Date of Analysis: 11/24/2009

0.97200

1.504

0.63

228.95

0.0003

0.1

0.21

7.51

0.0

0.00000

0.0000

This Calculates the Allowable Effluent Concentration/Loading Conservative Substances In a Receiving Water

Assumption: Complete Mixing

Conservative Substance: Acute or Chronic Standard

Discharger: Permit Number: Receiving Water:

Benefical Use: Class For the Season / Year

Stream Standard

Allowable Loading Before Mix:

Acute / Chronic Standard [Toxic

Permitted Effluent Concentration

Selenium, mg/l

| Selenium                |    |
|-------------------------|----|
| Acute                   | No |
| JVWCD Intermediate Feed | W  |

1.12 lbs/day

ote: Changes River Flow if Acute.

ater DW1 [Maintenance]

0025836 Bingham Creek

All Seasons

| Receiving | Water | Information | - | Bingham                      | Creek   |
|-----------|-------|-------------|---|------------------------------|---|
|           |       |             |   | THE OWNER OF THE OWNER, WHEN | NAME AND ADDRESS OF THE OWNER, WHEN PERSON NAMED IN |

Flow, cfs Flow, cfs (Acute) 5.650 Selenium, mg/l Selenium Load, Ibs/day 0.16 Effluent Information [Proposed] JVWCD Intermediate Feed WateMGD Flow, gal./min. 675,0000

Flow, MGD Flow, cfs

Selenium, ma/1 Selenium Load, lbs/day Selenium Load, lbs/year

Selenium Load, tons/day TDS Load, tons/year Percent of Receiving Stream = Discha Dilution Ratio: (to 1.0)

Percent of Stream Flow Used in Calc.

Effluent Limitation (per WLA)

Current Project Loading

Combined Effluent/Receiving Water Information

Flow, cfs \* w/ 50% of Receiving 7.154 cfs Selenium, mg/l

0.01840 mg/l Current Permit Information

Concentration Delta Increase, m 0.01570 mg/l [Delta Flow, MGD (per WLA) Percent Increase: 5.81 % Selenium Load, Ibs/day:

0.71 lbs/day Allowable Loading After Mix: 0.71 lbs/day Additional Loading Allowed:

0.00 lbs/day

0.067 mg/l 67.2 ug/l for : All Seasons

Permitted Effluent Loading: 0.62725 lbs/day 0.1 tons/year

Note: Whole Effluent Toxicity (WET) to be conducted on all toxic substances,.

Note: Waste Load Analysis may indicate unreasonably high allowed concentrations and loadings. Narrative standards, Source Performance Standards, and BAT also apply.

| Background Conc:                      | 0.00270    |
|---------------------------------------|------------|
| Effluent Conc.                        | 0.07739    |
| Conbined Conc:                        | 0.01840    |
| Standard:                             | 0.01840    |
| Percent Change                        | 581.5%     |
| Remaining Assimilative Capacity L     | 55.87%     |
| Antidegradation Level II Review is NO | T Required |

Date of Analysis: 12/2/2009 for Conservative Substances

This Calculates the Allowable Effluent Concentration/Loading Conservative Substances in a Receiving Water

Assumption: Complete Mixing

Conservative Substance: Acute or Chronic Standard

Discharger: Permit Number: Receiving Water:

Benefical Use: Class For the Season / Year TDS Acute

Note: Changes River Flow if Acute.

Effluent Information [Proposed] JVWCD Intermediate Feed Water MGD

675.0000

1.504

58451.43

21,334,771.26

29.2257

10,667.4

0.12

7.51

100%

0.0 0.00000

0.0000

0.97200

7,211,90144

0.97200

JVWCD Intermediate Feed Water DW1 [Maintenance] 0025836

Bingham Creek Class 3

All Seasons

11,300,

400,000000

24362.80

1200,0000

73088.40 lbs/day

0.00 lbs/day

7,211,901437 mg/l

5.650

Receiving Water Information - Bingham Creek

Flow, cfs Flow, cfs (Acute) TDS, mg/l

TDS Load, lbs/day

Stream Standard TDS, mg/l Allowable Loading Before Mix:

Combined Effluent/Receiving Water Information

Flow, cfs \* w/ 50% of Receiving 12.804 cfs 1,200.00000 mg/l TDS, mg/l

Concentration Delta Increase, m 800.00000 mg/l [Delta] 2.00 % Percent Increase: TDS Load, lbs/day: 82,814.23 lbs/day Allowable Loading After Mix: 82,814.23 lbs/day

Additional Loading Allowed:

Permitted Effluent Concentration

Permitted Effluent Loading:

58,451.42811 lbs/day

Flow, gal./mln. Flow, MGD Flow, cfs

TDS, mq/l TDS Load, lbs/day

TDS Load, lbs/year TDS Load, tons/day TDS Load, tons/year

Percent of Receiving Stream = Discha Dilution Ratio: (to 1.0)

Percent of Stream Flow Used in Calc.

Current Permit Information Flow, MGD (per WLA) Effluent Limitation (per WLA)

Current Project Loading

7211901.4 ug/l for : All Seasons 10667.4 tons/year

Note: Whole Effluent Toxicity (WET) to be conducted on all toxic substances,.

Note: Waste Load Analysis may indicate unreasonably high allowed concentrations and loadings, Narrative standards, Source Performance Standards, and BAT also apply.

Background Conc: 400,00000 Effluent Conc. 7.211.90144 Conbined Conc: 1,200.00000 Standard: 1,200.00000 Percent Change 200.0% Remaining Assimilative Capacity t 100.00% Antidegradation Level II Review is NOT Required

Date of Analysis: 11/24/2009

### Waste Load Analysis [TMDL] (Simple Mass Balance) for Conservative Substances

This Calculates the Allowable Effluent Concentration/Loading

Conservative Substances in a Receiving Water

Assumption: Complete Mixing

Conservative Substance:

Acute or Chronic Standard

Discharger:

Acute Note: Changes River Flow If Acute. JVWCD Intermediate Feed Water DW2 [Maintenance]

Permit Number:

0025836

Trimble Creek [1324 West Polo Ln.] Receiving Water: Class 3

Benefical Use: Class For the Season / Year

All Seasons

Selenium

Receiving Water Information - Trimble Creek [1324 West F Effluent Information [Proposed] JVWCD Intermediate Feed Wat MGD Flow, gal./min. 210,0000 0.30240

Flow, cfs

1.000 0.500 Flow, cfs (Acute) 0.00270.

Flow, MGD Flow, cfs

0.30240 0.468

Selenium, mg/l Selenium Load, Ibs/day

0.01 Selenium, mg/l Selenium Load, Ibs/day

0.03518 0.09 32.38

Stream Standard Selenium, mg/I

0.0184 0.10 lbs/day Acute

Selenium Load, tons/day TDS Load, tons/year

Selenium Load, lbs/year

0.0000 0.0

Allowable Loading Before Mix: Acute / Chronic Standard [Toxic

Concentration Delta Increase, m

Percent of Receiving Stream = Discha Dilution Ratio: (to 1.0)

0.48 2.14

Combined Effluent/Receiving Water Information

Percent of Stream Flow Used in Calc.

50%

Flow, cfs \* w/ 50% of Receiving 0.968 cfs

Selenium, ma/l 0.01840 mg/l

0.01570 mg/l [Delta Flow, MGD (per WLA) 5.81 %

Current Permit Information Effluent Limitation (per WLA)

Current Project Loading

0.0 0.00000 0.0000

Percent Increase: Selenium Load, lbs/day: 0.10 lbs/day Allowable Loading After Mix: 0.10 lbs/day

Additional Loading Allowed:

0.00 lbs/day 0.032 mg/l

32.3 ug/l for : All Seasons

Permitted Effluent Concentration Permitted Effluent Loading:

0.08871 lbs/day

0 tons/year

Note: Whole Effluent Toxicity (WET) to be conducted on all toxic substances,.

Note: Waste Load Analysis may indicate unreasonably high allowed concentrations and loadings. Narrative standards, Source Performance Standards, and BAT also apply.

Background Conc: 0.00270 Effluent Conc. 0.03518 Conbined Conc: 0.01840 Standard: 0.01840 Percent Change 581.5% Remaining Assimilative Capacity L 65.94% Antidegradation Level II Review is NOT Required

for Conservative Substances Date of Analysis: 12/2/2009

This Calculates the Allowable Effluent Concentration/Loading Conservative Substances in a Receiving Water

Assumption: Complete Mixing

Conservative Substance:

Acute or Chronic Standard

Discharger: Permit Number:

Receiving Water: Benefical Use: Class

For the Season / Year

TDS Acute

Trimble Creek

Class 3

Note: Changes River Flow if Acute.

Effluent Information [Proposed] JVWCD Intermediate Feed Water MGD

210.0000

0.468

7337.81

2,678,301.81

3,6689

1,339.2

0.32

2.14

100%

0.0

0.00000

0.0000

2,910,08574

0.30240

0.30240

JVWCD Intermediate Feed Water DW2 [Maintenance] 0025836

All Seasons

Receiving Water Information - Trimble Creek

Flow, cfs Flow, cfs (Acute) TDS, mg/l TDS Load, lbs/day

Stream Standard

TDS, mg/l Allowable Loading Before Mix:

0.500 400.00000 2156.00

1200,0000 6468.00 lbs/day

2.00 %

9,493.81 lbs/day

9,493.81 lbs/day

0.00 lbs/day

Combined Effluent/Receiving Water Information Flow, cfs \* w/ 50% of Receiving 1.468 cfs

TDS, mg/l 1,200,00000 mg/l Concentration Delta Increase, m 800.00000 mg/l [Delta]

Percent Increase: TDS Load, lbs/day:

Allowable Loading After Mix: Additional Loading Allowed:

Permitted Effluent Concentration

Permitted Effluent Loading:

2,910.085744 mg/l

7,337.81319 lbs/day

Flow, gal./min.

TDS Load, lbs/day

TDS Load, lbs/year

TDS Load, tons/day

TDS Load, tons/year

Dilution Ratio: (to 1.0)

Current Permit Information

Flow, MGD (per WLA)

Current Project Loading

Flow, MGD

TDS, mg/l

Flow, cfs

2910085.7 ug/l for: All Seasons 1339.2 tons/year

Effluent Limitation (per WLA)

Percent of Receiving Stream = Dischi

Percent of Stream Flow Used in Calc.

Note: Whole Effluent Toxicity (WET) to be conducted on all toxic substances,.

Note: Waste Load Analysis may Indicate unreasonably high allowed concentrations and loadings. Narrative standards, Source Performance Standards, and BAT also apply.

Background Conc: 400.00000 Effluent Conc. 2,910.08574 Conbined Conc: 1,200.00000 Standard: 1,200.00000 Percent Change 200.0% Remaining Assimilative Capacity ( 100.00% Antidegradation Level II Review is NOT Required

Date of Analysis: 11/24/2009

Effluent Information [Proposed] JVWCD Intermediate Feed WateMGD

175.0000

0.25200

0.390

3.00

1,095.17

0.0015

0.5

0.01 179.56

0.0

0.00000

0.0000

50%

1,42794

0.25200

### Waste Load Analysis [TMDL] (Simple Mass Balance) for Conservative Substances

This Calculates the Allowable Effluent Concentration/Loading Conservative Substances in a Receiving Water

Assumption: Complete Mixing

Conservative Substance: Acute or Chronic Standard

Discharger:

Permit Number: Receiving Water:

Benefical Use: Class For the Season / Year Selenium Acute JVWCD Intermediate Feed Water DW3 [Maintenance]

Note: Changes River Flow if Acute.

Flow, gal./min. Flow, MGD

Selenium, mg/l

Selenium Load, lbs/day

Selenium Load, lbs/year

Selenium Load, tons/day

Percent of Receiving Stream = Discha

Percent of Stream Flow Used in Calc.

TDS Load, tons/year

Dilution Ratio: (to 1.0)

Current Project Loading

0.5 tons/year

Current Permit Information

1185.5 ug/l for : All Seasons

Effluent Limitation (per WLA)

Flow, cfs

0025836

Jordan River Cold Water Fishery: 3A

All Seasons

Receiving Water Information - Jordan River

Flow, cfs Flow, cfs (Acute)

Selenium, mg/l Selenium Load, lbs/day

Stream Standard

Selenium, mg/l Allowable Loading Before Mix:

Acute / Chronic Standard [Toxics]

70,000 35.000

0.00270 1.02

0.0184

0.00 lbs/day

1.186 mg/l

6.94 lbs/day Acute

Combined Effluent/Receiving Water Information

Flow, cfs \* w/ 50% of Receiving 35.390 cfs Selenium, mg/l 0.01840 mg/l

Concentration Delta Increase, m 0.01570 mg/l [Delta Flow, MGD (per WLA) Percent Increase: 5.81 %

Selenium Load, lbs/day: 3.51 lbs/day Allowable Loading After Mix: 3.51 lbs/day

Additional Loading Allowed:

Permitted Effluent Concentration

Permitted Effluent Loading: 3.00047 lbs/day

Note: Whole Effluent Toxicity (WET) to be conducted on all toxic substances,

Note: Waste Load Analysis may Indicate unreasonably high allowed concentrations and loadings. Narrative standards, Source Performance Standards, and BAT also apply.

Background Conc: 0.00270 Effluent Conc. 1.42794 Conbined Conc: 0.01840 Standard: 0.01840 Percent Change 581.5% Remaining Assimilative Capacity L 50.28% Antidegradation Level II Review is NOT Required

for Conservative Substances Date of Analysis: 12/2/2009

This Calculates the Allowable Effluent Concentration/Loading Conservative Substances in a Receiving Water

Assumption: Complete Mixing

Conservative Substance:

Acute or Chronic Standard

Discharger: Permit Number:

Receiving Water: Benefical Use: Class For the Season / Year TDS Acute

70.000

35.000

Note: Changes River Flow if Acute.

JVWCD Intermediate Feed Water DW3 [Maintenance]

Jordan River

Class 3 All Seasons

Receiving Water Information - Jordan River

Flow, cfs Flow, cfs (Acute) TDS, mg/l TDS Load, lbs/day

1200.00000 452760.00

Stream Standard TDS, mg/l 1200.0000 452760.00 lbs/day

Allowable Loading Before Mix:

Combined Effluent/Receiving Water Information Flow, cfs \* w/ 50% of Receiving TDS, mg/l

Concentration Delta Increase, m Percent Increase:

TDS Load, lbs/day: Allowable Loading After Mix:

Additional Loading Allowed:

Permitted Effluent Concentration

Permitted Effluent Loading:

1,200.000000 mg/l

2,521.51099 lbs/day

70.390 cfs

0.00 %

455,281,51 lbs/day

455,281.51 lbs/day

0.00000 mg/l [Delta]

0.00 lbs/day

1,200.00000 mg/l

0025836

Effluent Information (Proposed) JVWCD Intermediate Feed Water MGD Flow, gal./min.

Flow, MGD Flow, cfs TDS, mg/l

> TDS Load, lbs/day TDS Load, lbs/year TDS Load, tons/day

TDS Load, tons/year Percent of Receiving Stream = Dischi Dilution Ratio: (to 1.0)

Percent of Stream Flow Used in Calc.

Current Permit Information Flow, MGD (per WLA)

Effluent Limitation (per WLA) Current Project Loading

0.0 0.00000 0.0000

175,0000

0.25200

0.390

1,200.00000

2521,51

920,351.51

1.2608

460.2

0.01 179.56

100%

0.25200

1200000 ug/l for : All Seasons 460.2 tons/year

Note: Whole Effluent Toxicity (WET) to be conducted on all toxic substances,.

Note: Waste Load Analysis may indicate unreasonably high allowed concentrations and loadings. Narrative standards, Source Performance Standards, and BAT also apply.

Background Conc: 1.200.00000 Effluent Conc. 1.200.00000 Conbined Conc: 1,200,00000 Standard: 1,200.00000 Percent Change 0.0% Remaining Assimilative Capacity ( #DIV/01 Antidegradation Level II Review is NOT Regulred

This Calculates the Allowable Effluent Concentration/Loading Conservative Substances in a Receiving Water

Assumption: Complete Mixing

Conservative Substance: Acute or Chronic Standard

Discharger: Permit Number:

Stream Standard

Receiving Water: Benefical Use: Class For the Season / Year Selenium Acute JVWCD Intermediate Feed Water DW4 [Maintenance]

Note: Changes River Flow if Acute.

0025836

Butterfield/Midas Creek

Class 3 All Seasons

Receiving Water Information - Butterfield/Midas Creek

Flow, cfs 1.000 0.500 Flow, cfs (Acute) 0.00270. Selenium, mg/l 0.01

Selenium Load, lbs/day

Selenlum, ma/l 0.0184 Allowable Loading Before Mix: 0.10 lbs/day Acute

Acute / Chronic Standard [Toxic

Combined Effluent/Receiving Water Information Flow, cfs \* w/ 50% of Receiving 1.736 cfs

Selenium, mg/l 0.01840 mg/l Concentration Delta Increase, m 0.01570 mg/l [Delta Flow, MGD (per WLA) Percent Increase: 5.81 %

Selenium Load, lbs/day: 0.17 lbs/day 0.17 lbs/day Allowable Loading After Mix:

Additional Loading Allowed: 0.00 lbs/day

Permitted Effluent Concentration

0.16493 lbs/day Permitted Effluent Loading:

0 tons/year

Note: Whole Effluent Toxicity (WET) to be conducted on all toxic substances,.

Note: Waste Load Analysis may indicate unreasonably high allowed concentrations and loadings. Narrative standards, Source Performance Standards, and BAT also apply.

0.024 mg/l

**Background Conc:** 0.00270 Effluent Conc. 0.02475 Conbined Conc: 0.01840 Standard: 0.01840 Percent Change 581.5% Remaining Assimilative Capacity L 77.64% Antidegradation Level II Review is NOT Required

Water Quality Management Section

Date of Analysis: 11/24/2009

Effluent Information [Proposed] JVWCD Intermediate Feed Wat: MGD Flow, gal./min. 555,0000 0.79920 Flow, MGD 0.79920

Flow, cfs 1.236 Selenium, mg/l 0.02475 Selenium Load, lbs/day 0.16

Selenium Load, lbs/year 60.20 Selenium Load, tons/day 0.0001 TDS Load, tons/year 0.0 Percent of Receiving Stream = Discha 0.71 Dilution Ratio: (to 1.0) 0.81

Percent of Stream Flow Used in Calc.

Current Permit Information

Current Project Loading

23.7 ug/l for : All Seasons

Effluent Limitation (per WLA)

0.0 0.00000

0.0000

This Calculates the Allowable Effluent Concentration/Loading Conservative Substances in a Receiving Water

Assumption: Complete Mixing

Conservative Substance: Acute or Chronic Standard

Discharger: Permit Number: Recelving Water:

Benefical Use: Class For the Season / Year TDS Acute

Note: Changes River Flow if Acute.

JVWCD Intermediate Feed Water DW4 [Maintenance] 0025836

Class 3 All Seasons

Receiving Water Information - Midas Creek

Flow, cfs Flow, cfs (Acute) TDS, mg/I

TDS Load, Ibs/day
Stream Standard

TDS, mg/l Allowable Loading Before Mix:

raiowable Loading Before Tax.

1,000 0,500 400,00000

Midas Creek

2156.00

200.0000

6468.00 lbs/day

Combined Effluent/Receiving Water Information Flow, cfs \* w/ 50% of Receiving 2.236 cfs

TDS, mg/l 1,200.00000 mg/l

Concentration Delta Increase, m
Percent Increase:
TDS Load, lbs/day:
Allowable Loading After Mix:

800.00000 mg/l [Delta]
2.00 %
14,464.79 lbs/day
14,464.79 lbs/day

Additional Loading Allowed:

Permitted Effluent Concentration

Permitted Effluent Loading: 12,308.7

1,847.059471 mg/l 12,308.79200 lbs/day

0.00 lbs/day

Effluent Information [Proposed] JVWCD Intermediate Feed Water MGD Flow, gai./min. 555.0000 0.79920

Flow, gal./min. 555.0000
Flow, MGD 0.79920
Flow, cfs 1.236

Date of Analysis:

Flow, cfs 1.236
TDS, mg/l 1,847.05947
TDS Load, lbs/day 12308.79

TDS Load, lbs/year 4,492,709.08
TDS Load, tons/day 6.1544
TDS Load, tons/year 2,246.4
Percent of Receiving Stream = Dischi 0.55

Dilution Ratio: (to 1.0)
Percent of Stream Flow Used in Calc.

Current Permit Information Flow, MGD (per WLA) Effluent Limitation (per WLA) Current Project Loading

0.0 0.00000 0.0000

0.81

100%

12/2/2009

1847059.5 ug/l for : All Seasons

2246.4 tons/year

Note: Whole Effluent Toxicity (WET) to be conducted on all toxic substances,.

Note: Waste Load Analysis may Indicete unreasonably high allowed concentrations and loadings. Narrative standards, Source Performance Standards, and BAT also apply.

 Background Conc:
 400.0000

 Effluent Conc.
 1,847.05947

 Conbined Conc:
 1,200.0000

 Standard:
 1,200.0000

 Percent Change
 200.0%

 Remaining Assimilative Capacity I
 100.00%

 Antidegradation Level II Review is NOT Required

Date of Analysis: 11/24/2009

Effluent Information [Proposed] JVWCD Intermediate Feed Watt MGD

675.0000

0.0000

0.97200

This Calculates the Allowable Effluent Concentration/Loading Conservative Substances in a Receiving Water

Assumption: Complete Mixing

Conservative Substance: Acute or Chronic Standard Discharger:

Permit Number: Receiving Water: Benefical Use: Class For the Season / Year

Stream Standard

Allowable Loading Before Mlx:

Permitted Efficient Loading:

Selenlum, mg/l

| Setenium             |  |
|----------------------|--|
| Acute                | Note: Changes River Flow if Acute.   |
| VWCD Intermediate Fa | eed Water DW1 [Maintenance]  |
| 0025836              | Park Walland Care and Park and All   |
| Bingham Creek        |  |
| Many 5               | The second secon |
| All Seasons          | (ref   |

Flow, gal./min.

0.1 tons/year

Flow, MGD

Receiving Water Information - Bingham Creek

 Flow, cfs
 5.650

 Flow, cfs (Acute)
 5.650

 Selenlum, mg/l
 0.0270

 Selenium Load, lbs/day
 0.16

Flow, cfs 1.504

0.16 Selenium, mg/l
Selenium Load, lbs/day 0.63
Selenium Load, lbs/year 228.95
Selenium Load, tons/day 0.0003

1.12 lbs/day TDS Load, tons/year 0.1

Acute / Chronic Standard [Toxic Acute | Percent of Receiving Stream = Dische 0.21 |
Dilution Ratio: (to 1.0) | 7.51 |
Combined Effluent/Receiving Water Information | Percent of Stream Flow Used in Calc. | 50%

Flow, cfs \* w/ 50% of Receiving 7.154 cfs

Selenium, mg/l
Concentration Delta Increase, m

Descent Increase, m

O.01840 mg/l
O.01570 mg/l [Delta Flow, MGD (per WLA)

Figure 1 imitation (per WLA)

Percent Increase: 5.81 % Effluent Limitation (per WLA)
Selenium Load, lbs/day: 0.71 lbs/day Current Project Loading
Allowable Loading After Mix: 0.71 lbs/day

Allowable Loading After Mix: 0.71 lbs/day
Addltlonal Loading Allowed: 0.00 lbs/day

Permitted Effluent Concentration 0.067 mg/l 67.2 ug/l før : All Seasons

0.62725 lbs/day

Note: Whole Efficient Toxicity (WET) to be conducted on all toxic substances,.

Note: Waste Load Analysis may indicate unreasonably high allowed concentrations and loadings. Narrative standards, Source Performance Standards, and BAT also apply.

Background Conc: 0.00270
Effluent Conc. 0.07739
Conbined Conc: 0.01840
Standard: 0.01840
Percent Change 581.5%
Remaining Assimilative Capacity 55.87%
Antidegradation Level II Review is NOT Required

Date of Analysis: 12/2/2009

Effluent Information [Proposed] JVWCD Intermediate Feed Water MGD

730.0000

1.05120

1.626

14830.30

5,413,060.59

7.4152

2,706.5

0.62

0.61

100%

0.0

0.00000

0,0000

1,691.94247

1.05120

This Calculates the Allowable Effluent Concentration/Loading Conservative Substances in a Receiving Water Assumption: Complete Mixing

Conservative Substance:

Acute or Chronic Standard Discharger:

Permit Number: Receiving Water: Benefical Use: Class For the Season / Year

Stream Standard

TDS Acute

Note: Changes River Flow if Acute.

JVWCD Intermediate Feed Water DW5 [Maintenance] 0025836

Midas Creek Class 3

All Seasons

Receiving Water Information - Midas Creek

Flow, cfs Flow, cfs (Acute) TDS, mg/l TDS Load, lbs/day

1.000 0.500 400.00000 2156.00

TDS, mg/l 1200.0000 Allowable Loading Before Mix: 6468.00 lbs/day

Combined Effluent/Receiving Water Information

Flow, cfs \* w/ 50% of Receiving 2.626 cfs TDS, mg/l 1,200.00000 mg/l

Concentration Delta Increase, m 800.00000 mg/l [Delta] Current Permit Information Percent Increase: 2.00 % 16,986.30 lbs/day TDS Load, lbs/day: Allowable Loading After Mix: 16,986.30 lbs/day

Additional Loading Allowed:

Permitted Effluent Concentration Permitted Effluent Loading:

1,691.942474 mg/l

14,830.30300 lbs/day

0.00 lbs/day

1691942.5 ug/l for : All Seasons

2706.5 tons/year

Flow, gal./min.

TDS Load, lbs/day

TDS Load, ibs/year

TDS Load, tons/day

TDS Load, tons/year

Dilution Ratio: (to 1.0)

Flow, MGD (per WLA)

Current Project Loading

Effluent Limitation (per WLA)

Percent of Receiving Stream = Discha

Percent of Stream Flow Used in Calc.

Flow, MGD

Flow, cfs

TDS, mg/l

Note: Whole Effluent Toxicity (WET) to be conducted on all toxic substances,.

Note: Waste Load Analysis may indicate unreasonably high allowed concentrations and loadings. Narrative standards, Source Performance Standards, and BAT also apply.

Background Conc: 400.00000 Effluent Conc. 1,691.94247 Conbined Conc: 1,200.00000 Standard: 1,200.00000 Percent Change 200.0% Remaining Assimilative Capacity ( 100.00% Antidegradation Level II Review is NOT Required

Date of Analysis: 11/24/2009

Effluent Information [Proposed] JVWCD Intermediate Feed Wate MGD

439.0000

0,63216

0.978 0.02643

0.14

50.84 0.0001

0.0

0.66

1.02

50%

0.0

0.00000

0.0000

0.63216

### Waste Load Analysis [TMDL] (Simple Mass Balance) for Conservative Substances

This Calculates the Allowable Effluent Concentration/Loading Conservative Substances in a Receiving Water

Assumption: Complete Mixing

Conservative Substance:

Acute or Chronic Standard

Discharger:

Permit Number:

Receiving Water:

Stream Standard

Benefical Use: Class

For the Season / Year

Selenium Acute

Note: Changes River Flow if Acute.

JVWCD Intermediate Feed Water DW5 [Maintenance]

Flow, gal./min.

Selenium, mg/l Selenium Load, Ibs/day

Selenium Load, lbs/year

Selenium Load, tons/day

TDS Load, tons/year

Flow, MGD

Flow, cfs

0025836 Butterfield/Midas Creek

Class 3

All Seasons

Receiving Water Information - Butterfield/Midas Creek

1.000 Flow, cfs

Flow, cfs (Acute) Selenium, mg/l

Selenium Load, lbs/day

0.500 0.00270

0.01

0.025 mg/l

0.0184 Selenium, mg/l Allowable Loading Before Mix: Acute / Chronic Standard [Toxic Acute.

0.10 lbs/day

Percent of Receiving Stream = Discha Dilution Ratio: (to 1.0) Combined Effluent/Receiving Water Information

Percent of Stream Flow Used in Calc.

Effluent Limitation (per WLA)

Current Permit Information

Flow, cfs \* w/ 50% of Receiving 1.478 cfs

Selenium, mg/l 0.01840 mg/l Concentration Delta Increase, m 0.01570 mg/l [Delta Flow, MGD (per WLA)

Percent Increase: 5.81 % Selenium Load, lbs/day: 0.15 lbs/day

Allowable Loading After Mix: 0.15 lbs/day Required Loading Reduction: 0.00 lbs/day

Permitted Effluent Concentration

Permitted Effluent Loading: 0.13930 lbs/day 25 ug/l for : All Seasons

Current Project Loading

0 tons/year

Note: Whole Effluent Toxicity (WET) to be conducted on all toxic substances,.

Note: Waste Load Analysis may indicate unreasonably high allowed concentrations and loadings. Narrative standards, Source Performance Standards, and BAT also apply.

Background Conc: 0.00270 Effluent Conc. 0.02643 Conbined Conc: 0.01840 Standard: 0.01840 Percent Change 581.5% Remaining Assimilative Capacity L 74.72% Antidegradation Level II Review is NOT Required

for Conservative Substances

Date of Analysis: 12/2/2009

This Calculates the Allowable Effluent Concentration/Loading Conservative Substances in a Receiving Water

Assumption: Complete Mixing

Conservative Substance: Acute or Chronic Standard

Discharger: Permit Number: Receiving Water:

Benefical Use: Class For the Season / Year TDS Acute

Note: Changes River Flow If Acute.

TVWCD Intermediate Feed Water DW6 [Maintenance] 0025836

Utah Salt Lake Canal

Class 4 Fall Winter

Receiving Water Information - Utah Salt Lake Canal

Flow, cfs 0.0001 Flow, cfs (Acute) 0.000 TDS, mg/l 0.00000 TDS Load, lbs/day 0.00

Stream Standard TDS, mg/l

Allowable Loading Before Mix:

Combined Effluent/Receiving Water Information

Flow, cfs \* w/ 50% of Receiving

TDS, mg/l 1,199,99931 mg/l Concentration Delta Increase, m

Percent Increase: TDS Load, lbs/day:

Allowable Loading After Mix:

Additional Loading Allowed:

Permitted Effluent Concentration

Permitted Effluent Loading:

1,200.000691 mg/l

#DIV/0!

200.0000

0.01 lbs/day

1.738 cfs

11,238.73 lbs/day

11,238.74 lbs/day

0.01 lbs/day

11,238.74118 lbs/day

Effluent Information [Proposed] JVWCD Intermediate Feed Water MGD

Flow, gal./min. Flow, MGD Flow, cfs

TDS, ma/l TDS Load, lbs/day TDS Load, lbs/year

TDS Load, tons/day TDS Load, tons/year Percent of Receiving Stream = Discha

Dilution Ratio: (to 1.0)

Percent of Stream Flow Used in Calc.

1,199.99931 mg/l [Delta] Current Permit Information Flow, MGD (per WLA) Effluent Limitation (per WLA)

Current Project Loading

0.0 0.00000 0.0000

780.0000

1.12320 1.738

1.200.00000

11238.73

4,102,138.17

5.6194

2,051.1

1.00

0.00

100%

1.12320

1200000.7 ug/l for : Fall Winter

2051.1 tons/year

Note: Whole Effluent Toxicity (WET) to be conducted on all toxic substances,.

Note: Waste Load Analysia may indicate unreasonably high allowed concentrations and loadings. Narrative standards, Source Performance Standards, and BAT also apply.

**Background Conc:** 0.00000 Effluent Conc. 1,200.00000 Conbined Conc: 1,199.99931 Standard: 1,200.00000 Percent Change #DIV/0! Remaining Assimilative Capacity ( 100.00% Antidegradation Level II Review is NOT Required

for Conservative Substances Date of Analysis: 12/2/2009

This Calculates the Allowable Effluent Concentration/Loading Conservative Substances in a Receiving Water

Assumption: Complete Mixing

Conservative Substance: Acute or Chronic Standard

Discharger: Permit Number: Receiving Water:

Benefical Use: Class For the Season / Year TDS Acute

Note: Changes River Flow if Acute.

780.0000

1.12320

1.738

24174.73

8,823,778.17

12.0874

4,411.9

0.03 28.78

100%

0.0

0.00000

0.0000

2,581.22310

1.12320

Flow, gal./min.

TDS Load, lbs/day

TDS Load, lbs/year

TDS Load, tons/day

TDS Load, tons/year

Dilution Ratio: (to 1.0)

Current Permit Information

Effluent Limitation (per WLA)

Flow, MGD (per WLA)

Current Project Loading

Percent of Receiving Stream = Dischi

Percent of Stream Flow Used in Calc.

Flow, MGD

Flow, cfs

TDS, mg/l

3VWCD Intermediate Feed Water DW6 [Maintenance] 0025836

Utah Salt Lake Canal Class 4

1200.0000

323400.00 lbs/day

Summer, Spring

Effluent Information [Proposed] JVWCD Intermediate Feed Water MGD

Receiving Water Information - Utah Salt Lake Canal

Flow, cfs 50,000 Flow, cfs (Acute) 25.000 TDS, mq/l

152,00000 TDS Load, lbs/day 310464.00 Stream Standard

TDS, mg/l Allowable Loading Before Mix:

Combined Effluent/Receiving Water Information Flow, cfs \* w/ 50% of Receiving

51.738 cfs 1,200,00000 mg/l TDS, mg/l

Concentration Delta Increase, m 48.00000 mg/l [Delta] Percent Increase: 0.04 % TDS Load, lbs/day: 334,638.73 lbs/day

Allowable Loading After Mix: 334,638.73 lbs/day 0.00 lbs/day

Additional Loading Allowed:

Permitted Effluent Concentration

Permitted Effluent Loading:

2,581.223101 mg/l

24,174.73471 ibs/day

2581223.1 ug/l for : Summer, Spring 4411.9 tons/year

Note: Whole Effluent Toxicity (WET) to be conducted on all toxic substances,.

Note: Waste Load Analysis may indicate unreasonably high allowed concentrations and loadings. Narrative standards, Source Performance Standards, and BAT also apply.

Background Conc: 1,152.00000 Effluent Conc. 2,581.22310 Conbined Conc: 1,200,00000 Standard: 1,200.00000 Percent Change 4.2% Remaining Assimilative Capacity ( 100.00% Antidegradation Level II Review is NOT Required

Date of Analysis: 12/2/2009 for Conservative Substances

This Calculates the Allowable Effluent Concentration/Loading Conservative Substances in a Receiving Water

Assumption: Complete Mixing

Conservative Substance: Acute or Chronic Standard Discharger:

TDS Acute Note: Changes River Flow if Acute. JVWCD Intermediate Feed Water DW7 [Maintenance]

Permit Number: 0025836

Receiving Water: Utah Salt Lake Canal

Benefical Use: Class Class 4

For the Season / Year Fall Winter

Effluent Information [Proposed] JVWCD Intermediate Feed Water MGD Receiving Water Information - Utah Salt Lake Canal

1,500.0000 2.16000 Flow, cfs 0.000 Flow, gal./min.

0.000 Flow, MGD 2.16000 Flow, cfs (Acute) TDS, mg/l 0.00000 Flow, cfs 3.342 1,200.00000 TDS Load, lbs/day 0.00 TDS, mg/l TDS Load, lbs/day 21612.95

TDS Load, lbs/year 7,888,727.25 10.8065 1200.0000 TDS Load, tons/day

3,944.4 Allowable Loading Before Mix: 0.01 lbs/day TDS Load, tons/year Percent of Receiving Stream = Discha 1.00 0.00

Combined Effluent/Receiving Water Information Dilution Ratio: (to 1.0) Flow, cfs \* w/ 50% of Receiving Percent of Stream Flow Used in Calc. 100% 3.342 cfs

TDS, mg/l 1,199.99964 mg/l

Concentration Delta Increase, m 1,199.99964 mg/l [Delta] Current Permit Information

Percent Increase: #DIV/0! Flow, MGD (per WLA) 0.0 TDS Load, lbs/day: 21,612.95 lbs/day Effluent Limitation (per WLA) 0.00000 Allowable Loading After Mix: 21,612.96 lbs/day Current Project Loading 0.0000

Additional Loading Allowed: 0.01 lbs/day

Permitted Effluent Concentration 1,200.000359 mg/l 1200000.4 ug/l for : Fall Winter

Permitted Effluent Loading: 21,612.95783 lbs/day 3944.4 tons/year

Note: Whole Effluent Toxicity (WET) to be conducted on all toxic substances,.

Note: Waste Load Analysis may Indicate unreasonably high allowed concantrations and loadings. Narrative standards, Source Performance Standards, and BAT also

apply.

Stream Standard

TDS, mg/l

Background Conc: 0.00000 Effluent Conc. 1,200.00000 Conbined Conc: 1.199.99964 Standard: 1,200.00000 Percent Change #DIV/0! Remaining Assimilative Capacity U 100.00%

Antidegradation Level II Review Is NOT Required

This Calculates the Allowable Effluent Concentration/Loading

Conservative Substances in a Receiving Water

Assumption: Complete Mixing

Conservative Substance:

Acute or Chronic Standard

Discharger: Permit Number: Receiving Water:

Benefical Use: Class For the Season / Year TDS Acute DVWCD Intermediate Feed Water DW7 [Maintenance]

Note: Changes River Flow if Acute.

0025836

Jordan River Class 4

Spring, Summer

Receiving Water Information - Jordan River

Flow, cfs Flow, cfs (Acute)

TDS, mq/l TDS Load, lbs/day 0.000 0.000

0.00

0.00 lbs/day

0.00 %

0.00 lbs/day

Stream Standard TDS, mg/l 1200,0000 Allowable Loading Before Mix:

Combined Effluent/Receiving Water Information

Flow, cfs \* w/ 50% of Receiving 3,342 cfs TDS, mg/l 1,200.00000 mg/l

Concentration Delta Increase, m 0.00000 mg/l [Delta] Percent Increase: TDS Load, lbs/day: 21,612.95 lbs/day Allowable Loading After Mix: 21,612.95 lbs/day

Additional Loading Allowed:

Permitted Effluent Concentration

Permitted Effluent Loading:

1,200.000000 mg/l

21,612.95136 lbs/day

Effluent Information [Proposed] JVWCD Intermediate Feed WatcMGD 1,500.0000 2.16000 Flow, gal./min. 2.16000

Date of Analysis: 12/2/2009

Flow, MGD Flow, cfs

TDS, mg/l TDS Load, lbs/day

TDS Load, lbs/year TDS Load, tons/day TDS Load, tons/year

Percent of Receiving Stream = Dischi Dilution Ratio: (to 1.0)

Percent of Stream Flow Used in Calc.

Current Permit Information Flow, MGD (per WLA) Effluent Limitation (per WLA)

Current Project Loading

0.0 0.00000 0.0000

3.342

1,200.00000

21612.95

7,888,727.25

10.8065

3,944.4

1.00

0.00

100%

1200000 ug/i for : Spring, Summer 3944.4 tons/year

Note: Whole Effluent Toxicity (WET) to be conducted on all toxic substances,.

Note: Waste Load Analysis may indicate unreasonably high allowed concentrations and loadings. Narrative standards, Source Performance Standards, and BAT also apply.

Background Conc: 1,200,00000 Effluent Conc. 1,200.00000 Conbined Conc: 1,200.00000 Standard: 1.200.00000 Percent Change 0.0% Remaining Assimilative Capacity L #DIV/01 Antidegradation Level II Review is NOT Required