

# AGENDA

## COMMITTEE OF THE WHOLE MEETING

February 17, 2015

5:30 P.M. – 1201 S. Washington Ave.  
REO Town Depot

Call to Order

Roll Call

Public Comments on Agenda Items

1. Committee of the Whole Meeting Minutes of 11/11/14.....**TAB 1**
2. Regional Customer Input ..... **(INFO ONLY)**
3. Smart Meter Update..... **(INFO ONLY)**
4. HACO Update..... **(INFO ONLY)**
5. CRT Update..... **TAB 2**
6. Environmental Regulatory Update ..... **TAB 3**
7. Strategic Plan Framework..... **(INFO ONLY)**
8. Closed Session Discussion (Attorney – Client Memo)..... **(DISCUSSION ONLY)**  
[MCL 15.268 (h); MCL 15.243 (g)]

9. Other

Adjourn

## COMMITTEE OF THE WHOLE

November 11, 2014

The Committee of the Whole of the Lansing Board of Water and Light met at the BWL Headquarters – Reo Town Depot located at 1201 S. Washington Ave., Lansing, MI at 5:30 p.m. on Tuesday, November 11, 2014.

Committee of the Whole (COW) Chair Margaret Bossenbery called the meeting to order and asked the Corporate Secretary to call the Roll.

Present: Commissioners Dennis M. Louney, Margaret Bossenbery, Tony Mullen, David Price, Cynthia Ward, Thomas Tracy and Sandra Zerkle.

Absent: Commissioner Anthony McCloud.

The Corporate Secretary called a quorum.

### **Public Comment**

No Public Comment

### **Approval of Minutes**

**Motion** by Commissioner Price, Seconded by Commissioner Ward to approve the Committee of the Whole meeting minutes of September 9, 2014.

**Action:** Motion Carried

### **Regional Customer Input**

Chair Bossenbery invited Regional customers or representatives to address the Board.

Delta Township Supervisor Ken Fletcher, commented the Board of Water & Light and the Board of Commissioners on changes that have been made operationally and functionally since the ice storm. He stated that Delta Township is pleased with the changes and the communication between the BWL and Delta Township has improved dramatically and stated that Calvin Jones has been doing a tremendous job keeping in contact with the Township. Mr. Fletcher stated concerns regarding water rate increases.

After some discussion regarding the percentage of water rate increases General Manager Lark and Mr. Fletcher suggested there should be further discussion with water management.

Mr. Fletcher stated that Delta Township was very pleased with the recent vote regarding additional regional representation on the Board of Commissioners.

## **Resolution for 2015 Regular Board Meeting Dates**

**Motion** by Commissioner Price, Seconded by Commissioner Ward to forward the Resolution for the 2015 Board meeting dates the full Board for consideration.

**Action:** Motion Carried

Chair Bossenbery acknowledge any of the Veterans in the audience and stated the Board's appreciation for their service to the country.

## **Energy Optimization Update**

Mr. Lark stated that there has been discussion of the ability of the Erickson Power Plant to remove Mercury from the air. Beginning December 3<sup>rd</sup> the Board of Water & Light will be operating the mercury removal system at the Erickson Plant and there will be adjustments made to bring the system to its optimum level.

Mr. Lark stated at the request of Commissioner Louney he asked John Kinch, Director of Michigan Energy Options (MEO), to address the Board on what his company does as well as what they do for the BWL.

General Manager Lark introduced Sue Warren, Manager of Energy and Eco Strategies to present an update on Energy Optimization.

Sue Warren stated that the BWL now has five years of energy optimization programs and that we have recently added a couple of pilot programs.

Ms. Warren reviewed the Public Act 295 that went into effect in 2008 and that it requires electric utilities to implement energy saving programs to reduce their sales.

Ms. Warren stated that the Board of Water & Light launched programs in April 2009 and that our management team was already planning energy efficiency programs for our customers. All that Public Act 295 did was to help us define our goals. We do have implementation contractors that help us with these programs and that MEO is one of the contractors for our residential and low income programs.

Ms. Warren stated that the Board of Water & Light's program goals have always exceeded MWh goals and have come in under budget since the second year of inception. Also, we have the Million Kilowatt Hour Club.

Our Technical Energy Audit (TEA) for non-profits, which we have done audits on 20 nonprofits in the Lansing area and this year we have expanded that to restaurants. The LED Holiday Light exchange we have handed out over 73,000 LED holiday light and recycled 10,000. Our latest pilot program is Michigan Saves Financing which we are collaborating with Consumers Energy.

This is where we are offering our residential customers .99% financing for energy projects. MSUFCU is the lender and they can borrow from \$1,000 to \$30,000 dollars up to 10 years. For businesses we are offering a rate of 2.99% and they can borrow from \$2,000 to \$75,000 and Ascentium Capital, LLC is the lender for them. Currently we have 17 residential loans and 2 business loans.

Commissioner Zerkle asked what are the kinds of projects are being allowed.

Ms. Warren stated that anything that would save kilowatt hours or natural gas or energy in general. For example the 17 residential loans that we have seen come through are a combination of high efficiency gas furnace, a magnesium motor on that furnace and central air conditioning system.

Commissioner Zerkle asked if we help make arrangements for the loan.

Ms. Warren stated that arrangements for loans are done through a contractor and we pay down on the part when the projects are complete.

Commissioner Zerkle asked how the programs get introduced to the general public.

Ms. Warren stated that we do a lot of events in the community and that the information is on the Hometown Energy Savers website and Steve Serkaian helps as well. One of the things we are going to do, that we just finalized this week, that for anyone who is going to be recycling their refrigerator or air conditioner they can donate their incentive to the Greater Lansing Food Bank and then they will get the tax receipt.

Commissioner Price asked if there was an income requirement to obtain a loan.

Ms. Warren state that there was no income requirement and that it is available to everyone. That in fact we are looking on the business side to start offering 0% for 24 months starting in January .

John Kinch presented to the board a brief description of what MEO does and how they have been working with the BWL. Mr. Finch stated that MEO is a local non-profit with the mission is to help communities move toward being more energy efficient and sustainable. Mr. Finch stated that MEO is working with the BWL on the Energy Optimization Program for residential and low income customers.

### **Resolutions to Adopt Ethics, Training & Record Retention Policies for Pension Trustees**

Mr. Lark stated that the three resolutions discuss the fiduciary responsibilities as Pension Trustees to the retirement pension of the Defined Benefit Plan, Defined Contribution Plan and the VEBA Plan.

In 2012 Act 347 passed and the law requires the Board to prepare and maintain written policies regarding ethics and professional education and training including travel, which polices contain clearly defined accountable and reporting requirements for the systems investment fiduciary. It also requires that a system should retain its financial records for a minimum of 6 years. What we have done is assembled these three resolutions for the Board and these are what you might call the best practices from our consultants at Merill Lynch and they have also been reviewed by our General Council for consistency with our existing policies.

Mr. Lark respectfully requested that the Board approve the three proposed resolutions listed below and they be forwarded to the full board for approval.

- Retirements System Code of Conduct and Ethics
- Retirement System Education and Travel Policy
- Retirement System Records Retention Policy and Records Retention and Disposal Schedule

**Motion** by Commissioner Price, Seconded by Commissioner Mullen to forward the 3 presented Resolutions to the full Board for consideration.

**Action:** Motion Carried

### **CRT/PSC Update**

Mr. Lark presented the list of remaining recommendations from the CRT, PSC and the BWL list of recommendations. Mr. Lark stated that the ones that have been accomplished since the last reporting period are highlighted in yellow.

Mr. Lark stated that there have been a total of 134 recommendations and practices completed or have become an ongoing part of our policies and procedures. Of the 39 remaining to be undertaken, 29 will be completed by the Emergency Operations Manager whom we have already discussed is Trent Atkins and he will be starting on November 17<sup>th</sup>. The recommendations for Mr. Atkins will focus on collaboration with local units of governments, an Emergency Operations Center to coordinate emergency response plans, to recommend and coordinate emergency training to the BWL staff, to consolidate the BWL emergency and business continuity plans and to collaborate with a variety of local institutions to build community resiliency to major emergencies. We are very proud to have Mr. Atkins with us.

Mr. Lark stated that on December 15<sup>th</sup> the BWL Management will be undergoing 4 hours of Nation Incident Management System Training that was recommended to the Board and senior staff in the CRT and PSC recommendations, Board members are invited to attend. In addition the Emergency Manager will be scheduling a table top storm restoration exercise sometime in the first two weeks of January and the Board members will be invited to attend that.

Mr. Lark stated that as an ongoing responsibility the Emergency Manager will be making training opportunities available to the Board. In addition the BWL staff over the next year will be explaining various aspects of our electric and water operations to the Board to help give a better understanding of the infrastructure and how our production transmission systems work.

Mr. Lark stated that we are continuing to assist with building community resiliency. Last Saturday was the BWLs first trainer program that is being undertaken with the Red Cross. This program offers training to neighborhood leaders who in turn provide information to residents in being prepared for an emergency. We are also meeting with the Lansing Police Department and Neighborhood Watch Captains to inform them on readiness resources available and to invite them to the trainer program.

Mr. Lark stated that we are still receiving authorization from senior and medical alert customers to share their status. To date we have received permission from 114 medical alert customer and almost 4000 seniors. In addition to identify these callers and assist them, new call flow changes have been added to our external call support vendor which we call TFCC this functionality will allow our customers to be identified on more than just their phone numbers. We are working to have them be identified through a combination of their address and last four digits of their Social Security Number. Of course this will help identify the location for which the caller is reporting an outage or making a service request.

Mr. Lark stated that one of major improvements in the BWL electric restoration plan has been the adoption of a set of triggers that initiate storm planning. This includes storms having a rating of 1 to 4 and a type, each rating automatically triggers a different resource deployment. So when a storm is forecasted for the Lansing area staff monitors closely the approaching storm and gives it a rating based on the predicted storm type and intensity, then a planning meeting is conducted to confirm resources are available and stand-by assignments are made.

Mr. Lark stated that in order to assist in the storm restoration we have had a major effort to increase what we call C-spotter staffing. The C-spotters are those who guard the lines when they are down. We have now trained a total of 301 of BWL staff and for our A and B spotter crews we have 32 BWL spotter crews in addition to outside contractors and mutual aide crews and we have the ability together, with our outside support, to field 70 restoration crews.

Mr. Lark stated that together with our best practices crisis communication plan, and our highly enhanced communication options, our customers now can call in on the phone, they can go to the internet, they can go to the smart phone app and very shortly we are going to announce a text ability service as well.

Mr. Lark stated that with the enhanced communication options for the customers, the updated restoration plan, the training exercises, and the outreach programs, the fixes to our OMS and backup systems the BWL has dramatically improved its ability to respond to emergency events.

### **New Customer Update**

Mr. Lark introduced Ray Moore the Manager of Customer Projects to give the Board an update on new customers for the BWL.

Ray Moore stated that in the past year we have completed and signed service agreements for several significant projects.

- Gillespie Projects
  - Midtown and Marketplace Apartments
- Capstone Collegiate Communities in East Lansing
- Eastwood Town Center
  - The Hyatt
  - Fairfield Inn
  - DTN Apartment Complex
- Jackson National Life Expansion
- The Marriot in East Lansing Expansion
- Niowave Research Facility

Mr. Lark stated that all the projects that are not within the City of Lansing were all in competition and that Mr. Moore did a tremendous job getting those projects to sign on with the BWL.

Mr. Moore then mentioned upcoming projects the BWL will be pitching to.

- Caddis Development Two Story Mixed Use building
- MSUFCU Complex Data Center Expansion
- Sparrow Hospital Expansion
- The Outfield Project – Improvements to the Cooley Law School Stadium and Apartments
- General Motors expansion at the Grand River Plant
- General Motors Expansion at the Delta Township Plant
- Magna Facility
- Whole Foods
- Red Cedar Renaissance Project

### **Framework for Creating a Strategic Plan**

Mr. Lark then introduced George Stojic, Executive Director of, to go over the framework for creating a new Strategic Plan and Integrated Resource Plan (IRP).

Mr. Stojic stated that since the last time we updated our plans we have met a number of objections identified. With some major changes in the industry it is both timely and appropriate to take a look at those plans and begin to develop new ones.

Mr. Stojic stated that the strategic plan starts with the mission or purpose of why the utility exists. The Strategic Plan then adopts strategies to meet that goal for an uncertain future. It also identifies the strengths and weaknesses of an organization to determine what kind of resources are going to be needed in the future to meet the goals. Mr. Stojic stated that the plan is broad in nature and really deals with the value the BWL will bring to the community in the future.

Mr. Stojic stated that the IRP is a more focused planning process that has to do with resource planning. For example, how will the BWL replace the generating capacity and energy supplied by our older coal units that are going to have to be retired in the future? It looks at both the risks and trade off involved in the resources.

Mr. Stojic stated that the planning process will start after the 1<sup>st</sup> of the year and at the January Committee of the Whole meeting they will be presenting a more detailed plan on how we want to go forward.

**Resolution Directing the General Manager to Provide Recommendations Regarding Board Policies for Governance.**

**After a lengthy discussion regarding the Board's input on policy recommendations it was determined that any recommendations or developments be presented to the Executive Committee and that committee would bring any concepts to the Committee of the Whole for consideration and this action does not require a Resolution.**

**Motion** by Commissioner Zerkle, Seconded by Commissioner Price to Direct General Manager Lark to provide recommendations regarding board policies for governance.

**Action:** Motion Carried

**Excused Absence**

**Motion** by Commissioner Price, seconded by Commissionr Mullen to excuse Commissioner Anthony McCloud from tonight's meeting.

**Action:** Motion Carried

**Other**



Commissioner Bossenbery congratulated Commissioner Thomas the 2014 Uplift Our Youth Child Advocate Award.

Commissioner Louney acknowledged the following:

- Sue Warren and Ray Moore for today's presentations
- Resident of E. Laisng for acknowledging the good work on the tree trimming in their areas
- The addition of Trent Atkins as the Board of Water & Light's Emergency Manager
- New article titled "Too Curious Cat" in the Lansing State Journal, about BWL workers rescuing a cat
- Sue Devon for receiving the Philanthropist of the Year award.

**Adjourn**

Motion by Commissioner Price, Seconded by Commissioner Mullen to adjourn the meeting at 6:46 p.m.

Respectfully Submitted  
Margaret Bossenbery  
Chair of the Committee of the Whole

Item #	Lead	CRT Remaining Recommendation	BWL Response
5		Recognize its role to assist Regional, City and Township Emergency Management in disaster response by implementing all of the following:	
c	Trent Atkins	Assure that all operations employees receive basic NIMS training, at a minimum the two introductory courses: 1. FEMA IS-700, NIMS An Introduction; 2. IS-100.PW-B, Introduction to the Incident Command System (ICS 100) for Public Works;  that all first-line supervisors take those courses, plus ICS-200, Basic ICS;  that all senior management officials take those 3 courses, plus ICS-400, Advanced ICS.	The BWL currently has the following ICS trained employees: Introduction to Incident Command: 48 ICS 200 ICS for Single Resources and Initial Action Incidents: 29 ICS 300 Intermediate ICS for Expanding Incidents: 14 ICS 400 Advanced ICS: 13 IS G402 ICS for Executives/Senior Officials: 35 IS 700 National Incident Management System (NIMS) An Introduction: 26 IS: 800 National Response Framework, An Introduction:1 2 Training is continuing for the remaining employees and must be completed no later than the following dates: 1. All BWL operations employees will complete the FEMA IS-700 IS-100 PW-B and the ICS 100 courses by March 31, 2015 2. All Managers and First-line Supervisors will also take ICS 200 course by November 30, 2014. 3. All BWL Directors will take courses in (1) and (2) and ICS-400 by December 31, 2014.
6	Trent Atkins	Consolidate its multiple emergency response plans within the City and Regional plan, (see below) and then test that plan by scheduling a full staff coordinated "table top" exercise at a minimum of every 12 months.	Consolidation of BWL Emergency Plans within 120 days of Emergency Operations Manager hire. Coordination BWL plan with local or regional plans within 180 days of Emergency Operations Manager and on an ongoing basis as updates are adopted. Coordination of BWL's participation in City or regional exercises ongoing.
9	Trent Atkins	Include Business Continuity Planning in its development of a comprehensive Emergency Operations Plan.	Coordinate development of a business continuity plan as part of the BWL's EOP within 270 days of Emergency Operations Manager hire.
10	Trent Atkins	Develop a comprehensive EOP, in coordination with the City EM officials, that is an Annex to the City EOP, consistent with MCL 30.410 (1) (a)	Consolidate BWL's emergency plans into a single BWL EOP within 120 days of Emergency Operations Manager hire. Coordinating the BWL plan with local or regional plans within 180 days of Emergency Operations Manager hire and on an ongoing basis as updates are adopted.
15	Trent Atkins	Require all communications staff and senior leadership to undergo certified NIMS communications training in order to understand best communications practices during crisis situations, with associated training events and tabletop exercises to ensure coordination of communications functions with regional governments.	Provide BWL communication, GRCSO staff, and leadership with NIMS training. Annual update training for communications staff on ongoing basis. BWL's communications staff and leadership team will participate in local and regional emergency exercises on an ongoing basis.
23	Trent Atkins	Sponsor or encourage a full scale training exercise, involving emergency management staff of all units of government and BWL in the tri-county region, to take place annually.	Plan and coordinate BWL participation in full scale regional training exercises.
33	Trent Atkins	Maintain and retain all information developed during restoration operations, including all forms of communications. Retaining this information will assist post restoration analysis, enhance institutional retention and uses of valid lessons learned, and improve the technical competencies of field engineers and technicians, as well as assuring operations or restoration manager's decision making processes are more clearly understood by future key personnel.	Develop and implement records retention requirements in emergency plans within 120 days of Emergency Operations Manager hire.

Item #	Lead	CRT Remaining Recommendation	BWL Response
34		Information to be retained should include:	
a	Trent Atkins	A full log of the operations/restoration center input (phone calls, emails, radio messages, etc.), including identification of individuals sending and receiving, during the event.	Please see response to CRT #33.
b	Trent Atkins	A full log of output, as in #1 above.	Please see response to CRT #33.
c	Trent Atkins	Set of maps, optimally GIS, depicting the stages of the event, including at least, the initial outage area and affected components and customer zones, and stages of restoration sufficient to recreate the series of restoration actions leading to full restoration.	Please see response to CRT #33.
d	Trent Atkins	Full log of personnel engaged in restoration activities.	Please see response to CRT #33.
e	Trent Atkins	Full log of components and equipment used. This, optimally, would differentiate between components initially/originally identified for the restoration and those identified during the event based on discovery of event damage.	Please see response to CRT #33.
f	Trent Atkins	Log of field engineer actions; optimally with enough specificity to distinguish technical actions vs. administrative actions.	Please see response to CRT #33.
35	Trent Atkins	Retain this documentation in a form that enables efficient use, recall, and reuse, and in a format that is compatible with performing the same series of retention actions for future events; i.e., not a 'one time' storage, but with future use and comparison in mind.	Agreed. This has been and continues to be a part of BWL's procedures.
60b	George Stojic	Providing a forum for consideration of new risk reducing technologies and design in the built environment;	Conduct risk reduction technology forum by end of third quarter of FY15.
81	George Stojic	Hold an Annual Meeting of Stakeholders, with explicit invitations and opportunities for public debate on innovation and strategy.	Conduct an annual stakeholder meeting on innovation and strategy by end of third quarter FY15.

Item #	Lead	MPSC Remaining Recommendation	BWL Response
MPSC 4	Dave Bolan	Develop metrics that allow the BWL to analyze the performance of all reliability investments.	MPSC #5
MPSC 5	Dave Bolan	Develop an annual reliability report that can be publicly available.	Estimated completion date end of FY15
MPSC 6	Dave Bolan	Develop an annual reliability spending report that focuses on current and future reliability project spending and analyzes customer benefits and the overall effectiveness of reliability projects.	MPSC #5
MPSC 17	Dave Bolan	Voluntarily report to MPSC Staff when outages affect more than 10 percent of its customers, when a significant event affects the operation of its system, or when there is loss of power to a critical facility or critical customer.	MPSC #5
MPSC 18	Dave Bolan	Keep the BWL Board and Lansing City Council continually informed on mutual assistance agreements should any contracts expire or have cause to be amended.	MPSC #5
MPSC 24	Trent Atkins	Develop a procedure to collect system outage data during and post storm events for future reliability analysis.	Please see response to CRT # 33

## CRT Recommendations Completed or Ongoing

Item #	Lead	CRT Recommendation	Status
1	Trent Atkins	Working jointly with local emergency planners and municipal governments, update the inventory of critical facilities, as part of a Regional Emergency Operations Plan.	Completed and Ongoing
2	Trent Atkins	Assist all units of government representing its customer base with identifying Special Needs Facilities for power restoration efforts, including assisted care facilities, elder care facilities, water and sewer plants, food warehouses, Capital City airport and key industry.	Completed
3	George Stojic	Undertake a program of technical assistance to critical facilities in its service area to determine the feasibility and net benefits of implementing a micro-grid at each such facility, using combined heat and power or renewable generation and storage.	Completed and Ongoing
4	George Stojic	Explore various options to participate financially in implementing micro grids at critical facilities where they are feasible and beneficial, including power purchase agreements, joint ventures, and Board ownership.	Completed and Ongoing
5a	Trent Atkins	During any event where the City EOC is activated, including during major widespread outages, a trained and experienced BWL Liaison Officer must be deployed to the City EOC.	Completed
5b	Trent Atkins	Participate in all EM exercises sponsored by any units of government representing its customer base	Completed
5d	Trent Atkins	2) Participate in After-Action Reviews with all units of government representing its customer base, not just post-exercise, but after every major outage, disaster and emergency	Completed
5e	Trent Atkins	Develop and maintain good working relationships with the first-responder community for all units of government representing its customer base	Completed and Ongoing
7	Trent Atkins	BWL Staff and upper management should participate in the exercises and receive training on these plans and regular refresher training. BWL staff with emergency responsibilities should be required to have training on these plans and their role and responsibilities and the role and responsibilities of others that will be involved with any emergency response.	Completed and Ongoing
8	Trent Atkins	Together with the communities in the greater Lansing area (not just the BWL service area), undertake a regional planning effort to be better prepared and coordinated and assure that emergency communication protocols are agreed to and followed. The mayors and township supervisors of our communities must lead and encourage this effort and provide the necessary resources. This planning effort should be done in coordination with the State Police EMHSD District 1 Coordinator.	Completed and Ongoing
11	Trent Atkins	Working jointly with the City of Lansing and other regional governments, develop a regional EOP which includes a process for siting, supporting and sustaining a regional EOC.	Completed and Ongoing
12	Trent Atkins	Develop, in coordination with the governments representing its customer base, an Energy Annex to a Regional Emergency Operations Plan.	Completed

## CRT Recommendations Completed or Ongoing

Item #	Lead	CRT Recommendation	Status
13	Bob Perialas	Collaborate with Lansing Emergency Management, Lansing Police Department's Neighborhood Watch, Lansing Neighborhood Council, East Lansing neighborhood associations and similar groups in all townships in the development of a program supporting block level emergency response plans. This effort would build upon the well-developed social infrastructure of Lansing's 186 organized neighborhood groups and prepare them to play an important role in planning for, responding to, and recovering from extreme weather events.	Completed and Ongoing
14	Stephen Serekaian	Create a robust social media presence for its customers – this work is already underway internally, but must become a priority for its communications operations, as consumers are primarily using digital communication tools to learn about outages and other service issues.	Completed
16	Stephen Serkaian	Further refine the March 2014 plan. The plan must contain greater detail on how to address the need for timely and accurate information; customer information must be consistently explained in a way that effectively meets customer expectations; and the plan must assure the provision of information sufficient to allow the public to make informed decisions on how they may best respond. There is a considerable body of studies on this subject that should be drawn upon in the development of such a plan. Once this plan is completed the BWL management and employees must be trained on, periodically exercise, and follow the plan.	Completed
17	Trent Atkins	The crisis communications plan must be an annex to the Emergency Operations Plan and should be guided by a qualified communications professional certified through the NIMS protocols.	Completed
18	City Government	Consider amendment of the City Charter to clarify the powers of the Mayor and to provide the Mayor executive authority over the BWL during disasters or emergencies	Completed
19	Trent Atkins	Emergency Operations Manager, working with all other member communities, including Ingham, Clinton and Eaton Counties, create a regional emergency operations plan (EOP).	Completed
20	Trent Atkins	Work with BWL Operations and Senior Leadership to integrate their BESOC and Crisis Command Center, using the NIMS framework, with the City EOC.	Completed
22	Trent Atkins	Recommend appropriate emergency management training for BWL leadership, including Commissioners, on how best to build in resilience and ensure full response capability to storms that are increasing in severity and frequency.	Completed and Ongoing
25	Dave Bolan	Given that insufficient spotters for damage assessment was a serious problem in the December outage, identify the types of spotters necessary and currently lacking.	Completed
26	Dave Bolan	Include the acquisition of qualified primary distribution system spotters in its mutual aid agreements and extraordinary assistance contracts. Since repair crews are fundamentally more expensive than spotters, we believe that repair crews should be the restoration bottleneck rather than spotters.	Completed

## CRT Recommendations Completed or Ongoing

Item #	Lead	CRT Recommendation	Status
27	Dave Bolan	Identify specific personnel for spotter duty and training for deployment in emergencies. This function should be mandatory, not voluntary on the part of the employee, as it appears to be now. Training should also be mandatory and held, minimally, once per year.	Completed
28	Dave Bolan	That the two person line crew requirement and the requirement that a BWL employee accompany the outside contracted line crew are reasonable to ensure safety of BWL employees.	Completed
29	Nick Burwell	Integrate the OMS into an Emergency Operations Plan (EOP) which is tested to its maximum capacity68., both to assure system functionality and to assure integration with restoration operations, on a semi- annual (6 months) basis. Staff noted that because they had not experienced an outage of more than 20,000 customers, they assumed that was the maximum ever likely. As noted above, recent reports indicate that storm frequency and intensity are on the rise. Since the outage, the now apparently functional OMS has been tested for loss of power to 35,000 households—still fewer than lost power in the December outage. Therefore, the system must be tested to its maximum capability	Completed
30	Nick Burwell	Remedy the lack of redundancy in their OMS System by (1) devising an alternative system and (2) including the potential loss of OMS as a contingency in EOP. The OMS failed during the December outage and had no backup system.	Completed
31	Nick Burwell and Dave Bolan	The IT Department shall report OMS implementation and maintenance and redundant system development to the Board of Commissioners at least monthly. Further, the Commissioners should carefully review the history of the selection, installation, and performance of the GE OMS system to determine if further action is required.	Completed and Ongoing
32	Bruce Cook	A contingency retainer agreement with a third-party answering service must be executed. This is consistent with the BWL changing its corporate philosophy to one that plans for, recognizes, and addresses all potential contingencies.	Completed
34g	Trent Atkins	Log of physical access entries, either IAW or similar to NERC CIP standards for Physical Access to BES sites.	Completed
34h	Trent Atkins	Log of all connections to the local control systems during the restoration, including full hardware/software descriptions and each connecting devices security certificate.	Completed
34i	Trent Atkins	Log of interactions with partner utilities, Independent/Regional Systems Operators (ISO/RSO), private, state and federal regulatory organizations, state utility commissions, state governing personnel, federal entity personnel supporting restoration activities, as well as other personnel or organization interactions relevant to the restoration or an understanding of their role or influence on the restoration activities.	Completed
36	Dave Bolan	Contract with, or otherwise fund, the City of Lansing Operations and Maintenance Division to do all tree trimming for BWL in those areas (tree lawns and adjacent to city parks and golf courses) where the City is already engaged in vegetation management.	Completed

## CRT Recommendations Completed or Ongoing

Item #	Lead	CRT Recommendation	Status
37	Dave Bolan	Evaluate its 5-year schedule to determine whether vegetation management needs to be even more aggressive. Based on the Board's representation that it has been close to a five-year cycle for vegetation management, however, it is doubtful that shortening that cycle will provide much benefit. Rather, based on both public comments and comments from the BWL, focus should be placed on a strong and effective quality assurance program. Adjustments to the vegetation management standards must be made, especially with respect to the removal of dead trees or trees in poor condition.	Completed
38	Dave Bolan	Perform an 100% audit of all lines annually to ensure both that the BWL can stay on track in its vegetation cycle and that sections that may require immediate attention are not neglected.	Completed
39	Dave Bolan	Explore collaboration with other entities doing tree-trimming (City of East Lansing, Townships, Consumers Energy, DTE) in order to increase efficiencies.	Completed
40	Dave Bolan	Budget for distribution system maintenance based on regular replacement of each and every component at its engineering-based life-length and continue to recalculate its grid maintenance budget on that basis in all future budgets.	Completed and ongoing
41	Dave Bolan	Implement a procedure that actual replacement of most grid assets will be condition-based, or because distinctly better technology is available and warrants replacement of equipment that is not yet at end of life.	Completed and ongoing
42	Calvin Jones	Establish a process of long-term scheduling and annual work coordination in conjunction with each of its host communities.	Completed and ongoing
43	Dave Bolan	Undertake a value engineering analysis of the potential deployment of automatic circuit interrupters in its distribution grid and implement them accordingly.	Completed and ongoing
44	Dave Bolan	Adopt the practice of installing breakaway service drops whenever it installs or repairs a service drop or performs major maintenance on the distribution line to which a service drop is connected.	Completed and ongoing
45	Dave Bolan	Perform a benefit cost analysis to determine whether a proactive effort to install breakaway service drops is warranted.	Completed and ongoing
46	Dave Bolan	Undertake a value engineering analysis of its entire primary distribution system, with the intent to calculate the optimum extent and topology of the primary distribution grid, and the optimum design of each segment of its primary distribution grid. This analysis should consider all aspects of distribution grid performance, but particularly should include strong consideration of its effects on outage extent and time to service restoration in major storm events.	Completed and ongoing
47	Dave Bolan	When performing value engineering of the primary distribution grid and in implementing any hardening of the primary distribution grid, the BWL should examine opportunities to reduce costs (or improve results) through collaboration with host communities.	Completed and ongoing
48	Dave Bolan	Examine options to add additional sensors to the primary distribution system so as to localize faults much more quickly. Sensors are not particularly expensive and use of increased numbers of them may well be warranted.	Completed and ongoing



## CRT Recommendations Completed or Ongoing

Item #	Lead	CRT Recommendation	Status
49		Harden the Secondary Distribution System	
49a	Dave Bolan	Breaks and other faults in the secondary distribution system affect fewer customers per fault and are easier to repair than are faults in the primary distribution system. Thus, while we encourage the Board to undertake some hardening of the secondary distribution system, the CRT believes the Board should focus its grid maintenance and upgrade investments on the primary distribution system for the next few years.	Completed and ongoing
49b	Dave Bolan	Vegetation management is a key to reducing storm-induced outages in the secondary distribution system as it currently exists. Accepting BWL's representation that it will "strictly adhere" to a five-year cycle for vegetation management, the CRT believes that shortening that cycle further will not provide much further benefit. Rather, based on both public and BWL staff comments we believe that the Board should focus on a strong and effective quality assurance program for its vegetation management and consider making some adjustments in its vegetation management standards, especially with respect to the removal of dead trees or trees in poor condition. See the vegetation management section for further analysis of these issues.	Completed
49c	Dave Bolan	Once the value engineering analysis of the primary distribution system is completed, the BWL could begin using internal staff to undertake a substation-by-substation analysis of the secondary distribution lines fed from each substation and optimize the configuration of that portion of the secondary distribution grid. The order in which this analysis is done should begin with those portions of the secondary distribution grid suffering the greatest outage experience in recent storms and proceed toward those with apparently less risk. As these lines run through neighborhoods, and options to improve the secondary distribution system will require collective decisions about vegetation management, line relocation, undergrounding, and the like, that the BWL is not necessarily institutionally empowered to make on its own, we recommend that this planning be done jointly with the local government and engage the affected neighborhood.	Completed and ongoing
50	Dave Bolan	Direct its staff to work with local units of government to determine optimal strategies to harden the secondary distribution system, proceeding substation-by-substation in the order of susceptibility to storm damage as determined by experience in recent storms.	Completed and ongoing
51	Dave Bolan	Proceed as quickly as is consistent with good practice to deploy smart meters and integrate them to its outage management system to accelerate the identification and repair of the secondary distribution system after storm damage.	Completed and ongoing
52	Dave Bolan	In the interim, ensure that it has an adequate core of spotters for restoration of the secondary distribution system following a storm.	Completed
53	Dave Bolan	Deploy smart meters first to those residences located on lateral circuits.	Completed and ongoing

## CRT Recommendations Completed or Ongoing

Item #	Lead	CRT Recommendation	Status
54	Gennie Eva	Consider plans to own the system, including the mast, through to their meter box, as part of its benefit cost analysis to determine whether a proactive effort to install breakaway service drops is warranted.	Completed
55	Dave Bolan	Consider plans to install breakaway service drops first to those customers on lateral circuits or to special needs customers.	Completed and Ongoing
56	Bruce Cook	Develop through voluntary customer participation, and maintain, a list of all elderly customers and those with medical needs. Distribute consent forms to share medical alert customers and seniors residences with emergency response personnel for the purpose of wellness checks by August 1, 2014. Completed. Implement protocols for sharing information with local governments by end of second quarter FY15	Completed
57	Trent Atkins	Communicate daily with all EOCs to coordinate with emergency response personnel in all municipalities to ensure the safety of vulnerable citizens during an outage or other emergency event. Communication should be for the duration of a storm event. <u>PSC # 11, data base of vulnerable populations and service response facilities</u>	Completed
58	Trent Atkins	As part of the integrated Regional EOP, provide the regional EOC (or all EOCs or EMs for all governments within its customer service area, if no regional EOC is created) with up-to-date information of the location of its at-risk customers.	Completed
59	Trent Atkins	Revise items 44, 47, 48, 54 of the outage report. There must be a coordinated effort between BWL and local government emergency personnel and community groups to assure clear communication and coordination of efforts to protect at-risk customers when an emergency arises.	Completed
60	Trent Atkins	Create a Community Resilience Planning Coalition which would take a broad approach to building community level resilience to extreme events by:	Completed and ongoing
60a	Trent Atkins	Participating in the drafting of a regional emergency response plan, that would include community organizations' input on issues including a coordinated crisis communications plan and procedures to ensure a coordinated, efficient response to hazards across jurisdictions;	Completed and ongoing
60 c	Calvin Jones	Promoting strategies for engaging and organizing the community at multiple levels (household, block, neighborhood, shelters and non-profits, businesses, jurisdiction) to identify vulnerabilities, mitigate risk and better prepare for response and recovery from extreme events, and	Completed
60d	Trent Atkins	Providing a platform for regional sharing of lessons learned; connecting people, ideas, and resources; and engaging policymakers and community members in an ongoing conversation about resilience.	Completed and ongoing
61	George Stojic	Include regional resiliency, including energy self-reliance, as a strategic goal	Completed and ongoing

## CRT Recommendations Completed or Ongoing

Item #	Lead	CRT Recommendation	Status
62	George Stojic	Explore the potential for “islanding” to protect the local electrical grid, with BWL taking the lead in creating an innovative, strategic solution	Completed and ongoing
72	Dave Bolan	Setting a vegetation management schedule and budget & complying with it (pgs. 23-26 of MPSC staff report)	Completed
73	Bruce Cook	Customer call answer time – rule 460.724 (pg. 29 of MSPC staff report)	Completed and Ongoing
74	Calvin Jones	Community outreach activities (no rule – but see comparison pg. 32 of MPSC staff report)	Completed and ongoing
75	Bruce Cook	Blockage time of customer ability to report outage – (reference to rule at pgs. 32-33 of MPSC staff report)	Completed and ongoing
76	Gennie Eva	Service quality credits (rule 461.744-746, pg. 34 of MSPC staff report)	Completed
77	Dave Bolan	Time limits for relief of non-utility personnel guarding downed power lines	Completed
78	Dave Bolan	(Rule 460.723, pg. 37 of MPSC staff report) sets time limits for non-utility employees (i.e. police /fire personnel) guarding a downed wire. & adequate number of persons certified to perform wire down duty during high volume event (pg. 38 of MPSC staff report).	Completed
79	J. Peter Lark	Establish a Customer Ombudsman, Chief Customer Officer or expand the duties of the Director of Governmental Affairs and Customer Relations, directly reportable to the General Manager.	Completed
80	J. Peter Lark	Restructure its organizational chart so that the positions of Strategic Planning, Information Technology, and Operations direct reporting to the General Manager.	Completed
82	Susan Devon	Implement a utility-wide quality assurance plan. The testimony on vegetation management (that they looked at bills submitted by contractor monthly, and only now are adding a competitor and checking performance after trimming) suggests the lack of a comprehensive quality assurance plan.	Completed
83	George Stojic	Consider revision of the 54 Recommendations, using the SMART analysis to include specific metrics, including the tasks to be performed, the directorate or section within BWL charged with performance and the time need for accomplishment.	Completed
84	J. Peter Lark	Require staff reports monthly to the Board of Commissioners on specific actions that have been taken on all of the 54 recommendations made in the Ice Storm Outage Report and that the BWL post those reports on its website for the next 18-24 months.	Completed and ongoing

## MPSC Recommendations Completed or Ongoing

Item #	Lead	MPSC Recommendation	Status
1	Bruce Cook	Require specific customer service metrics as part of the BWL's Quality of Service best practices. The MPSC also recommends the BWL institute a billing credit.	Completed
2	Dave Bolan	Analyze and determine if the BWL's current budget and expenditures on vegetation management and maintenance of the distribution and transmission system are adequate to continue to provide safe and reliable service.	Completed
3	Dave Bolan	Analyze the reliability measurements of System Average Interruption Duration Index (SAIDI), System Average Interruption Frequency Index (SAIFI) and Customer Average Interruption Duration Index (CAIDI) on a circuit basis and expand the reporting of these indices to include each of the individual municipalities served by the BWL. Completed 8/26/14	Completed
8	Stephen Serkaian	Develop a Communication Plan, as part of an overall emergency operations plan, aligning with industry best practices for customer service obligations for major service outage responses and during restoration periods.	Completed
9	Calvin Jones	Provide consumer education material through multiple media so that customers may be prepared to handle outages including free outreach to educate the public on electric line safety, preparation for storm events, and who to contact in the event of an outage. Please see response to CRT #60. The BWL routinely educates its customers regarding lines down and other safety issues and storm outage information through its Connections newsletter, its website, GRCSO outreach activities, through press releases, and social media.	Completed
10	Bruce Cook	Maintain single phone number for customer inquiries	Completed
11	Bruce Cook	Identify the account holders who are seniors and maintain a database of facilities servicing vulnerable populations.	Completed
12	Trent Atkins	Provide training to the Board and identify resources and opportunities for Board members to gain experience and knowledge that will allow for greater control of current and emerging issues.	Completed and ongoing
13	Trent Atkins	Expand emergency training and exercise programs to include the Board so they are educated on the BWL's electric system infrastructure and emergency operations plan.	Completed and ongoing
14	Dave Bolan	Train and educate BWL staff so that experienced and knowledgeable staff can fill back-up roles in the event of an outage or energy emergency. The BWL currently has staff with secondary roles to support operations staff and customer service staff. However, the BWL will review its secondary staff needs, identify staff to fill additional roles that may be needed, and schedule training for secondary role staff by November 30, 2014.	Completed and ongoing
15	Calvin Jones	Consider use of the Local Energy Assistance Program (LEAP) process to serve as the conduit for establishing private-public partnerships focused on improving community resiliency to a prolonged energy disruption. The CRT was explicit in recommending that the BWL develop an emergency operations plan in the context of a regional plan. This would satisfy that suggestion.	Completed

## MPSC Recommendations Completed or Ongoing

Item #	Lead	MPSC Recommendation	Status
16	Dave Bolan	Work in conjunction with the Michigan Municipal Electric Association (MMEA) to share the lessons learned and best practices with other municipal utilities within the state in an effort to improve the resiliency and outage response of all municipal utilities in Michigan.	Completed
19	Executive Management	Perform its own action items 10 through 15 from the BWL December 2013 Ice Storm Outage Report regarding spotters and provide frequent update reports to the BWL Board and Lansing City Council.	Completed
20	Dave Bolan	Provide spotter training at least two times per year at a very minimum, once in the spring and once in the fall for respective storm events.	Completed
21	Dave Bolan	Survey several Michigan utilities to determine the industry best practice regarding the BWL "bird dogs" assisting mutual assistance crews.	Completed
22	Nick Burwell	Integrate the BWL's Outage Management System (OMS) into an Emergency Operation Plan and test the system to its maximum capacity as recommended by the CRT.	Completed
23	Nick Burwell	Create a contingency process that will provide guidance to BWL staff in the event the OMS is not operational during an outage or catastrophic event.	Completed
25	Dave Bolan	Continue a rigorous tree trimming program and develop tree trimming practices that include overhead branch removal and hazardous tree removal.	Completed
26	Dave Bolan	Develop inspection procedures to ensure that companies who lease space on poles are clearing around communication lines.	Completed
27	Dave Bolan	Develop a comprehensive and transparent inspection and preventive maintenance plan that includes all equipment critical for maintaining system reliability.	Completed and ongoing
28	Dave Bolan	Study all grid modernization and two-way communication technologies to develop a capital investment plan that maximizes reliability and customer benefit.	Completed and ongoing
29	Dave Bolan	Continue to invest in assets that increase the overall strength and resiliency of the electric system when replacing assets that are at the end of their useful life.	Completed and ongoing
30	Dave Bolan	Study its poorest performing distribution power lines to determine the costs and benefits of undergrounding such lines as compared to other options aimed at increasing reliability.	Completed and ongoing

## BWL 54 Items Completed or Ongoing

Item #	BWL 54 Items	Status
1	The BWL will include its distribution plan in its annual table top tests designed to stress its emergency response and will use the results to continually improve its emergency plans	Completed
2	The BWL will consider implementing a set of triggers into its distribution plan.	Completed
3	The BWL will consolidate its Transmission and its Distribution emergency response plans into one document.	Completed
4	The BWL will investigate the benefit of collaborating with other Michigan utilities to track and estimate the impact of inclement weather.	Completed
5	Based on the BWL's experience with the impact of the ice storm, the BWL will make use of additional secondary role employees and these roles will be discussed in subsequent sections.	Completed
6	Most utilities have not found placing overhead lines underground to be cost effective. Instead reviewing maintenance practices and construction standards seems to be a more reasonable method for improving the resiliency of the BWL's distribution system. However, for those customers who want and are willing to pay for undergrounding existing services, the BWL will provide the service	Completed
7	The BWL will strictly adhere to a 5 year trimming cycle and is in the process of modifying its tree trimming standards and procedures to remove all branches located above distribution lines and better protect its lines during a major storm.	Completed
8	The BWL will begin to use multiple tree trimming contractors and assign work to contractors based on past performance. The contractor with the best record of performance will get a larger portion of the work. Recently, the BWL temporarily increased the number of tree trimming crews under contract to eighteen. Completed: Purchasing is working to finalize the agreements with Asplundh and Alpine for tree timing services.	Completed
9	The BWL will publish the contact information for its supervisor responsible for trimming scheduling so customers can contact the Manager directly with questions or complaints regarding tree trimming procedures and workmanship.	Completed
10	The BWL is in the process of carefully reviewing spotter duty during the ice storm and determining how many additional trained spotters would be needed to efficiently secure down lines and provide timely damage assessment during an event with the destructive impact of the ice storm. Based on this analysis, the BWL will survey its staff for additional personnel who would be suitable for spotter duty and train personnel for both spotter and damage assessment duty.	Completed and ongoing
11	The BWL will also utilize retired line workers to perform damage assessments and serve as spotters.	Completed
12	The BWL will consider contracting with electric service firms for damage assessment services to supplement its own staff.	Completed

## BWL 54 Items Completed or Ongoing

Item #	BWL 54 Items	Status
13	The BWL is developing common reporting forms and methods to be used by all spotters and damage assessors and will stress the importance of adhering to these during the annual training sessions.	Completed
14	The BWL will evaluate the use of damage predictive tools to determine if these tools could help in assessing possible damage earlier in a storm's approach.	Completed
15	The BWL will remind customers that lines marked with red and white tape are power lines and the tape indicates that the BWL is aware that the line is down. The BWL will publish this information on its website and Customer Connections newsletter.	Completed
16	The BWL has expanded the number of utilities and non-utility electric service contractors with which it has mutual aid agreements or service contracts. The list is shown below. Existing Agreements• Michigan Municipal Electric Association (35 Municipal Utilities)• Consumers Energy New Agreements• American Public Power Association• Asplundh• Kent Power• Hydaker-Wheatlake• FEMA Mutual Aid (Upon a Declaration of a State of Emergency) Pending Agreements• DTE Energy (Under Negotiations)These agreements both increase the number of potential crew sources and provide geographical diversity as well. For example the APPA agreement would enable the BWL to bring crews in from a number of different states. In the event of a declaration of emergency, the FEMA agreement would allow the BWL to bring in crews from nearly anywhere in the United States.	Completed
17	The BWL is in the process of hiring 3 additional line workers and an additional dispatcher to supplement its workforce and to help manage crews during the restoration process.	Completed
18	With the addition of 3 line workers, an additional dispatcher, more trained spotters, and the new mutual aid agreements the BWL has tripled the number of line crews that are available for immediate deployment and can be used safely and efficiently during a major outage event.	Completed
19	The BWL does update its critical and public safety lists periodically to ensure that it is up to date and complete. The BWL will share its overall restoration plans with local public officials so that they can be kept up to date on the BWL's restoration plans. If another catastrophic storm does occur, local officials will be better able to respond to citizen inquiries regarding the restoration progress. T&D plans updated 6/30/14 Critical facilities list updated 8/26/14. Consolidation of BWL emergency plans within 120 days of Emergency Director hire. Coordination of BWL consolidated plan with local officials expected to be completed within 180 days of Emergency Director hire.	Completed
20	The BWL will review it's storm inventory based on the recent ice storm.	Completed
21	The BWL will investigate connecting its line truck laptops to its OMS system as a tool to assist crews with storm responses.	Completed

## BWL 54 Items Completed or Ongoing

Item #	BWL 54 Items	Status
22	The BWL has resolved the matters related to the OMS functionality. The conductor cuts are now operational and the OMS performs to design standards.	Completed
23	To avoid this situation with other outage tools that may be employed in the future, the BWL will conduct annual stress tests of all its restoration tools including, but not limited to the OMS, outage call in number, Customer Service Center, and Communications plans.	Completed and ongoing
24	The BWL is moving forward with a project to implement smart grid and smart meter technology, which will allow it to identify individual customer outages. It will also develop a policy that will allow customers to “opt out” of smart meter use. c. customer communications:	Completed and ongoing
25	The BWL is hiring additional call center staff.	Completed
26	The BWL has implemented a process to assure call forward to the 877 number occurs during large outages. This will allow CSR and supporting staff to concentrate on line down, voice mail and other communications mediums.	Completed
27	The BWL will trigger the IVR in the 877 system to direct non-matched callers to voicemail during major outage events.	Completed
28	The BWL has reconfigured the Call Center to send messages in the voice mailbox to CSR's automatically.	Completed
29	The BWL is aggressively advertised the 877 number for outages including all available communications mediums, like magnets, social media, BWL Website, and other customer communications.	Completed
30	During a major outage, the BWL Call Center staff will focus their efforts on responding to email, texts, Facebook, Twitter, and voicemails left on the outage reporting system with the goal of responding to storm related inquiries in a timely fashion. The BWL has expanded the number of employees in secondary storm roles to assist with these customer service functions.	Completed
31	The BWL will ensure that the distribution plan weather forecasting and storm preparation function include employees who are directly or indirectly, through secondary roles, responsible for customer service. This, along with other changes, will assure that the BWL can respond to customer inquiries promptly.	Completed and ongoing
32	The BWL is working with the 877 vendor to provide additional methods for customers to be identified or matched when calling in to report an outage. This will include using the last digits of an account number or social security number.	Completed
33	The interface between the 877 number and the OMS has been fixed and alarms will be added on each system to alert staff of any problems in the future.	Completed
34	The BWL has added text outage reporting to the 877 system to offer customers another method for reporting outages.	Completed



## BWL 54 Items Completed or Ongoing

Item #	BWL 54 Items	Status
35	The BWL is working on a method to provide quicker updating of customer data from BWL system to 877 system. This is intended to provide better matches of customers to service addresses.	Completed
36	The BWL is working to improve its ability to automatically call back customers and provide them with updated outage information.	Completed
37	The BWL will continue its enhancements to its phone system. The enhancements will use newer technology to increase Internet bandwidth, increase available phone lines, and make the system fully redundant across the BWL private city-wide network. This upgrade will allow the system to dynamically increase the number of available lines to the call center during a large outage, using many of them to forward calls to the 877 vendor site which is designed for large volumes.	Completed
38	The BWL has increased the TFCC voice mailbox size to 8,000 messages and is in the process of contracting with another vendor to assist in responding to voice mailbox messages during a large outage.	Completed
39	The BWL is investigating a separate site created just for outage information (including outage maps). This will help ensure that the BWL's outage website will be available to customers in the event that a catastrophic outage disables the BWL's main website.	Completed
40	BWL has tested and established a redundant external email system	Completed
41	The BWL has developed a temporary web-based outage map for its website. The BWL is also working with a local vendor for a permanent outage map linked directly to the BWL's OMS system. Phase I of the project covering functionality has been completed and development is underway. Phase I is Scheduled for completion soon.	Completed
42	In Phase II of the project, the BWL plans to continue enhancements to all of its Information Systems that interact with customers. The next phase of the outage map product for BWL will include further interaction with our customers, allowing them to identify themselves to learn if our system shows them specifically out as well as possibly reporting an outage through the map system to our OMS system. Other enhancements and features are being evaluated.	Completed
43	In addition to using Twitter and Facebook, the BWL is investigating the use of Nixle to communicate outage and other information to its customers.	Completed
44	The BWL will work with customers and local officials to determine how to make local officials aware of seniors, customers with medical alerts, and other vulnerable populations during extended outages.	Completed
45	The BWL will be more proactive informing customers of where their responsibility for service ends, the service mast, and the BWL's begins.	Completed

## BWL 54 Items Completed or Ongoing

Item #	BWL 54 Items	Status
46	The BWL will maintain a list of qualified electricians who can repair service masts and the BWL will help customers finance the cost of mast repair by allowing customers to pay it off on their bill over a one year period without interest. A list of qualified electricians will appear on the BWL's website.	Completed
47	During events like the ice storm, the BWL will work with local organizations to maintain warming centers in the winter and cooling centers in the summer for Lansing area residents.	Completed and ongoing
48	As an integral part of the Lansing community, the BWL will work with other organizations to respond to crisis that may affect mid-Michigan in the future. The BWL is supporting work by The Power of We and others to help empower neighborhoods to react to any type of emergency. The BWL pledges to be a part of that coalition and play its part in protecting the Lansing community and to meet with neighborhood associations to explain the BWL storm response plans and listen to their concerns and questions.	Completed and ongoing
49	Since ice storm outage restoration, the BWL's service territory has experienced a number of severe winter weather events, and four separate outage events ranging from 100 outages to 7,400 outages. In all of the severe weather events, the BWL has posted, on all communications channels, at least two days prior to the forecasted weather, warning customers about the impending storm and directing them to call the BWL "877" outage number if they lost power. The BWL has also continuously posted updates, cold weather safety tips, and City of Lansing updates.	Completed
50	During outages, the BWL has acknowledged the time the outage began, the number of outages, the cause of the outage, the geographic area of the outage that can be found on the outage map, the projected time of restoration, and full restoration all clear.	Completed
51	Communication improvements have been noted on Facebook and Twitter with positive comments by our customers.	Completed
52	The BWL has retained the communications firm of Martin Waymire to help develop a crisis communications plan based on an examination of best practices across the utility industry to make sure it has a strong crisis communications protocol in place in the very near future. Martin Waymire will also assist during emergencies if needed. In the meantime, the BWL has a working interim crisis communications plan.	Completed
53	The BWL has also hired a social media specialist, a newly created position. The social media specialist will help develop strategies on how to best communicate with our customers over all social media channels.	Completed
54	The BWL will provide information to state and local officials on a regular basis. During an event like the ice storm, it will assign a liaison to state and local officials to answer questions that they may have from their constituents.	Completed and ongoing

CRT/MPSC Board of Commissioners Recommendations

Item #	Lead	Recommendation	
CRT 63	LBWL Board of Commissioners	Hire an "operational auditor" to conduct annual performance audits of the BWL operations and planning;	The Board considered this recommendation at its July 2014 Committee of the Whole Meeting, assigned Internal Auditor to make a proposal, but chose not go forward with the recommendation.
CRT 64	LBWL Board of Commissioners	Establish a standing committee for review of, and contract with outside expertise for, an annual operational audit.	The Board considered this recommendation at its July 2014 Committee of the Whole meeting, deferred consideration, but later chose not go forward with the recommendation.
CRT 65	LBWL Board of Commissioners	Institute a training process for all board members in Carver or other Policy Governance Model. Implement and use the model and continue the training on an ongoing basis.	Completed. Training was conducted on the Carver model on October 28, 2014. As an ongoing response, the Board will be provided with the opportunity for updates and refresher training periodically.
CRT 66	LBWL Board of Commissioners	Request the City to consider provision to the BWL Board of expense reimbursement and/or some minor stipend for attendance.	Completed. The Board considered this recommendation at its July 2014 Committee of the Whole Meeting, deferred consideration of the proposal, but chose not to request a stipend or expense reimbursement.
CRT 67	LBWL Board of Commissioners	Create a Local Government Liaison Committee of Board members and local government representatives from remaining governments, which will meet quarterly to review service-related issues and to recommend changes, improvements, and innovations AND the Board must institute a clear process for plenary and due consideration and action on the Committee's recommendations;	Completed. The Board considered this recommendation at its July 2014 Committee of the Whole meeting and created an Ad Hoc committee to make recommendations on implementing this CRT recommendation. Beginning with the August Committee of the Whole meeting, the Board invited representatives of local governments to address issues to the Board as a regular agenda item of the COW meetings. Also, on November 4, 2014, Lansing voters elected to change the City Charter to include three non-voting representatives to the Board from surrounding communities in which the BWL provides services.
CRT 68	LBWL Board of Commissioners	Request an opinion from the Lansing City attorney to clarify whether an ordinance or City Charter amendment could establish an expanded Board to include non-Lansing residents, to represent the municipalities within the BWL customer area.	Completed
CRT 69	LBWL Board of Commissioners	Urge the involved governments, the City of Lansing and the City of East Lansing and all townships with residents within the BWL customer area to meet and discuss the concept of representation on the BWL Board. These discussions must focus on the need for regionally developed and implemented plans for emergency response and for resiliency.	Completed
CRT 70	LBWL Board of Commissioners	Create and drive the system for implementation of the Internal Report and the CRT Report.	Completed
CRT 71	LBWL Board of Commissioners	Recommend to the City a "Best Practice" for recruiting new board members. Not only those that may represent certain areas that they serve, but recruit to needs of expertise, including, as examples only, an engineering background, business background or security background.	
MPSC 7	LBWL Board of Commissioners	Adopt Service and Reliability Standards similar to those ordered by the Commission in Case No. U-12270 (R 460.732), and include a customer catastrophic outage credit (R 460-744 - R 460.746), as well as comparable rules to the Unacceptable Levels of Performance for Electric Distribution Systems by regulated utilities (R 460.721 - R 460.724).	Completed. Standards have been adopted for relieving non-utility personnel of wire down duty, distribution performance standard, customer call answer time, call blockage factor, annual reliability report, and credit for catastrophic storm outage.

## CRT/MPSC City of Lansing Recommendations

<b>Item #</b>	<b>Lead</b>	<b>Recommendation</b>
CRT 21	City Government	Consider fully integrating BWL employees into the City EM structure.
CRT 24	City Government	That all units of government within or partially within the BWL customer service area review their emergency operations plans to include a process for assessing the need for an anticipatory emergency declaration.
MPSC V.	City Government	The MPSC recommends that the Mayor of the City of Lansing, as the appointing authority to the Board, should appoint new member(s) with expertise related to the duties of the BWL.

# CRT Remaining Recommendations

Item #	Task Name	Start	Finish	Q1 '13	Q1 '14	Q1 '15
5	Recognize its role to assist Regional, City and Township Emergency Management in disaster response by implementing all of the following	Tue 2/18/14				
5c	Assure that all operations employees receive basic NIMS training.	Tue 2/18/14	Tue 3/31/15			
6	Consolidate its multiple emergency response plans within the City and Regional plan, (see below) and then test that plan by scheduling a full staff coordinated "table top" exercise at a minimum of every 12 months.	Tue 2/18/14	Tue 3/31/15			
9	Include Business Continuity Planning in its development of a comprehensive Emergency Operations Plan.	Tue 2/18/14	Tue 6/30/15			
10	Develop a comprehensive EOP, in coordination with the City EM officials, that is an Annex to the City EOP, consistent with MCL 30.410 (1) (a)	Tue 2/18/14	Tue 3/31/15			
15	Require all communications staff and senior leadership to undergo certified NIMS communications training in order to understand best communications practices during crisis situations, with associated training events and tabletop exercises to ensure coordi	Tue 2/18/14	Tue 3/31/15			
23	Sponsor or encourage a full scale training exercise, involving emergency management staff of all units of government and BWL in the tri-county region, to take place annually.	Tue 2/18/14	Tue 3/31/15			
33	Maintain and retain all information developed during restoration operations, including all forms of communications. Retaining this information will assist post restoration analysis, enhance institutional retention and uses of valid lessons learned, and I	Tue 2/18/14	Tue 6/30/15			
34	Information to be retained should include:	Tue 2/18/14	Tue 6/30/15			
a	A full log of the operations/restoration center input (phone calls, emails, radio messages, etc.), including identification of individuals sending and receiving, during the event.	Tue 2/18/14	Tue 6/30/15			
b	A full log of output, as in #1 above.	Tue 2/18/14	Tue 6/30/15			
c	Set of maps, optimally GIS, depicting the stages of the event, including at least, the initial outage area and affected components and customer zones, and stages of restoration sufficient to recreate the series of restoration actions leading to full resto	Tue 2/18/14	Tue 6/30/15			
d	Full log of personnel engaged in restoration activities.	Tue 2/18/14	Tue 6/30/15			
e	Full log of components and equipment used. This, optimally, would differentiate between components initially/originally identified for the restoration and those identified during the event based on discovery of event damage.	Tue 2/18/14	Tue 6/30/15			
f	Log of field engineer actions; optimally with enough specificity to distinguish technical actions vs. administrative actions.	Tue 2/18/14	Tue 6/30/15			
35	Retain this documentation in a form that enables efficient use, recall, and reuse, and in a format that is compatible with performing the same series of retention actions for future events; i.e., not a "one time" storage, but with future use and compariso	Tue 2/18/14	Tue 6/30/15			
60b	Providing a forum for consideration of new risk reducing technologies and design in the built environment;	Tue 2/18/14	Tue 3/31/15			
81	Hold an Annual Meeting of Stakeholders, with explicit invitations and opportunities for public debate on innovation and strategy.	Tue 2/18/14	Tue 3/31/15			

# MPSC Remaining Recommendations

Item #	Task Name	Start	Finish								
				Q4 '13	Q1 '14	Q2 '14	Q3 '14	Q4 '14	Q1 '15	Q2 '15	
4	Develop metrics that allow the BWL to analyze the performance of all reliability investments.	Tue 2/18/14	Tue 6/30/15								
5	Develop an annual reliability report that can be publicly available.	Tue 2/18/14	Tue 6/30/15								
6	Develop an annual reliability spending report that focuses on current and future reliability project spending and analyzes customer benefits and the overall effectiveness of reliability projects.	Tue 2/18/14	Tue 6/30/15								
17	Voluntarily report to MPSC Staff when outages affect more than 10 percent of its customers, when a significant event affects the operation of its system, or when there is loss of power to a critical facility or critical customer.	Tue 2/18/14	Tue 6/30/15								
18	Keep the BWL Board and Lansing City Council continually informed on mutual assistance agreements should any contracts expire or have cause to be amended.	Tue 2/18/14	Tue 6/30/15								
24	Develop a procedure to collect system outage data during and post storm events for future reliability analysis.	Tue 2/18/14	Tue 6/30/15								



# Environmental Regulatory Update

Committee of the Whole Meeting

February 17, 2015

# Updates on Environmental Rules

- Cross State Air Pollution Rule (CSAPR)
- Mercury and Air Toxics Rule (MATS)
- Coal Combustion Residue (CCR)
- Clean Power Plant Rule (CPP)



# Cross State Air Pollution Rule (CSAPR)

- Limits the amount of sulfur dioxide (SO<sub>2</sub>) and oxides of nitrogen (NO<sub>x</sub>) that can be emitted by electric generating units
- Compliance period begins January 1, 2015
- Further reductions scheduled to occur in 2017
- Requires one allowance for every ton of SO<sub>2</sub> and NO<sub>x</sub> emitted
- Cap and trade program
- Provides allowances to existing generating units
- Allowances can be purchased and sold
- BWL expects to have sufficient allowances at least through 2020

# Mercury and Air Toxics Rule (MATS)

- Limits the emissions rate from electric generating units for:
  - Mercury
  - Fine particulates
  - Hydrochloric acid gas
- BWL compliance date April 2016, however Supreme Court agreed to hear appeal of rule
- BWL does not anticipate major impacts
- Compliance strategy:
  - Activated carbon
  - Precipitator upgrades
  - Low Chlorine coal

# Coal Combustion Residue (CCR)

- On December 19, 2014, the EPA issued its final rule on coal ash (CCR), finding that it is not considered hazardous but adopting regulations for impoundments and monitoring
  - Adopted structural integrity and inspection standards for surface impoundments
  - Requires monitoring wells for CCR facilities
  - Establishes restrictions on location of new CCR facilities
  - Specifies operating criteria for CCR facilities
  - Adopts record keeping and notification requirements for owners of CCR facilities

# BWL CCR Compliance

- BWL does not expect a significant impact
  - North Lansing landfill complies with slurry wall, pump and treat, and monitoring wells
  - Comfort street ash has been removed
  - Erickson ash pond has been cleared and replaced with small temporary disposal pond, which has clay liner and synthetic geo-liner

# Clean Power Plant Rule (CPP)

- Proposed regulation to reduce emissions of carbon dioxide (CO<sub>2</sub>) from electric generating plants
- Statewide compliance plan
- Scheduled to be implemented in two phases:
  - Interim phase 2020 to 2029
  - Final phase 2030 and thereafter

# CPP Continued

- Reduction in generation and CO2 emissions can be demonstrated by
  - Efficiency improvements at power plants
  - Redispatch of generation to natural gas combined cycle plants
  - Renewable energy generation
  - Demand-side management (energy efficiency) savings
- EPA used estimates of achievable savings from these four methods to set state goals

# CPP Continued

- Limits emissions of carbon dioxide from Michigan power plants to a rate equivalent to 1,227 lbs. per MWh for interim stage and 1,161 lbs. per MWh for 2030 and beyond
- EPA received over 1,000,000 comments on the Plan
- Final rule due in June, 2015
- Novel application of Section 111(d) of the Clean Air Act, likely to be litigated extensively

# Questions?