Street Light Outage Reporting Tools

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About PNM

As the state's largest electricity provider, PNM serves more than 500,000 New Mexico residential and business customers in Greater Albuquerque, Rio Rancho, Los Lunas and Belen, Santa Fe, Las Vegas, Alamogordo, Ruidoso, Silver City, Deming, Bayard, Lordsburg and Clayton. We also serve the New Mexico tribal communities of the Tesuque, Cochiti, Santo Domingo, San Felipe, Santa Ana, Sandia, Isleta and Laguna Pueblos.

• PNM maintains approximately 70,800 street lights across its service area.
We identified a need to improve our Street Light Outage processes:

- Improve Customer Service Communications
- Improve internal office communications
- Improve field to office communications
- Integrate Outage calls with Work Order management system
- Decrease number of Street Light outages

Charter:

Design and implement a Street Light Outage reporting tool utilizing ArcGIS Online that can be used by customer service representatives, street light administrators, field personnel, and general viewers for recording and reporting on street light outages. This tool will create a common standardized method in which street light outages are reported and will include the geographic location of the outage when available.
Business Need:

Currently PNM Street Light outages are reported by calling the call center. The CSR records the caller information in Banner and THOR files are exported to an FTP site. BCLAMPS then manually imports the THOR file with recorded calls at which point the outages are associated to pole id’s in the field within the BCLAMPS software and work is performed. There is no communication back to the CSR through interface once the call is recorded. This will be an improved process. In part of our Customer Engagement/Focus and Business process improvement initiatives, PNM can improve by deploying a modern methodology and software to record and communicate this information.

Project Objectives:

• Create transparent and easy access to Street Light Outages.
• Reduce Duplicate Records in the system.
• Increase productivity for lighting administrator.
• Expand on reporting capabilities and open reports to others in the company.
• Improve communications around outages.
• Invest in assets, partnerships and capabilities that create value today and opportunities in the future – Need to coordinate better with all street light owners i.e. COA, Santa Fe, Sandoval, Bernalillo, PNM, etc…
Feature Layer to host New Outage Records

Don’t reinvent the wheel – Leverage ESRI utility templates

1.) Feature Layer to host New Outage Records
Feature Name - ReportStreetLightProblem
Fields/Aliases:

- OBJECTID - Unique System Record Number - (hidden)
- REQUESTTYPE - Alias (Problem) - Values = Not On, On 24 hrs., Cycles On/Off, Vandalized, Pole Bent/Broken, Other
- COMMENTS - Alias (Location Description) - Describe the location of the outage here
- PHONE - Phone Number of caller
- EMAIL - Email address of caller
- REQUESTDATE - Alias (Date Submitted)
- GlobalID - Unique System ID
- Last_Name - Last Name of Caller
- First_Name - First Name of Caller
- CloseDate - Date Of Repair or Closure of Ticket
- Status - Alias (Request Status) - Values = New Outage, Assigned, Closed
- FieldNotes - Notes or comments from Field Personnel
- CSRNotes - Notes or comments from CSR’s
- AdminNotes - Notes or comments from Administrator
- PoleID - PoleID
- Creator - Name of individual that created the record I.E. CSR name
- Lineman - Name of individual in the field that is addressing this record
- STL_SYS - System Record
- Access - Alias (Preferred Access Time)
- TwoWeeks - System Date used to clear two week old closed tickets from view
Feature Layer to host New Outage Records

A filter is set on closed tickets which removes any closed tickets older than two weeks from the active view. Users do not want the screen cluttered with old closed tickets so this data is still available and is not removed from the system however it is removed from the active map view.

<table>
<thead>
<tr>
<th>New Outage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem</td>
</tr>
<tr>
<td>Location Description</td>
</tr>
<tr>
<td>Phone</td>
</tr>
<tr>
<td>Email</td>
</tr>
<tr>
<td>Date Submitted</td>
</tr>
<tr>
<td>Last Name</td>
</tr>
<tr>
<td>First Name</td>
</tr>
<tr>
<td>Close Date</td>
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<tr>
<td>Request Status</td>
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<tr>
<td>Field Notes</td>
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<tr>
<td>CSR Notes</td>
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<tr>
<td>Admin Notes</td>
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<tr>
<td>Pole ID</td>
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<tr>
<td>Creator</td>
</tr>
<tr>
<td>Lineman</td>
</tr>
<tr>
<td>STL SYS</td>
</tr>
<tr>
<td>Access Time</td>
</tr>
<tr>
<td>Two weeks</td>
</tr>
</tbody>
</table>

Legend Popup

- CABQDecorativeLights
- New Outage
- Assigned Outage
- Closed Outage
- Lights
- PNM
- CUST
- CITY
Interface Scripts run with FME

1.) Get Pole ID and Set Close Date – This workspace looks for records where the PoleID field is blank, attempting to find the closest distribution pole within 200 feet. If none is found, “No Light Found” is entered into the PoleID record instead. In addition, the workspace looks for records where the Status field is Closed and the CloseDate field is blank. For those records, the current date is applied to the CloseDate field.

2.) Calculate Two Weeks Ago – This workspace calculates the date two weeks prior to the current date, applying it to the TwoWeeks field. The field is used in a query to hide closed streetlight records two weeks or older from displaying on the map. The workspace runs once a day at 2:30 AM.

3.) Backup AGO Streetlight Request Data – The workspace creates a local backup, in ESRI’s file geodatabase (FGDB) format, of the streetlight request data. Creating a backup will allow PNM to restore the data in the unlikely event of data loss or corruption. It runs once a day at 2:00 AM.

4.) THOR REPLACEMENT FILE – This workspace pulls streetlight data from the Streetlight AGO webmap service and converts the data to replicate the two current THOR files. The workspace runs once a day at 3:00 AM.
Workflow

1.) Create new record in the Web AppBuilder Tool
2.) FME auto populates the PoleID - IE ^H17A308^ based on nearest street light pole to recorded outage location. This field can be updated once validated on site.
3.) FME creates a (replacement) THOR file which replaces Banner in the call center and feeds directly to BCLAMPS using the existing protocols.
4.) Light gets worked in BCLAMPS and also status is updated in the new application.
Workflow
Live Demo:

http://pnm.maps.arcgis.com/apps/webappviewer/index.html?id=55de382df3d4af78adf541bf0e820ed
Discussion:

1.) Building Organizational Relationships
2.) Leveraging ESRI Templates and AGO to reduce cost and speed up delivery
3.) Utilizing FME to avoid custom code
4.) Integrating into Enterprise systems like MAXIMO
5.) Now we have a years + worth of data to work with and understand

QUESTIONS?