Appendix D. Theil-Sen slope line and p-values for selected constituents for uncensored data from selected sites.

**Chloride, in milligrams per liter**
- Theil−Sen line p−value = 0.037

**Sodium, in milligrams per liter**
- Theil−Sen line p−value = 0.045

**Sulfate, in milligrams per liter**
- Theil−Sen line p−value = 0.020

**Nitrate plus Nitrite as N, in milligrams per liter**
- Theil−Sen line p−value = 0.234
Orthophosphate as P in milligrams per liter

Theil–Sen line
p-value = 0.219

ANP 6 (435152112443101)
Chloride, in milligrams per liter

Sodium, in milligrams per liter

Nitrate plus Nitrite as N, in milligrams per liter

Arsenic, in micrograms per liter

**ANP 9 (434856112400001)**

- **Barium**, in micrograms per liter
  - Theil–Sen line
  - p-value = 0.244

- **Chromium**, in micrograms per liter
  - Theil–Sen line
  - p-value = 0.000

- **Molybdenum**, in micrograms per liter
  - Theil–Sen line
  - p-value = 0.002

- **Uranium**, in micrograms per liter
  - Theil–Sen line
  - p-value = 0.000
Zinc, in micrograms per liter

ANP 9 (434856112400001)

Theil–Sen line
p-value = 0.010
Theil–Sen line
p-value = 0.311

Chloride, in milligrams per liter

ARBOR TEST (433509112384801)
Appendix D

Area 2 (433223112470201)

Chloride, in milligrams per liter
Theil–Sen line
p-value = 0.200

Sodium, in milligrams per liter
Theil–Sen line
p-value = 0.427

Sulfate, in milligrams per liter
Theil–Sen line
p-value = 0.007

Nitrate plus Nitrite as N, in milligrams per liter
Theil–Sen line
p-value = 0.202
ATOMIC CITY (432638112484101)

Chloride, in milligrams per liter

- Theil–Sen line
  - p-value = 0.715

Sodium, in milligrams per liter

- Theil–Sen line
  - p-value = 0.000
BADGING FACILITY WELL (433042112535101)

Chloride, in milligrams per liter
- Theil–Sen line
- p-value = 0.571

Sodium, in milligrams per liter
- Theil–Sen line
- p-value = 0.339

Sulfate, in milligrams per liter
- Theil–Sen line
- p-value = 0.252

Nitrate plus Nitrite as N, in milligrams per liter
- Theil–Sen line
- p-value = 0.000
Theil−Sen line
p−value = 0.469

Chloride, in milligrams per liter

Theil−Sen line
p−value = 0.010

Sodium, in milligrams per liter

Theil−Sen line
p−value = 0.083

Nitrate plus Nitrite as N, in milligrams per liter
Appendix D

EBR 1 (433051113002601)

Chloride, in milligrams per liter

- Theil–Sen line
  p-value = 0.826

N-1

Sodium, in milligrams per liter

- Theil–Sen line
  p-value = 0.022

N-1

Nitrate plus Nitrite as N, in milligrams per liter

- Theil–Sen line
  p-value = 0.496

N-1
FIRE STATION 2 (433548112562301)

Chloride, in milligrams per liter

Theil–Sen line
p-value = 0.344

Sodium, in milligrams per liter

Theil–Sen line
p-value = 0.087

Nitrate plus Nitrite as N, in milligrams per liter

Theil–Sen line
p-value = 0.047
HIGHWAY 3 (433256113002501)

**Chloride, in milligrams per liter**
- Theil–Sen line
- p-value = 0.093

**Sodium, in milligrams per liter**
- Theil–Sen line
- p-value = 0.554

**Nitrate plus Nitrite as N, in milligrams per liter**
- Theil–Sen line
- p-value = 0.003
Ammonia, in milligrams per liter

Sulfate, in milligrams per liter

IET 1 DISP (4351531112420501)
LEO ROGERS 1 (432533112504901)

Chloride, in milligrams per liter

- Theil–Sen line
- p-value = 0.324

Sodium, in milligrams per liter

- Theil–Sen line
- p-value = 0.728
Chloride, in milligrams per liter

Theil–Sen line
p−value = 0.240

Sodium, in milligrams per liter

Theil–Sen line
p−value = 0.633

Nitrate plus Nitrite as N, in milligrams per liter

Theil–Sen line
p−value = 0.110

Arsenic, in micrograms per liter

Theil–Sen line
p−value = 0.165
Barium, in micrograms per liter

Chromium, in micrograms per liter

Uranium, in micrograms per liter

Theil–Sen line

p-value = 0.095

Theil–Sen line

p-value = 0.005

Theil–Sen line

p-value = 0.030
Chloride, in milligrams per liter

Sodium, in milligrams per liter

Nitrate plus Nitrite as N, in milligrams per liter

Theil–Sen line

p-value = 0.000
Chloride, in milligrams per liter

- Theil–Sen line
- p-value = 0.327

Sodium, in milligrams per liter

- Theil–Sen line
- p-value = 0.902

Nitrate plus Nitrite as N, in milligrams per liter

- Theil–Sen line
- p-value = 0.154
Appendix D

6.06 .5 7.07 .5 8.08 .5 9.0
1995 2000 2005
Chloride, in milligrams per liter

Theil−Sen line
p−value = 0.314

6.06 .5 7.07 .5 8.08 .5 9.0
1995 2000 2005
Sodium, in milligrams per liter

Theil−Sen line
p−value = 0.871

0.20 .3 0.40 .5 0.60 .7 0.8
1995 2000 2005
Nitrate plus Nitrite as N, in milligrams per liter

Theil−Sen line
p−value = 0.471

62 64 66 68 70
1995 2000 2005
Barium, in micrograms per liter

Theil−Sen line
p−value = 0.078
SITE 4 (433617112542001)

- **Chloride, in milligrams per liter**
  - Theil−Sen line
  - p-value = 0.000

- **Sodium, in milligrams per liter**
  - Theil−Sen line
  - p-value = 0.000

- **Sulfate, in milligrams per liter**
  - Theil−Sen line
  - p-value = 0.651
SITE 9 (433123112530101)

- **Chloride, in milligrams per liter**
  - Theil–Sen line
  - p-value = 0.139

- **Sodium, in milligrams per liter**
  - Theil–Sen line
  - p-value = 0.000

- **Sulfate, in milligrams per liter**
  - Theil–Sen line
  - p-value = 0.000

- **Nitrate plus Nitrite as N, in milligrams per liter**
  - Theil–Sen line
  - p-value = 0.000
Appendix D

SITE 14 (434334112463101)

**Chloride, in milligrams per liter**
- Theil–Sen line
- p-value = 0.534

**Sodium, in milligrams per liter**
- Theil–Sen line
- p-value = 0.125

**Nitrate plus Nitrite as N, in milligrams per liter**
- Theil–Sen line
- p-value = 0.060
SITE 17 (434027112575701)

- **Chloride**, in milligrams per liter
  - Theil–Sen line
  - p-value = 0.189

- **Sodium**, in milligrams per liter
  - Theil–Sen line
  - p-value = 0.723

- **Sulfate**, in milligrams per liter
  - Theil–Sen line
  - p-value = 0.050

- **Nitrate plus Nitrite as N**, in milligrams per liter
  - Theil–Sen line
  - p-value = 0.073
SITE 19 (433522112582101)

Chloride, in milligrams per liter
Theil–Sen line
p-value = 0.002

Sodium, in milligrams per liter
Theil–Sen line
p-value = 0.359

Sulfate, in milligrams per liter
Theil–Sen line
p-value = 0.788
SPERT 1 (433252112520301)

Chloride, in milligrams per liter

Theil−Sen line
$p$-value = 0.003

Sodium, in milligrams per liter

Theil−Sen line
$p$-value = 0.002

Nitrate plus Nitrite as N, in milligrams per liter

Theil−Sen line
$p$-value = 0.000
Appendix D

TRA 1 (433521112573801)

Chloride, in milligrams per liter

Theil–Sen line
p-value = 0.012

Sodium, in milligrams per liter

Theil–Sen line
p-value = 0.000

Sulfate, in milligrams per liter

Theil–Sen line
p-value = 0.030
Theil–Sen line
p-value = 0.012

Theil–Sen line
p-value = 0.035

Theil–Sen line
p-value = 0.968
Appendix D  D31

TRA 4 (433521112574201)

Chloride, in milligrams per liter

Sodium, in milligrams per liter

Sulfate, in milligrams per liter

Theil–Sen line
p−value = 0.000

Theil–Sen line
p−value = 0.040
Chloride, in milligrams per liter

Sodium, in milligrams per liter

Nitrate plus Nitrite as N, in milligrams per liter

Total Organic Carbon, in milligrams per liter

Theil–Sen line

p-value = 0.022

p-value = 0.457

p-value = 0.007

p-value = 0.093
15.8 16.2 16.6 17.0
Chloride, in milligrams per liter

Theil−Sen line
p−value = 0.224

16.0 16.5 17.0 17.5
Sodium, in milligrams per liter

Theil−Sen line
p−value = 0.127

12 13 14 15 16 17
Sulfate, in milligrams per liter

Theil−Sen line
p−value = 0.000

1.01 .2 1.41 .6
Nitrate plus Nitrite as N, in milligrams per liter

Theil−Sen line
p−value = 0.000
Chloride, in milligrams per liter

Theil–Sen line
p-value = 0.002

Sodium, in milligrams per liter

Theil–Sen line
p-value = 0.083

Nitrate plus Nitrite as N, in milligrams per liter

Theil–Sen line
p-value = 0.634
Chloride, in milligrams per liter

Sodium, in milligrams per liter

Sulfate, in milligrams per liter

Nitrate plus Nitrite as N, in milligrams per liter

Theil–Sen line

p−value = 0.027

p−value = 0.457

p−value = 0.230

p−value = 0.053
Appendix D  D37

USGS 7 (434915112443901)

Chloride, in milligrams per liter

Sodium, in milligrams per liter

Nitrate plus Nitrite as N, in milligrams per liter

Arsenic, in micrograms per liter
Barium, in micrograms per liter

Manganese, in micrograms per liter

Uranium, in micrograms per liter

Theil–Sen line

p-value = 0.012

p-value = 0.357

p-value = 0.684
**Chloride, in milligrams per liter**

Theil–Sen line

*p*-value = 0.000

**Sodium, in milligrams per liter**

Theil–Sen line

*p*-value = 0.689

**Nitrate plus Nitrite as N, in milligrams per liter**

Theil–Sen line

*p*-value = 0.139
Chloride, in milligrams per liter

Sodium, in milligrams per liter

Nitrate plus Nitrite as N, in milligrams per liter
Chloride, in milligrams per liter

Sodium, in milligrams per liter

Sulfate, in milligrams per liter

Nitrate plus Nitrite as N, in milligrams per liter

USGS 12 (434126112550701)

Theil–Sen line

\textit{p−value} = 0.018

Theil–Sen line

\textit{p−value} = 0.972

Theil–Sen line

\textit{p−value} = 0.000

Theil–Sen line

\textit{p−value} = 0.656
Theil–Sen line
p-value = 0.007
Chloride, in milligrams per liter

Sodium, in milligrams per liter

Theil–Sen line
p-value = 0.554

Theil–Sen line
p-value = 0.781
Appendix D

USGS 15 (434234112551701)

**Chloride, in milligrams per liter**
- Theil–Sen line
- p-value = 0.119

**Sodium, in milligrams per liter**
- Theil–Sen line
- p-value = 0.755

**Sulfate, in milligrams per liter**
- Theil–Sen line
- p-value = 0.112

**Nitrate plus Nitrite as N, in milligrams per liter**
- Theil–Sen line
- p-value = 0.013
Theil–Sen line  
$p$-value = 0.860
Chloride, in milligrams per liter

Sodium, in milligrams per liter

Sulfate, in milligrams per liter

Nitrate plus Nitrite as N, in milligrams per liter

Theil−Sen line

p−value = 0.000

Theil−Sen line

p−value = 0.035

Theil−Sen line

p−value = 0.753

Theil−Sen line

p−value = 0.003
USGS 17 (433937112515401)

Fluoride, in milligrams per liter

Theil–Sen line
p-value = 0.992
Chloride, in milligrams per liter

Sodium, in milligrams per liter

Sulfate, in milligrams per liter

Nitrate plus Nitrite as N, in milligrams per liter

Theil−Sen line

p−value = 0.017

p−value = 0.204

p−value = 0.000

p−value = 0.641
Chloride, in milligrams per liter:
- Theil–Sen line
- p-value = 0.279

Sodium, in milligrams per liter:
- Theil–Sen line
- p-value = 0.000

Nitrate plus Nitrite as N, in milligrams per liter:
- Theil–Sen line
- p-value = 0.003
Appendix D  D51

Chloride, in milligrams per liter

Theil−Sen line
p-value = 0.150

Sodium, in milligrams per liter

Theil−Sen line
p-value = 0.828
Chloride, in milligrams per liter

- Theil–Sen line
- p-value = 0.379

Sodium, in milligrams per liter

- Theil–Sen line
- p-value = 0.037

Nitrate plus Nitrite as N, in milligrams per liter

- Theil–Sen line
- p-value = 0.043
Chloride, in milligrams per liter

Sodium, in milligrams per liter

Nitrate plus Nitrite as N, in milligrams per liter

Arsenic, in micrograms per liter
Uranium, in micrograms per liter
p-value = 0.090
Chloride, in milligrams per liter

USGS 27 (434851112321801)

- Theil–Sen line
- P-value = 0.000

Sodium, in milligrams per liter

- Theil–Sen line
- P-value = 0.187

Nitrate plus Nitrite as N, in milligrams per liter

- Theil–Sen line
- P-value = 0.050

Total Organic Carbon, in milligrams per liter

- Theil–Sen line
- P-value = 0.973
Theil–Sen line
p-value = 0.798

Theil–Sen line
p-value = 0.676

Theil–Sen line
p-value = 0.659

Theil–Sen line
p-value = 0.060
Chloride, in milligrams per liter

Sodium, in milligrams per liter

Sulfate, in milligrams per liter

Nitrate plus Nitrite as N, in milligrams per liter

Theil–Sen line
p-value = 0.000

Theil–Sen line
p-value = 0.097

Theil–Sen line
p-value = 0.000

Theil–Sen line
p-value = 0.000
Chloride, in milligrams per liter

Theil−Sen line
p−value = 0.057

Sodium, in milligrams per liter

Theil−Sen line
p−value = 0.134

Sulfate, in milligrams per liter

Theil−Sen line
p−value = 0.067

Nitrate plus Nitrite as N, in milligrams per liter

Theil−Sen line
p−value = 0.209
Appendix D

**chloride, in milligrams per liter**

Theil–Sen line

p-value = 0.290

**sodium, in milligrams per liter**

Theil–Sen line

p-value = 0.142

**nitrate plus nitrite as N, in milligrams per liter**

Theil–Sen line

p-value = 0.092
Theil−Sen line

Chloride, in milligrams per liter

- USGS 86 (432935113080001)
- Theil−Sen line
  p−value = 0.000

Sodium, in milligrams per liter

- Theil−Sen line
  p−value = 0.257

Nitrate plus Nitrite as N, in milligrams per liter

- Theil−Sen line
  p−value = 0.045
Chloride, in milligrams per liter

Sodium, in milligrams per liter

Sulfate, in milligrams per liter

Nitrate plus Nitrite as N, in milligrams per liter

Theil−Sen line

p-value = 0.000

Theil−Sen line

p-value = 0.002

Theil−Sen line

p-value = 0.000
Bromide, in milligrams per liter

Theil−Sen line
p−value = 0.042

Arsenic, in micrograms per liter

Theil−Sen line
p−value = 0.144

Barium, in micrograms per liter

Theil−Sen line
p−value = 0.025

Molybdenum, in micrograms per liter

Theil−Sen line
p−value = 0.000
Uranium, in micrograms per liter

USGS 97 (433807112551501)

Theil–Sen line
p-value = 0.938
Bromide, in milligrams per liter

Theil−Sen line
p−value = 0.932

Barium, in micrograms per liter

Theil−Sen line
p−value = 0.399

Uranium, in micrograms per liter

Theil−Sen line
p−value = 0.523

Zinc, in micrograms per liter

Theil−Sen line
p−value = 0.000
Chloride, in milligrams per liter

Sulfate, in milligrams per liter

Sodium, in milligrams per liter

Nitrate plus Nitrite as N, in milligrams per liter

USGS 99 (433705112552101)

Theil−Sen line

p−value = 0.000

Theil−Sen line

p−value = 0.290

Theil−Sen line

p−value = 0.000

Theil−Sen line

p−value = 0.900
Bromide, in milligrams per liter

USGS 99 (433705112552101)

Theil–Sen line
p-value = 0.422

Total Organic Carbon, in milligrams per liter

Theil–Sen line
p-value = 0.018
USGS 100 (433503112400701)

Chloride, in milligrams per liter

- Theil−Sen line
- p−value = 0.080

Sodium, in milligrams per liter

- Theil−Sen line
- p−value = 0.005

Sulfate, in milligrams per liter

- Theil−Sen line
- p−value = 0.023
Chloride, in milligrams per liter

Sodium, in milligrams per liter

Nitrate plus Nitrite as N, in milligrams per liter

Theil–Sen line
p-value = 0.000

Theil–Sen line
p-value = 0.195

Theil–Sen line
p-value = 0.000
Theil–Sen line
p-value = 0.955

Theil–Sen line
p-value = 0.000

Theil–Sen line
p-value = 0.072

Theil–Sen line
p-value = 0.035
Nitrate plus Nitrite as N, in milligrams per liter

Theil–Sen line
p-value = 0.002

Total Organic Carbon, in milligrams per liter

Theil–Sen line
p-value = 0.028
Chloride, in milligrams per liter

Sodium, in milligrams per liter

Nitrate plus Nitrite as N, in milligrams per liter

* Theil–Sen line p-value = 0.117
* Theil–Sen line p-value = 0.927
* Theil–Sen line p-value = 0.003
Theil–Sen line
p-value = 0.000

Theil–Sen line
p-value = 0.002

Theil–Sen line
p-value = 0.000
Chloride, in milligrams per liter

Sodium, in milligrams per liter

Nitrate plus Nitrite as N, in milligrams per liter
Theil–Sen line
p-value = 0.000

USGS 110 (432717112501501)

Chloride, in milligrams per liter

Sodium, in milligrams per liter

Theil–Sen line
p-value = 0.053
USGS 110A (432717112501502)

Chloride, in milligrams per liter

- Theil–Sen line
- p-value = 0.120

Sodium, in milligrams per liter

- Theil–Sen line
- p-value = 0.571

Nitrate plus Nitrite as N, in milligrams per liter

- Theil–Sen line
- p-value = 0.346
Chloride, in milligrams per liter

Theil−Sen line
p−value = 0.000

Sodium, in milligrams per liter

Theil−Sen line
p−value = 0.022

Sulfate, in milligrams per liter

Theil−Sen line
p−value = 0.965

Nitrate plus Nitrite as N, in milligrams per liter

Theil−Sen line
p−value = 0.002

USGS 119 (432945113023401)

Chloride, in milligrams per liter

Theil–Sen line
p-value = 0.050

Sodium, in milligrams per liter

Theil–Sen line
p-value = 0.853

Sulfate, in milligrams per liter

Theil–Sen line
p-value = 0.000

Nitrate plus Nitrite as N, in milligrams per liter

Theil–Sen line
p-value = 0.526
Theil−Sen line
p−value = 0.010

Chloride, in milligrams per liter

Theil−Sen line
p−value = 0.376

Sodium, in milligrams per liter

Theil−Sen line
p−value = 0.705

Sulfate, in milligrams per liter

Theil−Sen line
p−value = 0.254

Nitrate plus Nitrite as N, in milligrams per liter
Theil–Sen line
p-value = 0.000

Theil–Sen line
p-value = 0.037

Theil–Sen line
p-value = 0.346
Chloride, in milligrams per liter

Sodium, in milligrams per liter

Nitrate plus Nitrite as N, in milligrams per liter

USGS 126A (435529112471301)

Theil–Sen line
p-value = 0.391

Theil–Sen line
p-value = 0.561

Theil–Sen line
p-value = 0.902
USGS 126B (435529112471401)

Chloride, in milligrams per liter

Sodium, in milligrams per liter

Nitrate plus Nitrite as N, in milligrams per liter

Theil−Sen line

p−value = 0.621

p−value = 0.210

p−value = 0.688
Chloride, in milligrams per liter
Theil–Sen line
p-value = 0.000

Sodium, in milligrams per liter
Theil–Sen line
p-value = 0.000

Sulfate, in milligrams per liter
Theil–Sen line
p-value = 0.000

Bromide, in milligrams per liter
Theil–Sen line
p-value = 0.000
Nitrate plus Nitrite as N, in milligrams per liter

Theil–Sen line
p-value = 0.000

Total Organic Carbon, in milligrams per liter

Theil–Sen line
p-value = 0.686
BIG LOST RIVER AT EXPERIMENTAL DAIRY FARM, NEAR HOWE (13132545)

Chloride, in milligrams per liter

Theil–Sen line
p-value = 0.072
BIG LOST RIVER BELOW INL DIVERSION, NEAR ARCO (13132520)

Chloride, in milligrams per liter

Theil–Sen line
p-value = 0.000
BIG LOST RIVER AT MACKAY (13127700)

Chloride, in milligrams per liter

Theil–Sen line
p-value = 0.000
Chloride, in milligrams per liter

Sodium, in milligrams per liter

Sulfate, in milligrams per liter

Calcium, in milligrams per liter

**BIG LOST RIVER NEAR ARCO (13132500)**

- Chloride: Theil–Sen line, p-value = 0.140
- Sodium: Theil–Sen line, p-value = 0.297
- Sulfate: Theil–Sen line, p-value = 0.808
- Calcium: Theil–Sen line, p-value = 0.511
BIG LOST RIVER NEAR ARCO (13132500)

Magnesium, in micrograms per liter

Silica, in micrograms per liter

Nitrate plus Nitrite as N, in milligrams per liter

Fluoride, in milligrams per liter
Theil–Sen line
p-value = 0.780
BIRCH CREEK AT BLUE DOME INN, NEAR RENO (13117020)

Chloride, in milligrams per liter

Theil−Sen line
p−value = 0.002

LITTLE LOST RIVER NEAR HOWE (13119000)

Chloride, in milligrams per liter

Theil–Sen line
p-value = 0.030

Sodium, in milligrams per liter

Theil–Sen line
p-value = 0.382

Sulfate, in milligrams per liter

Theil–Sen line
p-value = 0.664

Calcium, in milligrams per liter

Theil–Sen line
p-value = 0.497
LITTLE LOST RIVER NEAR HOWE (13119000)

Magnesium, in micrograms per liter

Theil−Sen line
p−value = 0.648

Silica, in micrograms per liter

Theil−Sen line
p−value = 0.301

Nitrate plus Nitrite as N, in milligrams per liter

Theil−Sen line
p−value = 0.634

Potassium, in micrograms per liter

Theil−Sen line
p−value = 0.813
MUD LAKE NEAR TERRETON (13115000)

Chloride, in milligrams per liter

Sodium, in milligrams per liter

Sulfate, in milligrams per liter

Calcium, in milligrams per liter
MUD LAKE NEAR TERRETON (13115000)

Magnesium, in micrograms per liter

Silica, in micrograms per liter

Nitrate plus Nitrite as N, in milligrams per liter

Fluoride, in milligrams per liter

Theil−Sen line

p−value = 0.472

p−value = 0.070

p−value = 0.065

p−value = 0.908
MUD LAKE NEAR TERRETON (13115000)

Potassium, in micrograms per liter

Theil−Sen line
p-value = 0.686