

# BROOKSIDE LABORATORIES, INC.

## SOIL AUDIT AND INVENTORY REPORT

Name Los Robles Greens Golf Course City \_\_\_\_\_ State \_\_\_\_\_Independent Consultant Soil and Water Consulting Date 3/25/2019

|                                    |                                                                         |           |          |          |  |  |
|------------------------------------|-------------------------------------------------------------------------|-----------|----------|----------|--|--|
| Sample Location FAIRWAY            |                                                                         | 5         | 7        | 10       |  |  |
| Sample Identification              |                                                                         |           |          |          |  |  |
| Lab Number                         |                                                                         | 0086-1    | 0087-1   | 0088-1   |  |  |
| Total Exchange Capacity (ME/100 g) |                                                                         | 22.73     | 22.51    | 19.62    |  |  |
| pH (H <sub>2</sub> O 1:1)          |                                                                         | a 7.4     | a 7.4    | 7.2      |  |  |
| Organic Matter (360°C LOI) %       |                                                                         | 8.48      | 8.00     | 7.81     |  |  |
| Estimated Nitrogen Release lb/A    |                                                                         | 117       | 115      | 114      |  |  |
| ANIONS                             | SOLUBLE SULFUR* ppm                                                     | 14        | 112      | 12       |  |  |
|                                    | PHOSPHORUS MEHLICH III lb/A P as P <sub>2</sub> O <sub>5</sub> ppm of P |           |          |          |  |  |
|                                    | BRAY II lb/A P as P <sub>2</sub> O <sub>5</sub> ppm of P                |           |          |          |  |  |
|                                    | OLSEN lb/A P as P <sub>2</sub> O <sub>5</sub> ppm of P                  | 147<br>32 | 92<br>20 | 87<br>19 |  |  |
| EXCHANGEABLE CATIONS               | CALCIUM* lb/A                                                           | 5018      | 5902     | 4938     |  |  |
|                                    | ppm                                                                     | 2509      | 2951     | 2469     |  |  |
|                                    | MAGNESIUM* lb/A                                                         | 1674      | 1302     | 1218     |  |  |
|                                    | ppm                                                                     | 837       | 651      | 609      |  |  |
|                                    | POTASSIUM* lb/A                                                         | 1140      | 780      | 812      |  |  |
|                                    | ppm                                                                     | 570       | 390      | 406      |  |  |
|                                    | SODIUM* lb/A                                                            | 388       | 196      | 154      |  |  |
|                                    | ppm                                                                     | 194       | 98       | 77       |  |  |
| BASE SATURATION PERCENT            |                                                                         |           |          |          |  |  |
| Calcium %                          |                                                                         | 55.19     | 65.55    | 62.92    |  |  |
| Magnesium %                        |                                                                         | 30.69     | 24.10    | 25.87    |  |  |
| Potassium %                        |                                                                         | 6.43      | 4.44     | 5.31     |  |  |
| Sodium %                           |                                                                         | 3.71      | 1.89     | 1.71     |  |  |
| Other Bases %                      |                                                                         | 4.00      | 4.00     | 4.20     |  |  |
| Hydrogen %                         |                                                                         | 0.00      | 0.00     | 0.00     |  |  |
| EXTRACTABLE MINORS                 |                                                                         |           |          |          |  |  |
| Boron** (ppm)                      |                                                                         | 2.11      | 1.87     | 1.42     |  |  |
| Iron** (ppm)                       |                                                                         | 135       | 119      | 135      |  |  |
| Manganese** (ppm)                  |                                                                         | 66        | 102      | 61       |  |  |
| Copper** (ppm)                     |                                                                         | 2.31      | 2.66     | 2.04     |  |  |
| Zinc** (ppm)                       |                                                                         | 9.80      | 7.38     | 9.04     |  |  |
| Aluminum** (ppm)                   |                                                                         | 204       | 152      | 155      |  |  |
| OTHER TESTS                        | Soluble Salts (mmhos/cm)                                                |           |          |          |  |  |
|                                    | Chlorides (ppm)                                                         |           |          |          |  |  |
|                                    | NO <sub>3</sub> -N (ppm)                                                | 38.5      | 26.0     | 28.1     |  |  |
|                                    | NH <sub>4</sub> -N (ppm)                                                | 30.1      | 6.8      | 9.7      |  |  |

a - alkaline soil

\* Ammonium Acetate Extractable (pH of 8.1)

\*\* Mehlich III Extractable

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|                                    |                                                                         |          |          |          |  |  |
|------------------------------------|-------------------------------------------------------------------------|----------|----------|----------|--|--|
| Sample Location <u>GREEN</u>       |                                                                         | 5        | 7        | 10       |  |  |
| Sample Identification              |                                                                         |          |          |          |  |  |
| Lab Number                         |                                                                         | 0089-1   | 0090-1   | 0091-1   |  |  |
| Total Exchange Capacity (ME/100 g) |                                                                         | 5.00     | 6.03     | 5.70     |  |  |
| pH (H <sub>2</sub> O 1:1)          |                                                                         | a<br>7.5 | a<br>7.5 | a<br>7.6 |  |  |
| Organic Matter (360°C LOI) %       |                                                                         | 0.99     | 1.69     | 1.42     |  |  |
| Estimated Nitrogen Release lb/A    |                                                                         | 40       | 54       | 48       |  |  |
| ANIONS                             | SOLUBLE SULFUR* ppm                                                     | 7        | 10       | 9        |  |  |
|                                    | PHOSPHORUS MEHLICH III lb/A P as P <sub>2</sub> O <sub>5</sub> ppm of P |          |          |          |  |  |
|                                    | BRAY II lb/A P as P <sub>2</sub> O <sub>5</sub> ppm of P                |          |          |          |  |  |
|                                    | OLSEN lb/A P as P <sub>2</sub> O <sub>5</sub> ppm of P                  | 41<br>9  | 32<br>7  | 50<br>11 |  |  |
| EXCHANGEABLE CATIONS               | CALCIUM* lb/A                                                           | 1486     | 1828     | 1696     |  |  |
|                                    | ppm                                                                     | 743      | 914      | 848      |  |  |
|                                    | MAGNESIUM* lb/A                                                         | 208      | 234      | 232      |  |  |
|                                    | ppm                                                                     | 104      | 117      | 116      |  |  |
|                                    | POTASSIUM* lb/A                                                         | 98       | 112      | 136      |  |  |
|                                    | ppm                                                                     | 49       | 56       | 68       |  |  |
|                                    | SODIUM* lb/A                                                            | 44       | 50       | 46       |  |  |
|                                    | ppm                                                                     | 22       | 25       | 23       |  |  |
| BASE SATURATION PERCENT            |                                                                         |          |          |          |  |  |
| Calcium %                          |                                                                         | 74.30    | 75.79    | 74.39    |  |  |
| Magnesium %                        |                                                                         | 17.33    | 16.17    | 16.96    |  |  |
| Potassium %                        |                                                                         | 2.51     | 2.38     | 3.06     |  |  |
| Sodium %                           |                                                                         | 1.91     | 1.80     | 1.75     |  |  |
| Other Bases %                      |                                                                         | 3.90     | 3.90     | 3.80     |  |  |
| Hydrogen %                         |                                                                         | 0.00     | 0.00     | 0.00     |  |  |
| EXTRACTABLE MINORS                 |                                                                         |          |          |          |  |  |
| Boron** (ppm)                      |                                                                         | 0.68     | 0.73     | 0.66     |  |  |
| Iron** (ppm)                       |                                                                         | 68       | 66       | 73       |  |  |
| Manganese** (ppm)                  |                                                                         | 26       | 31       | 24       |  |  |
| Copper** (ppm)                     |                                                                         | 0.90     | 0.83     | 0.64     |  |  |
| Zinc** (ppm)                       |                                                                         | 8.64     | 10.04    | 8.46     |  |  |
| Aluminum** (ppm)                   |                                                                         | 51       | 50       | 52       |  |  |
| OTHER TESTS                        | Soluble Salts (mmhos/cm)                                                |          |          |          |  |  |
|                                    | Chlorides (ppm)                                                         |          |          |          |  |  |
|                                    | NO <sub>3</sub> -N (ppm)                                                | 4.9      | 7.3      | 4.8      |  |  |
|                                    | NH <sub>4</sub> -N (ppm)                                                | 16.9     | 16.2     | 4.8      |  |  |

a - alkaline soil

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\*\* Mehlich III Extractable