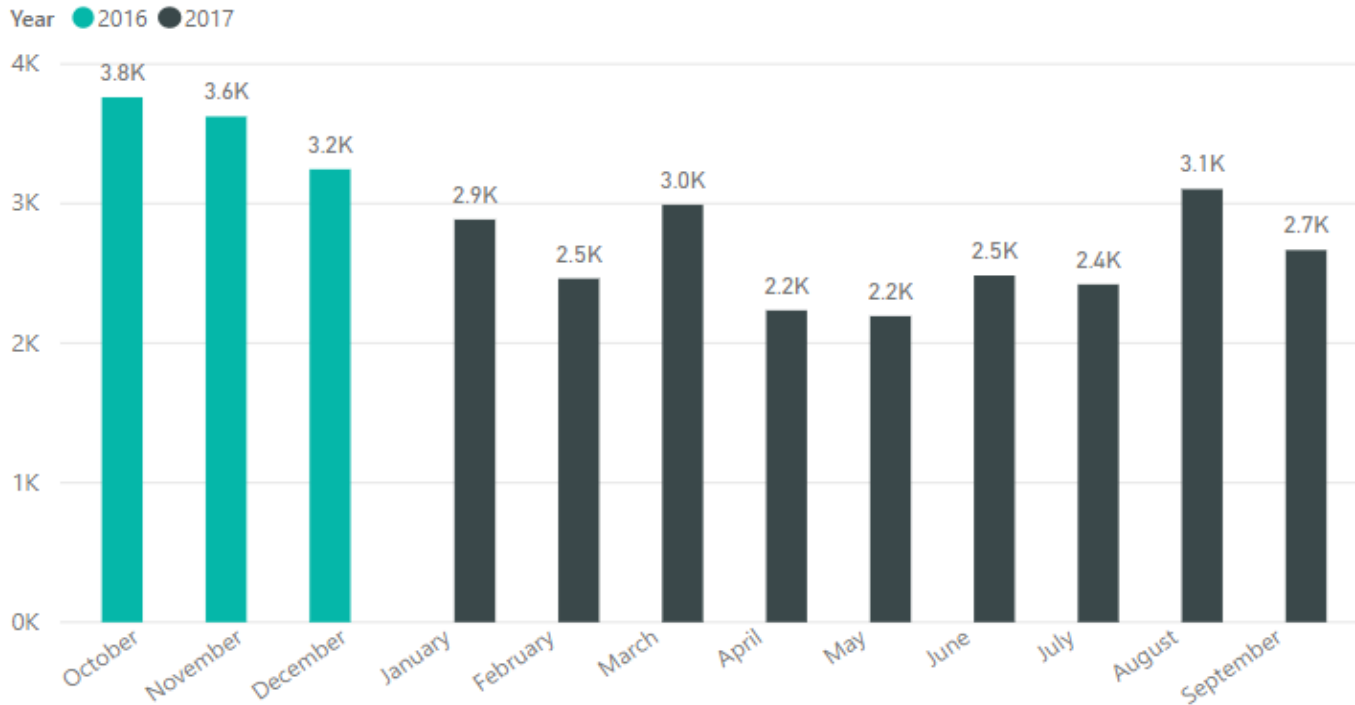
Title (Regarding KB Article) (Knowledge Article)	%GT Count of Title (Regarding KB Article) (Knowledge Article)
Water Miscellaneous	29.75%
Account Shut Off Amount	15.91%
Shut Off for Non Pay	11.93%
Payment Arrangement Inquiry	8.37%
Account Balance or Due Date	7.94%
Other Billing Inquiries	7.48%
IVR Transfer for Payment	6.12%
Water Bill Payment Assistance	2.49%
Account Number	1.46%
WW Customer Inquiry following IVR	1.41%
IVR Troubles	1.26%
Water Leak Outside/Yard/Street	0.77%
WWGC - General Concerns	0.77%
High Bill or Consumption Questions	0.75%
Bank Draft Inquiry	0.67%
Start Domestic Service	0.55%
Contact Info, Hours, and Locations	0.33%
Terminate Domestic Service	0.30%



311 Utility Calls in CRM

CRM is the system used by 311 to record calls

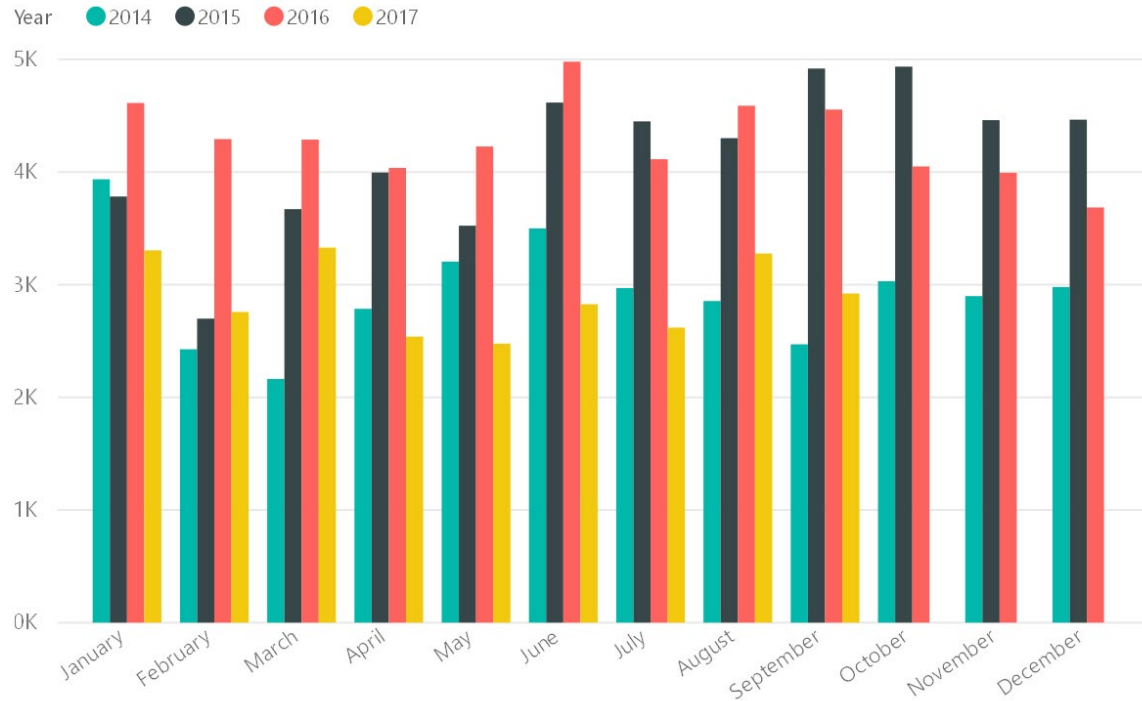
Count of Title (Regarding KB Article) (Knowledge Article) by Month and Year



Naviline Utility Calls

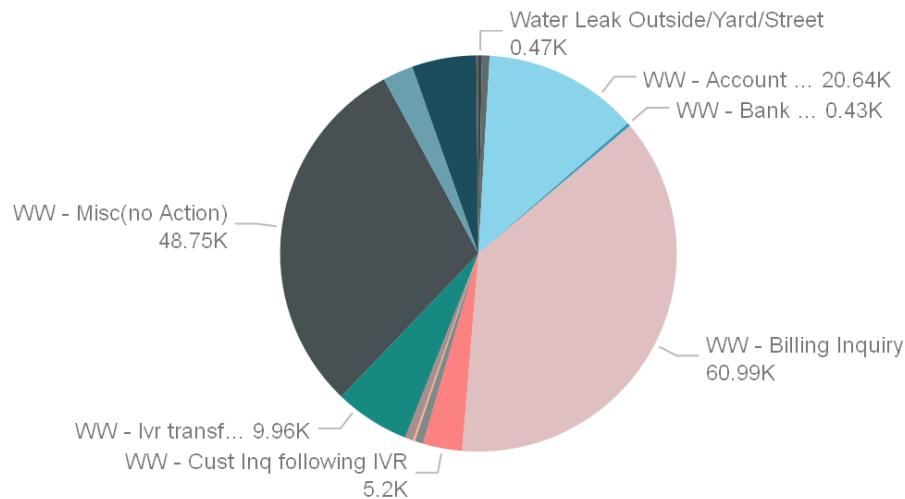
Naviline is the Utility's system of record and was also used by 311 prior to 2016

Count of CALL_TYPE_CODE by Month-Name and Year

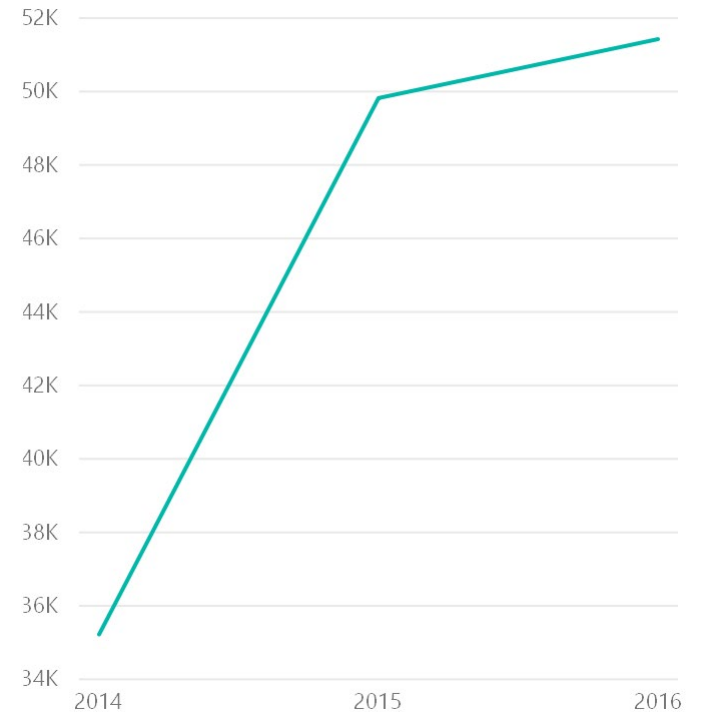


Naviline Utility Calls

Count of Calls to 311



Count of Utility Calls by Year



Unique Callers to 311

2015

$16,830/46,070 = 36.5\%$ of unique customer IDs

2016

$17,020/44,658 = 38.1\%$ of unique customer IDs

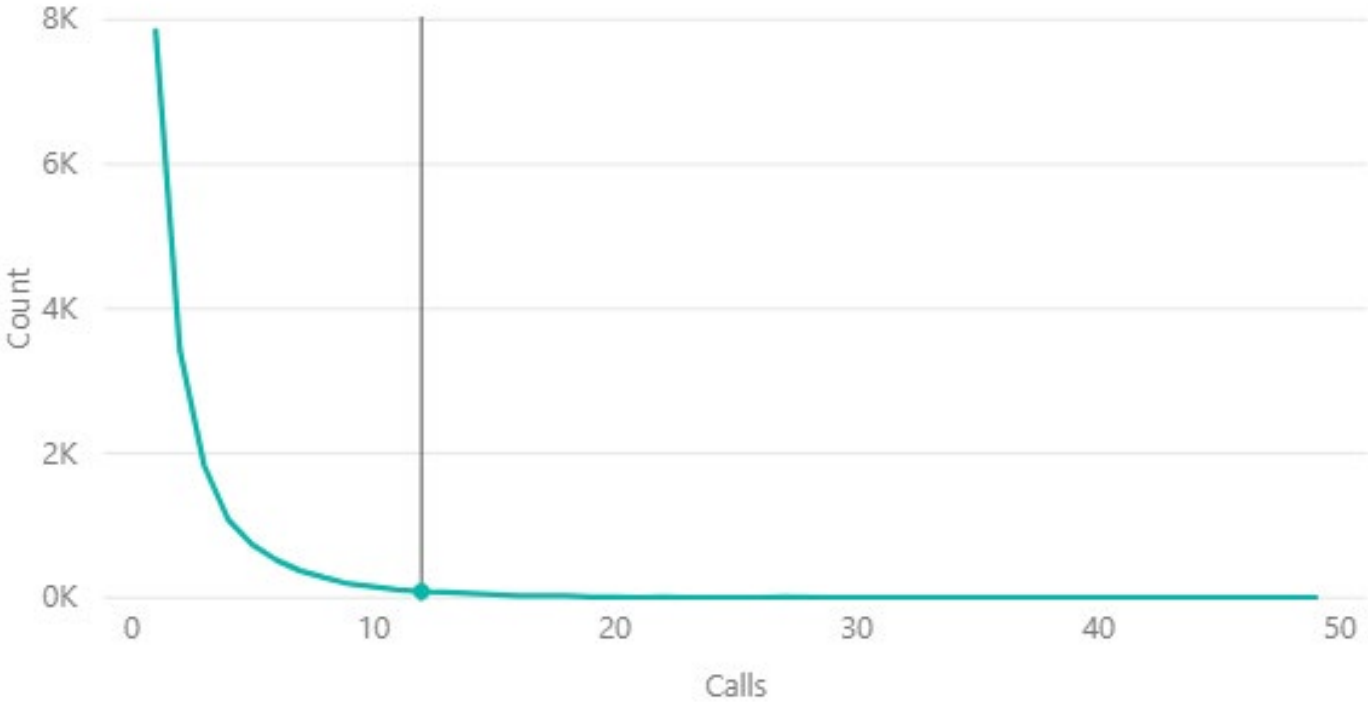
2017

$7,192/42,828 = 16.8\%$ of unique customer IDs



Caller Frequency Distribution

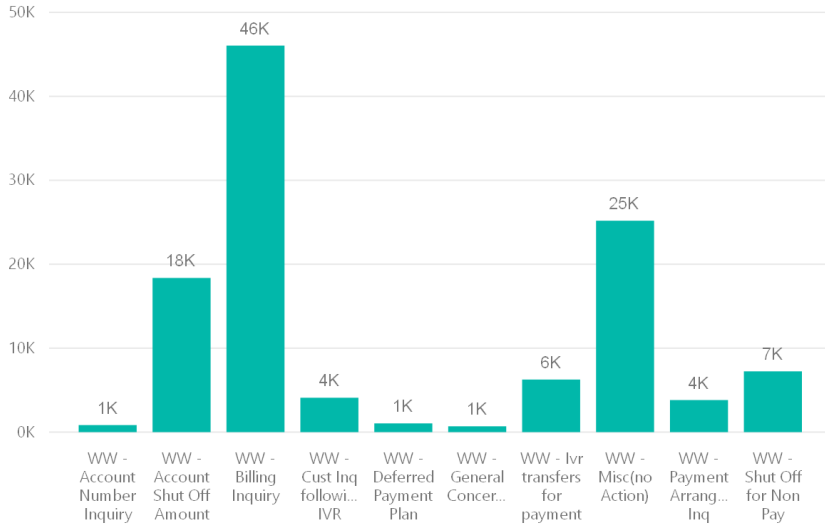
2016 Caller Frequency Distribution



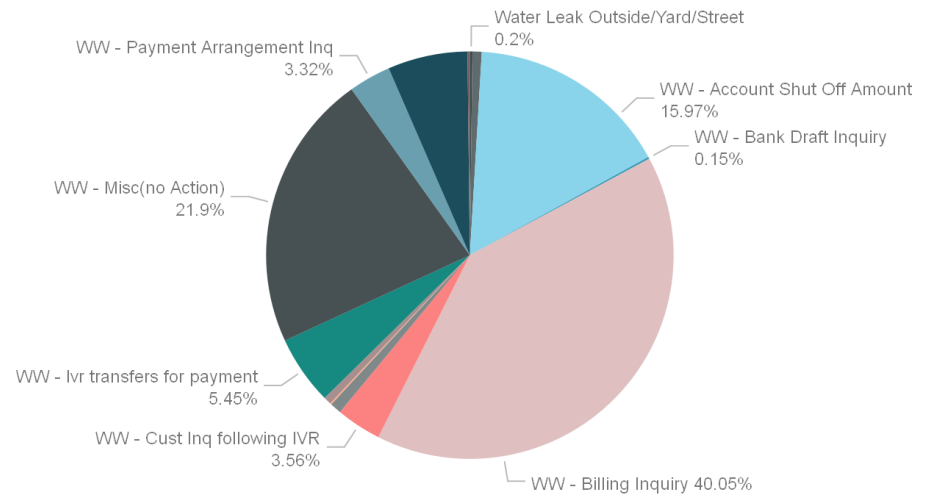
High Volume Callers

- 2014-2017 data

Count of CALL_TYPE by CALL_TYPE

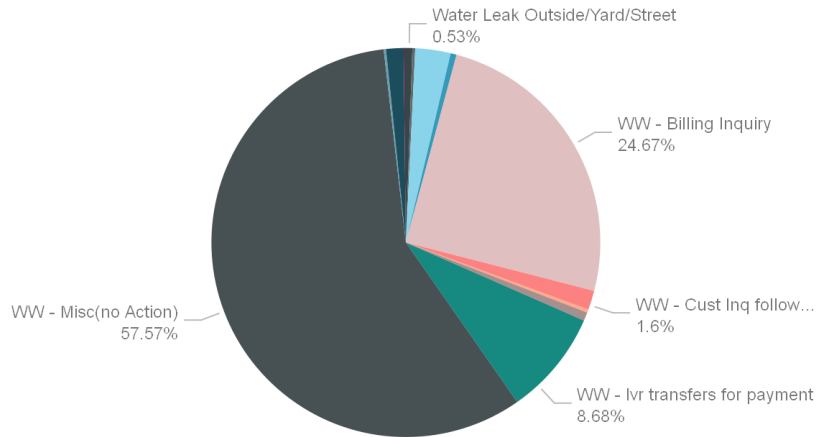


CALL_TYPE Percentage by CALL_TYPE

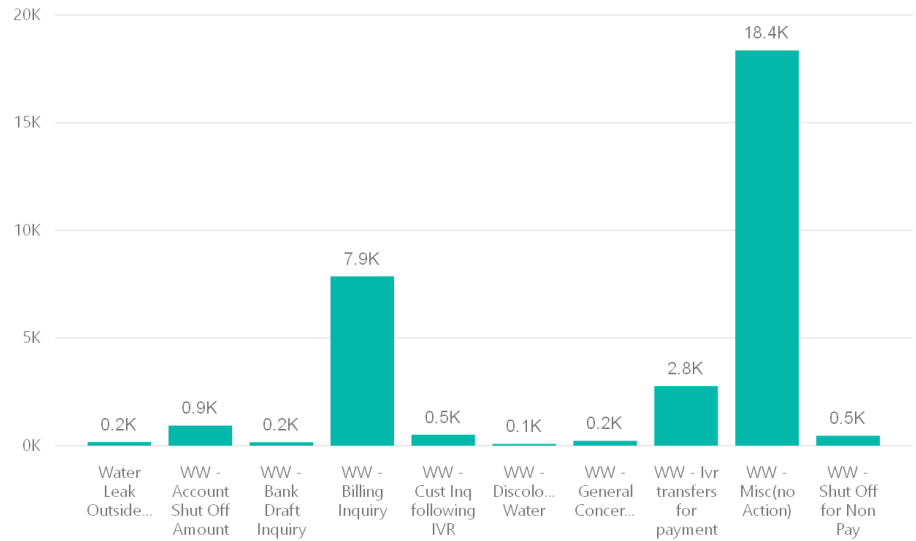


Low Volume Callers

CALL_TYPE Percentage by CALL_TYPE



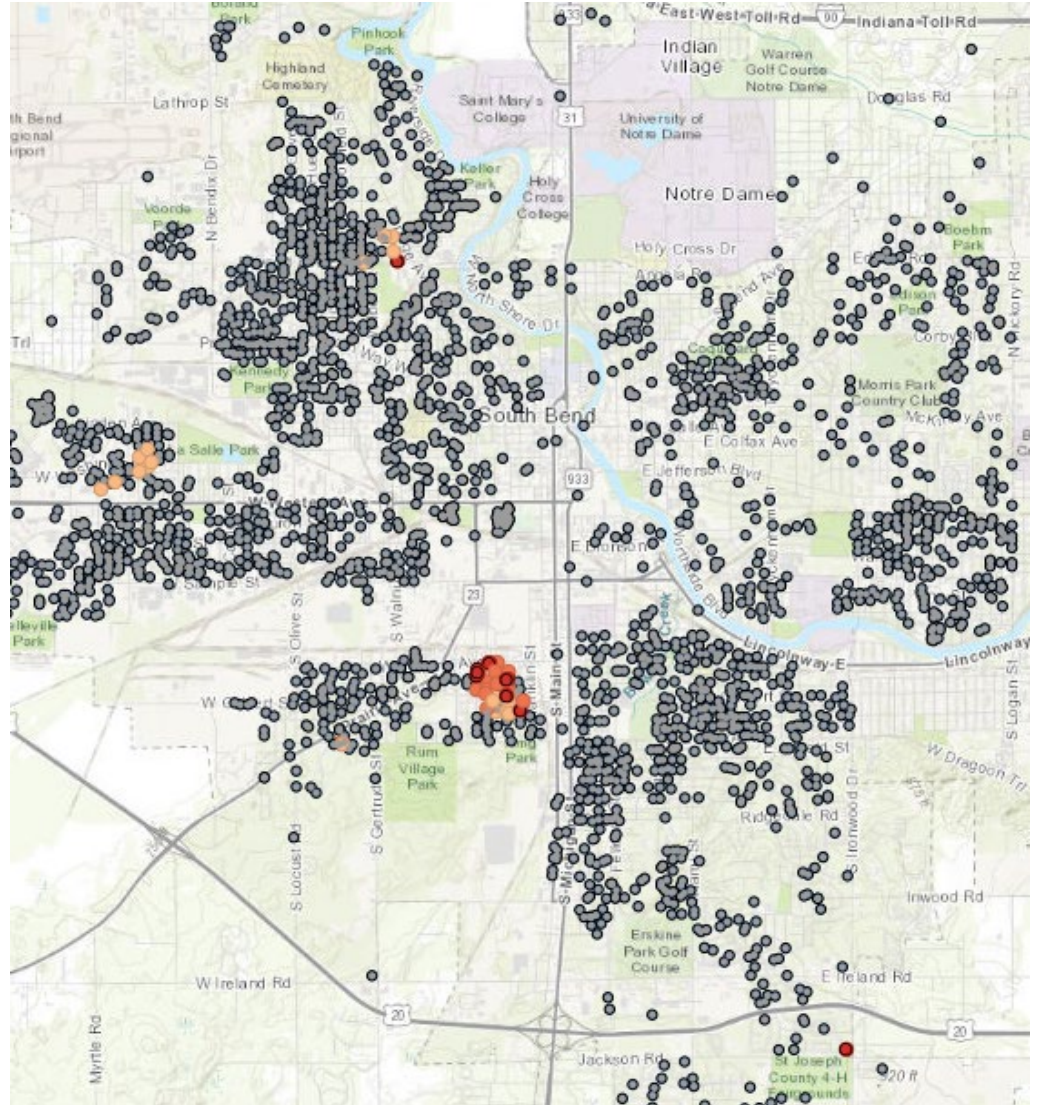
Count of CALL_TYPE by CALL_TYPE



Repeat Callers Hot Spot Map

Hot spot map of locations with greater than 3 calls for Jan.-Sept. 2017

- Cold Spot - 99% Confidence
- Cold Spot - 95% Confidence
- Cold Spot - 90% Confidence
- Not Significant
- Hot Spot - 90% Confidence
- Hot Spot - 95% Confidence
- Hot Spot - 99% Confidence





Prospective Projects

Analyzing Cost and Benefits of Payment Options

- Customer service office
- IVR
- Online
- Lockbox
- Electronic Incoming ACH



Resident Feedback

- 311 survey when resident calls
- Upcoming City-wide survey



Celebrating Our Values

Excellence & Accountability

- Delivering lead free water to customers and being in compliance with the Safe Drinking Water Act
- Utility outreach to empower residents and schools to take steps to minimize exposure to lead

Please read this important notice about service work on your water line



The City of South Bend cares about the health of your household. Based on the age of your home, we believe the water line that connects your home to the City water main may contain lead that can affect the quality of your tap water. Through the City's service line insurance program, repairs to your water line will be performed and these repairs may cause a temporary increase in lead in your tap water. Exposure to lead can pose serious health risks, especially for



pregnant women and children under the age of six. The best way to protect your household is to remove all lead plumbing that comes into contact with drinking water. But there are actions you can take right away to reduce exposure to lead that may be in your tap water when water lines are disturbed. Please see the backside of this flyer for more information on the steps you should take once service work begins.

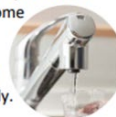
If you have questions or want more information about water quality, please call 574-235-5994 or email waterquality@southbendin.gov.



If you have questions about your water service or the repair work, please call 574-235-9464.

Este aviso contiene información muy importante. Tradúzcalo o hable con alguien que lo entienda bien. Para discutir esta información en español, por favor llame al 311.

After work on your service line begins, follow these simple steps to reduce lead exposure...

- 1 Immediately flush your household plumbing.** Flush all household faucets by opening each cold-water faucet one at a time, working from the lowest level to the highest level in your home. To flush, first remove the aerator. Aerators are the small attachments at the tips of faucets that control the flow of water. Next, turn on the cold water faucet to the highest possible flow for approximately 10 minutes. Be sure to remain near the faucet to watch for overflow. When flushing is complete, turn off the faucet, clean the aerator screen, and replace the aerator. Repeat for all household faucets. Do not open a hot-water faucet until the house is completely flushed. 
- 2 Flush for 30 days.** Each day, flush your plumbing by opening at least one cold-water faucet for approximately 10 minutes. After flushing, remove and clean faucet aerators.
- 3 Filter for 6 months.** Filter your tap water for cooking and drinking using a home water filter. Purchase a sink-mounted or water pitcher equipped with a filter certified for lead and maintain it properly. Find out more at nsf.org. 
- 4 Use Cold Water for Drinking and Cooking.** Always cook and prepare baby formula with cold water, because hot water can have higher levels of lead than cold water.

Today's Date: _____

- Water service work will begin within 72 hours
- Work is in progress and should be complete in approximately ____ days
- Water service work is complete

