



Cowichan Valley Regional District | January 19, 2015

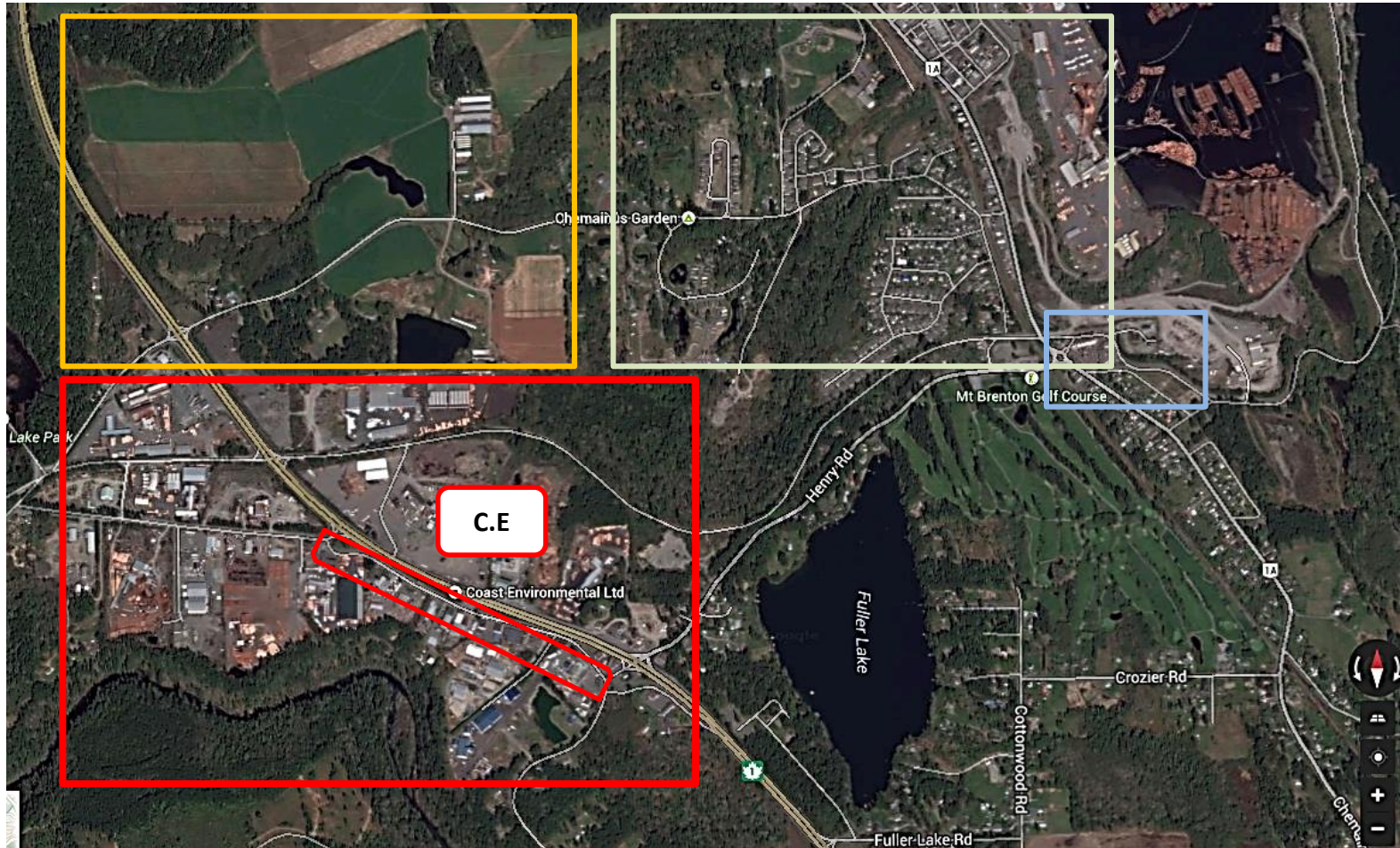
Chemainus Odour Survey

Summary of survey results at and
near Smiley Road

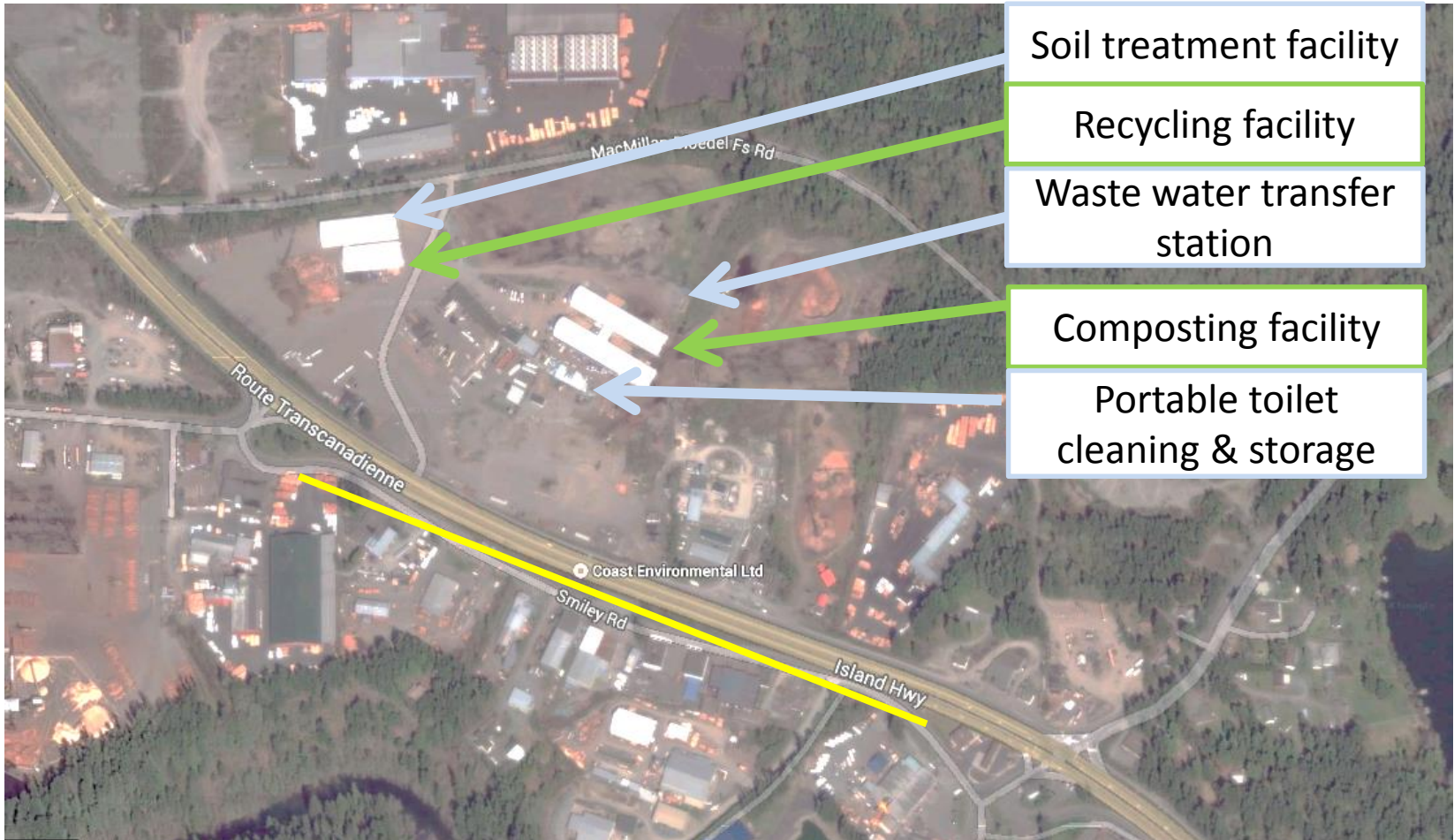
Presentation Purpose

To provide an overview of the odour survey with focus on the survey results at and near Smiley Road

Survey Areas in Chemainus



Coast Environmental's Operations



Why an Odour Survey?

- In 2013, Coast Environmental Ltd. (Coast) enclosed the majority of the compost operations in two buildings. Despite this, odour complaints were still frequently reported to the CVRD in 2014.
- **Needed:** Resources to frequently (e.g. daily) monitor odours around Coast and in the community, to respond to complaint and investigate odours immediately.
- **Survey Purpose:** to identify the magnitude of the community odour problem by systematically recording information on important odour variables e.g. frequency, intensity, duration, offensiveness, wind direction and location at which the odour occurred.

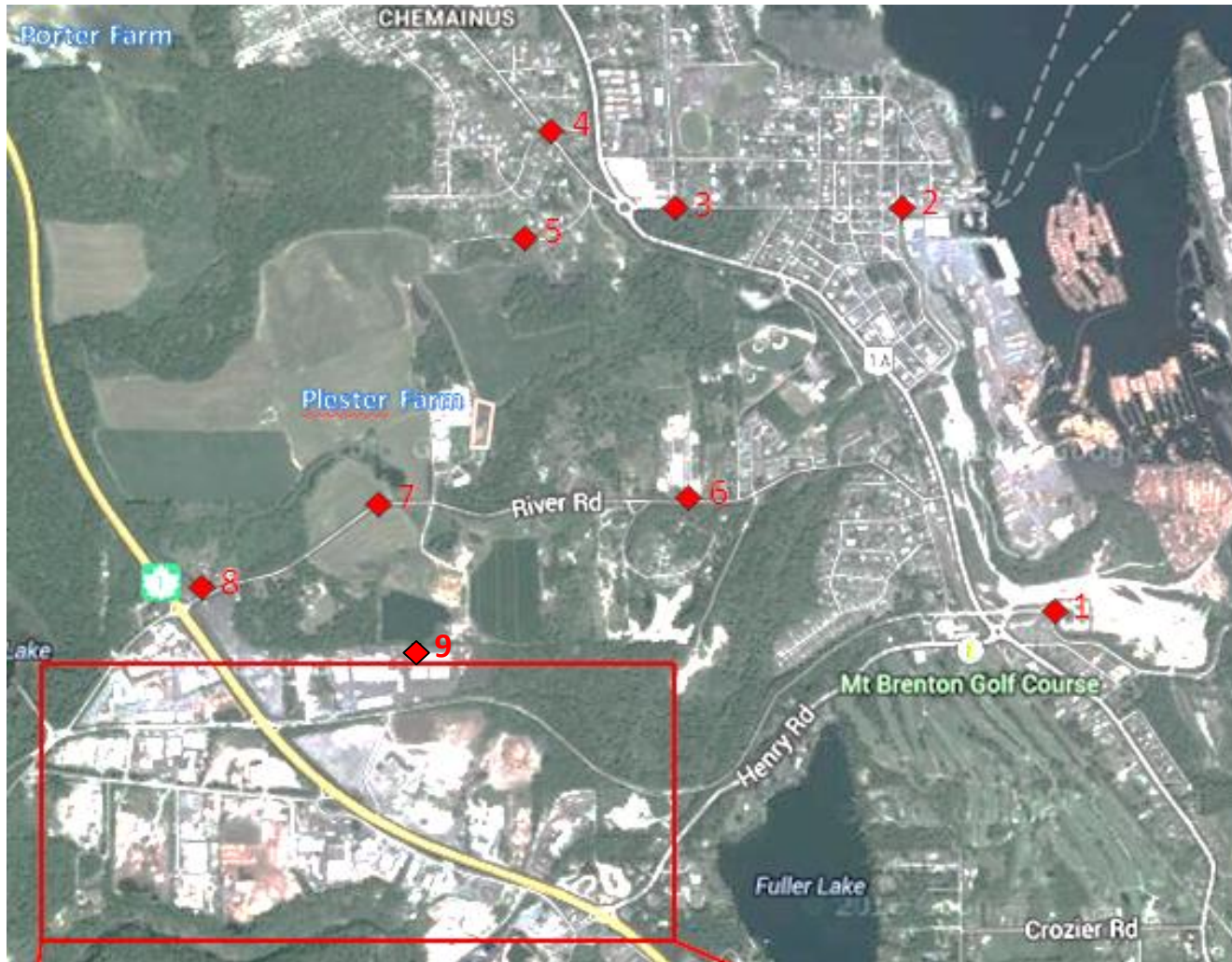
About the Survey

- In 2014, retained SENES Consultants to help design an odour survey and to analyse and prepare a report on the survey data.
- 18 survey stations in the community with focus on areas where odours had been reported by businesses and residents in the past i.e. the village at and near Smiley Road
- Survey carried out during May and June 2014 using two odour surveyors.

Odour Data

- At each station, the surveyors recorded:
 - wind speed and direction
 - the *predominant* odour intensity using a six-point scale: 0-‘no odour’ to 5-‘very strong/offensive’.
 - the frequency of *short-term wafts* of offensive odours
 - the odour *character* using ten descriptors:
1- fecal/sewage/manure, 10- rotten cabbage/egg/sulphur...
- In total ~80 survey readings per station

Survey Stations



Survey Stations at & near Smiley Road



Odour Characters at Station 9-16

- 9: Wood/Pine, with SW, SE winds: earthy/musty, sweet, garbage can
- 10: Wood/Pine/Lumber, chemical, musty, 1 instance of sewage
- 11: Lumber/Woody/Plant, 3 instances - Coast Y&G with N, NE winds
- 12: Coast – various operations, mostly Y&G: earthy/musty, pine, sweet, garbage, manure, rancid putrid occasionally.
- 13: Coast - various operations: earthy/musty, pine, sweet, garbage can, sometimes rancid, putrid. Also nearby operations, lumber, vehicle exhaust, etc.
- 14: Coast - various operations: earthy, musty, pine, sweet, garbage can, sometimes sewage and putrid odours
- 15: Chemical, including gasoline and vehicle exhaust and occasional lumber, citrusy chemical odour
- 16: Hydrocarbon type odour from vehicles. No persistent odour of any kind.

Station Results near/at Smiley Road

Frequency of Predominantly Offensive Odours:

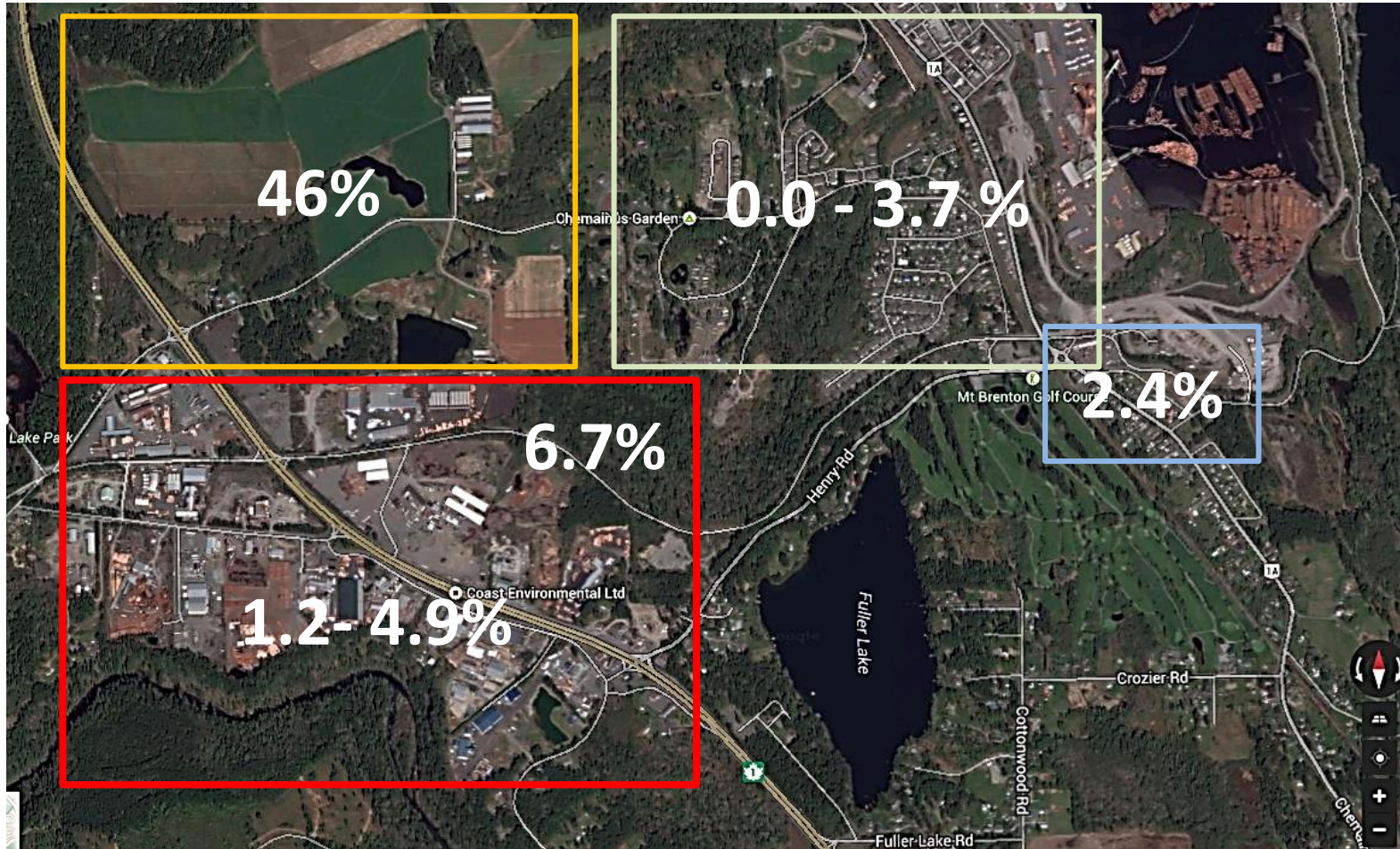
- Station 9 – McMillan Bloedel Fs Rd: 6.7 % of obs.
- Station 10 – Smiley Rd/River Rd: 0.0% of obs.
- Station 11 – Smiley Rd/Barkley Pl.: 2.5% of obs.
- Station 12 – near TD Auto Repairs: 4.9 % of obs.
- Station 13 – near Thermoproof W.: 1.2% of obs.
- Station 14 – near Speed Sincher Inc.: 2.4% of obs.
- Station 15 – Smiley Rd/Hendy Rd: 0% of obs.
- Station 16 – Henry Rd (east of TCH): 1.2% of obs.

Short-Term Offensive Odours

In addition to predominantly offensive odours, short-term offensive odours (<30 sec) were observed at the following stations and frequencies:

- Station 11 – Smiley Rd/Barkley Place: 1 occasion
- Station 12 – near TD Auto Repairs: 5 occasions
- Station 13 – near Thermoproof W.: 3 occasions
- Station 14 – near Speed Sincher Inc.: 1 occasion

Summary - Frequency of Offensive Odours



Nuisance Odours

- Nuisance odour not treated as air pollution under the Environmental Management Act
- In the absence of what constitutes a nuisance odour within the Province of BC, SENES Consultants used the World Health Organization's definition of a 'nuisance threshold' level to provide a benchmark:

“the concentration at which not more than a small proportion of the **population (less than 5%)** experiences annoyance for a small part of the **time (less than 2%)**.”

Overall Survey Conclusions

SENES Consultants concluded that;

- Coast does pose a nuisance odour impact on surrounding properties in the Industrial Park to a varied degree.
- Coast is not the source of odours in the village: instead a nearby farm appears to be the source.