

# BROOKSIDE LABORATORIES, INC.

## SOIL AUDIT AND INVENTORY REPORT

Name Canyon Gate Country Club City Las Vegas State NV

Independent Consultant Soil and Water Consulting Date 9/30/2016

|                                    |                                                                         |              |              |              |              |              |
|------------------------------------|-------------------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|
| Sample Location <u>GREEN</u>       |                                                                         | 1            | 3            | 6            | 7            | 9            |
| Sample Identification              |                                                                         |              |              |              |              |              |
| Lab Number                         |                                                                         | 0451-1       | 0452-1       | 0453-1       | 0454-1       | 0455-1       |
| Total Exchange Capacity (ME/100 g) |                                                                         | 8.54         | 8.45         | 8.22         | 8.48         | 8.74         |
| pH (H <sub>2</sub> O 1:1)          |                                                                         | a<br>8.0     | a<br>8.4     | a<br>8.1     | a<br>8.4     | a<br>8.1     |
| Organic Matter (humus) %           |                                                                         | 0.86         | 0.79         | 1.02         | 0.87         | 0.87         |
| Estimated Nitrogen Release lb/A    |                                                                         | 34           | 32           | 40           | 35           | 35           |
| ANIONS                             | SOLUBLE SULFUR* ppm                                                     | 24           | 21           | 26           | 26           | 22           |
|                                    | 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                  | 151<br>33    | 147<br>32    | 197<br>43    | 224<br>49    | 179<br>39    |
| EXCHANGEABLE CATIONS               | CALCIUM* lb/A ppm                                                       | 2798<br>1399 | 2812<br>1406 | 2738<br>1369 | 2820<br>1410 | 2872<br>1436 |
|                                    | MAGNESIUM* lb/A ppm                                                     | 202<br>101   | 186<br>93    | 180<br>90    | 190<br>95    | 200<br>100   |
|                                    | POTASSIUM* lb/A ppm                                                     | 158<br>79    | 156<br>78    | 122<br>61    | 136<br>68    | 166<br>83    |
|                                    | SODIUM* lb/A ppm                                                        | 98<br>49     | 90<br>45     | 90<br>45     | 98<br>49     | 104<br>52    |
|                                    |                                                                         |              |              |              |              |              |
| BASE SATURATION PERCENT            |                                                                         |              |              |              |              |              |
| Calcium %                          |                                                                         | 81.91        | 83.20        | 83.27        | 83.14        | 82.15        |
| Magnesium %                        |                                                                         | 9.86         | 9.17         | 9.12         | 9.34         | 9.53         |
| Potassium %                        |                                                                         | 2.37         | 2.37         | 1.90         | 2.06         | 2.44         |
| Sodium %                           |                                                                         | 2.49         | 2.32         | 2.38         | 2.51         | 2.59         |
| Other Bases %                      |                                                                         | 3.40         | 3.00         | 3.30         | 3.00         | 3.30         |
| Hydrogen %                         |                                                                         | 0.00         | 0.00         | 0.00         | 0.00         | 0.00         |
| EXTRACTABLE MINORS                 |                                                                         |              |              |              |              |              |
| Boron M3 (ppm)                     |                                                                         |              |              |              |              |              |
| Iron** (ppm)                       |                                                                         | 8            | 6            | 7            | 7            | 7            |
| Manganese** (ppm)                  |                                                                         | 5            | 3            | 4            | 5            | 3            |
| Copper** (ppm)                     |                                                                         | 1.42         | 0.62         | 0.96         | 0.69         | 1.07         |
| Zinc** (ppm)                       |                                                                         | 9.40         | 3.87         | 7.17         | 5.93         | 7.34         |
| Aluminum (ppm)                     |                                                                         |              |              |              |              |              |
| OTHER TESTS                        | Soluble Salts (mmhos/cm)                                                |              |              |              |              |              |
|                                    | Chlorides (ppm)                                                         |              |              |              |              |              |
|                                    |                                                                         |              |              |              |              |              |

a - alkaline soil

\* Ammonium Acetate Extractable (pH of 8.1)

\*\* DTPA Extractable

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|                                    |                                                                         |              |              |              |              |  |
|------------------------------------|-------------------------------------------------------------------------|--------------|--------------|--------------|--------------|--|
| Sample Location <u>GREEN</u>       |                                                                         | 10           | 11           | 16           | 18           |  |
| Sample Identification              |                                                                         |              |              |              |              |  |
| Lab Number                         |                                                                         | 0456-1       | 0457-1       | 0458-1       | 0459-1       |  |
| Total Exchange Capacity (ME/100 g) |                                                                         | 8.31         | 7.85         | 9.23         | 7.62         |  |
| pH (H <sub>2</sub> O 1:1)          |                                                                         | a<br>8.2     | a<br>8.2     | a<br>8.2     | a<br>8.2     |  |
| Organic Matter (humus) %           |                                                                         | 0.83         | 0.94         | 1.00         | 0.70         |  |
| Estimated Nitrogen Release lb/A    |                                                                         | 33           | 38           | 40           | 28           |  |
| ANIONS                             | SOLUBLE SULFUR* ppm                                                     | 24           | 22           | 38           | 21           |  |
|                                    | 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                  | 174<br>38    | 133<br>29    | 202<br>44    | 192<br>42    |  |
| EXCHANGEABLE CATIONS               | CALCIUM* lb/A ppm                                                       | 2706<br>1353 | 2570<br>1285 | 2972<br>1486 | 2516<br>1258 |  |
|                                    | MAGNESIUM* lb/A ppm                                                     | 206<br>103   | 192<br>96    | 252<br>126   | 182<br>91    |  |
|                                    | POTASSIUM* lb/A ppm                                                     | 140<br>70    | 132<br>66    | 148<br>74    | 106<br>53    |  |
|                                    | SODIUM* lb/A ppm                                                        | 112<br>56    | 94<br>47     | 120<br>60    | 88<br>44     |  |
| BASE SATURATION PERCENT            |                                                                         |              |              |              |              |  |
| Calcium %                          |                                                                         | 81.41        | 81.85        | 80.50        | 82.55        |  |
| Magnesium %                        |                                                                         | 10.33        | 10.19        | 11.38        | 9.95         |  |
| Potassium %                        |                                                                         | 2.16         | 2.16         | 2.06         | 1.78         |  |
| Sodium %                           |                                                                         | 2.93         | 2.60         | 2.83         | 2.51         |  |
| Other Bases %                      |                                                                         | 3.20         | 3.20         | 3.20         | 3.20         |  |
| Hydrogen %                         |                                                                         | 0.00         | 0.00         | 0.00         | 0.00         |  |
| EXTRACTABLE MINORS                 |                                                                         |              |              |              |              |  |
| Boron M3 (ppm)                     |                                                                         |              |              |              |              |  |
| Iron** (ppm)                       |                                                                         | 9            | 7            | 7            | 6            |  |
| Manganese** (ppm)                  |                                                                         | 4            | 3            | 3            | 3            |  |
| Copper** (ppm)                     |                                                                         | 1.12         | 0.70         | 1.09         | 0.84         |  |
| Zinc** (ppm)                       |                                                                         | 6.69         | 5.34         | 6.34         | 5.62         |  |
| Aluminum (ppm)                     |                                                                         |              |              |              |              |  |
| OTHER TESTS                        | Soluble Salts (mmhos/cm)                                                |              |              |              |              |  |
|                                    | Chlorides (ppm)                                                         |              |              |              |              |  |
|                                    |                                                                         |              |              |              |              |  |

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