

# TRI DISTRICT/SOLDIER CANYON FILTER PLANT

(East Larimer County Water District; Fort Collins/Loveland Water District; North Weld County Water District)

## WATER QUALITY REPORT

**3RD QUARTER 2014**

| ANALYSIS PARAMETER<br><small>Monitored at SCFP<br/>(not a certified lab)</small> | Report | PLANT INFLUENT |       |       | PLANT EFFLUENT |       |       | MCL *SMCL   |
|--|--------|----------------|-------|-------|----------------|-------|-------|-------------|
|  | Values | MIN            | MAX   | AVG   | MIN            | MAX   | AVG   |             |
| ALKALINITY   | mg/l   | 12.0           | 34.0  | 23.7  | 29.0           | 49.0  | 36.5  | N/A         |
| ALUMINUM   | mg/l   | N/A            | N/A   | N/A   | 0.027          | 0.051 | 0.041 | *0.05 - 0.2 |
| CALCIUM HARDNESS   | mg/l   | 10.0           | 29.0  | 19.5  | 19.0           | 26.0  | 22.3  | N/A         |
| CHLORINE   | mg/l   | N/A            | N/A   | N/A   | 0.81           | 0.92  | 0.87  | 4.0         |
| CHLORITE   | mg/l   | N/A            | N/A   | N/A   | 0.21           | 0.53  | 0.34  | 1.0         |
| CHLORINE DIOXIDE   | mg/l   | N/A            | N/A   | N/A   | 0.0            | 0.03  | 0.0   | 0.8         |
| CONDUCTIVITY   | uS/cm  | 37.9           | 78.9  | 60.2  | 86.6           | 113.0 | 96.4  | N/A         |
| DISSOLVED OXYGEN   | mg/l   | 4.8            | 8.6   | 7.4   | N/A            | N/A   | N/A   | N/A         |
| FLUORIDE   | mg/l   | 0.15           | 0.32  | 0.24  | 0.26           | 0.92  | 0.66  | 4.0/*2.0    |
| HARDNESS (TOTAL)   | mg/l   | 11.0           | 38.0  | 24.3  | 22.0           | 34.0  | 27.2  | N/A         |
| IRON   | mg/l   | 0              | 0.8   | 0.12  | 0.0            | 0.01  | 0.01  | *0.3        |
| LANGLIER INDEX   | S.I.#  | -1.92          | -2.43 | -2.18 | -0.88          | -1.48 | -1.28 | N/A         |
| MANGANESE  | mg/l   | 0.007          | 0.101 | 0.039 | 0.0            | 0.021 | 0.008 | *0.05       |
| pH   | VALUE  | 6.97           | 7.83  | 7.34  | 7.69           | 8.09  | 7.92  | N/A         |
| TEMPERATURE  | °C     | 7.0            | 16.1  | 10.9  | 7.0            | 12.6  | 9.8   | N/A         |
| TOTAL DISSOLVED SOLIDS   | mg/l   | 18.9           | 40.5  | 30.3  | 42.4           | 56.5  | 48.8  | *500        |
| TRUE COLOR   | APHA   | 0.0            | 44.0  | 15.8  | 0.0            | 2.0   | 1.0   | *15.0       |
| TURBIDITY  | NTU    | 0.60           | 43.3  | 2.36  | 0.019          | 0.048 | 0.020 | **<0.3 TT   |

| INORGANIC CONTAMINANTS ANALYSES (AL) - (ENTRY INTO THE DISTRIBUTION SYSTEM) |      |  | RESULTS | DATE      | MCL   |
|---|------|--|---------|-----------|-------|
| ANTIMONY  | mg/l |  | BDL     | 6/18/2014 | 0.006 |
| ARSENIC   | mg/l |  | BDL     | 6/18/2014 | 0.010 |
| BARIUM  | mg/l |  | 0.016   | 6/18/2014 | 2.000 |
| BERYLLIUM   | mg/l |  | BDL     | 6/18/2014 | 0.004 |
| CADMIUM   | mg/l |  | BDL     | 6/18/2014 | 0.005 |
| CHROMIUM  | mg/l |  | BDL     | 6/18/2014 | 0.1   |
| CYANIDE   | mg/l |  | NT      | 6/18/2014 | 0.2   |
| FLUORIDE  | mg/l |  | 0.66    | 6/18/2014 | 4.0   |
| MERCURY   | mg/l |  | BDL     | 6/18/2014 | 0.002 |
| NICKEL  | mg/l |  | BDL     | 6/18/2014 | *SMCL |
| SELENIUM  | mg/l |  | BDL     | 6/18/2014 | 0.050 |
| SODIUM  | mg/l |  | 10.6    | 6/18/2014 | *SMCL |
| THALLIUM  | mg/l |  | BDL     | 6/18/2014 | 0.002 |

| NITRATE AND/OR NITRITE AS NITROGEN (AL) (UL) - (ENTRY INTO DISTRIBUTION SYSTEM) |      |  | RESULTS | DATE      | MCL    |
|---|------|--|---------|-----------|--------|
| NITRATE   | mg/l |  | 0.079   | 6/18/2014 | 10.000 |
| NITRITE   | mg/l |  | <0.01   | 2/12/2013 | 1.000  |

| TOTAL ORGANIC CARBON (AL) - (PLANT INFLUENT AND EFFLUENT) |      |  | INFLUENT | EFFLUENT | TT RATIO | DATE      | MCL - **TT |
|---|------|--|----------|----------|----------|-----------|------------|
| TOTAL ORGANIC CARBON - TOC                                | mg/L |  | 3.9      | 2.2      | 1.25     | 7/15/2014 | RAA - ≥1.0 |
|   |      |  | 4.0      | 2.3      | 1.21     | 8/6/2014  | RAA - ≥1.0 |
|   |      |  | 3.7      | 2.2      | 1.16     | 9/10/2014 | RAA - ≥1.0 |
|   |      |  | INFLUENT |          |          | DATE      | MCL        |
| ALKALINITY - (PLANT INFLUENT ONLY)                        | mg/l |  | 32.8     |          |          | 7/15/2014 | N/A        |
|   |      |  | 30.8     |          |          | 8/6/2014  | N/A        |
|   |      |  | 23.2     |          |          | 9/10/2014 | N/A        |

**RADIONUCLIDE ANALYSES (UL) - (ENTRY INTO THE DISTRIBUTION SYSTEM)**

|                  |       |  | RESULTS | DATE      | MCL |
|------------------|-------|--|---------|-----------|-----|
| GROSS ALPHA      | pCi/L |  | 1.7     | 8/24/2011 | 15  |
| URANIUM          | ppb   |  | 0.01    | 8/24/2011 | 30  |
| RADIUM 226 + 228 | pCi/L |  | 0.76    | 8/24/2011 | 5   |
| GROSS BETA       | pCi/L |  | 2.1     | 8/24/2011 | 50  |

**ORGANIC CHEMICAL ANALYSES - VOC's (AL) - (ENTRY INTO THE DISTRIBUTION SYSTEM)**

|                            |      |  | RESULTS | DATE      | MCL  |
|----------------------------|------|--|---------|-----------|------|
| 1,1-DICHLOROETHYLENE       | µg/L |  | BDL     | 6/18/2014 | 7    |
| 1,1,1-TRICHLOROETHANE      | µg/L |  | BDL     | 6/18/2014 | 200  |
| 1,1,2-TRICHLOROETHANE      | µg/L |  | BDL     | 6/18/2014 | 5    |
| 1,2-DICHLOROETHANE         | µg/L |  | BDL     | 6/18/2014 | 5    |
| 1,2-DICHLOROPROPANE        | µg/L |  | BDL     | 6/18/2014 | 5    |
| 1,2,4-TRICHLOROBENZENE     | µg/L |  | BDL     | 6/18/2014 | 70   |
| BENZENE                    | µg/L |  | BDL     | 6/18/2014 | 5    |
| CARBON TETRACHLORIDE       | µg/L |  | BDL     | 6/18/2014 | 5    |
| cis-1,2-DICHLOROETHYLENE   | µg/L |  | BDL     | 6/18/2014 | 70   |
| DICHLOROMETHANE            | µg/L |  | BDL     | 6/18/2014 | 5    |
| ETHYLBENZENE               | µg/L |  | BDL     | 6/18/2014 | 700  |
| CHLOROBENZENE              | µg/L |  | BDL     | 6/18/2014 | 100  |
| o-DICHLOROBENZENE          | µg/L |  | BDL     | 6/18/2014 | 600  |
| para-DICHLOROBENZENE       | µg/L |  | BDL     | 6/18/2014 | 75   |
| STYRENE                    | µg/L |  | BDL     | 6/18/2014 | 100  |
| TETRACHLOROETHYLENE        | µg/L |  | BDL     | 6/18/2014 | 5    |
| TOLUENE                    | µg/L |  | BDL     | 6/18/2014 | 1000 |
| trans-1,2-DICHLOROETHYLENE | µg/L |  | BDL     | 6/18/2014 | 100  |
| TRICHLOROETHYLENE          | µg/L |  | BDL     | 6/18/2014 | 5    |
| VINYL CHLORIDE             | µg/L |  | BDL     | 6/18/2014 | 2    |
| XYLENES (total)            | µg/L |  | BDL     | 6/18/2014 | 1000 |

**ORGANIC CHEMICAL ANALYSES - SOC's (UL) (AL) - (ENTRY INTO THE DISTRIBUTION SYSTEM)**

|                             |      |  |     |           | RESULTS | DATE      | MCL  |
|-----------------------------|------|--|-----|-----------|---------|-----------|------|
| 1,2-DIBROMO-3-CHLOROPROPANE | µg/L |  | BDL | 6/18/2014 | BDL     | 9/10/2014 | 0.2  |
| 2,4-D                       | µg/L |  | BDL | 6/18/2014 | BDL     | 9/10/2014 | 70   |
| 2,4,5-TP                    | µg/L |  | BDL | 6/18/2014 | BDL     | 9/10/2014 | 50   |
| ALACHLOR (LASSO)            | µg/L |  | BDL | 6/18/2014 | BDL     | 9/10/2014 | 2    |
| ALDICARB                    | µg/L |  | BDL | 6/18/2014 | BDL     | 9/10/2014 | N/A  |
| ALDICARB SULFONE            | µg/L |  | BDL | 6/18/2014 | BDL     | 9/10/2014 | N/A  |
| ALDICARB SULFOXIDE          | µg/L |  | BDL | 6/18/2014 | BDL     | 9/10/2014 | N/A  |
| ATRAZINE                    | µg/L |  | BDL | 6/18/2014 | BDL     | 9/10/2014 | 3    |
| BENZO(a)PYRENE              | µg/L |  | BDL | 6/18/2014 | BDL     | 9/10/2014 | 0.2  |
| CARBOFURAN                  | µg/L |  | BDL | 6/18/2014 | BDL     | 9/10/2014 | 40   |
| CHLORDANE                   | µg/L |  | BDL | 6/18/2014 | BDL     | 9/10/2014 | 2    |
| DALAPON                     | µg/L |  | BDL | 6/18/2014 | BDL     | 9/10/2014 | 200  |
| DINOSEB                     | µg/L |  | BDL | 6/18/2014 | BDL     | 9/10/2014 | 7    |
| DIQUAT                      | µg/L |  | BDL | 6/18/2014 | BDL     | 9/10/2014 | 20   |
| DI(2-ethylhexyl)ADIPATE     | µg/L |  | BDL | 6/18/2014 | BDL     | 9/10/2014 | 400  |
| DI(2-ethylhexyl)PHTHALATE   | µg/L |  | BDL | 6/18/2014 | BDL     | 9/10/2014 | 6    |
| ENDOTHALL                   | µg/L |  | BDL | 6/18/2014 | BDL     | 9/10/2014 | 100  |
| ENDRIN                      | µg/L |  | BDL | 6/18/2014 | BDL     | 9/10/2014 | 2    |
| ETHYLENE DIBROMIDE          | µg/L |  | BDL | 6/18/2014 | BDL     | 9/10/2014 | 0.05 |
| HEPTACHLOR                  | µg/L |  | BDL | 6/18/2014 | BDL     | 9/10/2014 | 0.4  |
| HEPTACHLOR EPOXIDE          | µg/L |  | BDL | 6/18/2014 | BDL     | 9/10/2014 | 0.2  |
| HEXACHLOROBENZENE           | µg/L |  | BDL | 6/18/2014 | BDL     | 9/10/2014 | 1    |

**ORGANIC CHEMICAL ANALYSES - SOC's (UL) (AL) (con't) - (ENTRY INTO THE DISTRIBUTION SYSTEM)**

|                           |      |  |     |           |  | RESULTS | DATE      | MCL |
|---------------------------|------|--|-----|-----------|--|---------|-----------|-----|
| HEXACHLOROCYCLOPENTADIENE | µg/L |  | BDL | 6/18/2014 |  | BDL     | 9/10/2014 | 50  |
| LINDANE/BHC-GAMMA         | µg/L |  | BDL | 6/18/2014 |  | BDL     | 9/10/2014 | 0.2 |
| METHOXYCHLOR              | µg/L |  | BDL | 6/18/2014 |  | BDL     | 9/10/2014 | 40  |
| OXAMYL                    | µg/L |  | BDL | 6/18/2014 |  | BDL     | 9/10/2014 | 200 |
| PENTACHLOROPHENOL         | µg/L |  | BDL | 6/18/2014 |  | BDL     | 9/10/2014 | 1   |
| PICLORAM                  | µg/L |  | BDL | 6/18/2014 |  | BDL     | 9/10/2014 | 500 |
| POLYCHLORINATED BIPHENYLS | µg/L |  | BDL | 6/18/2014 |  | BDL     | 9/10/2014 | 0.5 |
| SIMAZINE                  | µg/L |  | BDL | 6/18/2014 |  | BDL     | 9/10/2014 | 4   |
| TOXAPHENE                 | µg/L |  | BDL | 6/18/2014 |  | BDL     | 9/10/2014 | 3   |

**DISTRIBUTION SYSTEMS SAMPLES**

**CHLORITE (AL)**

|          |      |  | MIN  | MAX  | AVG  | DATE      | MCL |
|----------|------|--|------|------|------|-----------|-----|
| CHLORITE | mg/L |  | 0.30 | 0.38 | 0.34 | 7/15/2014 | 1.0 |

**CHLORINE (Districts Measure)**

|                                     |      | TOTAL SAMPLES | MIN  | MAX  | AVG  | DATE   | MCL                     |
|-------------------------------------|------|---------------|------|------|------|--------|-------------------------|
| EAST LARIMER COUNTY WATER DISTRICT  | mg/L | 20            | 0.3  | 0.6  | 0.47 | Jul-14 | Low <trace<br>High >4.0 |
| EAST LARIMER COUNTY WATER DISTRICT  | mg/L | 24            | 0.06 | 0.6  | 0.38 | Aug-14 | Low <trace<br>High >4.0 |
| EAST LARIMER COUNTY WATER DISTRICT  | mg/L | 20            | 0.2  | 0.6  | 0.38 | Sep-14 | Low <trace<br>High >4.0 |
| FORTCOLLINS/LOVELAND WATER DISTRICT | mg/L | 45            | 0.40 | 0.80 | 0.61 | Jul-14 | Low <trace<br>High >4.0 |
| FORTCOLLINS/LOVELAND WATER DISTRICT | mg/L | 44            | 0.30 | 0.80 | 0.59 | Aug-14 | Low <trace<br>High >4.0 |
| FORTCOLLINS/LOVELAND WATER DISTRICT | mg/L | 45            | 0.15 | 0.75 | 0.53 | Sep-14 | Low <trace<br>High >4.0 |
| NORTH WELD COUNTY WATER DISTRICT    | mg/L | 10            | 0.28 | 1.18 | 0.70 | Jul-14 | Low <trace<br>High >4.0 |
| NORTH WELD COUNTY WATER DISTRICT    | mg/L | 10            | 0.21 | 0.90 | 0.57 | Aug-14 | Low <trace<br>High >4.0 |
| NORTH WELD COUNTY WATER DISTRICT    | mg/L | 10            | 0.18 | 0.85 | 0.49 | Sep-14 | Low <trace<br>High >4.0 |

**TOTAL COLIFORMS (SE/WCL)**

|                                     |  | TOTAL SAMPLES | # POSITIVE | # NEGITIVE | DATE   | MCL         |
|-------------------------------------|--|---------------|------------|------------|--------|-------------|
| EAST LARIMER COUNTY WATER DISTRICT  |  | 20            | 0          | 20         | Jul-14 | >1 POSITIVE |
| EAST LARIMER COUNTY WATER DISTRICT  |  | 24            | 1          | 23         | Aug-14 | >1 POSITIVE |
| EAST LARIMER COUNTY WATER DISTRICT  |  | 20            | 0          | 20         | Sep-14 | >1 POSITIVE |
| FORTCOLLINS/LOVELAND WATER DISTRICT |  | 45            | 0          | 45         | Jul-14 | >2 POSITIVE |
| FORTCOLLINS/LOVELAND WATER DISTRICT |  | 44            | 0          | 44         | Aug-14 | >2 POSITIVE |
| FORTCOLLINS/LOVELAND WATER DISTRICT |  | 45            | 0          | 45         | Sep-14 | >2 POSITIVE |
| NORTH WELD COUNTY WATER DISTRICT    |  | 10            | 0          | 10         | Jul-14 | >1 POSITIVE |
| NORTH WELD COUNTY WATER DISTRICT    |  | 10            | 0          | 10         | Aug-14 | >1 POSITIVE |
| NORTH WELD COUNTY WATER DISTRICT    |  | 10            | 0          | 10         | Sep-14 | >1 POSITIVE |

## DISTRIBUTION SYSTEMS SAMPLES

| <b>Total Trihalomethanes and Haloacetic Acids (AL)</b> |      | <b>TTHM RESULTS</b> | <b>MCL (LRAA)</b> | <b>HAA RESULTS</b> | <b>MCL (LRAA)</b> | <b>DATE</b> |
|--|------|---------------------|-------------------|--------------------|-------------------|-------------|
| <b>EAST LARIMER COUNTY WATER DISTRICT</b>              |      |                     |                   |                    |                   |             |
| SAMPLE SITE - DBP001-ELCSM4                            | µg/L | 35.5                | 80                | 23.6               | 60                | 3 QTR LRAA  |
| SAMPLE SITE - DBP002-ELCSM6                            | µg/L | 44.3                | 80                | 20.9               | 60                | 3 QTR LRAA  |
| SAMPLE SITE - DBP003-ELCSM2                            | µg/L | 39.8                | 80                | 26.4               | 60                | 3 QTR LRAA  |
| <b>FORT COLLINS/LOVELAND WATER DISTRICT</b>            |      |                     |                   |                    |                   |             |
| SAMPLE SITE - DBP001-FCLSM4                            | µg/L | 24.5                | 80                | 18.0               | 60                | 3 QTR LRAA  |
| SAMPLE SITE - DBP002-FCLSM6                            | µg/L | 37.7                | 80                | 17.1               | 60                | 3 QTR LRAA  |
| <b>NORTH WELD COUNTY WATER DISTRICT</b>                |      |                     |                   |                    |                   |             |
| SAMPLE SITE - DBP001-NWCMS1                            | µg/L | 43.0                | 80                | 22.0               | 60                | 3 QTR LRAA  |
| SAMPLE SITE - DBP002-NWCMS4                            | µg/L | 43.7                | 80                | 33.1               | 60                | 3 QTR LRAA  |
| SAMPLE SITE - DBP003-NWC MAX RES 1                     | µg/L | 39.3                | 80                | 31.8               | 60                | 3 QTR LRAA  |

|   |  |
|---|--|
| MCL = Maximum Contaminate Level - Enforcable  | BDL = Below Detectable Limit           |
| *SMCL = Secondary Maximum Contaminate Level - Recommended   | ND = Not Detected                      |
| **TT = Treatment Technique  | N/A = Not applicable                   |
| SOC = Synthetic Organic Chemicals   | VOC = Volatile Organic Chemicals       |
| RAA = Running Annual Average  | LRAA = Location Running Annual Average |
| < = Less Than   | > = Greater Than                       |
| (FCL) = Fort Collins Lab (UL) = United Lab (AL) = Accutest Lab (SE) = Stewart Environmental Lab (WCL) = Weld County Lab |  |