

**Austin Lake, Kalamazoo County, Michigan**  
**Official South Basin Laminar Flow Aeration (LFA) Data Summary and Review**  
**Restorative Lake Sciences (RLS)**  
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**Preface:**

RLS conducted a complete data audit of all muck, aquatic vegetation, and water quality data relative to the LFA efficacy on the South Basin improvements. Apparently, previous reports did not have the actual year of data reported on the cover page but did have the date when the data was presented to the Austin Lake Governmental Lake Board (ALGLB) each year. This date was often found in the header but there was confusion about the actual year of data being presented. RLS corrected this by entering the proper annual date on each report which have all been re-sent to the ALGLB. This was also the source of confusion for the muck loss summary table presented by RLS at the public hearing on May 10, 2017. RLS has corrected that information and it is presented below.

**Muck Loss Data (collected annually at n=19 diffuser sites and n=45 control sites in the South Basin of Austin Lake):**

**2012 (collected 4 months post LFA)**

10.8 inch mean loss in muck in diffuser sites

6.0 inch mean loss in muck in control sites

**2013**

1.9 inch mean loss in muck in diffuser sites

1.9 inch mean loss in muck in control sites

## **2014**

3.34 inch mean loss in muck in diffuser sites

3.73 inch mean loss in muck in control sites

## **2015**

-16.93 inch mean gain in muck in diffuser sites

-15.54 inch mean gain in muck in control sites

## **2016**

5.40 inch mean loss in muck in diffuser sites

4.82 inch mean loss in muck in control sites

## **TOTAL NET MEAN MUCK LOSS OVERALL:**

4.51 inch mean loss in diffuser sites

0.9 inch mean loss in control sites

## **Range in Muck Loss/Gain by Year:**

### **2013-2014**

Diffuser = 1.6''-5.0''

Control = 0.4''-7.4''

### **2014-2015**

Diffuser = -29.0'' to -7.0''

Control = -43.5'' to +3.4''

**2015-2016**

Diffuser = -5.0" to +17.0"

Control = -14.2" to +21.5"

**Changes in EWM in South Basin (% Cover) by Year:**

**2012**

86% (baseline cover) to 23% cover

**2013**

14% cover

**2014**

3.9% cover

**2015**

0% cover

**2016**

0% cover