Petitioner's Exhibit 3

COMMUNITY UTILITIES OF INDIANA, INC.

CAUSE NUMBER 44724

DIRECT OPERATIONS TESTIMONY

OF

STEVEN M. LUBERTOZZI

SPONSORING PETITIONER'S ATTACHMENT BTH-1

COMMUNITY UTILITIES OF INDIANA, INC.

Cause No. 44724

Direct testimony of Steven M. Lubertozzi

BACKGROUND

Q. Please state your name and business address.

A. My name is Steven Lubertozzi. My business address is 2235 Sanders Rd., Northbrook, Illinois, 60062.

Q. By whom are you employed and in what capacity?

Q. I am the President of Community Utilities of Indiana, Inc. ("CUII" or "Company").Are you the same Steven M. Lubertozzi who previously prefiled direct testimony in this Cause?

A. Yes.

Q. Please describe your educational and professional background.

A. My educational and professional background is set forth in my prefiled direct testimony.

Q. What is the purpose of your direct Operations testimony?

A. My testimony provides support for Community Utilities of Indiana, Inc.'s ("CUII" or "Company") request to adjust water and sewer rates. In particular, my testimony describes: (1) the Company's service territory and its water and wastewater system operations; (2) capital improvements made to the water and wastewater systems, including the projects identified in the Company's petition;

(3) water quality and service; (4) wastewater quality and service; and (5) customer complaints.

SYSTEM DESCRIPTION AND OPERATION

Q. Please generally describe the Company's service territory and water/wastewater systems.

A. CUII provides water and wastewater utility services to (3) independent systems located in Lake, Porter, Jasper and Newton Counties to approximately 8,546 ERCs with over 52 miles of water mains and nearly 40 miles of sewer mains, (9) wells, 16 Lift stations and (2) WWTPs.

Potable water is supplied to approximately 3150 water and 3100 wastewater ERCs in the Twin Lakes/Lakes of the Four Seasons system from seven (7) ground water wells flowing through (2) Water Treatment Plants ("WTP1" and "WTP2"). The ground water supply at WTP1 flows through two gravity iron-filtration units and chemically treated with sodium hypochlorite, polyphosphate, and fluoride, before flowing into one of two (2) on-site 500,000 gallon ground storage tanks (1,000,000 gal. total), or pumped directly into the water distribution system via three (3) high service pumps; the ground water supply at WTP2 flows through (2) pressurized iron-filtration units before flowing directly into the water distribution system. System pressure is maintained at an average of approx. 60 - 65 PSI. The water capacity and pressure in the Twin Lakes system are sustained by a 200,000

gallon elevated storage tank and the two (2) 500,000 gallon ground-level storage tanks with related high service pumps that deliver the water from the tanks into the distribution system as necessary. The Twin Lakes water distribution system contains approximately 174,240 linear feet ("LF") of water mains. CUII does not provide fire protection in Twin Lakes but has flushing hydrants located throughout the system for seasonal flushing purposes. The wastewater collection and treatment facilities serving the Twin Lakes/Lakes of the Four Seasons system is comprised of fourteen (14) lift stations and includes nearly 177,000 LF of gravity and pressure sewer mains. The sanitary sewage is treated at the 1.1 MGD Wastewater Treatment Plant ("WWTP"). This plant is a Class III, 1.1 MGD extended-aeration activated sludge wastewater treatment facility consisting of a bar screen, comminutor, Parshall flume with ultrasonic influent flow meter, flow splitter box, activated carbon odor control equipment at the headworks, five (5) aeration basins, final clarification, aerobic digestion, chlorination/dechlorination facilities, post-aeration and area velocity effluent flow monitoring. Solids handling includes a sludge storage tank and thickening which is land applied for final disposal.

Potable water service is provided to approx. 1,800 ERCs located in our former Indiana Water Service, Inc. ("IWSI") system via bulk water supplied by Indiana American through CUII's bulk water interconnect meters and through approx. 88,600 L.F. of 4", 6" and 8" water distribution mains. Flushing hydrants are

located within the water distribution system, but are owned and maintained directly by the Town of Merrillville and utilized by CUII for routine flushing and maintenance purposes within the system.

CUII also provides water and sewer services in Jasper and Newton Counties to approximately 180 water and 275 wastewater ERCs in the former Water Service Company of Indiana, Inc. ("WSCI") division. The potable water is supplied from two (2) ground water wells located at the Water Treatment Plant ("WTP") which pump directly into a newly installed 10,000 gal. hydropneumatic storage tank. The water is chemically treated with sodium hypochlorite and polyphosphate and the water distribution system pressure is maintained at 63 PSI to 65 PSI via the Variable Frequency Drive ("VFD") operated wells. The water distribution system piping is approximately 13,200 linear feet ("LF") in length. CUII does not provide fire protection but has flushing hydrants located throughout the system for seasonal flushing and maintenance purposes. The sanitary sewage collection system is comprised of two (2) lift stations with 640 LF of sewer force main and approximately 30,400 LF of gravity sewer piping. The sanitary sewage is treated at the 0.155 MGD dual-train, extended-aeration activated sludge Wastewater Treatment Plant ("WWTP").

Q. Please describe the duties of the staff at CUII.

A. CUII Operations Staff collects and tests water samples at the various entry points of and within the water distribution system on a daily basis. The staff is also responsible for the operation and maintenance of the water and wastewater treatment plants, and completes necessary equipment repairs. They are responsible for submitting complete and accurate monthly reports to the Indiana Department of Environmental Management ("IDEM") and for maintaining compliance with all applicable local, state and federal regulations. They operate maintain the distribution and collection systems, order and safely store and identify necessary chemicals, and complete field activities, responds to customer inquiries, and collects water meter readings on a monthly basis at all locations.

Q. Is the Company in compliance with all IDEM requirements and permits?

A. Yes.

CAPITAL IMPROVEMENTS

Q. Please describe your role in developing the forecasts for Capital Improvements as presented in Mr. Kersey's testimony, and how do you determine what capital projects will be needed in the future?

A. Company forecasts were developed with input from CUII staff and myself, based upon review of our water and wastewater operations and discussing the needs of the community. In addition, as I will discuss later in my testimony, the Company is in the process of developing a comprehensive Asset Management Plan ("AMP") involving the evaluation and assessment of the assets utilized in the

systems. The AMP will provide an overview of the service areas and how the systems are configured. Various sections of the AMP will include identifying levels of service required for the area, identifying critical assets/key risks involved, and development of an Asset Registry ("AR") which provides key information regarding these assets. The AR will also include information regarding age and condition of a particular asset through an inspection process, or a level of review of the historic data regarding repairs/upgrades to a particular asset. Based upon this information, CUII staff will develop and recommend various capital projects for approval by the Company.

Q. How are estimated costs for those projects determined?

A. CUII would request quotes from various contractors for potential projects whenever possible in the absence of having any detailed engineering plans. In other instances, we would rely on engineering cost estimates or estimates based on previous projects and/or the experience of our staff in order to forecast future budgets.

Q. Please describe the capital improvements made by the Company to its water and wastewater system since its last rate case.

A. Table 1 below lists each project, along with their associated start and completion dates as well as their associated costs. Since the last rate cases held in the various CUII systems prior to consolidation, CUII has invested, or plans to invest as part of this Cause, nearly $5.2 million dollars in the Water and Wastewater systems to improve service quality and ensure adequate and reliable service.

Table 1 – Summary of Capital Projects

		CAPITAL PROJECTS			
No	W/S	Description	Year Started	Year Completed	Amount ($)
1	W	SCADA Water Treatment Plant	Est. 2015	Est. 2015	87,170
2	S	Second Sludge Storage Tank	Est. 2017	Est. 2017	539,159
3	W	Replacement 500K Gallon Water Storage Tank at WTP 1	2014	2015	507,443
4	S	TLUI WWTP Headworks Upgrades	2015	Est. 2016	1,072,503
5	W	WSCI Hydro-tank Replacement	2015	2015	161,211
6	S	2015 Sewer Capital Improvement Project	2015	2015	435,775
7	S	2016 Sewer Capital Improvement Project	Est. 2016	Est. 2016	443,202
8	S	2017 Sewer Capital Improvement Project	Est. 2017	Est. 2017	228,112

Q. Please briefly describe each of the capital projects listed in Table 1.

A. (1) SCADA Water Treatment Plant – SCADA Controls are planned to be installed which will create communication between both Water Treatment Plants #1 and #2 and the Elevated Storage Tank in the water distribution system within the Twin Lakes system. This will provide continuous monitoring and automated operations of the water treatment facilities and allow automatic operations to maintain levels within the distribution system along with the existing GSTs. Additional monitoring of tank levels, water quality parameters, and the operations of both Water Treatment Plants provides additional backup should emergencies arise, and will also alert personnel of potential problems that may arise.

(2) Second Sludge Storage Tank – The Twin Lakes Waste Water Treatment Plant (TLU WWTP) currently operates with one, 400,000 gallon sludge storage tank (secondary digester). With the increasingly more stringent phosphorus limits, the second sludge storage tank will provide additional solids handling

capabilities in the phosphorus removal process in order to meet IDEM and NPDES Permit limits. The second tank will also provide needed additional storage as well as redundancy so that one tank can be taken out of service for inspection or maintenance while providing proper asset maintenance capabilities.

(3) Replacement 500K Gallon Ground Storage Tank ("GST") at WTP 1 – CUII installed a new 500,000 gallon GST in 2014 to provide additional storage capacity to meet the needs of the community and ensure water supply during peak periods of the year. It also provided redundancy should either of the GSTs need to be taken off-line. The original tank, labeled as a "Peabody Bolted, Twenty Year Temporary Tank", was installed in 1993. This original tank had reached the end of its designed life and had experienced numerous leaks around the bottom ring of the tank. The existing tank was removed from service and disassembled in order to install the new 500,000 gallon GST, which is the same tank/manufacturer as the new tank installed in 2014 and provides the necessary storage to meet the needs of the community. This tank was completed and placed in service in Q4 of 2015.

(4) TLUI WWTP Headworks Upgrades – The sewage grinder (comminutor) originally in operation at the WWTP headworks structure failed and has been removed from service and a manual bar screen has been temporarily used in its place. A new structure will be added to the head of the plant which will employ the use of a mechanical step screen to remove the non-biodegradable solids from the wastewater. It will also have a grit removal system to remove sand-like debris

from the wastewater before it enters the plant. The removal of these two types of solids will allow for more efficient solids removal and reduce future maintenance requirements within the WWTP along with aiding in the reduction of potential blockages and backups within the plant. Finally, the entire headworks structure will be covered with a building, enhancing the previous efforts to reduce sewer odors emitting from the headworks structure. The building will be equipped with fresh air intakes, use of the existing odor-scrubbing carbon media air filter(s), and will be heated to allow for proper operation of the mechanical equipment housed within the building during the winter months.

(5) WSCI Hydro Tank Replacement – In 2014, the existing 2,500 gallon hydro-tank in service at WSCI was inspected to ensure the integrity and safety of the pressure tank. Results of the testing indicated that this tank had reached the end of its useful life and was a potential safety risk to the nearby residents and operations staff. Current storage requirements from IDEM required that a larger vessel be installed. IDEM agreed to allow the replacement of this tank with a larger 10,000 gallon hydro-tank and new building to house this tank in order to meet current demands. While this system has encountered a decrease in customer population, with the approval of IDEM, CUII was allowed to install this tank with adequate design for future expansion of the treatment plant should customer population increase in the future, or should the system not maintain an adequate level of service to the customers and resulting in complaints. Should this occur, CUII would be required to install additional ground storage capacity with booster

pumps in order to meet the system requirements. The old tank was removed and the new tank was installed and placed in service in October, 2015.

(6) 2015 Sewer capital improvement project – Consistent with the Commission's order in Cause No. 43128-S1, CUII is required to clean and televise a minimum 10% of its sewer collection system each calendar year and make the necessary repairs/replacements of deficiencies identified. In a more proactive approach, TLUI began utilizing RedZone Robotics to inspect and evaluate the condition of the existing sewer mains and completing this work in the approximate 50% of the remaining portions of the collection system that had not yet been televised. This technology will provide necessary information, supported by a GIS Mapping system of the collection system that will be used to track deficiencies found, remediation conducted, and future maintenance activities in the collection system. This approach will provide CUII with the current conditions of this remaining portions of the system that had yet to be televised. It would allow CUII to prioritize and provide for more efficient planning and remediation work within the collection system.

(7) 2016 Sewer capital improvement project – Consistent with the Commission's order in Cause No. 43128-S1, CUII is required to clean and televise a minimum 10% of its sewer collection system each calendar year and make the necessary repairs/replacements of deficiencies identified. As in 2015, RedZone Robotics, Inc. will continue televising/investigating the first 50% of the

collection system and will complete the GIS mapping of the entire system along with providing updates to previous system replacement work completed.

(8) 2017 Sewer capital improvement project – Consistent with the Commission's order in Cause No. 43128-S1, CUII is required to clean and televise a minimum 10% of its sewer collection system each calendar year and make the necessary repairs/replacements of deficiencies identified.

WATER AND SERVICE QUALITY.

Q. What is the current status of the water systems?

A. CUII is in compliance with all applicable water quality regulations and standards. CUII previously implemented a more vigorous and comprehensive uni-directional flushing and hydrant maintenance program. This process is conducted on a semi-annual basis and has resulted in a decrease in water quality issues since the inception of this new program back in 2010. CUII has also noted certain areas of the system that require additional flushing due to geographic locations, such as at dead ends or at locations that may have inconsistent water flow in the area. Staff routinely visits these areas, between scheduled flushing events, to ensure the proper movement of water through the mains and to provide the best water possible quality delivered to the customers.

Q. Have these actions reduced the number of customer complaints regarding water quality?

A. Generally yes. While we recognize that there is always room for improvement, we believe these results demonstrate that the significant efforts undertaken in the past several years have measurably improved water quality for our customers.

Year	Number of Complaints	Number Due to Utility-Side Issues
2010	60	15
2011	40	12
2012	45	11
2013	45	6
2014	50	20
2015	47	4

Q. Has the company taken any additional steps to improve water service quality?

A. Yes. In addition to the development of the uni-directional flushing and hydrant maintenance program mentioned above, CUII has made additional improvements within the water system which includes a valve exercise program, upgrades to the water treatment plants and replacement of filter media, along with continuous updates/revisions to our flushing procedures to further enhance and improve the

effectiveness of the flushing process and ensure the best possible quality of service. CUII is also working to install additional SCADA controls to the water system, specifically to monitor the operations of both water treatment plants, storage tank levels, pressure monitoring, disinfection residual monitoring, and overall turbidity monitoring. These controls will allow improved monitoring of parameters within the water system and to alert CUII personnel in the event of potential problems and allow immediate response to such events.

Q. Please describe the water quality complaints for CUIIs remaining systems (formerly Indiana Water Service, Inc. and Water Service Company of Indiana)?

A. CUII has had very limited water quality complaints in those systems. IWSI bulk system in Merrillville showed no water quality complaints in 2015, while our WSCI system showed only 2 water quality complaints in 2015.

Q. What is the current status of the sewer collection system?

A. As with all wastewater collections systems, there is no way to prevent or completely eliminate wastewater backups or spills. During 2015, sanitary sewer overflows ("SSOs") and sewer backups ("backups") did occur within the Twin Lakes collection system as a result of unprecedented rainfall events and flooding throughout not only Twin Lakes area, but the entire State of Indiana. The SSOs and backups occurred during (4) major rainfall/flooding events during this time. CUII takes these situations very seriously and our goal is to eliminate all backups or overflows and has undertaken additional steps towards eliminating these types

of events. While there have been many upgrades and improvements completed over the past five years within the collection system and consistent with the Commission's order in Cause No. 43128-S1, the Company is over 50% complete through the wastewater collection system with its annual cleaning and televising requirement. All items identified in previous televising and jetting reports have been completed from the Televising and Jetting reports. As capital improvements are completed each year, there has been a noticeable difference in the number of sanitary sewer backups as well as the recovery time and flows at the treatment plant. This indicates that the improvements have been reducing I/I issues and impact within the wastewater collection system.

Q. Issues were raised recently in another proceeding involving CUII regarding overflows that occurred in 2015. Please discuss the circumstances around those overflows.

A. The surcharging manholes or overflow events which occurred in Twin Lakes were due to record amounts of rainfall and related flooding experienced in the Spring/Summer of 2015. As stated by the Purdue University - Agriculture News, "Indiana set a record for rainfall in the month of June, with a state average of 9.03 inches". In addition, it also stated that "June also was the fourth-wettest of any month on record since 1895". (http://www.purdue.edu/newsroom/releases/2015/Q3/state-climate-office-indiana-rains-set-record-for-month-of-june.html). Part of eliminating I&I is to reduce or eliminate possible entry points of surface water into the wastewater collection

system. During these rainfall and flooding events, additional entry points to the collection system were identified. CUII has also communicated with LOFS due to several locations attributed to the effectiveness of ditches and culverts to direct storm water away from areas where critical assets of CUII are located. Certain areas of flooding roadways and ditches resulted in submergence of manhole structures, including a lift station structure. Eliminating the introduction of I&I into the collection system is a team effort and CUII is working with LOFS to help mitigate these issues in the future to reduce any impact this has on our wastewater collection system.

Q. You indicated above that there were record rainfall amounts experienced in the Spring/Summer of 2015. Can you elaborate on that?

A. Yes. June 2015 was an extremely wet month not only for our service area, but for Indiana in general. In fact, this June was the wettest June on record for both Illinois and Indiana.[1] According to www.weather.gov, Crown Point, Indiana received 8.22" of rain, compared to normal rainfall of 3.87", making it the 3rd wettest June for that city since records began in 1916.[2] I point this out because it highlights the fact that controlling sewer discharges involves at least some factors that are largely outside of our control. That said, we will continue to work to improve the system and mitigate these occurrences where possible.

[1] http://www.weather.gov/lot/June2015_precip
[2] *Id.*

Q. Do you believe that certain I&I problems within the Twin Lakes sewer collection system are related to storm water drainage problems and what has been done to correct this situation?

A. Yes, based on the significant rainfall this past year and flooding that had occurred during these events, CUII was able to identify additional locations where I&I entered into our wastewater collection system which directly contributed to overflows. Some of these locations were in areas that had previously been addressed in our ongoing inspection and televising program. While CUII had made improvements in those areas previously, the flooding events during 2015 resulted in locating previously unidentified points where surface water had impacted our system and had not occurred previously. CUII has met with LOFS staff and discussed specific locations where this has occurred, along with identifying potential remedies in which to address those problems in those storm drainage areas in question. CUII has taken steps previously to install inserts in strategically located manholes which may be susceptible to storm water flooding and manhole structures have also been sealed.

Q. What additional steps has CUII taken to alleviate these concerns?

A. Due to the locations of these SSOs and reviewing sewer mapping and hydraulic flow patterns within the Twin Lakes system, CUII currently has a project underway which would divert wastewater flows within the system directly around the area and flow to the wastewater treatment plant. Engineering plans are nearing completion and upon approval by IDEM and issuance of a "construction

permit", the necessary work involving piping upgrades and modifications to several pump stations within the collection system would be completed expeditiously.

Q. Has CUII complied with the inspection, televising and pressure cleaning of at least 10% of the sewer collection system annually within Twin Lakes, along with making the necessary repairs/replacements of items found during this process as identified in the Order in Cause No. 43128-S1?

A. Yes.

Q. Has CUII performed additional work, in excess of the minimum 10% as listed above?

A. Yes. CUII has taken additional steps within the last 5 years to complete the inspection of all manholes located within the Twin Lakes collection system. In addition, as certain additional issues are identified which may require the remediation/replacement of additional assets, these items are also addressed as necessary.

Q. Do you have any examples of such additional work being completed?

A. Yes. As an example, during the investigations performed in 2014, a section of sewer gravity main was found to have deteriorated such that it could result in failure with the potential of causing wastewater blockage and/or overflows. CUII took the immediate and proactive steps of evaluating the options available and obtained quotes for the remediation/replacement of over 2,200 linear feet of gravity sewer main. Due to the location within the LOFS community, this section

of sewer main was completely replaced utilizing "pipe-bursting" method to accomplish this work. This avoided the need for additional excavation near the major roadway leading into the LOFS community and helped reduce overall costs by thoroughly evaluating various replacement methods. This included slip-lining of the sewer main, cured-in-place piping ("CIPP"), and open cutting/excavation of the entire length of main.

Q. Has CUII communicated and attempted to work with LOFS regarding the water and wastewater service provided within the community?

A. Yes. CUII, in an effort to continue its partnership with LOFS, continues to communicate with LOFS, typically through Mr. Rick Cleveland, LOFS Property Manager. Most of this communication is conducted between Mr. Cleveland and Mr. Charles Alexander, Area Manager for CUII. Mr. Alexander regularly communicates with Mr. Cleveland all activities happening within LOFS with regard to Capital Projects, Sewer and Water Construction activities, and future planning on behalf of CUII. At times, Mr. Bruce Haas, Vice President of Operations, and Mr. Tom Tapella, Regional Manager, have also been included in conversations with Mr. Cleveland and other members of the LOFS POA Board, as well as other community members, such as the LOFS Lakes Management Team, LOFS Security Department, and LOFS Fire Department. In addition, CUII has utilized the CCTV services previously to investigate issues with sewer collection lines which are owned and maintained by LOFS. CUII also meets periodically with various LOFS personnel to discuss work being done within the community,

updates to ongoing activities, future scheduled work including site restorations following excavation work, as well as other issues that may come up within the community.

Q. What additional steps has the company taken to improve service quality within the wastewater system?

A. Following the Order in Cause No. 43128-S1, CUII implemented the Sewer Capital Improvement Program that is being utilized today. This program includes the annual cleaning and televising of a minimum of 10% of the wastewater collection system. Video results and documentation are provided to CUII from the CCTV Contractor, along with plans for replacements and remediation to sections of the collection system. This includes work regarding the reduction of inflow and infiltration ("I&I"), as well as any other issues that may be identified during these investigations. This work has been organized on an annual basis and awarded to outside contractors to perform the necessary remediation work. A summary of all work being planned, work that was completed, and other summarization of water quality documentation via monthly operating reports (MORs) is included in the CUII Semi-Annual Report to the IURC on or before January 31st and July 31st each year and each of these reports and attachments is provided to LOFS for their review and evaluation.

Q. Is CUII going beyond merely televising its sewer system?

A. Yes. As explained in CUIIs most recent semi-annual report, CUII is currently utilizing RedZone Robotics technology to produce a web-based GIS map of the entire sanitary collection systems owned and maintained by the Company, which includes Twin Lakes and the former WSCI sewer system. Conducting this process, in combination with the development of a comprehensive asset management plan as further discussed below, will allow CUII to take a more proactive approach for pipe replacements and repairs and provide a more efficient approach towards eliminating I&I. It will also allow for better tracking of remediation and cleaning/jetting work completed, upgrades to the system and any replacement of assets that have occurred.

Q. Please list the approvals generally required for these projects.

A. Required approvals for an individual project may include any or all of the following: Indiana Department of Environmental Management ("IDEM") Construction Permits or Notice of Intent to Construct; IDEM Storm Water General Permit (Rule 5); IDEM Section 401 Water Quality Certification Program; Indiana Department of Transportation ("INDOT") Right of Way Permit; Indiana Department of Natural Resources Construction in a Floodway Permit; U.S. Army Corps of Engineers Nationwide Permit No. 12 Utility Lines; railroad crossing permits; local city or county right of way and road cut permits; and local county drainage authority permits. Upon request, copies of any applicable approvals will be supplied.

Q. Does the company have any additional plans to replace water distribution or wastewater collection system infrastructure in the next five years?

A. Yes.

Q. Please provide a general outline of those plans.

A. While we have always given consideration to longer-term infrastructure needs, that process is evolving to become more formal. More specifically, as discussed earlier in my testimony, CUII has begun developing a comprehensive Asset Management Plan ("AMP") involving the evaluation and assessment of the assets utilized in the systems. Various sections of the AMP would include identifying levels of service required, critical assets/key risks involved, and development of an Asset Registry ("AR"). In addition, a Geographic Information Systems ("GIS") mapping asset is currently being developed on the wastewater collection system to provide additional data on the condition and locations of sewer mains, manholes and lift stations within the system. Attachment BTH-1 is indicative of some of analysis being done as part of the AMP development. It is important to note that this analysis is preliminary only and will lead to validation of key input information and further refinement of the analysis before firm conclusions can be drawn.

Q. How will the AMP be utilized to determine what projects or upgrades/replacements of assets will be required?

A. As part of the AMP and AR being compiled, condition assessments of these assets along with the expected service life expectancy of the equipment/assets can be

evaluated. This evaluation, in addition to documenting "actual" conditions of the assets and a review of historic problems related to an asset, will help provide guidance regarding the prioritization and prudent replacement of such assets.

Q. How will the evaluation of assets contained in the Plan help in planning for future projects?

A. Each asset may have a nominal "service life" expectancy. Based on the review of the history of that particular asset along with the review of other parameters and visual inspections, will help CUII prioritize the projects in which assets can be upgraded/replaced on a planned schedule. Such schedule would be incorporated into CUIIs capital budgeting program for future spending.

Q. Does the AMP guarantee that a particular asset must be updated or replaced on a particular schedule, and if not, why not?

A. The AMP will be an important factor in the "evaluation" of such replacements or upgrades and to plan and prioritize such work for future budgeting purposes. However, it does not guarantee, nor is there any way to definitively predict the actual "end of life" of a particular asset. However, based upon the nominal life expectancy of an asset, in addition to the actual condition assessment and review of the historic data, will allow a better prioritization of such replacements.

Q. Can you provide an example of your evaluation regarding an asset replacement and what general factors would be included that may delay or justify moving up a particular asset replacement?

A. Yes. An example might include the condition of a water main and the replacement/upgrades schedule in a particular area. This water main could have a nominal life expectancy of 40 years although the main has already been in place for 30 years, indicating another 10 years of expected service. We would evaluate various factors in replacing this main, or sections thereof, based on such things as historic data related to water line breaks; condition of the soils and bedding; type of material present; location of the asset and how critical this component would be; and cost of replacement. While an asset could be considered to be at the end of its nominal life expectancy, the overall conditions would be evaluated periodically to determine the prudency of such replacement. Depending on these evaluations, the main could be included for replacement within the next 10 years, or if historic data shows an increase in breaks or leaks within that particular area, the main could be included for replacement much sooner than its nominal end of life expectancy. Likewise, based upon trouble-free operation and reliable service of the asset, it may therefore be appropriate to leave such asset in service for many years to come.

Q. Does CUII keep a record of the locations of water line breaks?

A. Yes. CUII tracks areas within the water distribution system regarding leaks or line replacements that have occurred. We also monitor and record areas within the water system involving water quality concerns in order to ensure we continue providing a high level of quality and service to our customers. In addition, the development of a GIS Mapping asset for the wastewater collection system is

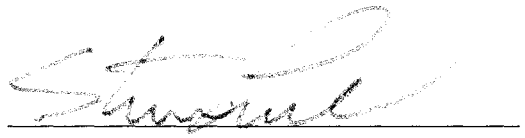
underway which will also allow us to evaluate the condition of the facilities, as well as documenting where/when particular piping has been replaced. This will also allow us to continue prioritizing our approach to the upgrades/replacement of various components within the wastewater collection system.

Q. Does this conclude your prepared direct Operations testimony?

A. Yes.

VERIFICATION

I, Steve Lubertozzi, President for Community Utilities of Indiana, Inc., affirm under penalties of perjury that the foregoing representations are true and correct to the best of my knowledge, information and belief.

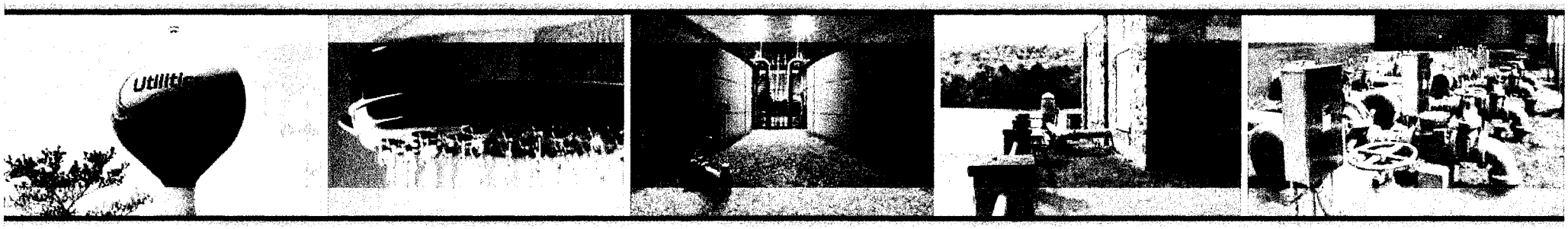


Steven Lubertozzi

Date: June 27, 2016

Utilities, Inc.

a CMS company



Indiana Consolidated Asset Registry Analysis

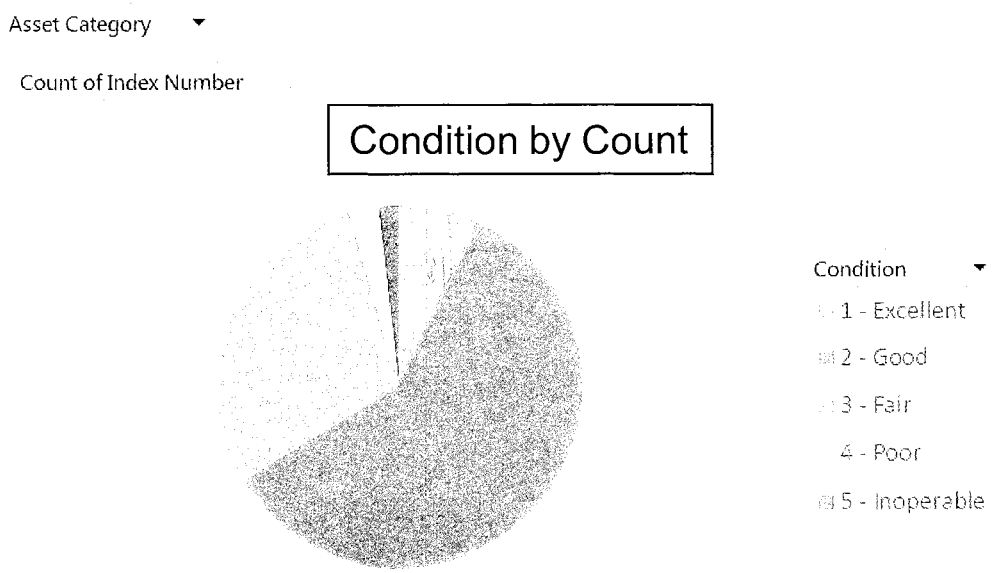
Preliminary Analysis

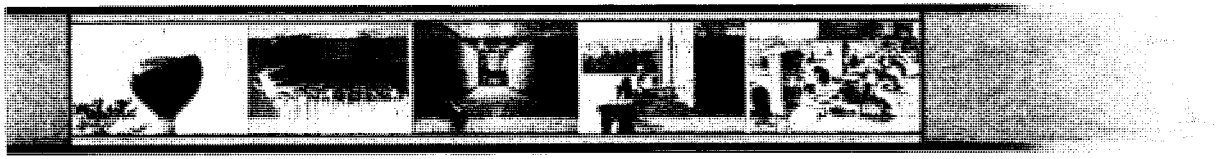
Draft

Condition distribution

Row Labels	Count of Index Number
1 - Excellent	16
2 - Good	134
3 - Fair	66
4 - Poor	6
5 - Inoperable	4
Grand Total	**226**

- 226 Current Assets listed in Registry
- $TBD m replacement cost
- Most assets considered "Good" or "Fair"
- Condition distribution by asset value is TBD





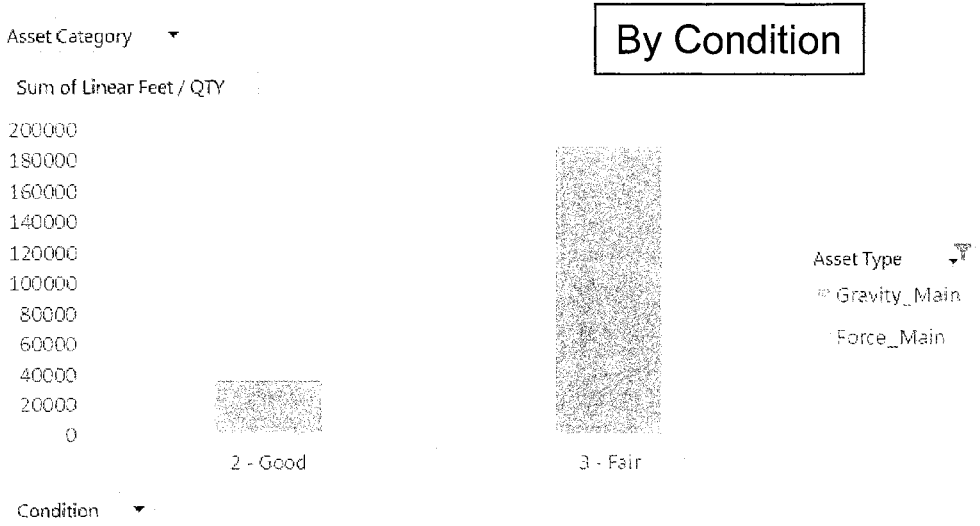
Utilities, Inc.®

Sewer Mains

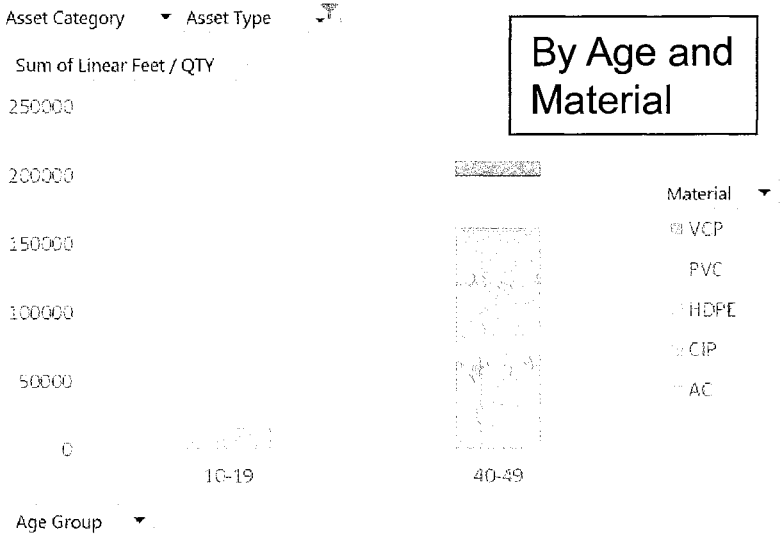
Sum of Linear Feet Colu						
Row Labels	**AC**	**CIP**	**HDPE**	**PVC**	**VCP**	**Grand Total**
10-19			15840			15840
40-49	160165	1825		37476	10333	209799
Grand Total	**160165**	**1825**	**15840**	**37476**	**10333**	**225639**

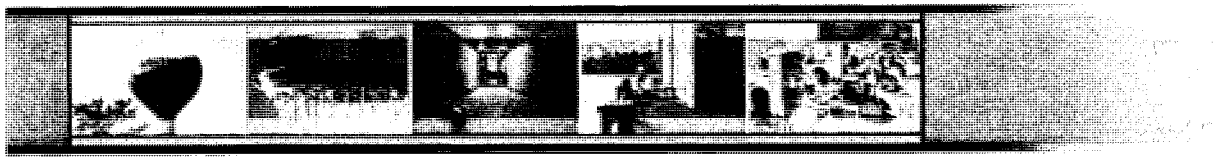
- 225,000 LF (950 LF Force Main)
- Most considered "Fair condition" (need to review assessment criteria)
- 70% AC
- Most pipe at ~ 2/3 of EUL (70 yrs for AC)
- 10,000 LF of Clay @ 42 yrs – reaching end of EUL

By Condition



By Age and Material





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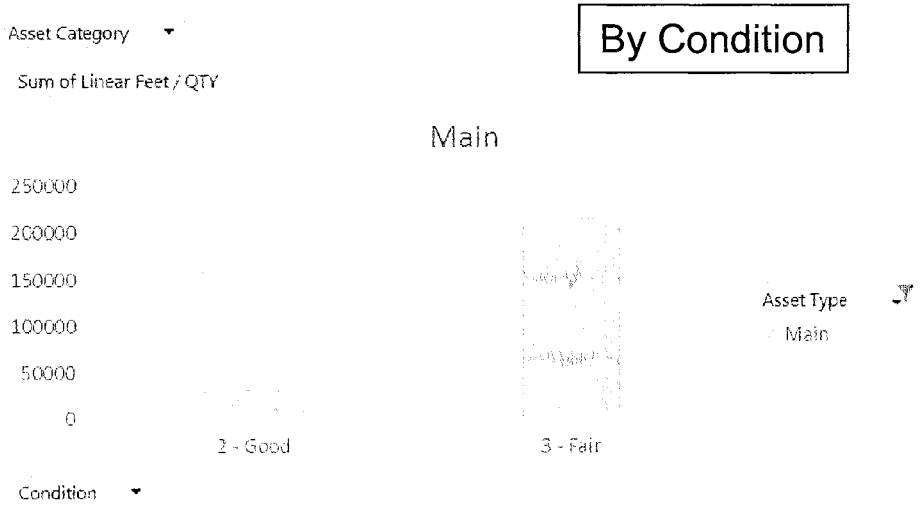
Water Mains

Asset Category (All)
Asset Type Main

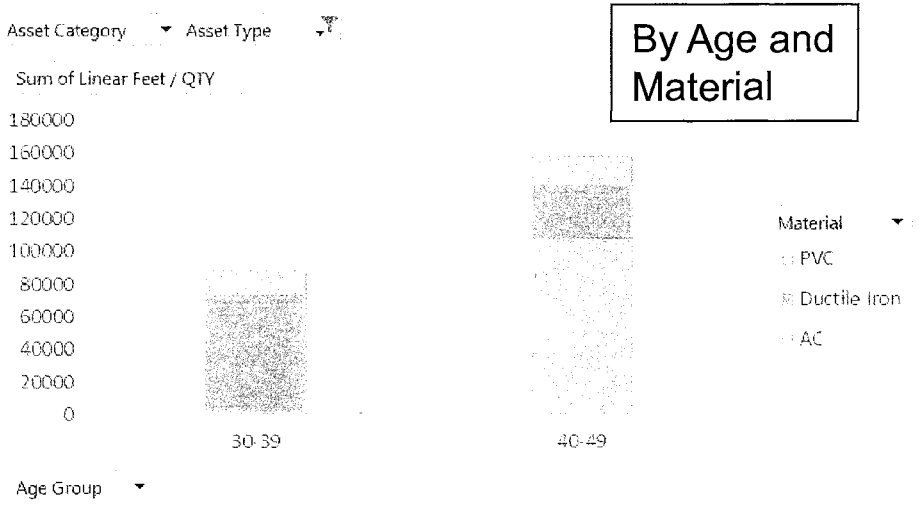
Sum of Linear Feet Column				
Row Labels	**AC**	**Ductile Iron**	**PVC**	**Grand Total**
30-39		73575	15025	88600
40-49	108106	33650	16310	158066
Grand Total	**108106**	**107225**	**31335**	**246666**

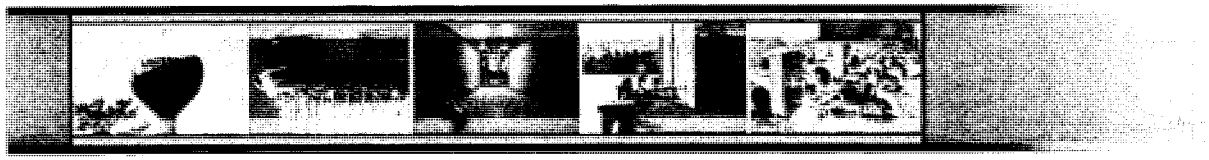
- 250,000 LF
- 30-50 years old
- 44% AC, 43% DI, 13% PVC
- Most pipe at aprox 2/3 EUL
- Most pipe considered "Fair"
  - What is basis of assessment? Further review and criteria needed.

By Condition



By Age and Material





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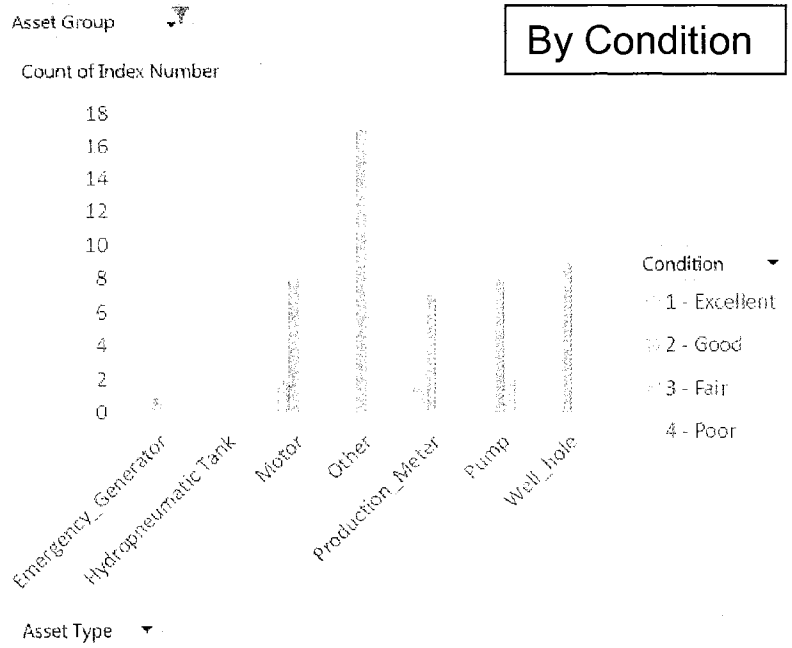
Wells

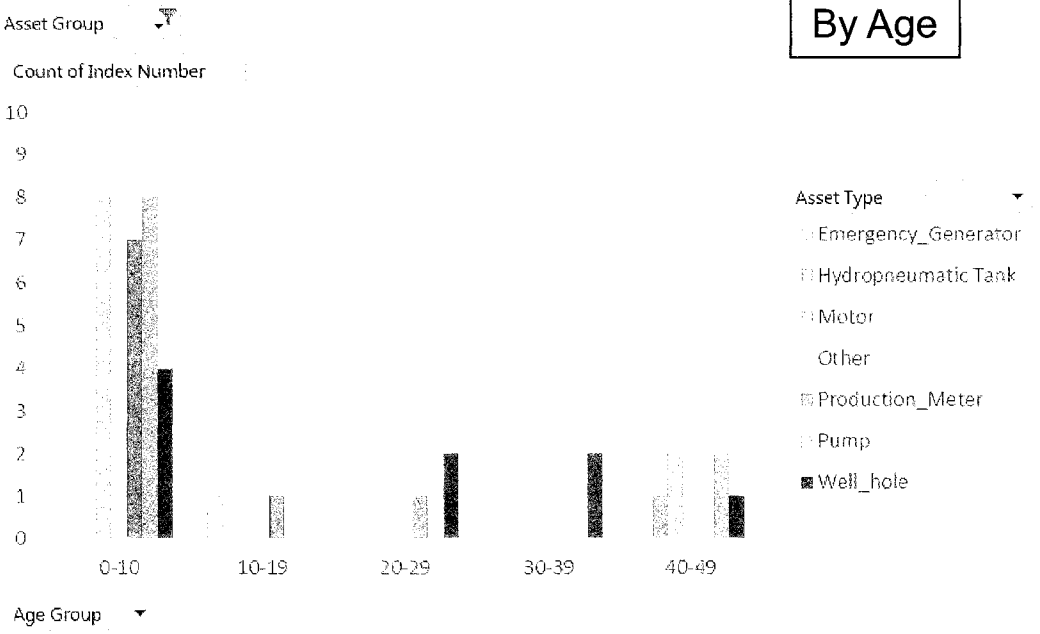
Count of Index Number	Column Labels					
Row Labels	**0-10**	**10-19**	**20-29**	**30-39**	**40-49**	**Grand Total**
Emergency_Generator		1				1
Hydropneumatic Tank					1	1
Motor	8				2	10
Other	9	4			4	17
Production_Meter	7	1	1			9
Pump	8				2	10
Well_hole	4		2	2	1	9
Grand Total	**36**	**6**	**3**	**2**	**10**	**57**

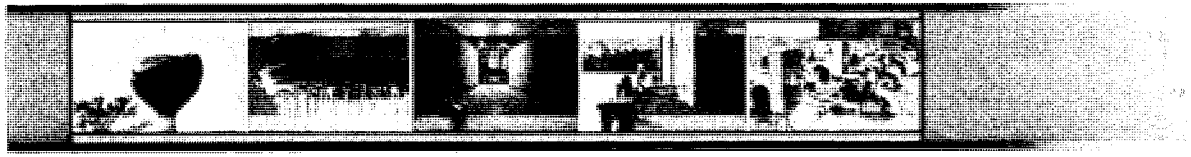
- 9 Wells
- Some key assets at 40+ years but conditions generally considered "good"
  - 2 pumps
  - 2 motors
- 1 "Poor" Hydrotank – planned replacement
- 2 Pumps considered "Fair"
- ("Other" Assets are generally drop pipes or well housings)

By Condition



By Age





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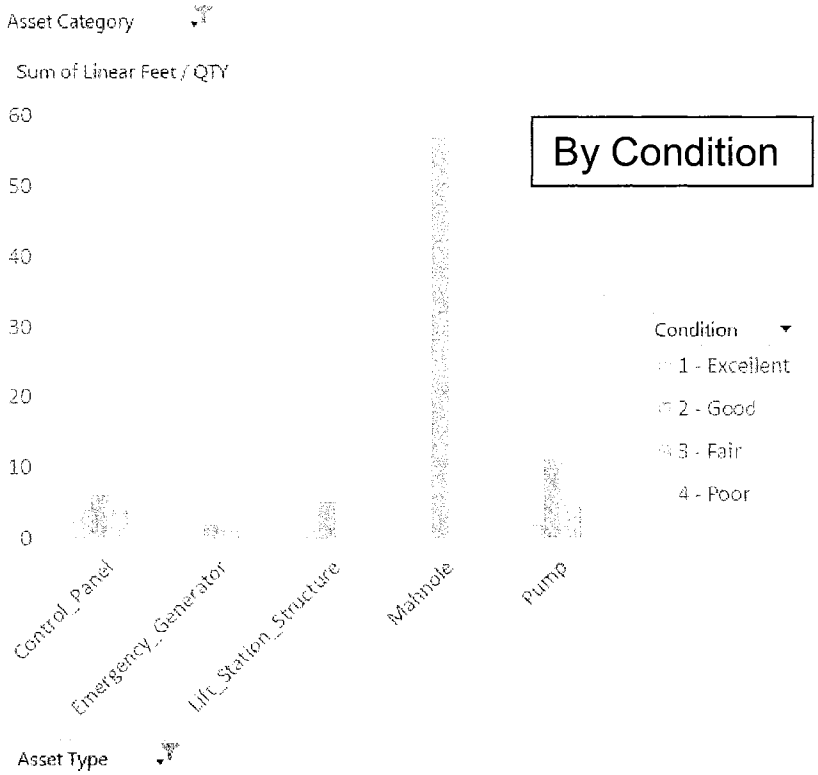
WW Collection Assets – Other than Mains

Sum of Linear Feet / QTY	C						
Row Labels		**0-10**	**10-19**	**20-29**	**40-49**	**50-59**	**Grand Total**
Control_Panel	1	6	4	3	2		16
Emergency_Generator		1	2			2	5
Lift_Station_Structure	1	5					6
Mahnole					57		57
Pump		14	4				18
Grand Total	**2**	**26**	**10**	**3**	**59**	**2**	**102**

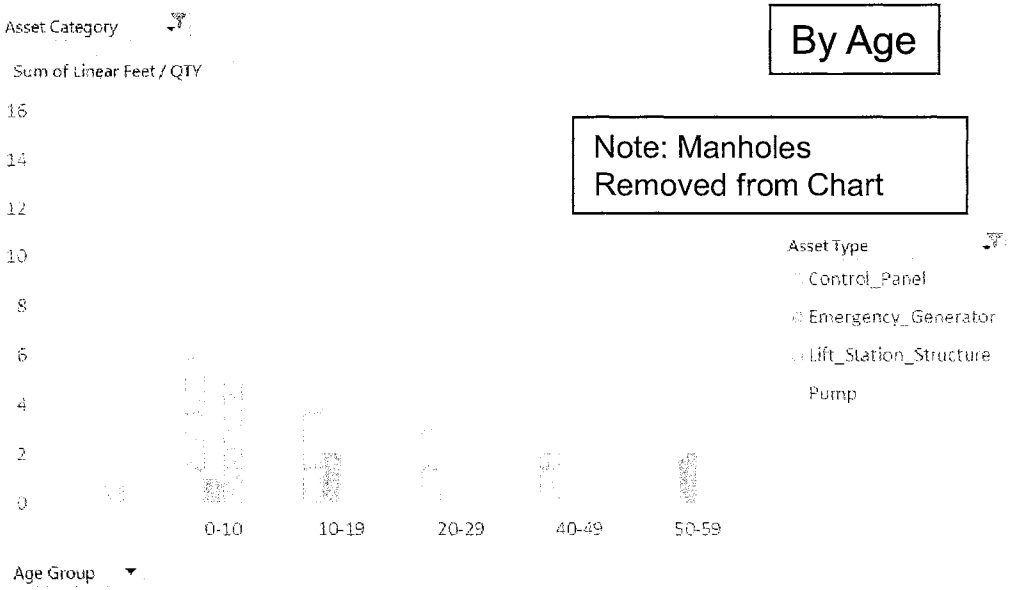
- Lift Station Structures – some missing
- Age info missing: Lift station and control panel
- Gensets (2) – review actual condition
- Control Panels (2) – 1 Poor, 1 Fair
- What is basis of Manhole condition assessment? Inspections/refurbishment work in last 5 years.
- Note assets in Fair or Poor condition



By Condition

By Age

Note: Manholes Removed from Chart



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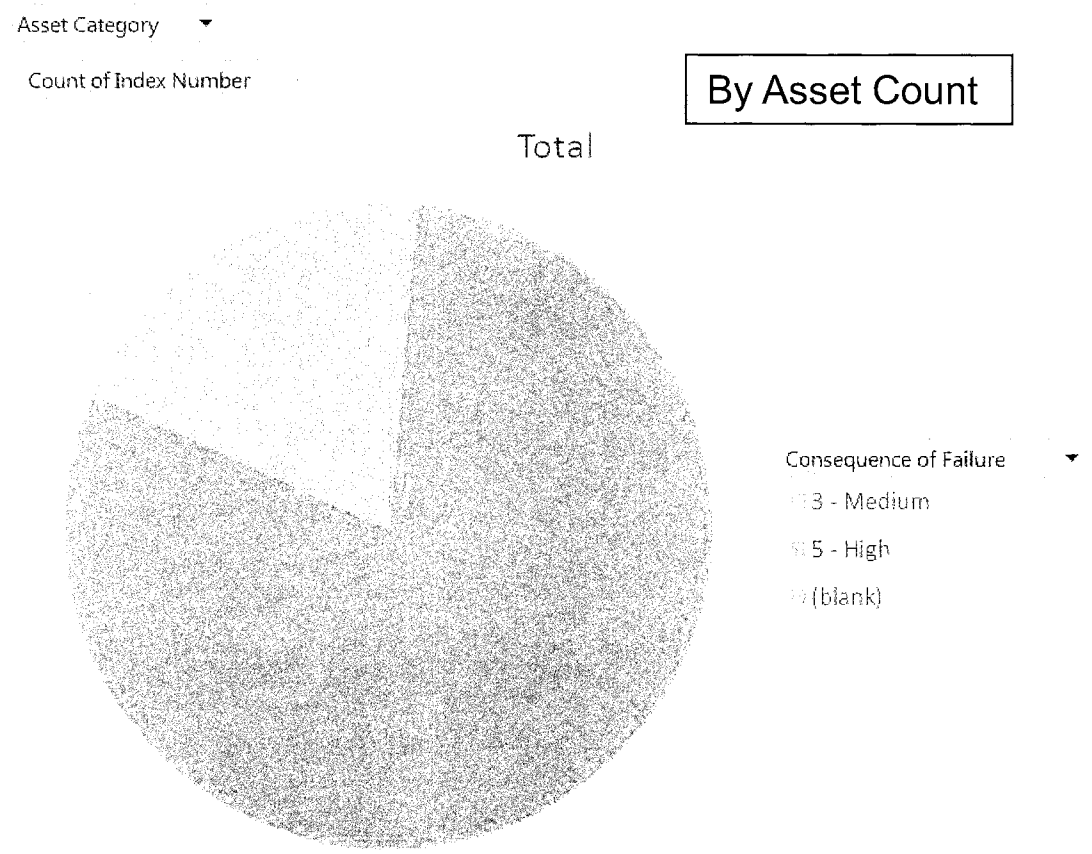
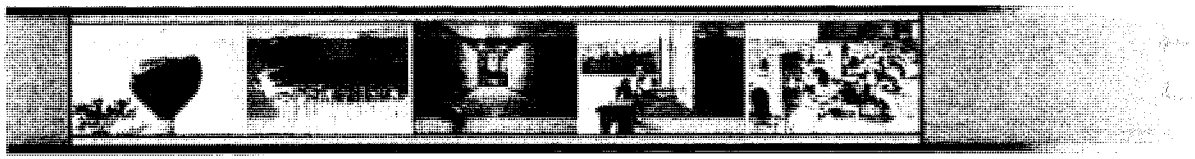
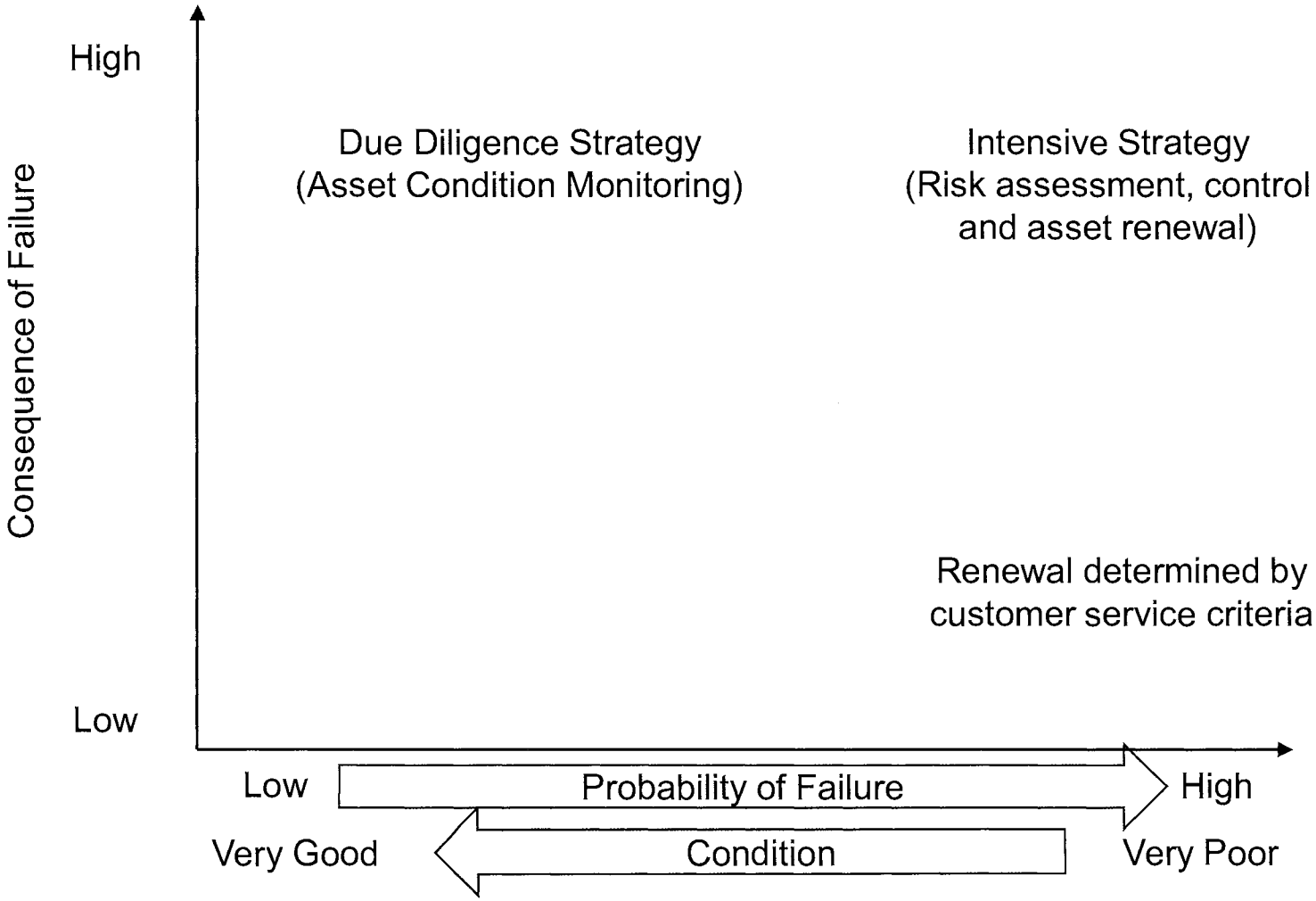
Consequence of Failure

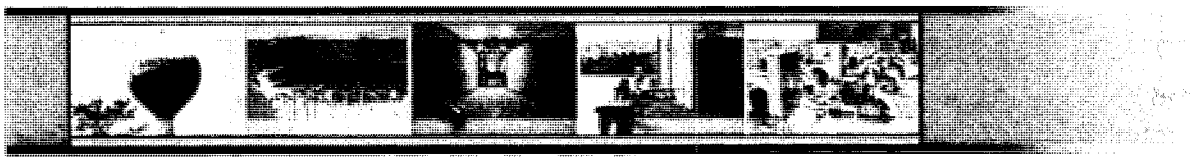
- 80% High CoF
- Most of the rest not yet rated
- Need to revaluate CoF ratings (are all these assets really “high” CoF?)





Risk Management Strategy





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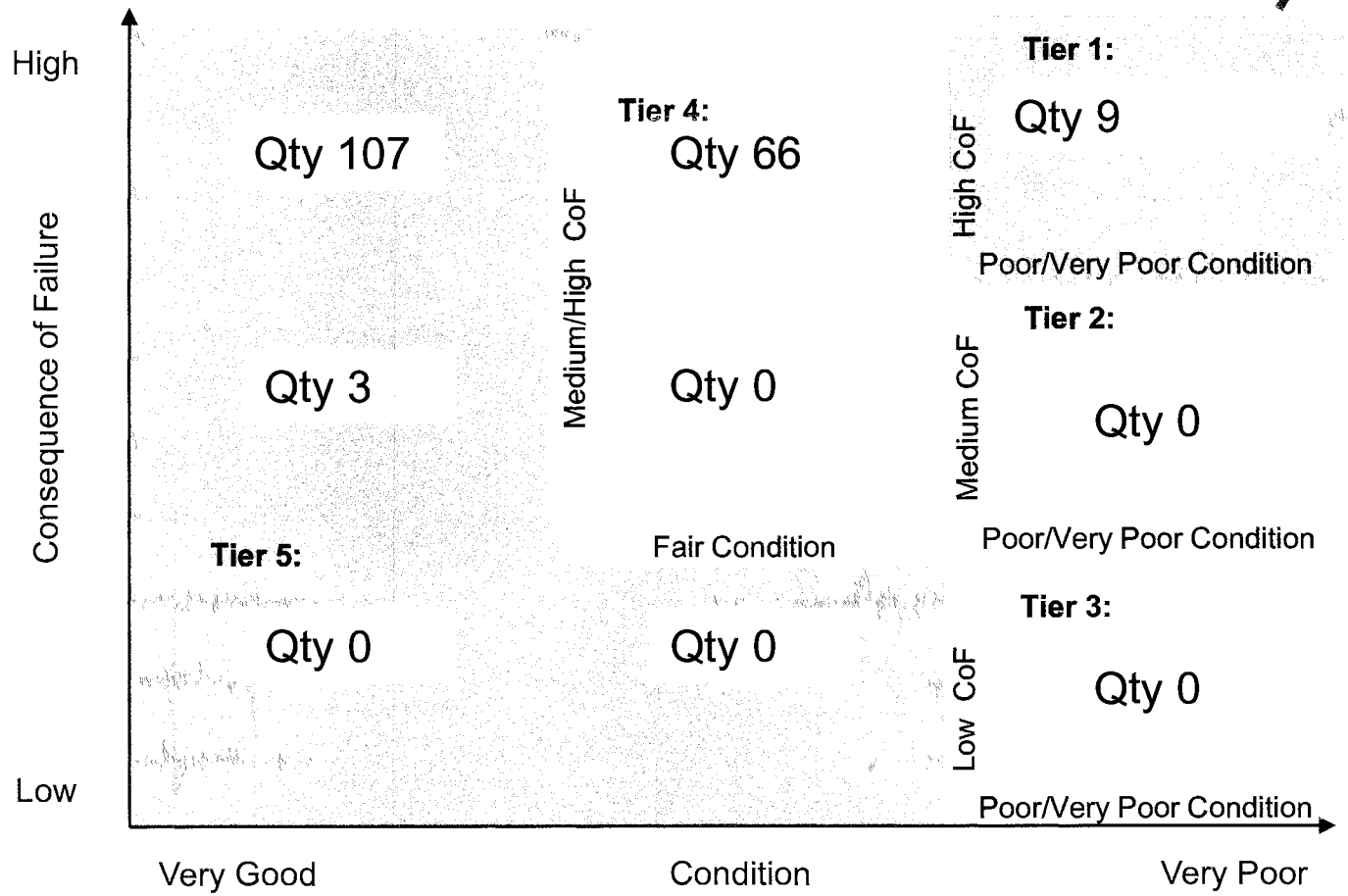
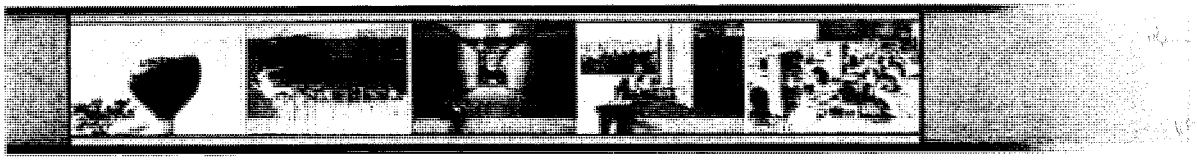
Risk Map and Strategy – Original CoF ratings

High CoF Assets – What is impact?

Almost all assets sit up here with high CoF in current view





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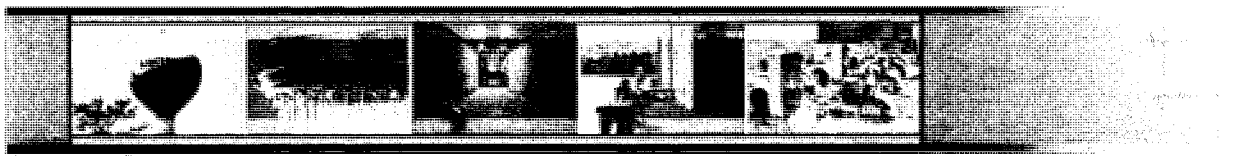
Consequence of Failure Rating

- The following CoF rating scheme was applied to refine Risk Map

Consequence of Failure Rating	Asset Groups
5 – Very High	Not Used
4 – High	Force Mains Most WWTPs, Lagoon Structures Wells - in single-well system Water Tower
3 - Medium	Gravity Sewer Mains Wells - in multi-well system Lift Stations (varies) Booster Pump Water Mains (6+")
2 - Low	Water Mains (2-4")
1 – Very Low	Not Used



Risk Map and Strategy - Updated

Field Input Required to Confirm

Build asset information and monitor condition over time

Develop appropriate longer-range plans

Confirm condition, monitor over time

Develop appropriate longer-range plans

Highest priority
Detailed condition information
Prioritized action plan
Risk management plans

Next priority
Detailed condition information
Develop action plan
Risk management plans

High

Low

Consequence of Failure

Tier 1:

GST	1
Hydro Tank	1
Total	2

High CoF

Poor/Very Poor Condition

Tier 2:

Aeration equip	1
Control Panel	2
Generator	2
Sludge equip	3
Total	8

Medium CoF

Poor/Very Poor Condition

Further review needed

Tier 3:
0 Total

Low CoF

Poor/Very Poor Condition

Tier 4:

Generator	1
Force Main	1
Sludge equip	1
WWTP Structure	5
Total	8
Gravity Main	13
Hydrant	6
Water Main	4
Pump	7
Various others	24
Total	54

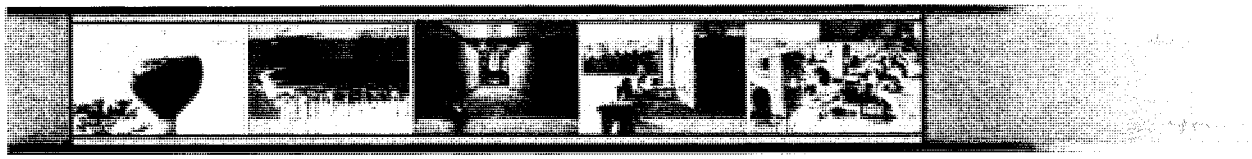
Medium/High CoF

Fair Condition

Tier 5:
Remaining 154 Assets

Develop R&R plans based on Level of Service implications
More likely on program basis

Very Good — Condition — Very Poor



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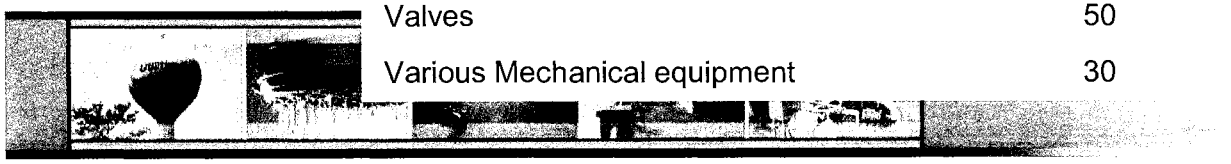
Expected Useful Life (EUL) Assumptions

Blower – centrifugal	25
Blower – rotary vane	20
Concrete Structure	60
Chemical Pump	10
Control Panel	30
Emergency Generator	40
Main (force, gravity, water) – CIP	100
Main (force, gravity, water) – DI	80
Main (force, gravity, water) - PVC	55
Main (force, gravity, water) - AC	70
Main (force, gravity, water) – HDPE, Plastic	70
Main (force, gravity, water) - VCP	45
Water tanks	60
Hydrotanks	45
Well hole	75
WWTP metal tanks	50
Pumps	25
Motors	25
Meters	25
Valves	50
Various Mechanical equipment	30

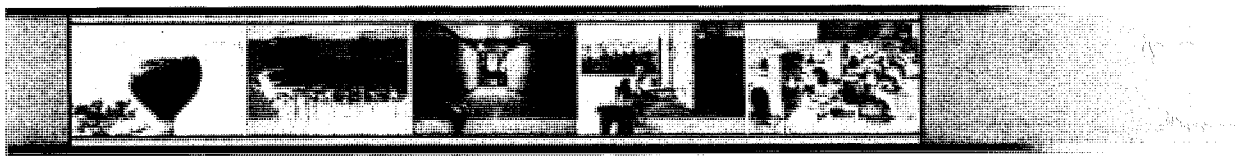


Average Pipe Service Lives

Derived Current Service Lives (Years)	CI	CICL (LSL)	CICL (SSL)	DI (LSL)	DI (SSL)	AC (LSL)	AC (SSL)	PVC	Steel	Conc & PCCP
Northeast Large	130	120	100	110	50	80	80	100	100	100
Midwest Large	125	120	85	110	50	100	85	55	80	105
South Large	110	100	100	105	55	100	80	55	70	105
West Large	115	100	75	110	60	105	75	70	95	75
Northeast Medium & Small	115	120	100	110	55	100	85	100	100	100
Midwest Medium & Small	125	120	85	110	50	70	70	55	80	105
South Medium & Small	105	100	100	105	55	100	80	55	70	105
West Medium & Small	105	100	75	110	60	105	75	70	95	75
Northeast Very Small	115	120	100	120	60	100	85	100	100	100
Midwest Very Small	135	120	85	110	60	80	75	55	80	105
South Very Small	130	110	100	105	55	100	80	55	70	105
West Very Small	130	100	75	110	60	105	65	70	95	75

LSL indicates a relatively long service life for the material resulting from some combination of benign ground conditions and evolved laying practices etc.
SSL indicates a relatively short service life for the material resulting from some combination of harsh ground conditions and early laying practices, etc.

Source: AWWA Study "Buried No Longer: Confronting America's Water Infrastructure Challenge"



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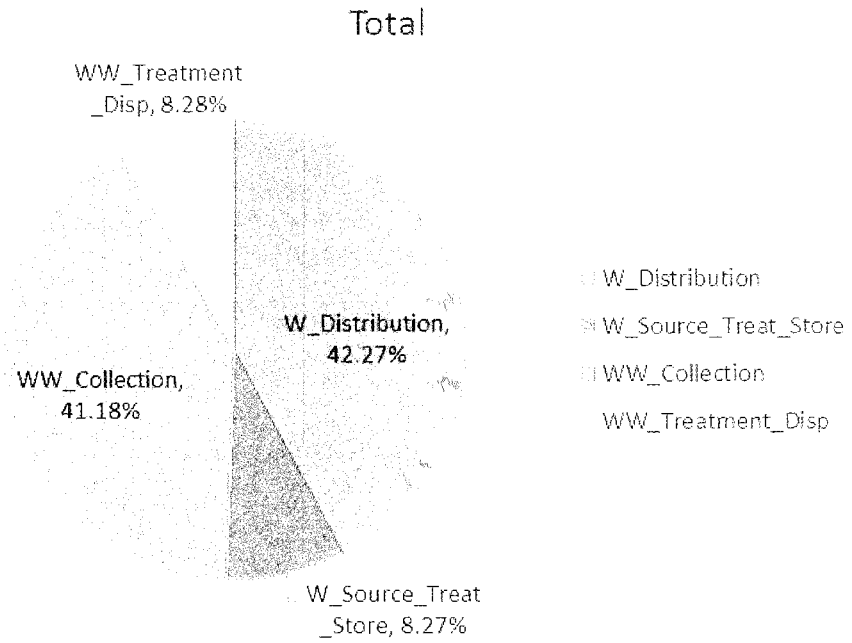
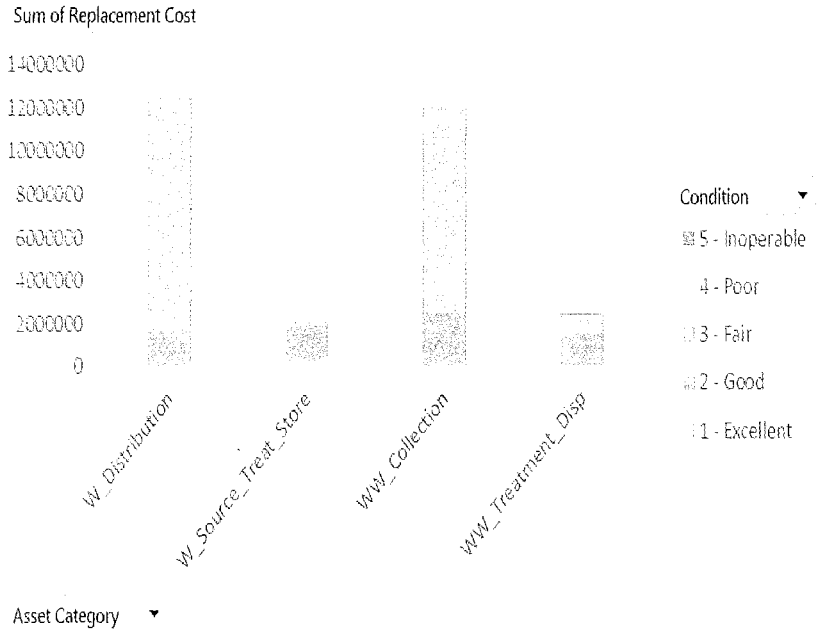
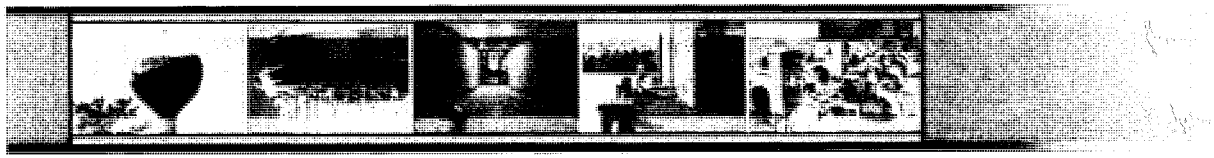
1st Cut Replacement Cost





- Rough estimate on replacement values
- $29.4 M replacement cost
- 80% in mains/20% plant



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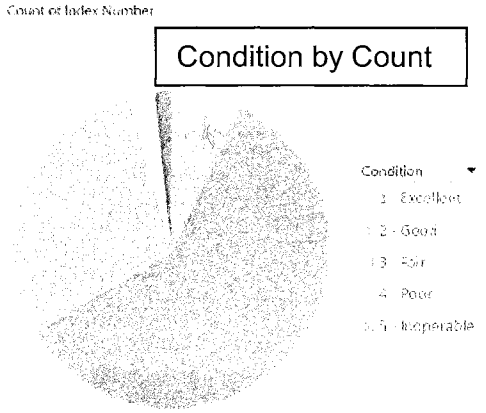
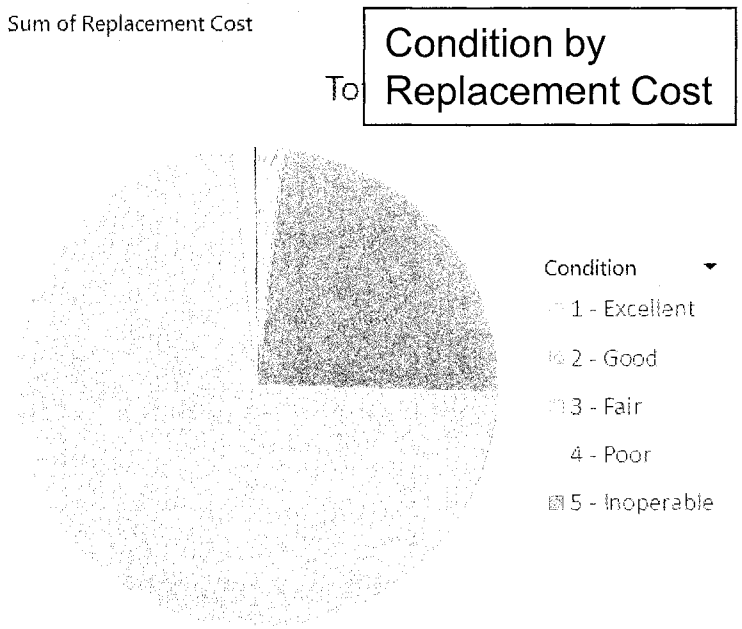
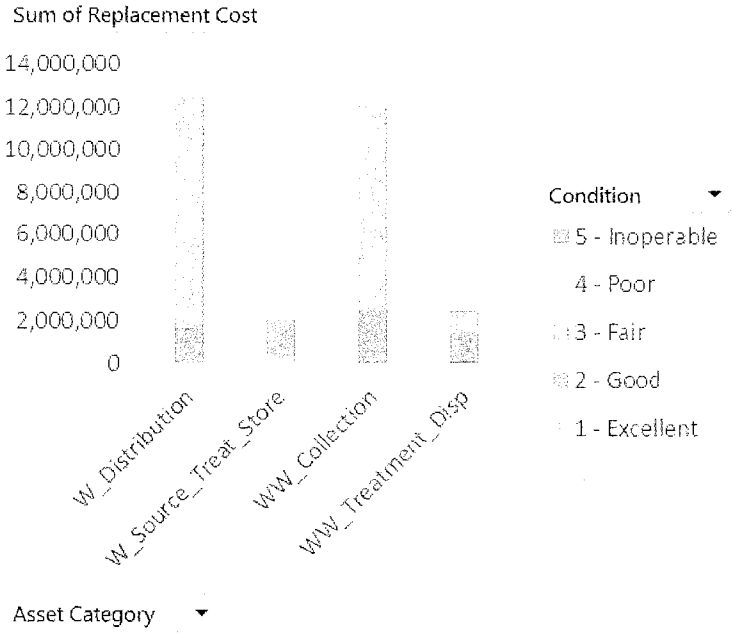
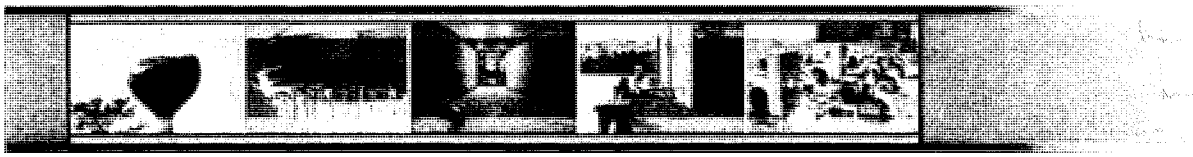
Condition distribution



- Whereas by count asset fleet mostly "good" condition, by value most is "fair"
  - Better condition assessment information needed
- Most "fair" assets are in collection and distribution (mains) - further info needed







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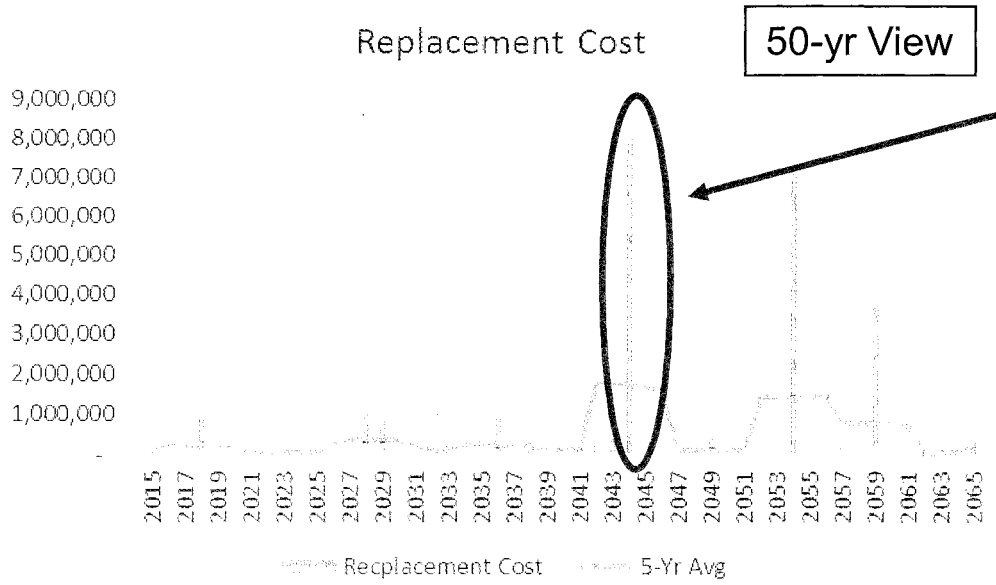
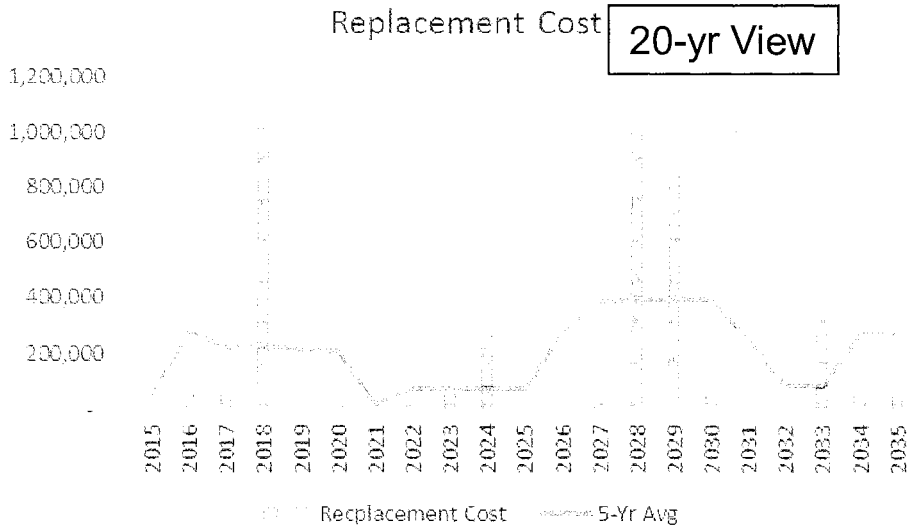
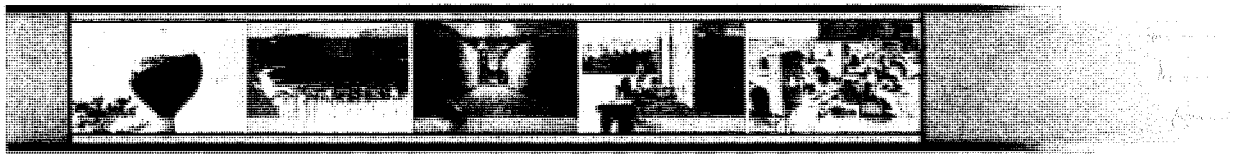
1st cut R&R Profile



Replacement of 1974 AC mains – assumes 70 yr life
Obviously will not all fail within one year but indicates a significant demographic hump for replacement/rehabilitation.

Caution – Preliminary Analysis Only - Based on EUL and cost assumptions without field operations input and evaluation





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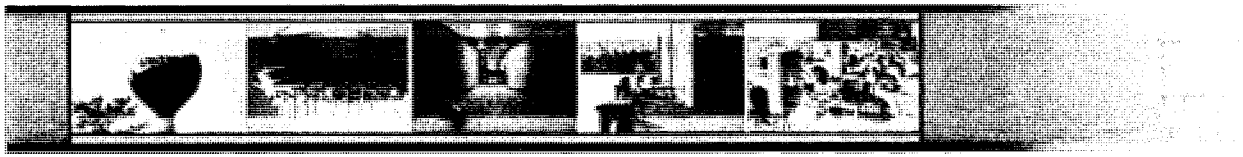
Asset-related issues from Draft AMPs – for further investigation

- Deficiencies in the collection system noted. Twin Lakes doing rehab. Registry rating of fair, need further evaluation and assessment criteria for consistency
- 70 EUL used here (~30 yrs remaining) for AC collection system – may be optimistic.
  - The R&R profile based on 70 yr EUL - May need to adjust
  - May need better condition data on collection/distribution system (see RedZone GIS mapping & info for review when complete)
- Possible short sections of sewer pipe under the lake at Twin Lakes. Further review and should track as a specific asset flagged as High/Very High CoF
- Twin Lakes: Failures of DI pipe (very early vs EUL of 100 yrs!)
- IWSI: Failures in distribution system - reduction is R&R priority. Mapping of failure areas
- WSC of IN : Collection system needs additional review and assessment (RedZone GIS mapping & info)
- Some service line issues noted – may want to include them as a separate line item so R&R profile can accommodate them



Next Steps

- Validate CoF, cost, and EUL information
- Review condition of key assets
- Refine risk map and identify risk management needs
- RedZone GIS Mapping & Evaluation asset project – review once complete
- Update R&R profile
- Additional input to cap planning process