

## **FEP Action Plan**

### **Replacement of 5 pumps Repair of major and minor concrete cylinders**

**Date Written: May 9, 2012**

#### **History:**

Luna Pier has experienced flooding and damage for over 100 years. In 1985 US Corp approved the permit for the concrete and earthen dike system costing over \$3 Million dollars. The agreement stated that the City would maintain and repair this dike system and would establish a committee and a fund to pay for repairs and maintenance.

The concrete dike system is badly cracking and crumbling. It is in need of both minor and major repairs. The 5 pump stations are over 40 years old with little maintenance being done by the city over the years. It is time to begin to purchase and replace pumps that are failing.

#### **Scope of Project:**

##### **Pumps:**

The FEP chairman and vice chair met with city Administrator Greg Stewart and DPW Supervisor Randy Wipple to discuss alternatives to replacing all the pumps at one time due to the cost of this project. The FEP committee held a special meeting on May 2, 2012 and a motion was made and passed to replace the pumps in the Pump station on North 1<sup>st</sup> Street (3 pumps) and the pump station on Lakewood at 15<sup>th</sup> Street (2 pumps) and to purchase two extra pumps to have on hand in the event there was an emergency and pumps were needed immediately. Pumps take 6 to 8 weeks to be delivered.

##### **Concrete Dike Cylinders:**

Stacy Grimes, Vice Chairman has been working with Mid-American Gunite of Frenchtown Township, MI in getting quotes. Ric Murray and Stacy have walked and marked the dike showing areas that need major repairs. **A**

**quote was received (see attached).** This topic was also discussed by Stacy Grimes, Ric Murray, Greg Stewart and Randy Wipple and also in the special FEP meeting of May 2<sup>nd</sup>. Again a motion was made and passed to begin to repair the cylinders that have major cracks and damage including the top concrete of the sill. The plan is to repair the most severely damaged cylinders first. After they are complete and examined by the DPW and FEP the committee will then ask the administration to authorize the completion of the next phase of cylinders. 50 to 75 cylinders will be repaired.

### **Description of Test Area:**

**Pump Stations:** North First Street (across from the American Legion) and on Lakewood @ 15<sup>th</sup> Street.

**Concrete Cylinders:** As indentified in pictures. Includes places in the South and North areas of the wall.

### **Urgency:**

The pump stations can not keep up when Luna Pier has heavy rain and this puts extra strain on our WWTP. Only a few of the pumps have been replaced in the past and the two stations noted in this document are the weakest pumps in our system and must be replaced as soon as possible. Due to the urgency the FEP committee met on May 2<sup>nd</sup> so this document could be presented to the Mayor and City Council for immediate action. We need our City to issue approval and get bids for these two stations.

As you can see from the pictures of the concrete dike some of the major cracks have weeds growing and are creating instability of our flood system. The weakest cylinders and concrete tops must be repaired and filled with gunite before we have another freeze and thaw season.

### **Time Line:**

Begin June 2012 on cylinder repairs. Pump replacement will begin as soon as the pumps arrive, approx July 2012.

### **Estimated Cost:**

**Pumps:** \$94K to \$110K

**Concrete Cylinders: \$80K total. The plan is to do about 20 cylinders at a time, the most damaged first. Cost will be \$18K to \$19K for each phase of the repairs.**

**The money will come from the Flood Tax Levy account to pay for both of these projects up to \$180K. The FEP committee and Administrator do not want to draw on the USDA loan at this time due to the additional costs, various limitations, and time line.**

### **Possible Vendors:**

**Pumps: Kennedy (Bidding process)**

**Cylinders: Mid-American Gunite (no bidding necessary for each phase)**

### **Recommendations:**

**The Flood and Erosion Protection Committee asks that our Mayor and City Council authorize the spending of less than \$20,000 for a first effort on the most critical concrete dike wall cylinders. Upon inspection, an additional amount of no more than \$20,000 would be spent to repair the next level of damaged cylinders along the City's concrete walls. After that inspection the committee plans to spend an additional amount of no more than \$20,000 for additional concrete dike walk and wall repair. Additional dike repairs will continue this summer capping our expenditures at approximately \$80,000.**

**We also recommend the repair and replacement as needed for the N. 1<sup>st</sup> Street and 15<sup>th</sup> Street pump stations, capping the expenditure at \$110,000. It is understood that the pump station repair will require a public bid.**

**Respectfully Submitted by:**

**Jim Gardner, FEP Council Representative**

**Ric Murray, FEP Chairman**

**Stacy Grimes, FEP Vice Chair**

**Sue Lopes, FEP Secretary**

**Members: Charles Gardner, Robin Walton,**

**Alternate Member: Cheryl Krakow**