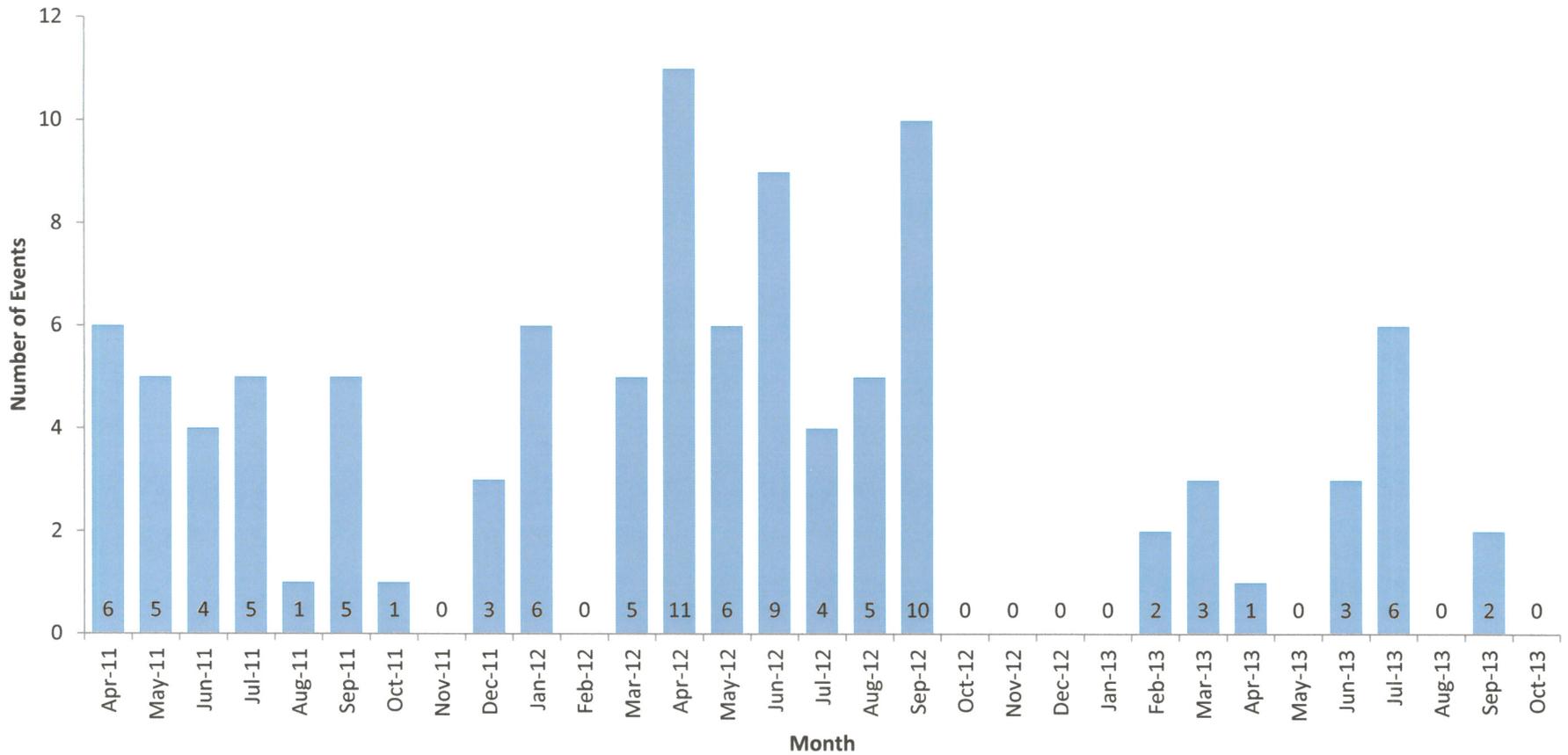


Cold Spring Brewing Co.
Odor Status Report
April, 2011 - Present

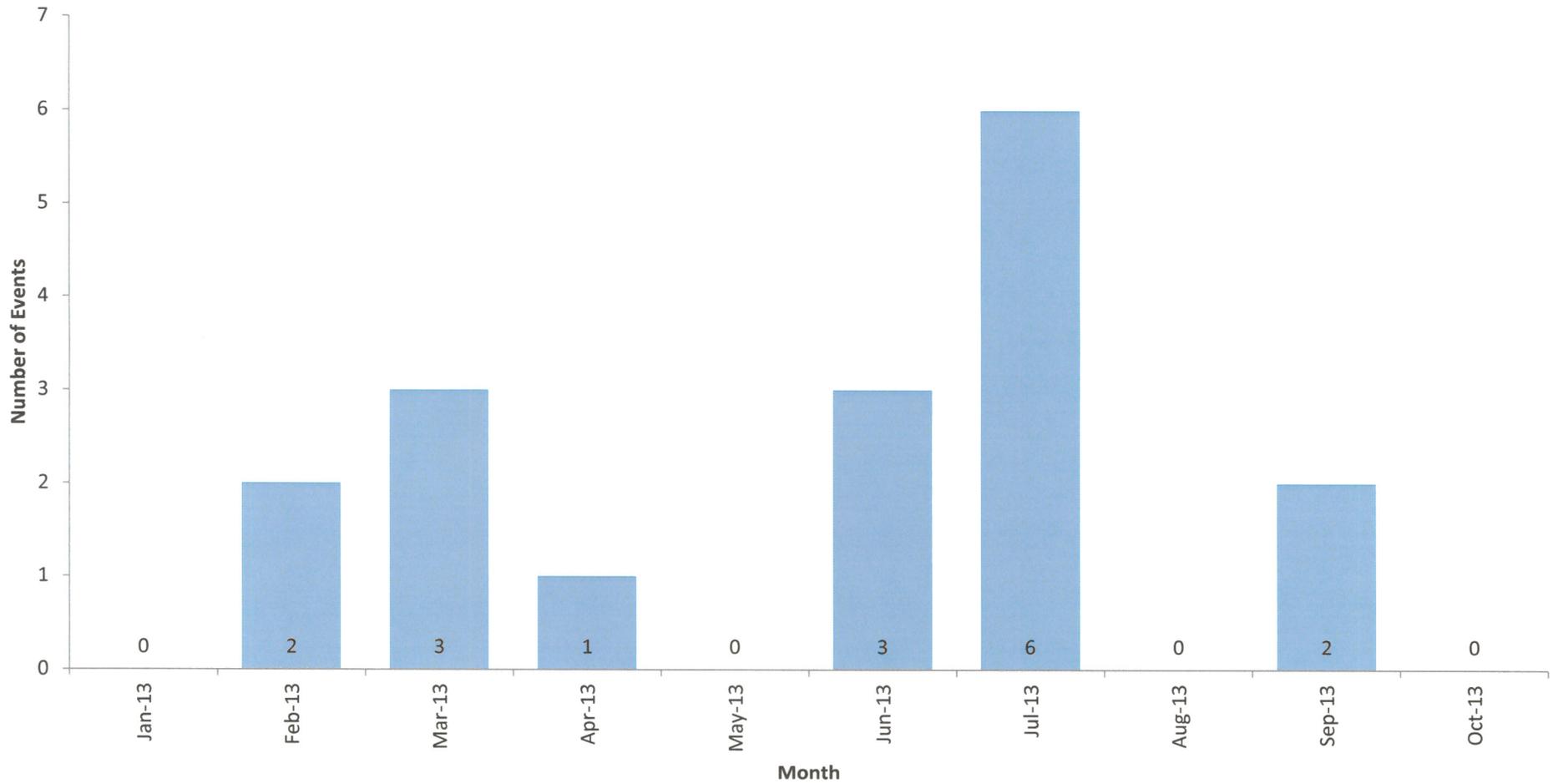
Total Number of Odor Event

Apr 2011- Oct 2013



**Data collected from 4/14/11 to 10/31/2013,
Cold Spring Brewery, MN*

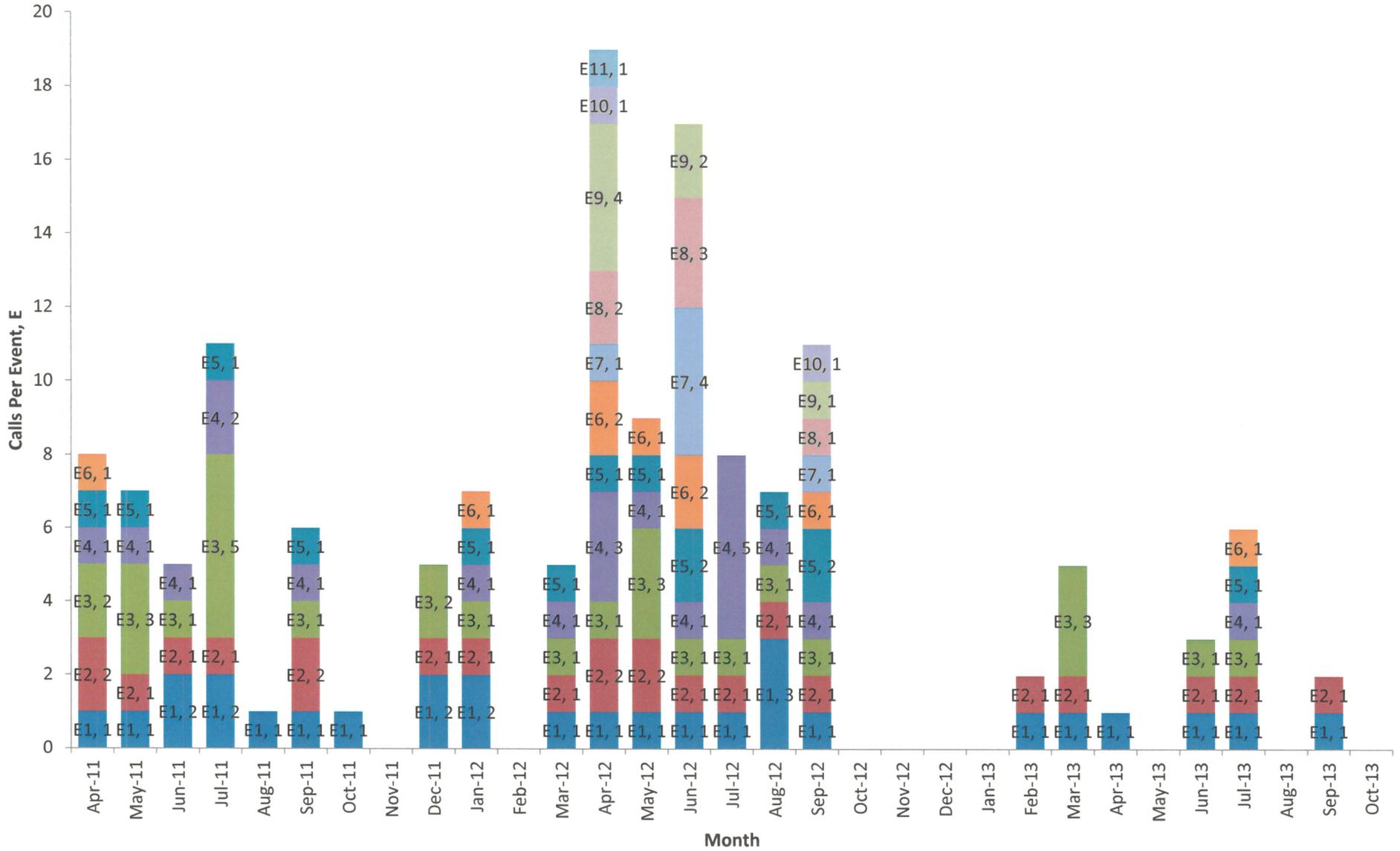
Number of Odor Events Jan 2013 - Oct 2013



**Data collected from 1/1/2013 to 10/31/2013,
Cold Spring Brewery, MN*

Total Reports Per Odor Event

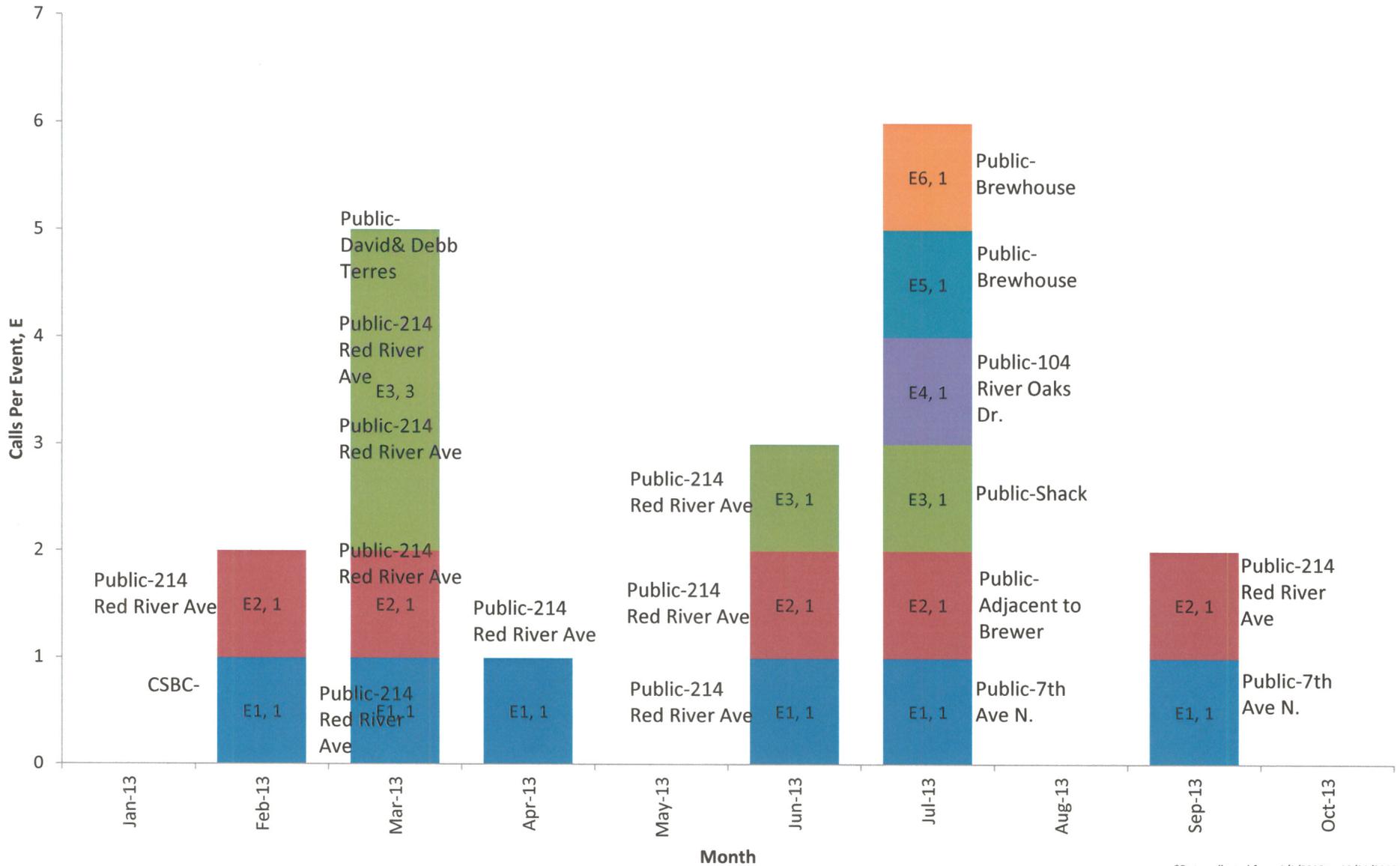
Apr 2011- Oct 2013



*Data collected from 4/14/11 to 10/31/2013, Cold Spring Brewery, MN

Reports Per Odor Event

Jan 2013- Oct 2013



**Data collected from 1/1/2013 to 10/31/2013, Cold Spring Brewery, MN*

**Odor Report
Statistics**

Cold Spring Brewery, Cold
Spring, MN

Starting Date 4/11/2011

Ending Date 10/8/2012

Individual Odor Events During

Time Period 1

**Odor Reports
Received**

Public 77

City 9

CSBC 41

Total Reports 127

**Average Odor Reports per
Month**

Public 4.3

City 0.5

CSBC 2.0

Total 7.1

**Odor Report
Statistics**

Cold Spring Brewery, Cold
Spring, MN

Starting Date 10/8/2012

Ending Date 10/31/2013

Individual Odor Events During

Time Period 1

**Odor Reports
Received**

Public 18

City 0

CSBC 1

Total Reports 19

**Average Odor Reports
per Month**

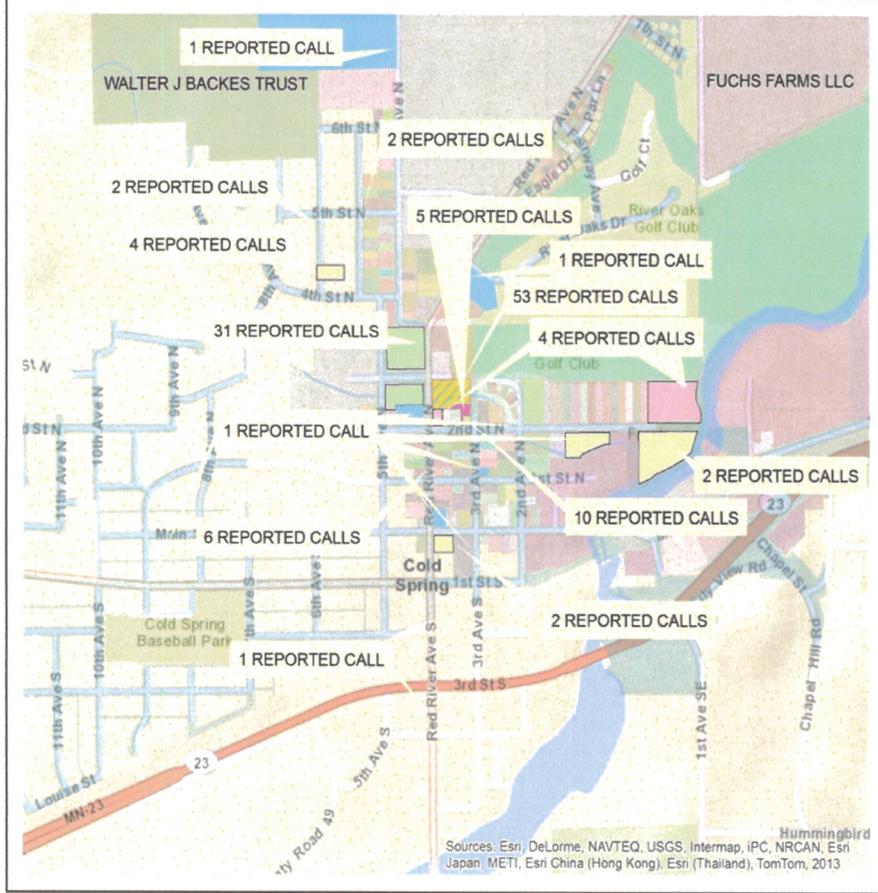
Public 2.0

City 0.0

CSBC 0.1

Total 2.1

ODOR REPORTS MAP



Frequency of Reports
Apr 14, 2011 -
Oct 30, 2013

ODOR REPORTS MAP COLD SPRING BREWERY

Legend

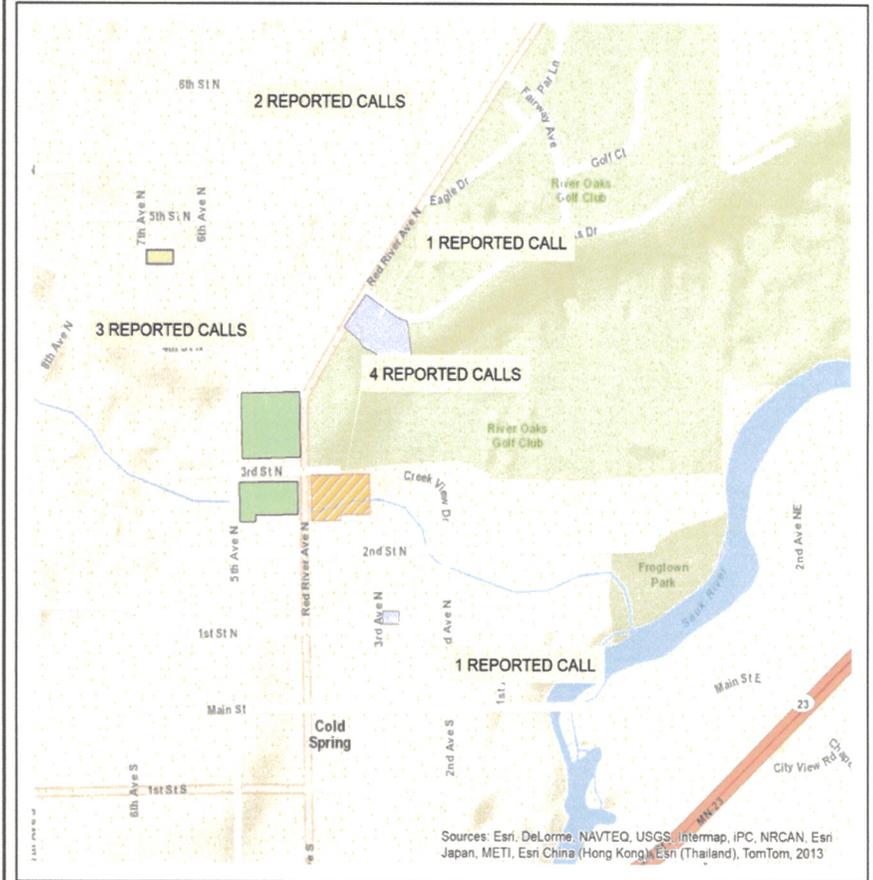


SCALE: 1 in = 1,425 ft



This map was created using MFRA's Geographic Information System (GIS). It is a compilation of information and data from various sources. This map is not surveyed or legally recorded map and is intended to be used as reference. MFRA is not responsible for any inaccuracies contained herein.

ODOR REPORTS MAP



Frequency of Reports
May, 2013 -
Oct 30, 2013

ODOR REPORTS MAP COLD SPRING BREWERY

Legend



SCALE: 1 in = 901 ft



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Chronology

November, 2011 – May, 2012

- Identification of emission sources
- Identification of odor sources from the emission points - including wet scrubber at current pretreatment plant and Metering/Sampling Building
- Identification of specific odor types

May, 2012 – December, 2012

- Chemical addition to address odor issues from pretreatment plant - wet scrubbers
- Identification of sampling protocol to quantify odor generation from Metering & Sampling Bldg (MSB). Data collected.
- Identification of several technologies to address MSB.
- Met with City staff to evaluate possible impacts at City POTW.
- Collected proposals from the specific technology suppliers
- Initiated trials with two treatment approaches, quantify effectiveness based on sampling protocol at the MSB location
- Continued evaluation of specific technologies using the MSB location as the major odor source
- Installation of dedicated odor data collection equipment
- Comparison of odor data from MSB with reported events
- Conduct trials with several technology suppliers to compare effectiveness at the MSB and the reported events

Recent Steps

January, 2013 –

- Evaluate source reduction of certain high strength side-streams
- Implement source reduction of selected side-streams
- Monitor odor reduction as a result of source reduction

Specific Changes

- Installed a positive pressure stainless steel cover on the basin in the metering building
- Spent most of the summer trialing yeast segregation
- Permanent install of an underground tank was scheduled for Monday- DNR stopped the operation due to Trout concern (re-assessing options now)
- Segregating our can crusher waste- we use this for weekend 'food' for the Treatment plant
- Segregate our can rinse water (clean water) and send it straight to the City
- Yeast and crusher waste segregation has proven to have an enormous effect on our treatability. Now we will install permanent structures to handle these waste streams

Thank You

Questions?