

Village of Paw Paw Electric System Asset Management Plan

Aug, 2017

This implementation plan is intended to organize and schedule the recommendations detailed in the 2017 Village of Paw Paw Electric Asset Management Plan. The above referenced project created a model of the Village's existing electrical distribution system and utilized this model to study a variety of issues including equipment condition and criticality, fuse coordination, capital improvements, and funding. The following tasks outline the major milestones and completion dates for each recommendation resulting from the system study.

1. Recommendation: Electric System Asset Management Program - An asset management program is distinct from the asset management plan (AMP) on which it is based. A management program is the management plan implemented throughout the system. This program should be an active and changing approach which requires ongoing adjustments and updates to correctly manage the system and its assets.

Champion: Village Manager

Task Number	Tasks	Completion Date	Status
1.1	Village Council accepts and adopts plan to establish program	Nov-17	
1.2	Communicate AMP to staff and customers including desired LOS, condition, CIP and rate designs	Jan-18	
1.3	Establish GIS hardware and software for the utility to manage system information	May-18	
1.4	Adopt a work order and preventative maintenance software application to document workflow	Jun-18	
1.5	Review status of major recommendations quarterly with staff	Quarterly	
1.6	Report on status of PM and work orders monthly to Village Council	Monthly	
1.7	Update Capital Improvement Plan	2020	
1.8	Review and update system asset management program	2020	
1.9	Update System Model	2022	

2. Recommendation: Coordination Plan - This recommendation's goal is to coordinate the fuses throughout the electric system using the protective device coordination philosophy outlined in the 2017 System Coordination Study authored by GRP Engineering. In general, fuses should be replaced in one circuit at a time. Start with the mainline fuses and change or replace fuse cutouts with 600A single phase disconnects. Taps on the mainline may then be done next. Once a tap is started every fuse should be replaced before moving to the next tap.

Champion: Electric Utility Manager

Task Number	Tasks	Completion Date	Status
2.1	Order quantity and type of fuses likely needed to complete each circuit	Mar-18	
2.2	Coordinate with and gain approval from I&M regarding proposed recloser settings	Apr-18	
2.3	Identify order to complete inspections and changes	Apr-18	
2.4	Update settings on reclosers per recommendations	Jun-18	
2.5	Complete three (3) inspections and changes per week (137 total)	Jul-19	
2.6	Complete changes and inspect fuses as part of other work when appropriate	Ongoing	
2.7	Update GIS records for actual/new fuse data	Sep-19	

3. Recommendation: Capital Improvement Plan - This recommendation is an outline of the needed capital projects in order to keep the Village of Paw Paw's electric system in good working order. These projects are based on the operating philosophy and desired levels of service outlined in the 2017 Village of Paw Paw System Study. A typical project timeline is listed below for 2018 projects. the remaining projects are expected to generally follow the same process.

Champion: Village Manager

Task Number	Tasks	Completion Date	Status
3.1	2018 Projects: Review and approve scope, schedule and tentative budget for 2018 projects Write RFP and engage engineering firm for project designs (8 weeks) Finalize project plans and contract documents (22 weeks) Bid Projects (4.5 weeks) Award contract Begin construction Final completion (Aproximatly 22 weeks)	Dec-17 Feb-18 Jul-18 Aug-18 Sep-18 Sep-18 Apr-19	
3.2	2019 Projects: Follow above project outline	Apr-20	
3.3	2020 Projects: Follow above project outline	Apr-21	
3.4	2021 Projects (New Substation and Transmission Line): Follow above project outline but allow for additional time for design and construction	Apr-22	
3.5	2022 Projects: Follow above project outline	Apr-23	

4. Recommendation: Arc-Flash Program - This recommendation's goal is to establish a standard for what Personal Protective Equipment (PPE) is required to protect

Champion: Electric Utility Manager

Task Number	Tasks	Completion Date	Status
4.1	Review arc-flash recommendations from GRP report and NESC Table 410-1	Sep-17	
4.2	Establish procedure for verifying what PPE is required at a particular location	Nov-17	
4.3	Educate Village staff and practice the established procedures	Ongoing	
4.4	Reevaluate arc-flash recommendations after changes to recloser settings	Dec-18	

5. Recommendation: Equipment Maintenance Program - This program's goal is to identify the preventative maintenance required to prolong the life of existing system
 Champion: Electric Utility Manager

Task Number	Tasks	Completion Date	Status
5.1	Review manufacturer recommendations as well as the recommendations in the 2017 Village of Paw Paw System Study	Nov-17	
5.2	Create maintenance processes and checklists for each type equipment in the system (reclosers, switches, capacitor banks,	Jan-18	
5.3	Create schedule and tracking process for maintenance and integrate into Asset Management Program and GIS software	Apr-18	

6. Recommendation: GIS Geodatabase - Integrate GIS information into Village software
 Champion: Electric Utility Manager

Task Number	Tasks	Completion Date	Status
6.1	Wightman to provide GIS geodatabase to Village	Jul-17	
6.2	Wightman to provide overview of GIS data structure and use	Oct-17	
6.3	Ongoing support and hosting of GIS geodatabase	Oct-17	
6.4	Hosting of asset management plan documents and reports on public website	May-18	

7. Recommendation: Rate Design and Financial Projections - Identifying financial challenges and align rates by class to their respective costs of service
 Champion: Village Manager

Task Number	Tasks	Completion Date	Status
7.1	Present financial projections and proposed rate design to council for approval	Aug-17	
7.2	Implement rate changes and communicate reasons for changes to stakeholders and staff	Sep-17	
7.3	Start processes of redesigning future rates for the next three to five years	Sep-21	