

Investigation Report

Fatality - Worker Drowns When Riding Lawnmower Slides Into Pond

August 3, 2017

## The contents of this report

This document reports Occupational Health and Safety's (OHS) investigation of a fatal accident in August 2017. It begins with a short summary of what happened. The rest of the report covers this same information in much greater detail.

## Incident summary

A general labourer was cutting grass with a riding lawnmower around the Aspenview Pond in Drayton Valley. When the general labourer approached a slope, the riding lawnmower slid into the pond and rolled upside down trapping the general labourer. The general labourer was fatally injured.

## Background information

Drayton Valley was incorporated into a town in 1957. In a 2016 Census, the Town of Drayton Valley (Town) recorded a population of 7235. Oil and gas is the primary driver of Drayton Valley's economy. Agriculture and forestry also play roles in the local economy. A pulp mill is located in the Town.

In previous years, the Town would hire up to 25 summer students as general labourers in the parks department to maintain the grass and vegetation. In the summer of 2017, only 8 summer students were hired and supervised by the lead hand for parks. There were approximately 130 workers for the Town.

General labourer 1 had been working for the Town for the past 2 summers as a general labourer tending to the parks and lawns. There were records showing general labourer 1 had received an orientation and Workplace Hazardous Materials Information System (WHMIS) training in 2016, however, there were no records of orientation or training of any sort in 2017. General labourer 1's usual equipment to work on when mowing lawns was a flail lawn tractor which was a tall lawnmower with a cab. There was no record of training for general labourer 1 on the John Deere 1545 Series II, 4WD, #12-254 riding lawnmower that was being driven by general labourer 1 on the day of the incident.

General labourer 2 was a third year summer student hired to maintain grass and vegetation. At the time of the incident, general labourer 2 was on the northeast end of the pond mowing. General labourer 2 had previously received WHMIS training in 2015 and 2016, and an employee orientation in 2016. There were no records of training for the summer of 2017 for general labourer 2.

General labourer 3 was a second year summer student hired to maintain grass and vegetation. At the time of the incident, general labourer 3 was at the north end of the pond facing away from

where general labourer 1 was mowing. General labourer 3 had received WHMIS training in 2016 and an employee orientation in 2016. There were no records of training for the summer of 2017 for general labourer 3.

General labourer 4 was a third year summer student hired to maintain grass and vegetation. At the time of the incident, general labourer 4 was on the opposite west side of the sidewalk from the pond. General labourer 4 had received WHMIS training in 2015 and 2016 and an employee orientation in 2016. There were no records of training for the summer of 2017 for general labourer 4.

The lead hand for parks (lead hand) had been working for the Town for 5 years. Part of the lead hand's duties were to assign the general labourers their tasks, and do ground maintenance around the parks and downtown areas. At the time of the incident, the lead hand was in a different part of town conducting other duties.

## **Equipment and materials**

### **John Deere 1545 Series II, 4WD, #12-254 (riding lawnmower)**

The riding lawnmower that general labourer 1 was operating was a cabless John Deere 1545 Series II, 4WD, #12-254 with a 72 inch mowing deck (Figure 3). It was purchased new by the Town from MMD Sales Ltd. in 2012. It weighed 570 kilograms (kg) without mower or fuel. The riding lawnmower deck was a 183 centimetres (cm) cutting width commercial side discharge. The riding lawnmower did have a rollover protection system (ROPS) and a seat belt. The operator's manual stated the operator should never operate equipment with the ROPS folded and seat belt on. If the ROPS were folded down, the operator was to ensure the seat belt was off to allow the operator to eject from the equipment during a rollover. The seat belt was required to be secured around the operator when the ROPS were up (Figure 3).

### **The Aspenview Pond (pond)**

The pond, built on February 24, 1984, was 211.28 metres (m) in length with a width of 24.12 m at the centre. The average depth of the pond was 1.5 m and at the point of contact approximately 1.1 m. The slope angles were north 23.81% over 9.67 m, northeast 14.20% over 20.41 m and northwest 18.41 m over 13.6 m. The pond was lined with clay and natural vegetation with a volume of 7 650 449 litres (L).

## Sequence of events

On the morning of August 3, 2017, at approximately 7:30 a.m., the Public Works crew gathered at 5309 54 Street, Drayton Valley's Public Works' office. The full time crew would meet in the assistant manager's office, and the general labourers would stay in the front room with the lead hand to receive their assignments. General labourers 1, 2, 3 and 4 were assigned by the lead hand to cut the grass at the storm drainage pond. The general labourer who normally operated the riding lawnmower was not at work that day; therefore, the lead hand assigned general labourer 1 to operate the cabbless riding lawnmower.

General labourers 1, 2, 3, and 4 went across the street to the Ford building where the various types of lawnmowers were being kept. The mowers had been serviced the night before. General labourers 1, 2, 3 and 4 left another building to do their regular duties of cutting grass around the Town.

Shortly after 8:30 a.m., general labourer 1 was cutting on the east side of the pond heading north. General labourer 2 was on the northeast side of the pond and general labourer 3 was at the north end. Both general labourers 2 and 3 were facing away from general labourer 1. At approximately 9:00 a.m., when general labourer 3 had made a loop around the pond, general labourer 3 noticed general labourer 1's riding lawnmower upside down in the pond. General labourer 3 jumped into the water to see if they could find general labourer 1. General labourer 3 then swam around to the other side and felt for general labourer 1. General labourer 3 could not flip the riding lawnmower without help so general labourer 3 ran out of the pond and called out to general labourer 2.

When general labourer 2 saw general labourer 3 waving to them, general labourer 2 rode their lawnmower over to the north end of the pond. General labourer 2 then noticed general labourer 1's riding lawnmower upside down in the pond. Together general labourer 2 and 3 attempted to flip general labourer 1's riding lawnmower on to its side. When their attempts to lift the riding lawnmower were unsuccessful, general labourer 2 ran over to a private residence and asked them to call 911. General labourer 2 then returned to the north end of the pond (Figure 1).

General labourer 4 was on the northwest opposite side of the sidewalk from the pond when general labourer 4 noticed that two of the riding lawnmowers were parked on the side of the north sidewalk. General labourer 4 continued to mow when they noticed general labourer 2 was talking to a person in one of the nearby private residences. As general labourer 4 was riding towards general labourers 2 and 3, general labourer 4 noted general labourer 2 was running back to the north side of the pond. General labourer 3 waved to general labourer 4 to come over, and general labourer 4 noticed the riding lawnmower in the pond (Figure 2).

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At approximately 9:24 a.m., general labourers 2, 3 and 4 waited at the side of the pond until emergency medical services (EMS) and the fire department arrived. Both the lead hand and assistant manager arrived before EMS. When the paramedics arrived at the site, they jumped into the pond and cut general labourer 1's seat belt. General labourer 1 was removed from the pond by the paramedics and transported to the Drayton Valley Hospital. General labourer 1 was transferred to the University of Alberta Hospital and was pronounced deceased.

When the riding lawnmower was pulled from the pond, the ROPS were found locked down (Figures 3, 4 and 5).

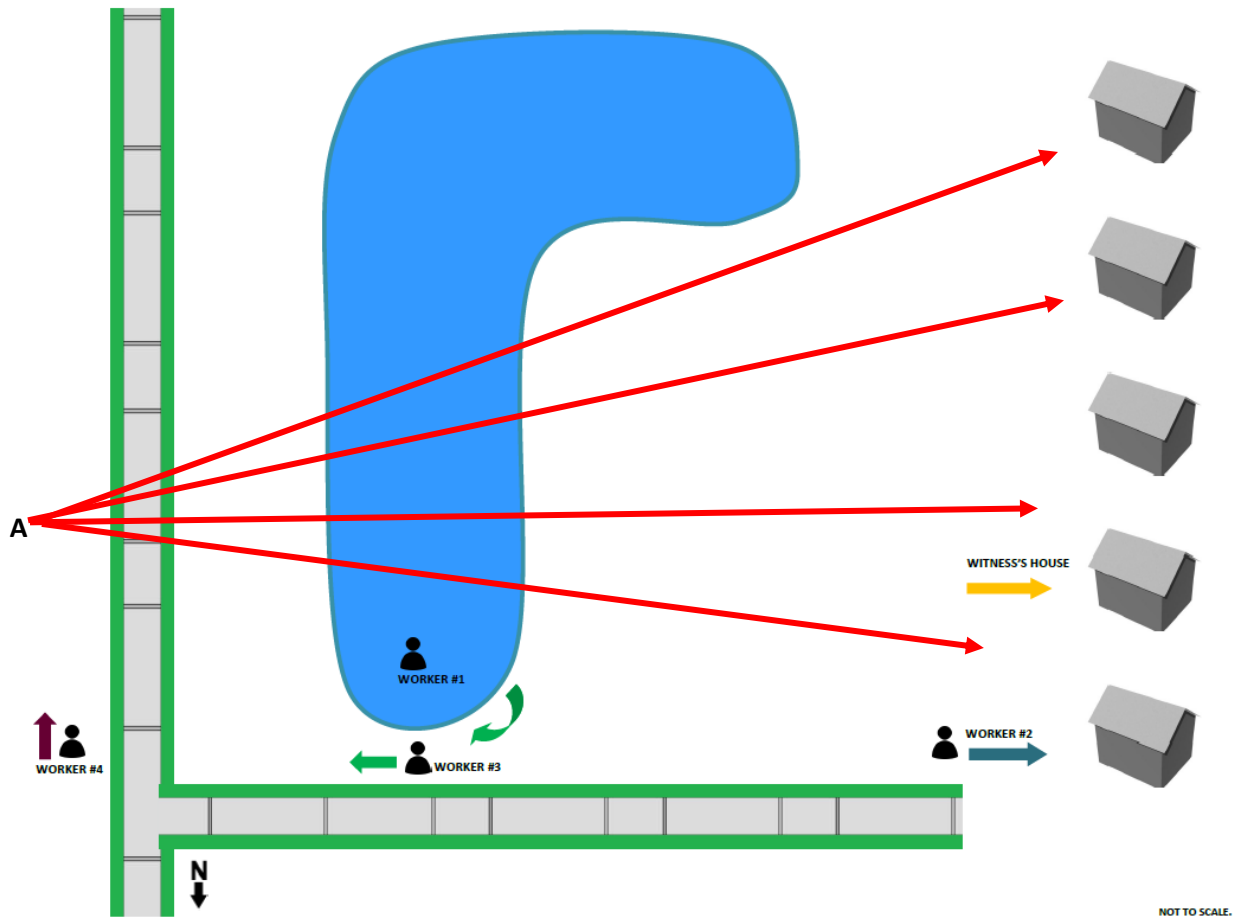


Figure 1. Map of the incident site noting locations of general labourers 1, 2, 3 and 4 in relation to the pond. The arrow on each worker indicates in which direction they were going when the incident occurred.

A. Private residences that backed onto the Town's property; general labourer 2 ran to one residence to ask them to call 911.



Figure 2. North end of the pond looking west.

A. Where the riding lawnmower operated by general labourer 1 slid into the pond.

#### Investigation and follow-up

OHS was advised of the incident through its call centre on August 3, 2017, at approximately 9:50 a.m. OHS officers seized the riding lawnmower involved in the incident (Figures 3, 4, 5 and 6). The riding lawnmower was towed away to a third party contractor where it was examined.



Figure 3. Left side of the riding lawnmower.

A. ROPS in the folded down position.





*Figure 4. Right side of the riding lawnmower.*

*A. Closer view of the ROPS in the folded down position.*



*Figure 5. Close up of the locked pin holding the ROPS in the folded down position.*



*Figure 6. Investigation photograph of incident location looking west.*

- A. Slope of 23.81% where the riding lawnmower slid into the pond and flipped.*
- B. General labourer 1 was travelling north and rounding the pond going west when it slid and rolled into it.*

## Completion

A review for enforcement action was completed on April 5, 2018, and it was determined that the file would be referred to Alberta Justice for review. The entire file was sent to Alberta Justice on June 6, 2018. On June 20, 2019, the Town of Drayton Valley was charged with 12 counts under the OHS legislation. The Town of Drayton Valley pled guilty to OHS Code Section 12(d) for failing to ensure that the John Deere riding lawnmower was operated in accordance with the specifications of a professional engineer or with the manufacturer's specifications which stated, "Do not mow near drop-offs, ditches, embankments, or bodies of water". On December 19, 2019, the Town of Drayton Valley was sentenced with a fine of \$25 000 inclusive of the 15% victim fine surcharge. In addition, they were ordered under the *OHS Act* Section 75 to pay \$300 000 in favour of the Alberta Municipal Health and Safety Association (AMHSA). The AMHSA will use the funds to address gaps in current training for workers and supervisors involved in lawn maintenance, including how to safely operate and maintain lawn mowing equipment, such as the riding lawnmower that was being used in this case and how to identify and control hazards. The target audience will be young workers and summer students and their supervisors, though it is expected that training will be given to other workers as well. All other charges were withdrawn.

This file was closed on April 28, 2020.

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**Signatures**

ORIGINAL REPORT SIGNED

March 4, 2020

Lead Investigator

Date

ORIGINAL REPORT SIGNED

March 4, 2020

Manager

Date

ORIGINAL REPORT SIGNED

April 25, 2020

Director

Date