OIL SPILL WATER CRISIS 2016

**TEAMWORK IS KEY** 

#### Wednesday, July 20, 2016

#### **HUSKY OIL SPILL**

A rupture occurred in a Husky Oil Pipeline resulting in approximately 250,000 liters of crude oil and other chemicals being released in the North Saskatchewan River about 380 kilometers upstream from the City of Prince Albert.





- Event Timeline
- Wednesday, July 20 Oil Leak Detected in pipeline
- Thursday, July 21 City Notified of Oil Spill in River
- Saturday, July 23 City Emergency Operations Activated
- Monday, July 25 City Notified to Shut River Intake, State of Emergency Declared & Water Restrictions Imposed



### EOC was activated Saturday, July 23rd to:

How to protect the intake in the North Sask River to prevent hydrocarbons from entering the WTP

Immediate activation of the water reserve system

Taking action to prevent the City's water supply from running out

Review of large water users (Rural Water)

Make plans on accessing an alternate water supply that could be utilized for water supply to residents



#### **EOC FOCUS**

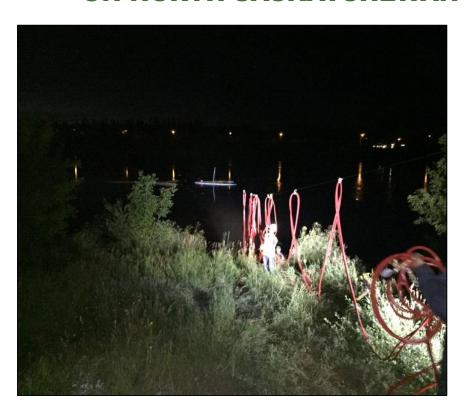
Water provided to our citizens was never compromised. The City continued to provide safe potable water as a priority.





# **Sunday, July 24, 2016**

CREWS WORK OVERNIGHT TO SECURE WATER INTAKE
ON NORTH SASKATCHEWAN RIVER FROM IMPENDING OIL







### **Water Conservation Bylaw**

**APPROVED BY CITY COUNCIL MONDAY, JULY 25, 2016** 



Closure of Car Washes, Laundromats, and the City's Municipal Water Crane



Closure of Water Park, Paddling Pools, Spray Parks, outdoor irrigation systems



Prohibition of washing of automobiles, trucks, trailers, and other vehicles and the watering of lawns and gardens

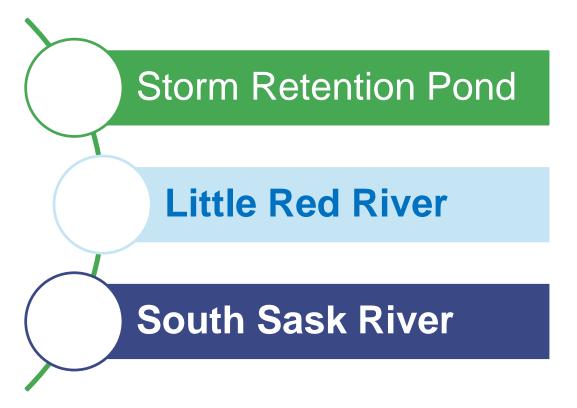


### Monday, July 25, 2016, 6:00 a.m.

#### **CLOSURE OF THE CITY'S INTAKE SYSTEM**

The most immediate challenge the City faced was that we had 48 hours worth of water supply in its treated water reservoirs.

The City worked to identify three alternate water sources as follows:





First Alternate Source - Storm Water Pond





#### **Storm Retention Pond**

#### Could provide five (5) days of raw water.

A contractor commissioned a line from a storm manhole near the river to connect it to the City's WTP.

The storm water retention pond was pre-treated with potassium permanganate by staff using a canoe and hand application.

The City opened the valve to release the water and diverted it from the storm outfall manhole to the Water Plant low lift pump house. The Storm Pond holds 47 million liters.





Second Alternate Source – Little Red River (Spruce River)





#### FRIDAY, JULY 29, 2016 - LITTLE RED RIVER



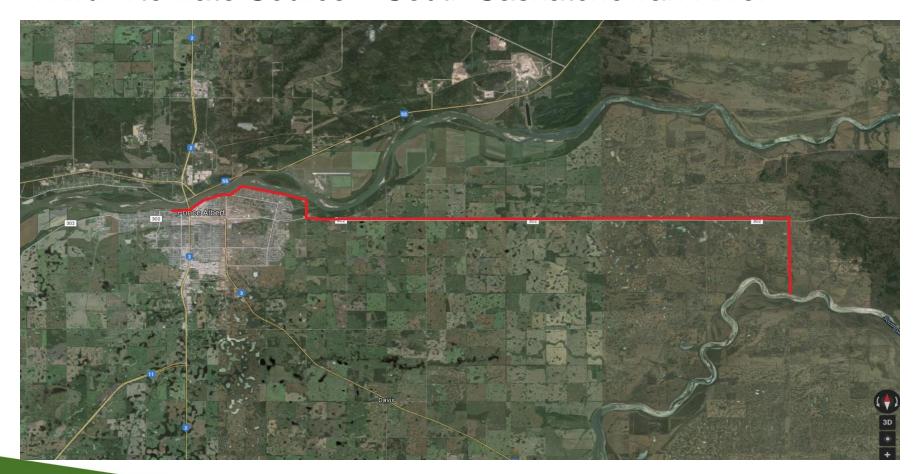
The City engaged a contractor to install a 6 kilometer line from the Little Red River to the sediment basins adjacent to the WTP. The Little Red water was pre-treated in the basins and pumped to the low lift pump house. Which was then treated through the WTP providing safe potable water. 8 Pumps were needed to move 22.5 million litres of water per day.



The City had to work with Water Security
Agency to open the gates to release more
water from the Anglin Lake, which would
flow down to Spruce River to the Little Red
River Park. Took approx. 3 days for the flow
to reach Little Red River. Difficult source of
water to treat at the WTP due to organics.



Third Alternate Source - South Saskatchewan River





Third Alternate Source – South Saskatchewan River



- Capable of supplying approximately 17.5 million litres of water per day over a 30+km line with 15 pumps
- Relatively easy source for treatment.
- Occasionally used in conjunction with Little Red River

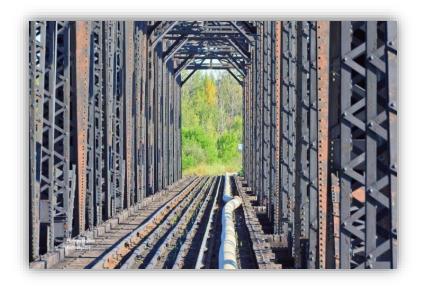


#### THE PIPELINES GO THROUGH THE CITY



Carlton Trail Railway provided assistance to the City using a train to bring the pipeline across the train bridge as shown below.







# Friday, September 16<sup>th</sup>

#### CITY RECEIVES THE GOOD NEWS

On Friday, September 16, the Water Security Agency gave municipalities the green light to resume using water from the North Saskatchewan River - with conditions. The City of Prince Albert implemented a 3 part multi-barrier system at its water treatment facilities to ensure that any hydrocarbons resulting from residual oil that remains in the North Saskatchewan River are removed from the final water delivered to residents.



#### Impact to the City

- Cooke Municipal Golf Course The City shut down the irrigation system and rented required equipment to pump water from the retention pond at the Golf Course to keep greens alive.
- Art Hauser Centre The City rented the required equipment and hauled water to make ice to ensure ice was ready for opening of season.
- City's Water Park, Sprays Parks and all irrigation systems were shut down.
- Security was hired to patrol the Little Red River, the pipeline in the City and the Storm Retention Pond 24/7.
- Recreational Users of River (Boating, Fishing)
- Environmental Concerns







#### **Husky Energy Representative**

- Saturday, July 23<sup>rd</sup> City Manager was contacted by Media and Issues Manager from Husky Energy – looking for a point of contact on the media/communications front.
- Monday, July 25<sup>th</sup> City Manager contacted Husky Energy requesting a Husky Representative to be stationed in Prince Albert.
- Thursday, July 28<sup>th</sup> A Representative from Husky Energy was introduced to the EOC Team and became an active representative in the EOC and Partner's Meetings.
- Husky Representative remained active in the City until the mid-September.
- City still has regular meetings with Husky Representatives long term relationship.



#### **Husky Oil Financial Commitment**

- The City organized a pre-payment system for Prince Albert with Husky.
- City was able to secure \$5.0 million deposit.
- Once request was made, deposit was made to the City within 48 hours.
- Through the process, the City of Prince Albert was able to hire Deloitte to manage the financial interactions, costs, etc. relating to the Husky Oil Spill.
- Husky paid for all of Deloitte's costs.
- Have received approx. \$10.0 million.



#### **Technical Working Group**

- Once operations within the City were 'stabilized', the working group was tasked with a broad range of projects requiring a very diverse team. Tasks included:
  - Full time river sampling and analysis program for the City
  - Review of Unified Command Technical Reports
  - Helping to secure Permit to Operate for each alternate source
  - Discussions with Water Security Agency
  - Assessment of treatment capacity of the existing plant process for removal of various oil constituents



## **Partner's Meeting**

THE CITY MANAGER HELD DAILY MEETINGS WITH THE FOLLOWING PARTNERS TO ENSURE THEY WERE KEPT UP TO DATE ON THE PROGRESS BY THE CITY:

- Emergency Management & Fire Services
- Prince Albert Parkland Health Region
- Rural Municipalities & Rural Water
- Husky Energy Representative
- Prince Albert Grand Council
- Water Security Agency
- Federal Penitentiary & Provincial Corrections
- City Administration



# **Communications Strategy:**

- Emergency Call Centre dedicated call #
- Dedicated website
- Daily press conferences & media releases
- Media Interviews with National/International media
- Informational flyers for residents
  - July 25<sup>th</sup> Water Conservation Notices delivered to every homeowner in the City
  - July 29<sup>th</sup> Posters hand-delivered to those residents affected by the driveways
- Social Media ~ Twitter and Facebook
- EOC Daily Updates Internally

**KEY TAKEAWAY – "Managing the Message"** 



## **Assistance to the City of Prince Albert**

- The Department of Highways provided assistance with the pipeline along Highway 302 relating to traffic speed signage.
- The Prince Albert Police Service provided assistance regarding traffic enforcement along Line 302.
- Bylaw provided assistance in the enforcement of the Water Conservation Bylaw and enforcement of the pipeline in the City.
- City of Saskatoon provided assistance with treated water for large users and the rural users.



#### Demobilization – Monday, September 19<sup>th</sup>

- Operations Section turned over the oversight of demobilization to the Technical Working Group as City required administration to turn focus toward normal City Operations
  - Demobilization plans received from each water line contractor
  - Reinstatement of all crossings, parks, fences, buildings, etc. tracked
  - Damage done to river banks at intake locations assessed and South Saskatchewan River intake site rehabilitated
  - Detailed assessment of damage to Little Red River (Spruce River) conducted. Significant erosion due to dam construction and water impoundment discovered and project initiated for rehabilitation. This is currently being repaired.



### **Water Usage**

The average daily water usage before the oil spill was approximately 17.5 million litres per day.

During the water conservation period the flows were reduced down to an average of 8.1 million litres per day over a 7 day period (July 25 through 31st.)



## City's Innovation

The combination of 3 items provided the City of Prince Albert Water Treatment Facility with a multi barrier approach for the effective monitoring and removal of trace hydrocarbon contaminants from the raw water supply.



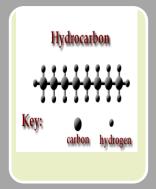


### **City's Innovation**



#### **#1 Innovation**

 Installation of a real time raw water Source Monitoring system.



#### #2 Innovation

- Continual dosing of powdered activated carbon (PAC) to remove dissolved hydrocarbons from raw water.
- City commissioned testing revealed high removal rates of dissolved hydrocarbons with PAC.



## City's Innovation



#### #3 Innovation

City commissioned testing revealed high removal rates of dissolved and particulate hydrocarbons with the City's existing Actiflo Clarifier Treatment Process.



#### **EOC**

The EOC was activated on Saturday, July 23<sup>rd</sup> and continued 'full-time' until Monday, August 8<sup>th</sup>, at which time it remained active but with reduced hours.





#### **EOC – Lessons Learned**

- 'Go big soon' internal and external resources
- Understand the scope of the issue and build the team accordingly – contact with 'field' is essential as is with the Policy Group
- Communication (internal to EOC, internal to organization and public) is absolutely critical – control the message with factual and defensible information
- Establish portals (phones, social media, website, etc.) to ensure members of the public can provide / ask for information
- Ensure the EOC location is 'restricted access' only



#### **EOC** – Lessons Learned

- Set key objectives and priorities based upon operational period time frames
- Establish short, intermediate and long term plans to address response, recovery and business continuity needs
- Review progress frequently and identify challenges
- Monitor 'the team' and ensure their wellbeing is maintained
- Document, document, document
- Trust and empower the team members to 'work their magic'
  - you will be amazed at what can be accomplished



# City of Prince Albert Winterized Temporary Water Supply

- The City issued an RFP for a winterized line for long-term planning if the situation were to occur in the future during the winter season.
- The City received a submission from a Contractor regarding 302 Route, as identified by the City of Prince Albert along with an alternate route.
- Quote for a winterized temporary water supply line for 120 days of operation totaled approx. \$10,400,000.
- Proven daily delivery of 18 million litres.
- Built in redundancy in the event of line freezing or pump failure.



# Questions?



