**Appendix D: Surface Water Quality Data Summary Tables**

(all Values are dissolved (mg/L) unless otherwise indicated)

| Chaco Downstream (USGS 09367950) | Dates | n | Range | Median | MAD | Average | Standard Deviation | Percent Relative Standard Deviation | Q3 | 95th Percentile | Exceedance of Criteria | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | Livestock | | Aquatic & Wildlife Acute | | Aquatic & Wildlife Chronic | | Secondary Human Contact | | Fish Consumption | | Baseline Median + 2MAD | |
| | | | | | | | | | | | n | % | n | % | n | % | n | % | n | % | n | % |
| **Aluminum** | (04/28/1977-04/28/1977) | **1** | (0.05-0.05) | **0.05** | 0 | **0.050** | | | 0.05 | **0.05** | | | | | | | | | | | | |
| **Arsenic** | (12/11/1975-08/10/1989) | **44** | (0.0005-0.02) | **0.0020** | 0.0010 | **0.0033** | 0.0046 | **142** | 0.003 | **0.0154** | | | | | | | | | | | 4 | **9** |
| **Barium** | (12/11/1975-05/19/1981) | **34** | (0.05-0.5) | **0.085** | 0.035 | **0.14** | 0.13 | **91** | 0.2 | **0.37** | | | | | | | | | | | 12 | 35 |
| **Boron** | (11/13/1975-08/10/1989) | **94** | (0.08-25.) | **2.5** | 1.9 | **3.551** | 4.214 | **119** | 4.6 | **9.3** | 22 | **23.4** | | | | | | | | | 90 | 96 |
| **Cadmium** | (04/28/1977-08/10/1989) | **13** | (0.0005-2.) | **0.0005** | 0 | **0.1544** | 0.5545 | **359** | 0.001 | **0.8006** | 1 | **8** | 1 | **8** | 1 | 8 | 13 | **100** | 1 | **8** | 4 | 31 |
| **Chloride** | (10/08/1969-08/10/1989) | **72** | (12.-720.) | **78** | 42 | **106** | 102 | **96** | 130 | 174.5 | 1 | **1** | | | | | | | | | 68 | **94** |
| **Chromium** | (04/28/1977-08/10/1989) | **13** | (0.001-0.01) | **0.01** | 0 | **0.009** | 0.003 | **39** | 0.01 | **0.01** | | | 13 | **100** | | | | | | | | |
| **Copper** | (12/20/1978-08/10/1989) | **4** | (0.005-0.031) | **0.009** | 0.0025 | **0.0135** | 0.011846 | **88** | 0.015 | **0.02785** | | | 1 | **25** | | | 1 | **25** | | | | |
| **Fluoride** | (04/27/1970-08/10/1989) | 72 | (0.1-13.) | **1.55** | 0.85 | **2.7** | 2.5 | **91** | 3.825 | **7.29** | 33 | 46 | | | | | | | | | 39 | **54** |
| **Lead** | (12/20/1978-08/10/1989) | **5** | (0.0005-0.0025) | **0.001** | 0.0005 | **0.0014** | 0.0010 | **73** | 0.003 | **0.0025** | | | | | | | 1 | **8** | | | | |
| **Mercury** | (12/11/1975-08/10/1989) | **54** | (0.00005- | **0.0003** | 0.0003 | **0.00104** | 0.001116 | **108** | 0.002 | **0.0031** | | | 9 | **17** | 54 | **100** | | | 46 | **85** | | |
| **Nitrate** | (04/27/1970-04/27/1970) | **1** | (15.-15.) | **15.0** | 0 | **15.0** | | | 15.0 | **15.0** | | | | | | | | | | | | |
| **pH** | (10/08/1969-08/10/1989) | **174** | (6.8-11.3) | **7.85** | 0.4 | **7.8** | 0.6 | **7** | 8.2 | **8.5** | | | | | | | | | | | 1 | 1 |
| **Radium (pCi/l)** | (11/29/1977-08/10/1989) | **24** | (0.01-0.27) | **0.115** | 0.03 | **0.1196** | 0.0536 | **45** | 0.15 | **0.1800** | | | | | | | | | | | 9 | 38 |
| **Selenium** | (12/11/1975-08/10/1989) | **26** | (0.001-0.047) | **0.0065** | 0.004 | **0.0110** | 0.0123 | **112** | 0.012 | **0.039** | | | 2 | 8 | 22 | **85** | | | | | 15 | 58 |
| **Silver** | | | | | | | | | | | | | | | | | | | | | | |
| **Sulfate** | (10/08/1969-08/10/1989) | **72** | (240.-7600.) | **700** | 250 | **965** | 1095 | **113** | 1000 | **1946** | 17 | **24** | | | | | | | | | 72 | 100 |
| **TDS - 180°C** | (10/08/1969-08/10/1989) | **73** | (517.5-12750.) | **1305** | 444 | **1701** | 1727 | **102** | 1790 | **3196** | 4 | **5** | | | | | | | | | 70 | 96 |
| **Zinc** | (12/11/1975-08/10/1989) | **24** | (0.0015-0.072) | **0.01** | 0.0025 | **0.016** | 0.015 | **96** | 0.02 | **0.039** | | | 2 | **8** | 2 | **8** | | | | | 2 | 8 |
| **TSS** | | | | | | | | | | | | | | | | | | | | | | |
| **Conductivity (umho/cm)** | (10/08/1969-08/10/1989) | **177** | (310.-12600.) | **1700** | 500 | **1926** | 1320 | **69** | 2200 | **3500** | | | | | | | | | | | 157 | 89 |
| **Iron (total)** | (12/11/1975-07/13/1984) | **83** | (0.23-800.) | **19** | 16 | **117.17** | 176.03 | **150** | 190 | **445** | | | | | | | | | | | 5 | **6** |
| **Manganese** | (12/11/1975-08/24/1982) | **41** | (0.0005-0.15) | **0.005** | 0.0045 | **0.018** | 0.030 | **163** | 0.02 | **0.08** | | | | | | | | | | | 6 | 15 |

**Appendix D: Surface Water Quality Data Summary Tables**

(all Values are dissolved (mg/L) unless otherwise indicated)

| Composite Chinde Baseline (CD-1 & CD-1A) | Dates | n | Range | Median | MAD | Average | Standard Deviation | Percent Relative Standard Deviation | Q3 | 95th Percentile | Exceedance of Criteria | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | Livestock | | Aquatic & Wildlife Acute | | Aquatic & Wildlife Chronic | | Secondary Human Contact | | Fish Consumption | |
| | | | | | | | | | | | n | % | n | % | n | % | n | % | n | % |
| **Aluminum** | (09/05/2000-09/25/2008) | **45** | (0.036-0.5) | **0.05** | 0 | **0.112** | 0.125 | **112** | 0.1 | **0.45** | | | | | 12 | **27** | | | | |
| **Arsenic** | (07/21/1986-07/02/1997) | **289** | (0.0005-0.092) | **0.0005** | 0 | **0.0017** | 0.0055 | **325** | 0.003 | **0.0025** | | | | | | | | | 1 | **0** |
| **Barium** | (07/21/1986-07/02/1997) | **287** | (0.02-1.1) | **0.5** | 0 | **0.37** | 0.20 | **53** | 0.5 | **0.5** | | | | | | | | | | |
| **Boron** | (07/21/1986-09/21/2010) | **376** | (0.005-1.89) | **0.16** | 0.08 | **0.228** | 0.225 | **98** | 0.28 | **0.6** | | | | | | | | | 11 | **21** |
| **Cadmium** | (07/21/1986-07/02/1997) | **289** | (0.0005-0.005) | **0.0025** | 0 | **0.002** | 0.001 | **54** | 0.003 | **0.003** | | | 12 | **4** | 289 | **100** | | | | |
| **Chloride** | (07/21/1986-09/21/2010) | **381** | (0.84-373.) | **31** | 19.2 | **46.48** | 43.65 | **94** | 63 | **129** | | | | | | | | | | |
| **Chromium** | (07/21/1986-07/02/1997) | **289** | (0.001-0.1) | **0.01** | 0 | **0.009** | 0.006 | **71** | 0.01 | **0.01** | | | 289 | **100** | 7 | **2** | | | | |
| **Copper** | | | | | | | | | | | | | | | | | | | | |
| **Fluoride** | (08/24/1988-09/21/2010) | **153** | (0.005-3.5) | **1** | 0.37 | **1.25** | 0.80 | **64** | 1.6 | **3** | 25 | **16** | | | | | | | | |
| **Lead** | (07/21/1986-07/02/1997) | **289** | (0.0005-0.16) | **0.01** | 0 | **0.009** | 0.012 | **131** | 0.01 | **0.013** | 1 | **0.3** | 1 | **0** | 188 | **65** | 13 | **4** | | |
| **Mercury** | | | | | | | | | | | | | | | | | | | | |
| **Nitrate** | (08/12/1988-07/02/1997) | **117** | (0.5-239.) | **6.9** | 2.6 | **11.5** | 24.4 | **212** | 10.3 | **21** | | | | | | | | | | |
| **pH** | (07/21/1986-09/21/2010) | **257** | (6.7-8.86) | **7.9** | 0.23 | **7.90** | 0.36 | **5** | 8.15 | **8.4** | | | | | | | | | | |
| **Radium (pCi/l)** | (07/21/1986-06/28/1989) | **11** | (0.3-1.2) | **0.4** | 0.1 | **0.5** | 0.3 | **56** | 0.6 | **0.9** | | | | | | | | | | |
| **Selenium** | (07/21/1986-09/21/2010) | **346** | (0.0005-0.1) | **0.0028** | 0.0013 | **0.0051** | 0.0074 | **146** | 0.006 | **0.013** | 1 | **0.3** | 3 | **1** | 263 | **76** | | | | |
| **Silver** | (07/21/1986-07/02/1997) | **288** | (0.0005-0.09) | **0.005** | 0 | **0.0056** | 0.0055 | **98** | 0.005 | **0.01** | | | 5 | **2** | | | | | | |
| **Sulfate** | (07/21/1986-09/21/2010) | **378** | (40.-4050.) | **560** | 240 | **674** | 506 | **75** | 820 | **1653** | 61 | **16** | | | | | | | | |
| **TDS - 180°C** | (07/21/1986-09/21/2010) | **371** | (150.-7000.) | **1020** | 424 | **1257** | 837 | **67** | 1585 | **2880** | 16 | **4** | | | | | | | | |
| **Zinc** | (07/21/1986-07/02/1997) | **289** | (0.005-1.01) | **0.07** | 0.055 | **0.081** | 0.082 | **102** | 0.125 | **0.125** | | | 184 | **64** | 184 | **64** | | | | |
| **TSS** | (07/21/1986-09/21/2010) | **375** | (1.-108000.) | **884** | 865 | **4541** | 11211 | **247** | 3280 | **22380** | | | | | | | | | | |
| **Conductivity (umho/cm)** | (07/21/1986-09/21/2010) | **380** | (105.-7600.) | **1425** | 542 | **1674** | 977 | **58** | 2200 | **3502.5** | | | | | | | | | | |
| **Iron (total)** | (12/29/1992-09/21/2010) | **243** | (0.05-412.) | **1.44** | 1.33 | **19.78** | 53.72 | **272** | 10.45 | **116.9** | | | | | | | | | | |
| **Manganese** | (07/21/1986-09/21/2010) | **377** | (0.0025-2.85) | **0.1** | 0.028 | **0.099** | 0.215 | **218** | 0.1 | **0.152** | | | | | | | | | | |

**Appendix D: Surface Water Quality Data Summary Tables**

(all Values are dissolved (mg/L) unless otherwise indicated)

| Chinde Baseline (CD-1) | Dates | n | Range | Median | MAD | Average | Standard Deviation | Percent Relative Standard Deviation | Q3 | 95th Percentile | Exceedance of Criteria | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | Livestock | | Aquatic & Wildlife Acute | | Aquatic & Wildlife Chronic | | Secondary Human Contact | | Fish Consumption | |
| | | | | | | | | | | | n | % | n | % | n | % | n | % | n | % |
| **Aluminum** | | | | | | | | | | | | | | | | | | | | |
| **Arsenic** | (07/21/1986-05/23/1997) | **287** | (0.0005-0.092) | **0.0005** | 0 | **0.0017** | 0.0055 | **327** | 0.003 | **0.0025** | | | | | | | | | 1 | **0** |
| **Barium** | (07/21/1986-05/23/1997) | **285** | (0.025-1.1) | **0.5** | 0 | **0.37** | 0.19 | **53** | 0.5 | **0.5** | | | | | | | | | | |
| **Boron** | (07/21/1986-05/23/1997) | **285** | (0.005-1.89) | **0.15** | 0.06 | **0.193** | 0.202 | **104** | 0.22 | **0.5** | | | | | | | | | | |
| **Cadmium** | (07/21/1986-05/23/1997) | **287** | (0.0005-0.005) | **0.0025** | 0 | **0.002** | 0.001 | **53** | 0.003 | **0.003** | | | 12 | **4** | 287 | **100** | | | | |
| **Chloride** | (07/21/1986-05/23/1997) | **289** | (0.84-373.) | **29** | 16 | **44.48** | 44.81 | **101** | 54.9 | **135.8** | | | | | | | | | | |
| **Chromium** | (07/21/1986-05/23/1997) | **287** | (0.001-0.1) | **0.01** | 0 | **0.009** | 0.006 | **71** | 0.01 | **0.01** | | | 287 | **100** | 7 | **2** | | | | |
| **Copper** | | | | | | | | | | | | | | | | | | | | |
| **Fluoride** | (08/24/1988-06/21/1996) | **113** | (0.005-3.3) | **0.97** | 0.24 | **1.05** | 0.52 | **49** | 1.25 | **1.994** | 6 | **5** | | | | | | | | |
| **Lead** | (07/21/1986-05/23/1997) | **287** | (0.0005-0.16) | **0.01** | 0 | **0.009** | 0.012 | **131** | 0.01 | **0.0135** | 1 | **0.3** | 1 | **0** | 188 | **66** | 13 | **5** | | |
| **Mercury** | | | | | | | | | | | | | | | | | | | | |
| **Nitrate** | (08/12/1988-07/02/1997) | **115** | (0.5-239.) | **6.9** | 2.6 | **11.7** | 24.6 | **211** | 10.35 | **21.5** | | | | | | | | | | |
| **pH** | (07/21/1986-09/21/2010) | **203** | (6.7-8.8) | **7.84** | 0.2 | **7.83** | 0.34 | **4** | 8.015 | **8.3** | | | | | | | | | | |
| **Radium (pCi/l)** | (07/21/1986-06/28/1989) | **11** | (0.3-1.2) | **0.4** | 0.1 | **0.5** | 0.3 | **56** | 0.6 | **0.9** | | | | | | | | | | |
| **Selenium** | (07/21/1986-05/23/1997) | **287** | (0.0005-0.046) | **0.003** | 0.001 | **0.0044** | 0.0046 | **103** | 0.005 | **0.012** | | | 1 | **0** | 209 | **73** | | | | |
| **Silver** | (07/21/1986-05/23/1997) | **286** | (0.0005-0.03) | **0.005** | 0 | **0.0053** | 0.0023 | **43** | 0.005 | **0.01** | | | 4 | **1** | | | | | | |
| **Sulfate** | (07/21/1986-05/23/1997) | **286** | (40.-4050.) | **558** | 262 | **729** | 554 | **76** | 880 | **1715** | 59 | **21** | | | | | | | | |
| **TDS - 180°C** | (07/21/1986-05/23/1997) | **288** | (260.-7000.) | **1005** | 400 | **1301** | 894 | **69** | 1573 | **3053** | 16 | | | | | | | | | |
| **Zinc** | (07/21/1986-05/23/1997) | **287** | (0.005-1.01) | **0.08** | 0.045 | **0.081** | 0.082 | **102** | 0.125 | **0.125** | | | 184 | **64** | 184 | **64** | | | | |
| **TSS** | (07/21/1986-05/23/1997) | **284** | (2.5-108000.) | **1610** | 1410 | **5945** | 12565 | **211** | 4950 | **26195** | | | | | | | | | | |
| **Conductivity (umho/cm)** | (07/21/1986-05/23/1997) | **288** | (105.-7600.) | **1400** | 500 | **1696** | 1031 | **61** | 2100 | **3636.5** | | | | | | | | | | |
| **Iron (total)** | (12/29/1992-05/23/1997) | **152** | (0.1-412.) | **3.75** | 3.575 | **29.83** | 65.58 | **220** | 29.08 | **142.35** | | | | | | | | | | |
| **Manganese** | (07/21/1986-05/23/1997) | **286** | (0.0025-2.85) | **0.1** | 0 | **0.119** | 0.242 | **203** | 0.1 | **0.29** | | | | | | | | | | |

**Appendix D: Surface Water Quality Data Summary Tables**

(all Values are dissolved (mg/L) unless otherwise indicated)

| Chinde Baseline (CD-1A) | Dates | n | Range | Median | MAD | Average | Standard Deviation | Percent Relative Standard Deviation | Q3 | 95th Percentile | Exceedance of Criteria | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | Livestock | | Aquatic & Wildlife Acute | | Aquatic & Wildlife Chronic | | Secondary Human Contact | | Fish Consumption | |
| | | | | | | | | | | | n | % | n | % | n | % | n | % | n | % |
| **Aluminum** | (09/05/2000-09/25/2008) | **45** | (0.036-0.5) | **0.05** | 0 | **0.112** | 0.125 | **112** | 0.1 | **0.45** | | | | | 12 | **27** | | | | |
| **Arsenic** | (09/14/1996-07/02/1997) | **2** | (0.0025-0.0025) | **0.0025** | 0 | **0.0025** | 0 | **0** | 0.003 | **0.0025** | | | | | | | | | | |
| **Barium** | (09/14/1996-07/02/1997) | **2** | (0.02-0.03) | **0.025** | 0.005 | **0.03** | 0.01 | **28** | 0.028 | **0.0295** | | | | | | | | | | |
| **Boron** | (09/14/1996-09/21/2010) | **91** | (0.025-1.1) | **0.25** | 0.2 | **0.338** | 0.256 | **76** | 0.595 | **0.71** | | | | | | | | | | |
| **Cadmium** | (09/14/1996-07/02/1997) | **2** | (0.0005-0.0005) | **0.0005** | 0 | **0.001** | 0 | **0** | 0.001 | **0.001** | | | | | 2 | **100** | | | | |
| **Chloride** | (09/14/1996-09/21/2010) | **92** | (3.-159.) | **40.5** | 32.5 | **52.78** | 39.38 | **75** | 82.25 | **117.7** | | | | | | | | | | |
| **Chromium** | (09/14/1996-07/02/1997) | **2** | (0.005-0.005) | **0.005** | 0 | **0.005** | 0 | **0** | 0.005 | **0.005** | | | 2 | **100** | | | | | | |
| **Copper** | | | | | | | | | | | | | | | | | | | | |
| **Fluoride** | (05/06/2002-09/21/2010) | **40** | (0.1-3.5) | **2** | 1 | **1.81** | 1.12 | **62** | 2.9 | **3.5** | 19 | **48** | | | | | | | | |
| **Lead** | (09/14/1996-07/02/1997) | **2** | (0.0025-0.0025) | **0.0025** | 0 | **0.003** | 0 | **0** | 0.003 | **0.0025** | | | | | | | | | | |
| **Mercury** | | | | | | | | | | | | | | | | | | | | |
| **Nitrate** | (09/14/1996-07/02/1997) | **2** | (0.5-7.9) | **4.2** | 3.7 | **4.2** | 5.2 | **125** | 6.05 | **7.53** | | | | | | | | | | |
| **pH** | (07/02/1997-09/21/2010) | **54** | (6.9-8.7) | **8.21** | 0.155 | **8.16** | 0.33 | **4** | 8.368 | **8.4635** | | | | | | | | | | |
| **Radium (pCi/l)** | | | | | | | | | | | | | | | | | | | | |
| **Selenium** | (09/14/1996-09/21/2010) | **59** | (0.0005-0.1) | **0.0025** | 0.002 | **0.0084** | 0.0146 | **174** | 0.009 | **0.025** | 1 | **1.7** | 2 | **3** | 54 | **92** | | | | |
| **Silver** | (09/14/1996-07/02/1997) | **2** | (0.005-0.09) | **0.0475** | 0.0425 | **0.0475** | 0.0601 | **127** | 0.069 | **0.08575** | | | 1 | **50** | | | | | | |
| **Sulfate** | (09/14/1996-09/21/2010) | **92** | (46.-1060.) | **563** | 179.5 | **502** | 246 | **49** | 700.5 | **818.35** | 2 | **2** | | | | | | | | |
| **TDS - 180°C** | (09/14/1996-09/21/2010) | **83** | (150.-2240.) | **1130** | 520 | **1103** | 577 | **52** | 1635 | **1900** | | | | | | | | | | |
| **Zinc** | (09/14/1996-07/02/1997) | **2** | (0.025-0.03) | **0.0275** | 0.0025 | **0.028** | 0.004 | **13** | 0.029 | **0.02975** | | | | | | | | | | |
| **TSS** | (09/14/1996-09/21/2010) | **91** | (1.-3490.) | **20.3** | 17.8 | **160** | 452 | **282** | 92.5 | **1040** | | | | | | | | | | |
| **Conductivity (umho/cm)** | (09/14/1996-09/21/2010) | **92** | (260.-3060.) | **1620** | 690 | **1607** | 787 | **49** | 2333 | **2693.5** | | | | | | | | | | |
| **Iron (total)** | (09/14/1996-09/21/2010) | **91** | (0.05-69.) | **0.38** | 0.29 | **2.98** | 9.25 | **311** | 1.32 | **14.75** | | | | | | | | | | |
| **Manganese** | (09/14/1996-09/21/2010) | **91** | (0.0025-0.461) | **0.02** | 0.015 | **0.036** | 0.061 | **171** | 0.037 | **0.103** | | | | | | | | | | |

**Appendix D: Surface Water Quality Data Summary Tables**

(all Values are dissolved (mg/L) unless otherwise indicated)

| Composite Chinde Downstream (CD-2 & CD-2A) | Dates | n | Range | Median | MAD | Average | Standard Deviation | Percent Relative Standard Deviation | Q3 | 95th Percentile | Exceedance of Criteria | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | Livestock | | Aquatic & Wildlife Acute | | Aquatic & Wildlife Chronic | | Secondary Human Contact | | Fish Consumption | | Baseline Median + 2MAD | |
| | | | | | | | | | | | n | % | n | % | n | % | n | % | n | % | n | % |
| **Aluminum** | (09/05/2000-03/26/2008) | **24** | (0.05-0.5) | **0.065** | 0.015 | **0.148** | 0.151 | **102** | 0.175 | **0.5** | | | | | 11 | **46** | | | | | 12 | **50** |
| **Arsenic** | (05/13/1986-05/23/1997) | **168** | (0.0005-0.012) | **0.0008** | 0.0003 | **0.0015** | 0.0014 | **89** | 0.003 | **0.0025** | | | | | | | | | | | 84 | **50** |
| **Barium** | (05/13/1986-05/23/1997) | **168** | (0.04-1.) | **0.5** | 0.25 | **0.36** | 0.20 | **57** | 0.5 | **0.5** | | | | | | | | | | | 6 | 4 |
| **Boron** | (05/13/1986-03/24/2010) | **219** | (0.005-5.4) | **0.15** | 0.07 | **0.222** | 0.399 | **180** | 0.245 | **0.513** | 1 | **0.5** | | | | | | | | | 32 | 15 |
| **Cadmium** | (05/13/1986-05/23/1997) | **168** | (0.0005-0.005) | **0.0025** | 0.0015 | **0.0018** | 0.0011 | **61** | 0.003 | **0.0025** | | | | | | | | | | | 7 | 4 |
| **Chloride** | (05/13/1986-03/24/2010) | **221** | (5.-6150.) | **56** | 33 | **184** | 670 | **364** | 120 | 550 | 10 | **5** | | | | | | | | | 86 | **39** |
| **Chromium** | (05/13/1986-05/23/1997) | **168** | (0.001-0.025) | **0.01** | 0 | **0.009** | 0.004 | **44** | 0.01 | **0.01** | | | 168 | **100** | 5 | **3** | | | | | 5 | 3 |
| **Copper** | | | | | | | | | | | | | | | | | | | | | | |
| **Fluoride** | (05/06/2002-03/24/2010) | **16** | (0.3-1.7) | **1.2** | 0.2 | **1.2** | 0.4 | **29** | 1.5 | **1.7** | | | | | | | | | | | | |
| **Lead** | (05/13/1986-05/23/1997) | **168** | (0.0005-0.09) | **0.01** | 0.0015 | **0.0084** | 0.0100 | **120** | 0.01 | **0.0107** | | | | | | | 7 | **4** | | | 9 | 5 |
| **Mercury** | | | | | | | | | | | | | | | | | | | | | | |
| **Nitrate** | (08/12/1988-05/23/1997) | **166** | (0.5-340.) | **9.5** | 3.8 | **15.2** | 31.3 | **205** | 14.2 | **31.4** | | | | | | | | | | | 58 | **35** |
| **pH** | (04/05/1996-05/23/1997) | **44** | (7.2-8.4) | **8.2** | 0.1 | **8.1** | 0.3 | **4** | 8.3 | **8.4** | | | | | | | | | | | 4 | 9 |
| **Radium (pCi/l)** | (05/13/1986-08/27/1992) | **14** | (0.2-9.9999) | **0.4** | 0.1 | **1.0786** | 2.5700 | **238** | 0.5 | **3.8900** | | | | | | | | | | | 1 | 7 |
| **Selenium** | (05/13/1986-03/24/2010) | **220** | (0.0005-0.1) | **0.0025** | 0.0015 | **0.0048** | 0.0087 | **179** | 0.005 | **0.0125** | 1 | **0.5** | 3 | **1** | 153 | **70** | | | | | 52 | 24 |
| **Silver** | (05/13/1986-05/23/1997) | **168** | (0.0005-0.05) | **0.005** | 0 | **0.0053** | 0.0040 | **75** | 0.005 | **0.01** | | | | | | | | | | | 10 | 6 |
| **Sulfate** | (05/13/1986-03/24/2010) | **219** | (49.-5580.) | **580** | 280 | **743** | 678 | **91** | 900 | **1761** | 51 | **23** | | | | | | | | | 47 | 21 |
| **TDS - 180°C** | (05/13/1986-03/24/2010) | **213** | (250.-18300.) | **1080** | 470 | **1561** | 2022 | **130** | 1660 | **3612** | 13 | **6** | | | | | | | | | 46 | 22 |
| **Zinc** | (05/13/1986-05/23/1997) | **168** | (0.005-0.64) | **0.05** | 0.045 | **0.080** | 0.079 | **99** | 0.125 | **0.128** | | | | | | | | | | | 4 | 2 |
| **TSS** | (05/13/1986-03/24/2010) | **206** | (2.5-335000.) | **726** | 717.5 | **8306.7** | 30325.8 | **365** | 4418 | **35125** | | | | | | | | | | | 66 | **32** |
| **Conductivity (umho/cm)** | (05/13/1986-03/24/2010) | **221** | (17.-25300.) | **1550** | 650 | **2212** | 2858 | **129** | 2310 | **4950** | | | | | | | | | | | 48 | 22 |
| **Iron (total)** | (12/29/1992-03/24/2010) | **157** | (0.05-325.) | **1.4** | 1.25 | **21.40** | 54.07 | **253** | 9.54 | **123.4** | | | | | | | | | | | 51 | **32** |
| **Manganese** | (05/13/1986-03/24/2010) | **220** | (0.002-3.75) | **0.1** | 0.0685 | **0.139** | 0.356 | **256** | 0.1 | **0.904** | | | | | | | | | | | 21 | 10 |

**Appendix D: Surface Water Quality Data Summary Tables**

(all Values are dissolved (mg/L) unless otherwise indicated)

| Chinde Downstream (CD-2) | Dates | n | Range | Median | MAD | Average | Standard Deviation | Percent Relative Standard Deviation | Q3 | 95th Percentile | Exceedance of Criteria | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | Livestock | | Aquatic & Wildlife Acute | | Aquatic & Wildlife Chronic | | Secondary Human Contact | | Fish Consumption | | Baseline Median + 2MAD | |
| | | | | | | | | | | | n | % | n | % | n | % | n | % | n | % | n | % |
| **Aluminum** | | | | | | | | | | | | | | | | | | | | | | |
| **Arsenic** | (05/13/1986-05/23/1997) | **168** | (0.0005-0.012) | **0.0008** | 0.0003 | **0.0015** | 0.0014 | **89** | 0.003 | **0.0025** | | | | | | | | | | | 84 | **50** |
| **Barium** | (05/13/1986-05/23/1997) | **168** | (0.04-1.) | **0.5** | 0.25 | **0.36** | 0.20 | **57** | 0.5 | **0.5** | | | | | | | | | | | 6 | 4 |
| **Boron** | (05/13/1986-05/23/1997) | **167** | (0.005-5.4) | **0.12** | 0.06 | **0.213** | 0.451 | **212** | 0.2 | **0.561** | 1 | **0.6** | | | | | | | | | 21 | 13 |
| **Cadmium** | (05/13/1986-05/23/1997) | **168** | (0.0005-0.005) | **0.0025** | 0.0015 | **0.0018** | 0.0011 | **61** | 0.003 | **0.0025** | | | | | | | | | | | 7 | 4 |
| **Chloride** | (05/13/1986-05/23/1997) | **168** | (5.-6150.) | **50** | 27.5 | **217** | 765 | **353** | 122.3 | 651.55 | 10 | **6** | | | | | | | | | 59 | **35** |
| **Chromium** | (05/13/1986-05/23/1997) | **168** | (0.001-0.025) | **0.01** | 0 | **0.009** | 0.004 | **44** | 0.01 | **0.01** | | | 168 | **100** | 5 | **3** | | | | | 5 | 3 |
| **Copper** | | | | | | | | | | | | | | | | | | | | | | |
| **Fluoride** | | | | | | | | | | | | | | | | | | | | | | |
| **Lead** | (05/13/1986-05/23/1997) | **168** | (0.0005-0.09) | **0.01** | 0.0015 | **0.0084** | 0.0100 | **120** | 0.01 | **0.0107** | | | | | | | | **4** | | | 9 | 5 |
| **Mercury** | | | | | | | | | | | | | | | | | | | | | | |
| **Nitrate** | (05/13/1986-05/23/1997) | **166** | (0.5-340.) | **9.5** | 3.8 | **15.2** | 31.3 | **205** | 14.2 | **31.4** | | | | | | | | | | | 58 | **35** |
| **pH** | (04/05/1996-05/23/1997) | **23** | (7.2-8.4) | **7.9** | 0.2 | **7.9** | 0.3 | **4** | 8.25 | **8.4** | | | | | | | | | | | 2 | 9 |
| **Radium (pCi/l)** | (05/13/1986-08/27/1992) | **14** | (0.2-9.9999) | **0.4** | 0.1 | **1.0786** | 2.5700 | **238** | 0.5 | **3.8900** | | | | | | | | | | | 1 | 7 |
| **Selenium** | (05/13/1986-05/23/1997) | **168** | (0.0005-0.019) | **0.0025** | 0.0005 | **0.0034** | 0.0030 | **87** | 0.004 | **0.009** | | | | | | **108** | 64 | | | | 32 | 19 |
| **Silver** | (05/13/1986-05/23/1997) | **168** | (0.0005-0.05) | **0.005** | 0 | **0.0053** | 0.0040 | **75** | 0.005 | **0.01** | | | | | | | | | | | 10 | 6 |
| **Sulfate** | (05/13/1986-05/23/1997) | **166** | (49.-5580.) | **495** | 226.5 | **697** | 732 | **105** | 837.5 | **1794** | 30 | **18** | | | | | | | | | 27 | 16 |
| **TDS - 180°C** | (05/13/1986-05/23/1997) | **168** | (367.-18300.) | **1005** | 395 | **1536** | 2235 | **146** | 1593 | **3884.8** | 12 | **7** | | | | | | | | | 28 | 17 |
| **Zinc** | (05/13/1986-05/23/1997) | **168** | (0.005-0.64) | **0.05** | 0.045 | **0.080** | 0.079 | **99** | 0.125 | **0.128** | | | | | | | | | | | 4 | 2 |
| **TSS** | (05/13/1986-05/23/1997) | **166** | (5.-335000.) | **1705** | 1605 | **10290.2** | 33499.3 | **326** | 6570 | **37400** | | | | | | | | | | | 66 | **40** |
| **Conductivity (umho/cm)** | (05/13/1986-05/23/1997) | **168** | (17.-25300.) | **1410** | 540 | **2207** | 3232 | **146** | 2123 | **5677** | | | | | | | | | | | 28 | 17 |
| **Iron (total)** | (12/29/1992-05/23/1997) | **105** | (0.1-325.) | **3** | 2.85 | **31.26** | 63.93 | **205** | 30.1 | **155** | | | | | | | | | | | 45 | **43** |
| **Manganese** | (05/13/1986-05/23/1997) | **168** | (0.002-3.75) | **0.1** | 0 | **0.174** | 0.399 | **230** | 0.1 | **1.086** | | | | | | | | | | | 19 | 11 |

**Appendix D: Surface Water Quality Data Summary Tables**

(all Values are dissolved (mg/L) unless otherwise indicated)

| Chinde Downstream (CD-2A) | Dates | n | Range | Median | MAD | Average | Standard Deviation | Percent Relative Standard Deviation | Q3 | 95th Percentile | Exceedance of Criteria | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | Livestock | | Aquatic & Wildlife Acute | | Aquatic & Wildlife Chronic | | Secondary Human Contact | | Fish Consumption | | Baseline Median + 2MAD | |
| | | | | | | | | | | | n | % | n | % | n | % | n | % | n | % | n | % |
| **Aluminum** | (09/05/2000-03/26/2008) | **24** | (0.05-0.5) | **0.065** | 0.015 | **0.148** | 0.151 | **102** | 0.175 | **0.5** | | | | | 11 | **46** | | | | | 12 | **50** |
| **Arsenic** | | | | | | | | | | | | | | | | | | | | | | |
| **Barium** | | | | | | | | | | | | | | | | | | | | | | |
| **Boron** | (08/06/1997-03/24/2010) | **52** | (0.05-0.76) | **0.215** | 0.085 | **0.253** | 0.136 | **54** | 0.3 | **0.468** | | | | | | | | | | | 11 | **21** |
| **Cadmium** | | | | | | | | | | | | | | | | | | | | | | |
| **Chloride** | (08/06/1997-03/24/2010) | **53** | (5.-174.) | **75** | 46 | **80** | 50 | **63** | 120 | 162.2 | | | | | | | | | | | 27 | **51** |
| **Chromium** | | | | | | | | | | | | | | | | | | | | | | |
| **Copper** | | | | | | | | | | | | | | | | | | | | | | |
| **Fluoride** | (05/06/2002-03/24/2010) | 16 | (0.3-1.7) | **1.2** | 0.2 | **1.2** | 0.4 | **29** | 1.5 | **1.7** | | | | | | | | | | | | |
| **Lead** | | | | | | | | | | | | | | | | | | | | | | |
| **Mercury** | | | | | | | | | | | | | | | | | | | | | | |
| **Nitrate** | | | | | | | | | | | | | | | | | | | | | | |
| **pH** | (08/06/1997-03/24/2010) | **21** | (7.8-8.39) | **8.27** | 0.1 | **8.2** | 0.1 | **2** | 8.32 | **8.4** | | | | | | | | | | | 2 | 10 |
| **Radium (pCi/l)** | | | | | | | | | | | | | | | | | | | | | | |
| **Selenium** | (08/06/1997-03/24/2010) | **52** | (0.0005-0.1) | **0.005** | 0.0025 | **0.0095** | 0.0163 | **172** | 0.009 | **0.03625** | 1 | **1.9** | 3 | **6** | 45 | **87** | | | | | 20 | **38** |
| **Silver** | | | | | | | | | | | | | | | | | | | | | | |
| **Sulfate** | (08/06/1997-03/24/2010) | **53** | (87.-1970.) | **820** | 390 | **887** | 450 | **51** | 1260 | **1550** | 21 | **40** | | | | | | | | | 20 | **38** |
| **TDS - 180°C** | (08/06/1997-03/24/2010) | **45** | (250.-3870.) | **1520** | 810 | **1656** | 858 | **52** | 2360 | **2816** | 1 | **2** | | | | | | | | | 18 | **40** |
| **Zinc** | | | | | | | | | | | | | | | | | | | | | | |
| **TSS** | (08/06/1997-03/24/2010) | **40** | (2.5-840.) | **21** | 14.15 | **74.9** | 150.5 | **201** | 59.5 | **286.9** | | | | | | | | | | | | |
| **Conductivity (umho/cm)** | (08/06/1997-03/24/2010) | **53** | (390.-5010.) | **2230** | 880 | **2228** | 1007 | **45** | 3100 | **3648** | | | | | | | | | | | 20 | **38** |
| **Iron (total)** | (08/06/1997-03/24/2010) | **52** | (0.05-10.4) | **0.425** | 0.315 | **1.49** | 2.21 | **148** | 1.715 | **6.0105** | | | | | | | | | | | 6 | **12** |
| **Manganese** | (08/06/1997-03/24/2010) | **52** | (0.0025-0.503) | **0.005** | 0.0025 | **0.028** | 0.073 | **261** | 0.025 | **0.089** | | | | | | | | | | | 2 | 4 |

**Appendix D: Surface Water Quality Data Summary Tables**

(all Values are dissolved (mg/L) unless otherwise indicated)

| Composite Cottonwood Baseline (CN-1, CNS-1, CS-1) | Dates | n | Range | Median | MAD | Average | Standard Deviation | Percent Relative Standard Deviation | Q3 | 95th Percentile | Exceedance of Criteria | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | Livestock | | Aquatic & Wildlife Acute | | Aquatic & Wildlife Chronic | | Secondary Human Contact | | Fish Consumption | |
| | | | | | | | | | | | n | % | n | % | n | % | n | % | n | % |
| **Aluminum** | | | | | | | | | | | | | | | | | | | | |
| **Arsenic** | (07/18/1990-09/01/1997) | **222** | (0.0005-0.347) | **0.002** | 0.001 | **0.0036** | 0.023 | **639** | 0.003 | **0.005** | 1 | **0** | 1 | **0** | 1 | **0** | 1 | **0** | 1 | **0** |
| **Barium** | (07/18/1990-09/01/1997) | **227** | (0.005-4.9) | **0.5** | 0.2 | **0.52** | 0.54 | **105** | 0.5 | **1.221** | | | | | | | | | | |
| **Boron** | (07/18/1990-09/02/1999) | **282** | (0.005-1.1) | **0.11** | 0.06 | **0.162** | 0.175 | **108** | 0.19 | **0.5** | | | | | | | | | | |
| **Cadmium** | (07/18/1990-09/01/1997) | **226** | (0.0005-0.009) | **0.0025** | 0 | **0.002** | 0.0011 | **57** | 0.003 | **0.003** | | | 4 | **2** | 226 | **100** | | | 1 | **0** |
| **Chloride** | (07/18/1990-09/02/1999) | **284** | (0.52-197.) | **13** | 5 | **16.89** | 16.50 | **98** | 19 | **41** | | | | | | | | | | |
| **Chromium** | (07/18/1990-09/01/1997) | **226** | (0.005-0.17) | **0.01** | 0 | **0.010** | 0.0126 | **132** | 0.01 | **0.0175** | | | 226 | **100** | 12 | **5** | | | 1 | **0** |
| **Copper** | | | | | | | | | | | | | | | | | | | | |
| **Fluoride** | | | | | | | | | | | | | | | | | | | | |
| **Lead** | (07/18/1990-09/01/1997) | **226** | (0.0025-1.13) | **0.01** | 0 | **0.024** | 0.091 | **384** | 0.01 | **0.06075** | 6 | **2.7** | 3 | **1** | 177 | **78** | 45 | **20** | | |
| **Mercury** | | | | | | | | | | | | | | | | | | | | |
| **Nitrate** | (07/18/1990-09/01/1997) | **219** | (0.5-180.) | **7.5** | 3.4 | **15.6** | 25.7 | **165** | 14.45 | **47.53** | | | | | | | | | | |
| **pH** | (06/22/1996-11/12/1997) | **41** | (5.3-9.) | **8.4** | 0.2 | **8.13** | 0.72 | **9** | 8.5 | **8.8** | 2 | **5** | | | | | | | | |
| **Radium (pCi/l)** | | | | | | | | | | | | | | | | | | | | |
| **Selenium** | (07/18/1990-09/02/1999) | **282** | (0.0005-0.032) | **0.0025** | 0.0005 | **0.0029** | 0.0030 | **105** | 0.003 | **0.006** | | | | | 180 | **64** | | | | |
| **Silver** | (07/18/1990-09/01/1997) | **226** | (0.005-0.03) | **0.005** | 0 | **0.0052** | 0.0018 | **35** | 0.005 | **0.005** | | | 2 | **1** | | | | | | |
| **Sulfate** | (07/18/1990-09/02/1999) | **283** | (50.-1760.) | **285** | 105 | **353** | 249 | **70** | 430 | **840** | 8 | **3** | | | | | | | | |
| **TDS - 180°C** | (07/18/1990-09/02/1999) | **287** | (290.-15600.) | **692** | 203 | **1041** | 1488 | **143** | 952.5 | **2167** | 12 | **4** | | | | | | | | |
| **Zinc** | (07/18/1990-09/01/1997) | **226** | (0.005-1.82) | **0.125** | 0.025 | **0.173** | 0.275 | **159** | 0.125 | **0.735** | | | 173 | **77** | 173 | **77** | | | | |
| **TSS** | (07/18/1990-09/02/1999) | **279** | (920.-1120000.) | **73600** | 32500 | **113627** | 142466 | **125** | 1E+05 | **372030** | | | | | | | | | | |
| **Conductivity (umho/cm)** | (07/18/1990-09/02/1999) | **292** | (250.-11809.) | **853** | 247 | **1013** | 831 | **82** | 1190 | **1918** | | | | | | | | | | |
| **Iron (total)** | (12/29/1992-09/02/1999) | **203** | (0.01-4350.) | **203** | 196.9 | **494.07** | 737.66 | **149** | 638.5 | **2030** | | | | | | | | | | |
| **Manganese** | (07/18/1990-09/02/1999) | **281** | (0.0025-4.23) | **0.1** | 0.08 | **0.373** | 0.724 | **194** | 0.265 | **1.83** | | | | | | | | | | |

**Appendix D: Surface Water Quality Data Summary Tables**

(all Values are dissolved (mg/L) unless otherwise indicated)

| Cottonwood Baseline (CN-1) | Dates | n | Range | Median | MAD | Average | Standard Deviation | Percent Relative Standard Deviation | Q3 | 95th Percentile | Exceedance of Criteria | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | Livestock | | Aquatic & Wildlife Acute | | Aquatic & Wildlife Chronic | | Secondary Human Contact | | Fish Consumption | |
| | | | | | | | | | | | n | % | n | % | n | % | n | % | n | % |
| **Aluminum** | | | | | | | | | | | | | | | | | | | | |
| **Arsenic** | (07/18/1990-09/01/1997) | **64** | (0.0005-0.347) | **0.0015** | 0.001 | **0.0072** | 0.043 | **597** | 0.003 | **0.0057** | 1 | **2** | 1 | **2** | 1 | **2** | 1 | **2** | 1 | **2** |
| **Barium** | (07/18/1990-09/01/1997) | **67** | (0.005-2.4) | **0.5** | 0 | **0.44** | 0.38 | **87** | 0.5 | **1.05** | | | | | | | | | | |
| **Boron** | (07/18/1990-09/02/1999) | **92** | (0.005-0.78) | **0.08** | 0.03 | **0.128** | 0.139 | **108** | 0.16 | **0.4115** | | | | | | | | | | |
| **Cadmium** | (07/18/1990-09/01/1997) | **66** | (0.0005-0.008) | **0.0025** | 0 | **0.002** | 0.0011 | **59** | 0.003 | **0.003** | | | 1 | **2** | 66 | **100** | | | | |
| **Chloride** | (07/18/1990-09/02/1999) | **94** | (3.-77.) | **16** | 6 | **19.62** | 14.94 | **76** | 22.75 | **48.7** | | | | | | | | | | |
| **Chromium** | (07/18/1990-09/01/1997) | **66** | (0.005-0.09) | **0.01** | 0.0025 | **0.009** | 0.0107 | **113** | 0.01 | **0.0175** | | | 66 | **100** | 4 | **6** | | | | |
| **Copper** | | | | | | | | | | | | | | | | | | | | |
| **Fluoride** | | | | | | | | | | | | | | | | | | | | |
| **Lead** | (07/18/1990-09/01/1997) | **66** | (0.0025-1.13) | **0.01** | 0 | **0.028** | 0.138 | **492** | 0.01 | **0.0335** | 1 | **1.5** | 1 | **2** | 51 | **77** | 10 | **15** | | |
| **Mercury** | | | | | | | | | | | | | | | | | | | | |
| **Nitrate** | (07/18/1990-09/01/1997) | **63** | (0.5-116.) | **7** | 3.5 | **11.5** | 15.9 | **138** | 13.15 | **29.36** | | | | | | | | | | |
| **pH** | (06/27/1996-11/12/1997) | **10** | (5.3-8.6) | **7.95** | 0.45 | **7.77** | 0.96 | **12** | 8.4 | **8.51** | 1 | **10** | | | | | | | | |
| **Radium (pCi/l)** | | | | | | | | | | | | | | | | | | | | |
| **Selenium** | (07/18/1990-09/02/1999) | **92** | (0.0005-0.032) | **0.0025** | 0.0005 | **0.0035** | 0.0048 | **135** | 0.003 | **0.007** | | | | | 57 | **62** | | | | |
| **Silver** | (07/18/1990-09/01/1997) | **66** | (0.005-0.005) | **0.005** | 0 | **0.0050** | 0.0000 | **0** | 0.005 | **0.005** | | | | | | | | | | |
| **Sulfate** | (07/18/1990-09/02/1999) | **94** | (50.-1760.) | **385.5** | 168 | **451** | 303 | **67** | 567.5 | **1009** | 5 | **5** | | | | | | | | |
| **TDS - 180°C** | (07/18/1990-09/02/1999) | **94** | (290.-6220.) | **780** | 250 | **972** | 712 | **73** | 1195 | **1895** | 1 | **1** | | | | | | | | |
| **Zinc** | (07/18/1990-09/01/1997) | **66** | (0.005-1.7) | **0.125** | 0.0025 | **0.154** | 0.318 | **206** | 0.125 | **0.2075** | | | 46 | **70** | 46 | **70** | | | | |
| **TSS** | (07/18/1990-09/02/1999) | **92** | (14400.- | **87500** | 37600 | **131005** | 127328 | **97** | 1E+05 | **378690** | | | | | | | | | | |
| **Conductivity (umho/cm)** | (07/18/1990-09/02/1999) | **96** | (390.-3350.) | **1035** | 320 | **1151** | 567 | **49** | 1413 | **2177.5** | | | | | | | | | | |
| **Iron (total)** | (08/14/1993-09/02/1999) | **62** | (0.01-4350.) | **174** | 172.1 | **631.36** | 876.58 | **139** | 1087 | **2082.5** | | | | | | | | | | |
| **Manganese** | (07/18/1990-09/02/1999) | **90** | (0.0025-2.9) | **0.1** | 0.064 | **0.258** | 0.546 | **211** | 0.1 | **1.629** | | | | | | | | | | |

**Appendix D: Surface Water Quality Data Summary Tables**

(all Values are dissolved (mg/L) unless otherwise indicated)

| Cottonwood Baseline (CNS-1) | Dates | n | Range | Median | MAD | Average | Standard Deviation | Percent Relative Standard Deviation | Q3 | 95th Percentile | Exceedance of Criteria | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | Livestock | | Aquatic & Wildlife Acute | | Aquatic & Wildlife Chronic | | Secondary Human Contact | | Fish Consumption | |
| | | | | | | | | | | | n | % | n | % | n | % | n | % | n | % |
| **Aluminum** | | | | | | | | | | | | | | | | | | | | |
| **Arsenic** | (07/18/1990-05/22/1997) | **81** | (0.0005-0.024) | **0.002** | 0.0005 | **0.0023** | 0.003 | **146** | 0.003 | **0.005** | | | | | | | | | | |
| **Barium** | (07/18/1990-05/22/1997) | **82** | (0.04-2.) | **0.5** | 0.055 | **0.50** | 0.35 | **70** | 0.5 | **1.195** | | | | | | | | | | |
| **Boron** | (07/18/1990-08/03/1999) | **100** | (0.005-1.02) | **0.13** | 0.08 | **0.168** | 0.172 | **103** | 0.223 | **0.5315** | | | | | | | | | | |
| **Cadmium** | (07/18/1990-05/22/1997) | **82** | (0.0005-0.005) | **0.0025** | 0 | **0.002** | 0.0010 | **53** | 0.003 | **0.003** | | | 2 | **2** | 82 | **100** | | | | |
| **Chloride** | (07/18/1990-08/03/1999) | **99** | (0.52-47.) | **13** | 3.48 | **14.07** | 8.85 | **63** | 15 | **30.6** | | | | | | | | | | |
| **Chromium** | (07/18/1990-05/22/1997) | **82** | (0.005-0.03) | **0.01** | 0 | **0.009** | 0.0039 | **46** | 0.01 | **0.01** | | | 82 | **100** | 3 | **4** | | | | |
| **Copper** | | | | | | | | | | | | | | | | | | | | |
| **Fluoride** | | | | | | | | | | | | | | | | | | | | |
| **Lead** | (07/18/1990-05/22/1997) | **82** | (0.0025-0.12) | **0.01** | 0 | **0.015** | 0.020 | **134** | 0.01 | **0.05865** | 1 | **1.2** | | | 60 | **73** | 17 | **21** | | |
| **Mercury** | | | | | | | | | | | | | | | | | | | | |
| **Nitrate** | (07/18/1990-05/22/1997) | **80** | (0.5-155.) | **8** | 3.25 | **15.6** | 25.6 | **164** | 15.55 | **34.72** | | | | | | | | | | |
| **pH** | (06/22/1996-11/12/1997) | **16** | (5.9-8.9) | **8.3** | 0.3 | **8.16** | 0.68 | **8** | 8.525 | **8.75** | 1 | **6** | | | | | | | | |
| **Radium (pCi/l)** | | | | | | | | | | | | | | | | | | | | |
| **Selenium** | (07/18/1990-08/03/1999) | **100** | (0.0005-0.011) | **0.0025** | 0.0005 | **0.0025** | 0.0014 | **57** | 0.003 | **0.00505** | | | | | 66 | **66** | | | | |
| **Silver** | (07/18/1990-05/22/1997) | **82** | (0.005-0.03) | **0.005** | 0 | **0.0054** | 0.0028 | **52** | 0.005 | **0.005** | | | 1 | **1** | | | | | | |
| **Sulfate** | (07/18/1990-08/03/1999) | **98** | (50.-1050.) | **257.5** | 82 | **292** | 179 | **61** | 338 | **718.3** | 2 | **2** | | | | | | | | |
| **TDS - 180°C** | (07/18/1990-08/03/1999) | **103** | (315.-15600.) | **610** | 160 | **1099** | 2049 | **187** | 880 | **2062** | 4 | **4** | | | | | | | | |
| **Zinc** | (07/18/1990-05/22/1997) | **82** | (0.005-1.1) | **0.125** | 0.045 | **0.158** | 0.221 | **140** | 0.125 | **0.7355** | | | 60 | **73** | 60 | **73** | | | | |
| **TSS** | (07/18/1990-08/02/1999) | **98** | (920.-1120000.) | **65300** | 28300 | **95335** | 134569 | **141** | 96100 | **209900** | | | | | | | | | | |
| **Conductivity (umho/cm)** | (07/18/1990-08/03/1999) | **104** | (370.-2300.) | **760** | 178.5 | **861** | 374 | **43** | 973.5 | **1649.5** | | | | | | | | | | |
| **Iron (total)** | (12/29/1992-08/03/1999) | **79** | (0.07-3720.) | **203** | 189.7 | **444.66** | 731.51 | **165** | 526.5 | **2073** | | | | | | | | | | |
| **Manganese** | (07/18/1990-08/03/1999) | **101** | (0.005-4.02) | **0.1** | 0.09 | **0.340** | 0.600 | **176** | 0.332 | **1.47** | | | | | | | | | | |

**Appendix D: Surface Water Quality Data Summary Tables**

(all Values are dissolved (mg/L) unless otherwise indicated)

| Cottonwood Baseline (CS-1) | Dates | n | Range | Median | MAD | Average | Standard Deviation | Percent Relative Standard Deviation | Q3 | 95th Percentile | Exceedance of Criteria | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | Livestock | | Aquatic & Wildlife Acute | | Aquatic & Wildlife Chronic | | Secondary Human Contact | | Fish Consumption | |
| | | | | | | | | | | | n | % | n | % | n | % | n | % | n | % |
| **Aluminum** | | | | | | | | | | | | | | | | | | | | |
| **Arsenic** | (07/18/1990-08/05/1997) | **77** | (0.0005-0.014) | **0.002** | 0.001 | **0.0021** | 0.002 | **93** | 0.003 | **0.0052** | | | | | | | | | | |
| **Barium** | (07/18/1990-08/05/1997) | **78** | (0.025-4.9) | **0.5** | 0.245 | **0.61** | 0.77 | **126** | 0.5 | **1.5** | | | | | | | | | | |
| **Boron** | (07/18/1990-08/05/1999) | **90** | (0.005-1.1) | **0.12** | 0.07 | **0.189** | 0.206 | **109** | 0.22 | **0.5275** | | | | | | | | | | |
| **Cadmium** | (07/18/1990-08/05/1997) | **78** | (0.0005-0.009) | **0.0025** | 0 | **0.002** | 0.0012 | **59** | 0.003 | **0.003** | | | 1 | **1** | 78 | **100** | | | 1 | **1** |
| **Chloride** | (07/18/1990-08/05/1999) | **91** | (4.-197.) | **12.8** | 5.2 | **17.14** | 22.88 | **133** | 17 | **39** | | | | | | | | | | |
| **Chromium** | (07/18/1990-08/05/1997) | **78** | (0.005-0.17) | **0.01** | 0 | **0.011** | 0.0186 | **176** | 0.01 | **0.02** | | | 78 | **100** | 5 | **6** | | | 1 | **1** |
| **Copper** | | | | | | | | | | | | | | | | | | | | |
| **Fluoride** | | | | | | | | | | | | | | | | | | | | |
| **Lead** | (07/18/1990-08/05/1997) | **78** | (0.0025-0.753) | **0.01** | 0 | **0.030** | 0.088 | **298** | 0.01 | **0.08615** | 4 | **5.1** | 2 | **3** | 66 | **85** | 18 | **23** | | |
| **Mercury** | | | | | | | | | | | | | | | | | | | | |
| **Nitrate** | (07/18/1990-08/05/1997) | **76** | (0.5-180.) | **7.65** | 3.95 | **18.9** | 31.7 | **168** | 14.88 | **102** | | | | | | | | | | |
| **pH** | (06/27/1996-11/12/1997) | **15** | (6.9-9.) | **8.4** | 0.2 | **8.35** | 0.48 | **6** | 8.6 | **8.86** | | | | | | | | | | |
| **Radium (pCi/l)** | | | | | | | | | | | | | | | | | | | | |
| **Selenium** | (07/18/1990-08/05/1999) | **90** | (0.0005-0.011) | **0.0025** | 0.0005 | **0.0026** | 0.0015 | **59** | 0.003 | **0.005** | | | | | 57 | **63** | | | | |
| **Silver** | (07/18/1990-08/05/1997) | **78** | (0.005-0.015) | **0.005** | 0 | **0.0051** | 0.0011 | **22** | 0.005 | **0.005** | | | 1 | **1** | | | | | | |
| **Sulfate** | (07/18/1990-08/05/1999) | **91** | (85.-1500.) | **275** | 86 | **317** | 222 | **70** | 355.5 | **828.5** | 1 | **1** | | | | | | | | |
| **TDS - 180°C** | (07/18/1990-08/05/1999) | **90** | (305.-9060.) | **675** | 207 | **1048** | 1329 | **127** | 910 | **3558.5** | 7 | **8** | | | | | | | | |
| **Zinc** | (07/18/1990-08/05/1997) | **78** | (0.005-1.82) | **0.125** | 0.02 | **0.204** | 0.288 | **141** | 0.129 | **0.7185** | | | 67 | **86** | 67 | **86** | | | | |
| **TSS** | (07/18/1990-08/05/1999) | **89** | (2110.- | **59400** | 28300 | **115804** | 163401 | **141** | 1E+05 | **366900** | | | | | | | | | | |
| **Conductivity (umho/cm)** | (07/18/1990-08/05/1999) | **92** | (250.-11809.) | **817** | 213 | **1041** | 1292 | **124** | 1030 | **1800** | | | | | | | | | | |
| **Iron (total)** | (12/29/1992-08/05/1999) | **62** | (1.5-2350.) | **225.5** | 211.15 | **419.74** | 566.88 | **135** | 557.3 | **1813.5** | | | | | | | | | | |
| **Manganese** | (07/18/1990-08/05/1999) | **90** | (0.005-4.23) | **0.1** | 0.08 | **0.524** | 0.953 | **182** | 0.425 | **3.139** | | | | | | | | | | |

**Appendix D: Surface Water Quality Data Summary Tables**

(all Values are dissolved (mg/L) unless otherwise indicated)

| Composite Baseline (Pinabete & No Name) | Dates | n | Range | Median | MAD | Average | Standard Deviation | Percent Relative Standard Deviation | Q3 | 95th Percentile | Exceedance of Criteria | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | Livestock | | Aquatic & Wildlife Acute | | Aquatic & Wildlife Chronic | | Secondary Human Contact | | Fish Consumption | |
| | | | | | | | | | | | n | % | n | % | n | % | n | % | n | % |
| **Aluminum** | (08/28/2007-08/12/2008) | **29** | (0.005-2.3) | **0.05** | 0.045 | **0.261** | 0.506 | **194** | 0.25 | **1.214** | | | 2 | **7** | 12 | **41** | | | | |
| **Arsenic** | (08/28/2007-08/12/2008) | **29** | (0.0009-0.0204) | **0.0027** | 0.0016 | **0.0052** | 0.0048 | **92** | 0.006 | **0.01432** | | | | | | | | | | |
| **Barium** | (08/28/2007-08/12/2008) | **29** | (0.0247-0.2193) | **0.0528** | 0.0157 | **0.07** | 0.04 | **63** | 0.071 | **0.13716** | | | | | | | | | | |
| **Boron** | (07/29/1998-08/12/2008) | **44** | (0.025-0.9) | **0.095** | 0.045 | **0.169** | 0.201 | **119** | 0.2 | **0.5** | | | | | | | | | | |
| **Cadmium** | (08/28/2007-08/12/2008) | **26** | (0.000025- | **3E-05** | 0 | **0.003** | 0.013 | **407** | 0.000 | **0.008** | 1 | **4** | 2 | **8** | 6 | **23** | | | 2 | **8** |
| **Chloride** | (07/29/1998-08/12/2008) | **44** | (5.-34.) | **8** | 3 | **10.05** | 7.20 | **72** | 11 | **26.55** | | | | | | | | | | |
| **Chromium** | (08/28/2007-08/12/2008) | **28** | (0.0005-0.005) | **0.0005** | 0 | **0.002** | 0.002 | **99** | 0.003 | **0.005** | | | 13 | **46** | | | | | | |
| **Copper** | (08/28/2007-08/12/2008) | **29** | (0.0042-0.0261) | **0.0076** | 0.0019 | **0.00882** | 0.004344 | **49** | 0.01 | **0.01522** | | | | | 2 | **7** | | | | |
| **Fluoride** | (07/29/1998-08/12/2008) | **41** | (0.1-1.19) | **0.2** | 0.1 | **0.35** | 0.31 | **90** | 0.6 | **0.9** | | | | | | | | | | |
| **Lead** | (08/28/2007-08/12/2008) | **29** | (0.00005- | **0.0002** | 0.0002 | **0.001** | 0.002 | **241** | 5E-04 | **0.0036** | | | | | 1 | **3** | | | | |
| **Mercury** | (08/28/2007-12/03/2007) | **7** | (0.0001-0.0001) | **0.0001** | 0 | **0.0001** | 1.46E-20 | **0** | 1E-04 | **0.0001** | | | | | 7 | **100** | | | | |
| **Nitrate** | (08/28/2007-08/12/2008) | **28** | (0.01-3.4) | **0.405** | 0.355 | **0.9** | 1.0 | **116** | 1.67 | **2.94** | | | | | | | | | | |
| **pH** | (07/29/1998-08/12/2008) | **46** | (7.-8.56) | **8.005** | 0.2 | **7.90** | 0.35 | **4** | 8.16 | **8.3875** | | | | | | | | | | |
| **Radium (pCi/l)** | | | | | | | | | | | | | | | | | | | | |
| **Selenium** | (07/29/1998-08/12/2008) | **43** | (0.0005-0.007) | **0.0025** | 0.0005 | **0.0023** | 0.0016 | **71** | 0.003 | **0.005** | | | | | 24 | **56** | | | | |
| **Silver** | (08/28/2007-08/12/2008) | **26** | (0.000025- | **3E-05** | 0 | **0.0001** | 0.0003 | **193** | 2E-04 | **0.00025** | | | | | | | | | | |
| **Sulfate** | (07/29/1998-08/12/2008) | **44** | (5.-840.) | **175** | 152 | **252** | 229 | **91** | 365 | **731.6** | | | | | | | | | | |
| **TDS - 180°C** | (07/29/1998-08/12/2008) | **46** | (100.-28400.) | **550** | 272.5 | **1599** | 4531 | **283** | 1006 | **4327.5** | 3 | **7** | | | | | | | | |
| **Zinc** | (08/28/2007-08/12/2008) | **29** | (0.001-14.2) | **0.004** | 0.002 | **0.501** | 2.635 | **526** | 0.01 | **0.108** | | | 2 | **7** | 2 | **7** | | | 1 | **3** |
| **TSS** | (07/29/1998-08/12/2008) | **44** | (367.-521000.) | **49750** | 40000 | **93912** | 119354 | **127** | 1E+05 | **380650** | | | | | | | | | | |
| **Conductivity (umho/cm)** | (07/29/1998-08/12/2008) | **47** | (150.-1940.) | **666** | 329 | **777** | 460 | **59** | 1020 | **1607** | | | | | | | | | | |
| **Iron (total)** | (07/29/1998-08/12/2008) | **42** | (1.26-6020.) | **272** | 265.49 | **592.99** | 1004.03 | **169** | 826.8 | **1547** | | | | | | | | | | |
| **Manganese** | (07/29/1998-08/12/2008) | **42** | (0.0025-3.76) | **0.0145** | 0.012 | **0.277** | 0.669 | **241** | 0.227 | **0.89335** | | | | | | | | | | |

**Appendix D: Surface Water Quality Data Summary Tables**

(all Values are dissolved (mg/L) unless otherwise indicated)

| Baseline (Upper Pinabete) | Dates | n | Range | Median | MAD | Average | Standard Deviation | Percent Relative Standard Deviation | Q3 | 95th Percentile | Exceedance of Criteria | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | Livestock | | Aquatic & Wildlife Acute | | Aquatic & Wildlife Chronic | | Secondary Human Contact | | Fish Consumption | |
| | | | | | | | | | | | n | % | n | % | n | % | n | % | n | % |
| **Aluminum** | (10/08/2007-08/12/2008) | **5** | (0.05-0.42) | **0.25** | 0.17 | **0.210** | 0.160 | **76** | 0.28 | **0.392** | | | | | 3 | **60** | | | | |
| **Arsenic** | (10/08/2007-08/12/2008) | **5** | (0.0009-0.0204) | **0.0084** | 0.0066 | **0.0094** | 0.0083 | **89** | 0.015 | **0.01932** | | | | | | | | | | |
| **Barium** | (10/08/2007-08/12/2008) | **5** | (0.0313-0.112) | **0.0433** | 0.012 | **0.06** | 0.03 | **56** | 0.069 | **0.1033** | | | | | | | | | | |
| **Boron** | (07/29/1998-08/12/2008) | **9** | (0.05-0.9) | **0.09** | 0.02 | **0.196** | 0.275 | **140** | 0.1 | **0.66** | | | | | | | | | | |
| **Cadmium** | (12/03/2007-08/12/2008) | **4** | (0.000025- | **3E-05** | 0 | **0.000** | 0.000 | **107** | 0.000 | **0.000** | | | | | | | | | | |
| **Chloride** | (07/29/1998-08/12/2008) | **9** | (5.-32.) | **10** | 1 | **13.44** | 8.66 | **64** | 11 | **28.8** | | | | | | | | | | |
| **Chromium** | (12/03/2007-08/12/2008) | **4** | (0.0005-0.002) | **0.0005** | 0 | **0.001** | 0.001 | **86** | 9E-04 | **0.001775** | | | 1 | **25** | | | | | | |
| **Copper** | (10/08/2007-08/12/2008) | **5** | (0.008-0.0261) | **0.0096** | 0.0016 | **0.01284** | 0.007522 | **59** | 0.012 | **0.02318** | | | | | 1 | **20** | | | | |
| **Fluoride** | (07/29/1998-08/12/2008) | **8** | (0.1-1.19) | **0.44** | 0.34 | **0.55** | 0.49 | **90** | 0.948 | **1.155** | | | | | | | | | | |
| **Lead** | (10/08/2007-08/12/2008) | **5** | (0.00005- | **0.0001** | 5E-05 | **0.000** | 0.000 | **105** | 2E-04 | **0.00044** | | | | | | | | | | |
| **Mercury** | (12/03/2007-12/03/2007) | **1** | (0.0001-0.0001) | **0.0001** | 0 | **0.0001** | | | 1E-04 | **0.0001** | | | | | 1 | **100** | | | | |
| **Nitrate** | (10/08/2007-08/12/2008) | **4** | (0.06-2.48) | **1.195** | 0.795 | **1.2** | 1.1 | **86** | 1.858 | **2.3555** | | | | | | | | | | |
| **pH** | (07/29/1998-08/12/2008) | **9** | (7.48-8.24) | **7.99** | 0.21 | **7.89** | 0.30 | **4** | 8.11 | **8.224** | | | | | | | | | | |
| **Radium (pCi/l)** | | | | | | | | | | | | | | | | | | | | |
| **Selenium** | (07/29/1998-08/12/2008) | **9** | (0.001-0.005) | **0.0025** | 0.0005 | **0.0026** | 0.0011 | **42** | 0.003 | **0.0042** | | | | | 6 | **67** | | | | |
| **Silver** | (12/03/2007-08/12/2008) | **4** | (0.000025- | **3E-05** | 0 | **0.0000** | 0.0000 | **86** | 4E-05 | **8.875E-05** | | | | | | | | | | |
| **Sulfate** | (07/29/1998-08/12/2008) | **9** | (180.-840.) | **390** | 191 | **500** | 240 | **48** | 740 | **816** | | | | | | | | | | |
| **TDS - 180°C** | (07/29/1998-08/12/2008) | **9** | (610.-5300.) | **1060** | 225 | **1425** | 1479 | **104** | 1270 | **3688** | 1 | **11** | | | | | | | | |
| **Zinc** | (10/08/2007-08/12/2008) | **5** | (0.001-0.004) | **0.002** | 0.001 | **0.002** | 0.001 | **61** | 0.002 | **0.0036** | | | | | | | | | | |
| **TSS** | (07/29/1998-08/12/2008) | **8** | (26600.- | **124500** | 56900 | **179213** | 161955 | **90** | 2E+05 | **445400** | | | | | | | | | | |
| **Conductivity (umho/cm)** | (07/29/1998-08/12/2008) | **9** | (584.-1810.) | **1460** | 350 | **1250** | 417 | **33** | 1520 | **1742** | | | | | | | | | | |
| **Iron (total)** | (07/29/1998-08/12/2008) | **8** | (5.96-1220.) | **428.5** | 396.02 | **568.75** | 527.53 | **93** | 1143 | **1195.5** | | | | | | | | | | |
| **Manganese** | (07/29/1998-08/12/2008) | **8** | (0.0025-0.453) | **0.005** | 0.0025 | **0.104** | 0.187 | **180** | 0.095 | **0.4194** | | | | | | | | | | |

**Appendix D: Surface Water Quality Data Summary Tables**

(all Values are dissolved (mg/L) unless otherwise indicated)

| Baseline (Lower Pinabete) | Dates | n | Range | Median | MAD | Average | Standard Deviation | Percent Relative Standard Deviation | Q3 | 95th Percentile | Exceedance of Criteria | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | Livestock | | Aquatic & Wildlife Acute | | Aquatic & Wildlife Chronic | | Secondary Human Contact | | Fish Consumption | |
| | | | | | | | | | | | n | % | n | % | n | % | n | % | n | % |
| **Aluminum** | (09/18/2007-07/21/2008) | **11** | (0.005-2.3) | **0.05** | 0.045 | **0.305** | 0.667 | **219** | 0.21 | **1.28** | | | 1 | **9** | 5 | **45** | | | | |
| **Arsenic** | (09/18/2007-07/21/2008) | **11** | (0.0013-0.0133) | **0.0025** | 0.0012 | **0.0056** | 0.0043 | **77** | 0.01 | **0.0117** | | | | | | | | | | |
| **Barium** | (09/18/2007-07/21/2008) | **11** | (0.0247-0.2193) | **0.0528** | 0.0182 | **0.07** | 0.06 | **78** | 0.074 | **0.1776** | | | | | | | | | | |
| **Boron** | (07/29/1998-07/21/2008) | **17** | (0.025-0.9) | **0.1** | 0.05 | **0.189** | 0.221 | **117** | 0.2 | **0.58** | | | | | | | | | | |
| **Cadmium** | (09/18/2007-07/21/2008) | **9** | (0.000025- | **3E-05** | 0 | **0.008** | 0.023 | **281** | 0.000 | **0.042** | 1 | **11** | 1 | **11** | | | | | 1 | **11** |
| **Chloride** | (07/29/1998-07/21/2008) | **17** | (5.-34.) | **8** | 3 | **11.18** | 8.11 | **73** | 13 | **28.4** | | | | | | | | | | |
| **Chromium** | (09/18/2007-07/21/2008) | **11** | (0.0005-0.005) | **0.001** | 0.0005 | **0.002** | 0.002 | **90** | 0.004 | **0.005** | | | 7 | **64** | | | | | | |
| **Copper** | (09/18/2007-07/21/2008) | **11** | (0.006-0.0171) | **0.009** | 0.0019 | **0.0094** | 0.003149 | **33** | 0.011 | **0.0144** | | | | | 1 | **9** | | | | |
| **Fluoride** | (07/29/1998-07/21/2008) | **15** | (0.1-0.75) | **0.1** | 0 | **0.31** | 0.27 | **87** | 0.525 | **0.75** | | | | | | | | | | |
| **Lead** | (09/18/2007-07/21/2008) | **11** | (0.00005-0.004) | **0.0005** | 0.0004 | **0.001** | 0.001 | **143** | 8E-04 | **0.0035** | | | | | | | | | | |
| **Mercury** | (09/18/2007-12/03/2007) | **4** | (0.0001-0.0001) | **0.0001** | 0 | **0.0001** | 0 | | 1E-04 | **0.0001** | | | | | 4 | **100** | | | | |
| **Nitrate** | (09/18/2007-07/21/2008) | **11** | (0.04-3.4) | **0.85** | 0.54 | **1.1** | 1.0 | **89** | 1.76 | **2.665** | | | | | | | | | | |
| **pH** | (07/29/1998-07/21/2008) | **19** | (7.-8.56) | **8.07** | 0.28 | **7.95** | 0.41 | **5** | 8.205 | **8.416** | | | | | | | | | | |
| **Radium (pCi/l)** | | | | | | | | | | | | | | | | | | | | |
| **Selenium** | (07/29/1998-07/21/2008) | **17** | (0.0005-0.007) | **0.0025** | 0.0005 | **0.0026** | 0.0019 | **73** | 0.003 | **0.007** | | | | | 11 | **65** | | | | |
| **Silver** | (09/18/2007-07/21/2008) | **9** | (0.000025- | **6E-05** | 4E-05 | **0.0001** | 0.0001 | **91** | 3E-04 | **0.00025** | | | | | | | | | | |
| **Sulfate** | (07/29/1998-07/21/2008) | **17** | (100.-684.) | **170** | 40 | **248** | 168 | **68** | 295 | **609.6** | | | | | | | | | | |
| **TDS - 180°C** | (07/29/1998-07/21/2008) | **19** | (295.-28400.) | **570** | 200 | **2808** | 6878 | **245** | 1175 | **15080** | 2 | **11** | | | | | | | | |
| **Zinc** | (09/18/2007-07/21/2008) | **11** | (0.002-0.16) | **0.006** | 0.004 | **0.021** | 0.046 | **223** | 0.013 | **0.088** | | | 1 | **9** | 1 | **9** | | | | |
| **TSS** | (07/29/1998-07/21/2008) | **18** | (10200.- | **59900** | 30600 | **77678** | 63856 | **82** | 95600 | **174450** | | | | | | | | | | |
| **Conductivity (umho/cm)** | (07/29/1998-08/12/2008) | **20** | (396.-1940.) | **660.5** | 103 | **773** | 376 | **49** | 798.5 | **1550.5** | | | | | | | | | | |
| **Iron (total)** | (07/29/1998-07/21/2008) | **16** | (125.-1940.) | **674.5** | 435.5 | **805.19** | 552.74 | **69** | 1155 | **1647.5** | | | | | | | | | | |
| **Manganese** | (07/29/1998-07/21/2008) | **16** | (0.0025-3.76) | **0.0635** | 0.061 | **0.526** | 1.023 | **194** | 0.541 | **2.5225** | | | | | | | | | | |

**Appendix D: Surface Water Quality Data Summary Tables**

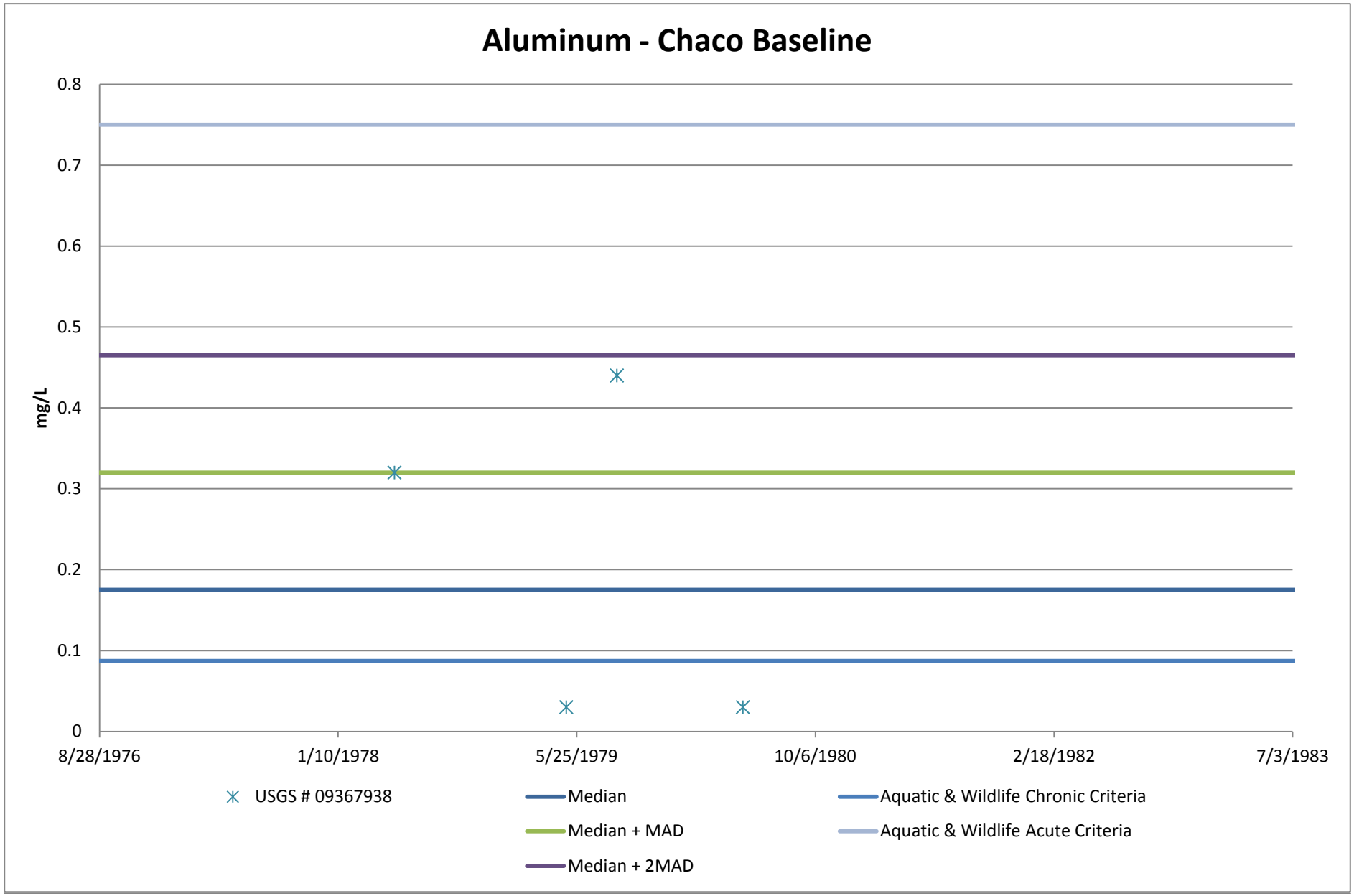
(all Values are dissolved (mg/L) unless otherwise indicated)

| Baseline (Upper No Name ) | Dates | n | Range | Median | MAD | Average | Standard Deviation | Percent Relative Standard Deviation | Q3 | 95th Percentile | Exceedance of Criteria | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | Livestock | | Aquatic & Wildlife Acute | | Aquatic & Wildlife Chronic | | Secondary Human Contact | | Fish Consumption | |
| | | | | | | | | | | | n | % | n | % | n | % | n | % | n | % |
| **Aluminum** | (02/13/2008-08/12/2008) | **8** | (0.005-1.65) | **0.1** | 0.095 | **0.374** | 0.563 | **151** | 0.53 | **1.2685** | | | 1 | **13** | 4 | **50** | | | | |
| **Arsenic** | (02/13/2008-08/12/2008) | **8** | (0.0019-0.0046) | **0.0026** | 0.0005 | **0.0029** | 0.0009 | **30** | 0.003 | **0.00432** | | | | | | | | | | |
| **Barium** | (02/13/2008-08/12/2008) | **8** | (0.0287-0.0658) | **0.0515** | 0.008 | **0.05** | 0.01 | **25** | 0.059 | **0.06398** | | | | | | | | | | |
| **Boron** | (07/29/1998-08/12/2008) | **10** | (0.025-0.5) | **0.05** | 0.0125 | **0.150** | 0.179 | **119** | 0.238 | **0.455** | | | | | | | | | | |
| **Cadmium** | (02/13/2008-08/12/2008) | **8** | (0.000025- | **0.0001** | 0.0001 | **0.001** | 0.003 | **228** | 0.001 | **0.007** | | | 1 | **13** | 3 | **38** | | | 1 | **13** |
| **Chloride** | (07/29/1998-08/12/2008) | **10** | (5.-19.) | **5** | 0 | **6.90** | 4.38 | **64** | 6.5 | **14.05** | | | | | | | | | | |
| **Chromium** | (02/13/2008-08/12/2008) | **8** | (0.0005-0.005) | **0.0025** | 0.002 | **0.002** | 0.002 | **78** | 0.004 | **0.005** | | | 5 | **63** | | | | | | |
| **Copper** | (02/13/2008-08/12/2008) | **8** | (0.0042-0.0124) | **0.0069** | 0.0025 | **0.00713** | 0.002925 | **41** | 0.008 | **0.011525** | | | | | | | | | | |
| **Fluoride** | (07/29/1998-08/12/2008) | **10** | (0.1-0.3) | **0.23** | 0.07 | **0.22** | 0.09 | **41** | 0.3 | **0.3** | | | | | | | | | | |
| **Lead** | (02/13/2008-08/12/2008) | **8** | (0.00005- | **8E-05** | 3E-05 | **0.000** | 0.000 | **111** | 2E-04 | **0.000495** | | | | | | | | | | |
| **Mercury** | | | | | | | | | | | | | | | | | | | | |
| **Nitrate** | (02/13/2008-08/12/2008) | **8** | (0.01-0.4) | **0.06** | 0.04 | **0.1** | 0.2 | **105** | 0.278 | **0.3755** | | | | | | | | | | |
| **pH** | (07/29/1998-08/12/2008) | **10** | (7.83-8.4) | **8.085** | 0.075 | **8.07** | 0.17 | **2** | 8.15 | **8.292** | | | | | | | | | | |
| **Radium (pCi/l)** | | | | | | | | | | | | | | | | | | | | |
| **Selenium** | (07/29/1998-08/12/2008) | **9** | (0.0005-0.005) | **0.0005** | 0 | **0.0019** | 0.0019 | **99** | 0.003 | **0.005** | | | | | 4 | **44** | | | | |
| **Silver** | (02/13/2008-08/12/2008) | **8** | (0.000025- | **5E-05** | 2E-05 | **0.0001** | 0.0001 | **98** | 2E-04 | **0.00025** | | | | | | | | | | |
| **Sulfate** | (07/29/1998-08/12/2008) | **10** | (5.-30.) | **5** | 0 | **10** | 8 | **85** | 13.75 | **23.7** | | | | | | | | | | |
| **TDS - 180°C** | (07/29/1998-08/12/2008) | **10** | (100.-490.) | **185** | 30 | **215** | 113 | **52** | 213.8 | **413.5** | | | | | | | | | | |
| **Zinc** | (02/13/2008-08/12/2008) | **8** | (0.001-0.03) | **0.0045** | 0.003 | **0.010** | 0.013 | **125** | 0.013 | **0.03** | | | | | | | | | | |
| **TSS** | (07/29/1998-08/12/2008) | **10** | (367.-19400.) | **7090** | 3055 | **7571** | 6042 | **80** | 8153 | **17825** | | | | | | | | | | |
| **Conductivity (umho/cm)** | (07/29/1998-08/12/2008) | **10** | (150.-337.) | **229** | 36.5 | **241** | 55 | **23** | 282 | **315.85** | | | | | | | | | | |
| **Iron (total)** | (07/29/1998-08/12/2008) | **10** | (3.24-6020.) | **50.3** | 46.215 | **645.82** | 1888.85 | **292** | 103 | **3366.35** | | | | | | | | | | |
| **Manganese** | (07/29/1998-08/12/2008) | **10** | (0.0025-0.24) | **0.024** | 0.0203 | **0.055** | 0.076 | **138** | 0.078 | **0.18375** | | | | | | | | | | |

**Appendix D: Surface Water Quality Data Summary Tables**

(all Values are dissolved (mg/L) unless otherwise indicated)

| Baseline (Lower No Name ) | Dates | n | Range | Median | MAD | Average | Standard Deviation | Percent Relative Standard Deviation | Q3 | 95th Percentile | Exceedance of Criteria | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | Livestock | | Aquatic & Wildlife Acute | | Aquatic & Wildlife Chronic | | Secondary Human Contact | | Fish Consumption | |
| | | | | | | | | | | | n | % | n | % | n | % | n | % | n | % |
| **Aluminum** | (08/28/2007-08/12/2008) | **5** | (0.005-0.05) | **0.05** | 0 | **0.032** | 0.025 | **77** | 0.05 | **0.05** | | | | | | | | | | |
| **Arsenic** | (08/28/2007-08/12/2008) | **5** | (0.0011-0.0058) | **0.0045** | 0.0013 | **0.0035** | 0.0023 | **64** | 0.005 | **0.00566** | | | | | | | | | | |
| **Barium** | (08/28/2007-08/12/2008) | **5** | (0.0474-0.138) | **0.111** | 0.027 | **0.09** | 0.04 | **45** | 0.122 | **0.1348** | | | | | | | | | | |
| **Boron** | (08/13/1998-08/12/2008) | **8** | (0.05-0.2) | **0.14** | 0.06 | **0.124** | 0.066 | **53** | 0.17 | **0.2** | | | | | | | | | | |
| **Cadmium** | (08/28/2007-08/12/2008) | **5** | (0.000025- | **3E-05** | 0 | **0.000** | 0.000 | **197** | 0.000 | **0.001** | | | | | | | | | | |
| **Chloride** | (08/13/1998-08/12/2008) | **8** | (5.-17.) | **5** | 0 | **7.75** | 4.40 | **57** | 9.5 | **14.9** | | | | | | | | | | |
| **Chromium** | (08/28/2007-08/12/2008) | **5** | (0.0005-0.0005) | **0.0005** | 0 | **0.001** | 0.000 | | 5E-04 | **0.0005** | | | | | | | | | | |
| **Copper** | (08/28/2007-08/12/2008) | **5** | (0.0056-0.0072) | **0.0063** | 0.0006 | **0.00622** | 0.000638 | **10** | 0.006 | **0.00702** | | | | | | | | | | |
| **Fluoride** | (08/13/1998-08/12/2008) | **8** | (0.1-0.89) | **0.35** | 0.25 | **0.40** | 0.31 | **76** | 0.65 | **0.8165** | | | | | | | | | | |
| **Lead** | (08/28/2007-08/12/2008) | **5** | (0.00005- | **0.0002** | 0.0002 | **0.002** | 0.004 | **209** | 2E-04 | **0.0074** | | | | | | | | | | |
| **Mercury** | (08/28/2007-08/28/2007) | **2** | (0.0001-0.0001) | **0.0001** | 0 | **0.0001** | 0 | | 1E-04 | **0.0001** | | | | | 2 | **100** | | | | |
| **Nitrate** | (08/28/2007-08/12/2008) | **5** | (0.06-2.94) | **0.41** | 0.35 | **1.3** | 1.5 | **118** | 2.94 | **2.94** | | | | | | | | | | |
| **pH** | (08/13/1998-08/12/2008) | **8** | (7.17-8.) | **7.65** | 0.29 | **7.61** | 0.32 | **4** | 7.903 | **7.9685** | | | | | | | | | | |
| **Radium (pCi/l)** | | | | | | | | | | | | | | | | | | | | |
| **Selenium** | (08/13/1998-08/12/2008) | **8** | (0.001-0.0025) | **0.001** | 0 | **0.0016** | 0.0008 | **50** | 0.003 | **0.0025** | | | | | 3 | **38** | | | | |
| **Silver** | (08/28/2007-08/12/2008) | **5** | (0.000025- | **3E-05** | 0 | **0.0003** | 0.0006 | **204** | 3E-05 | **0.001085** | | | | | | | | | | |
| **Sulfate** | (08/13/1998-08/12/2008) | **8** | (131.-600.) | **242.5** | 106 | **284** | 162 | **57** | 380.8 | **524.05** | | | | | | | | | | |
| **TDS - 180°C** | (08/13/1998-08/12/2008) | **8** | (385.-1030.) | **600** | 182.5 | **654** | 224 | **34** | 817.5 | **963.5** | | | | | | | | | | |
| **Zinc** | (08/28/2007-08/12/2008) | **5** | (0.001-14.2) | **0.004** | 0.003 | **2.844** | 6.348 | **223** | 0.01 | **11.362** | | | 1 | **20** | 20 | **1** | | | 1 | **20** |
| **TSS** | (08/13/1998-08/12/2008) | **8** | (16700.- | **57600** | 36200 | **153063** | 166392 | **109** | 3E+05 | **394650** | | | | | | | | | | |
| **Conductivity (umho/cm)** | (08/13/1998-08/12/2008) | **8** | (498.-1330.) | **1010** | 220 | **926** | 286 | **31** | 1080 | **1274** | | | | | | | | | | |
| **Iron (total)** | (08/13/1998-08/12/2008) | **8** | (1.26-419.) | **16.7** | 13.82 | **126.78** | 168.31 | **133** | 266 | **373.85** | | | | | | | | | | |
| **Manganese** | (08/13/1998-08/12/2008) | **8** | (0.0025-0.786) | **0.12** | 0.113 | **0.231** | 0.296 | **128** | 0.317 | **0.7097** | | | | | | | | | | |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0.6
0.5
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0.1
0
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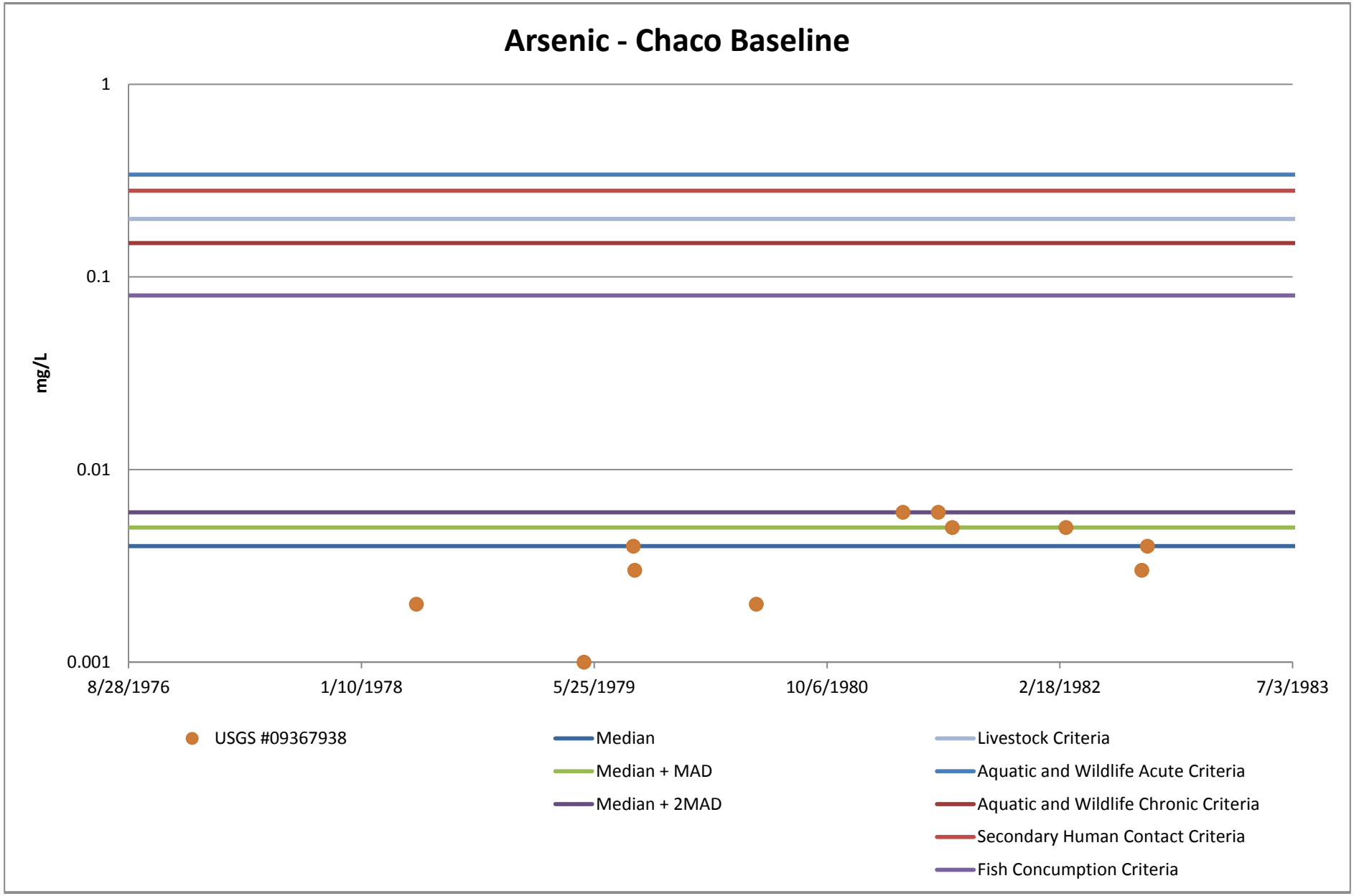
1/10/1978
5/25/1979
10/6/1980
2/18/1982
7/3/1983
USGS # 09367938
Median
Aquatic & Wildlife Chronic Criteria
Median + MAD
Aquatic & Wildlife Acute Criteria
Median + 2MAD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mg/L
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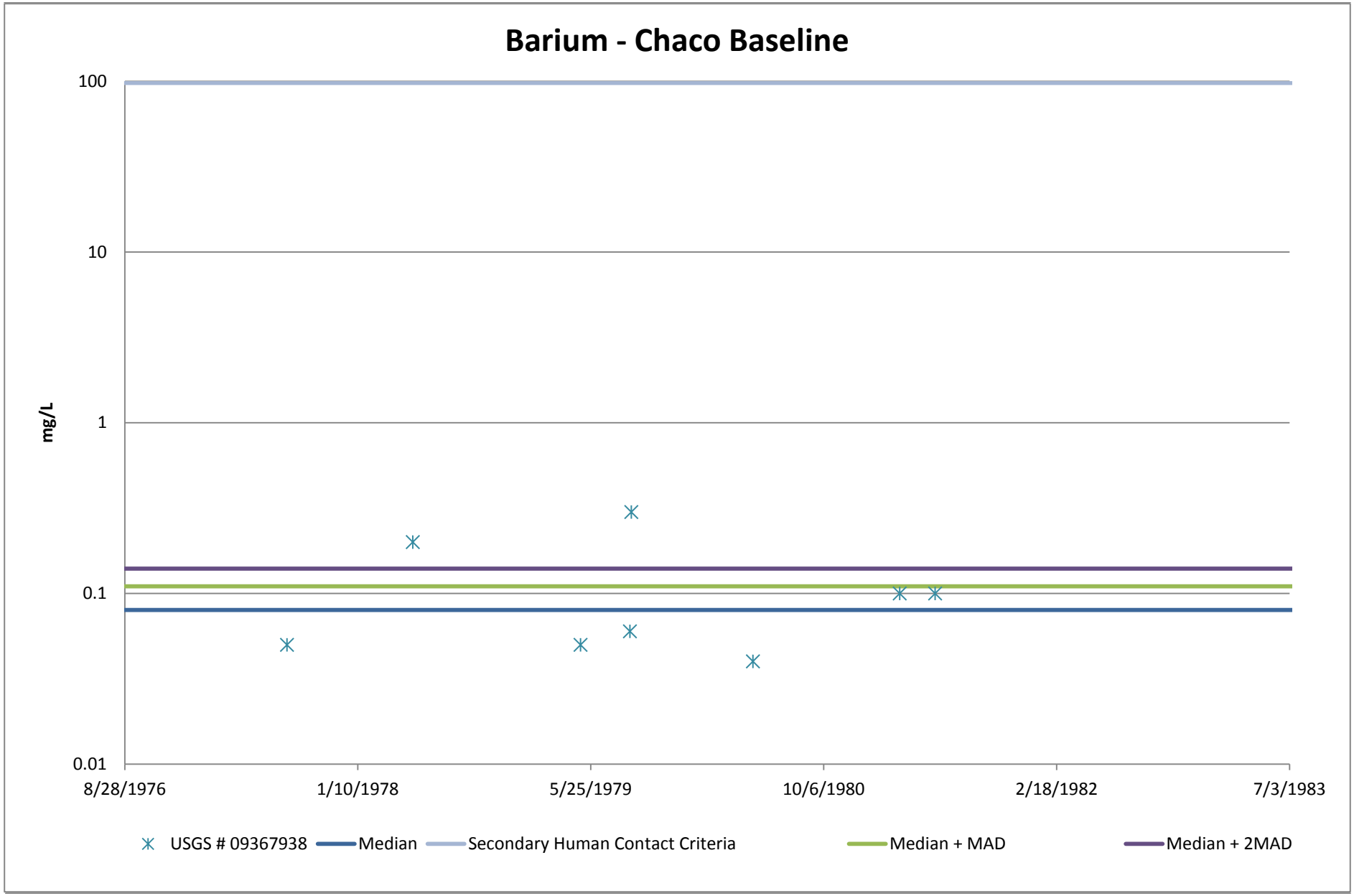
5/25/1979
10/6/1980
2/18/1982
7/3/1983
USGS #09367938
Median
Median + MAD
Median + 2MAD
Livestock Criteria
Aquatic and Wildlife Acute Criteria
Aquatic and Wildlife Chronic Criteria
Secondary Human Contact Criteria
Fish Concumption Criteria


Barium - Chaco Baseline
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10
1
0.1
0.01
mg/L
8/28/1976
1/10/1978
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7/3/1983
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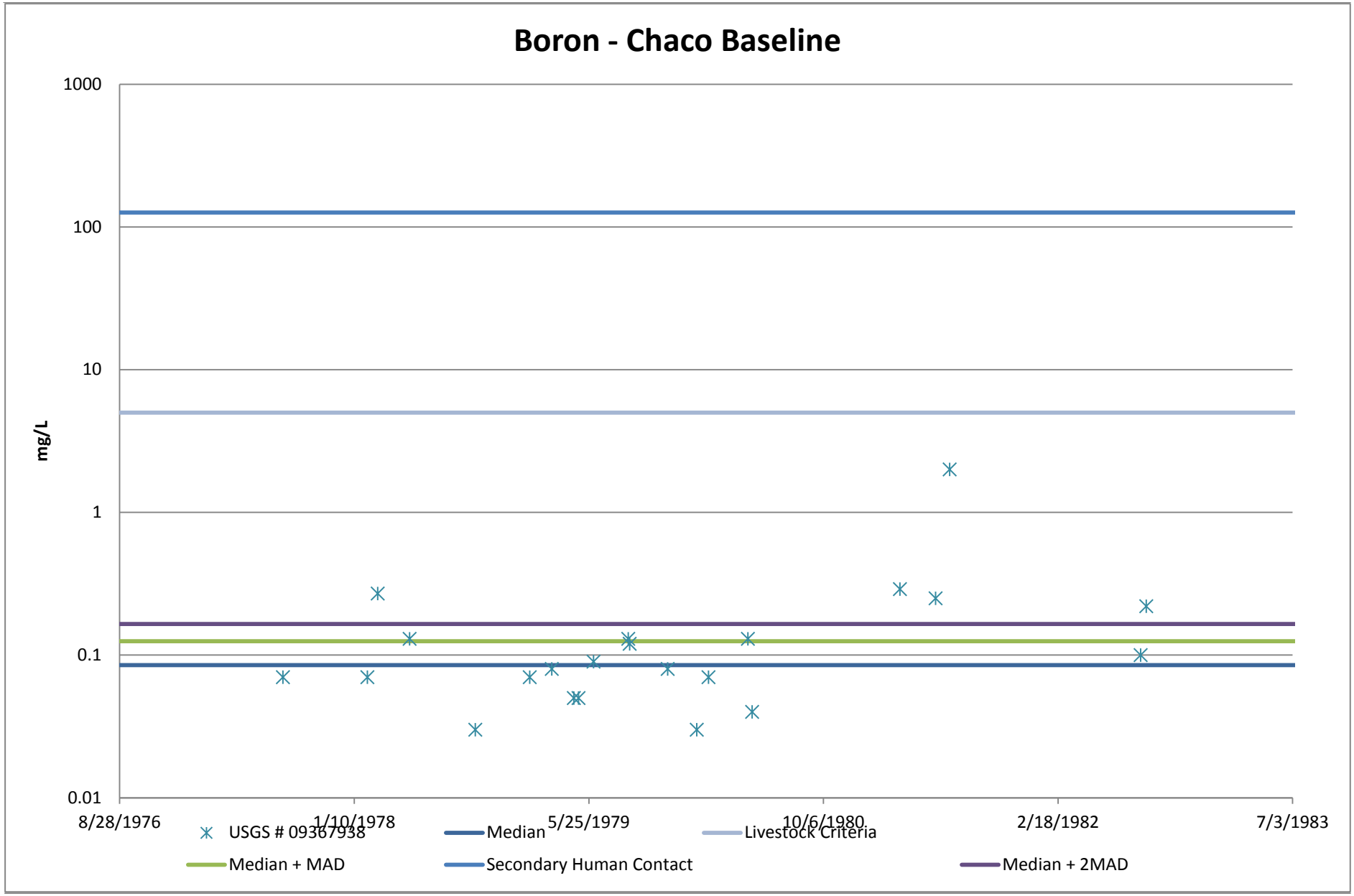
Median
Secondary Human Contact Criteria
Median + MAD
Median + 2MAD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mg/L
8/28/1976
1/10/1978
5/25/1979
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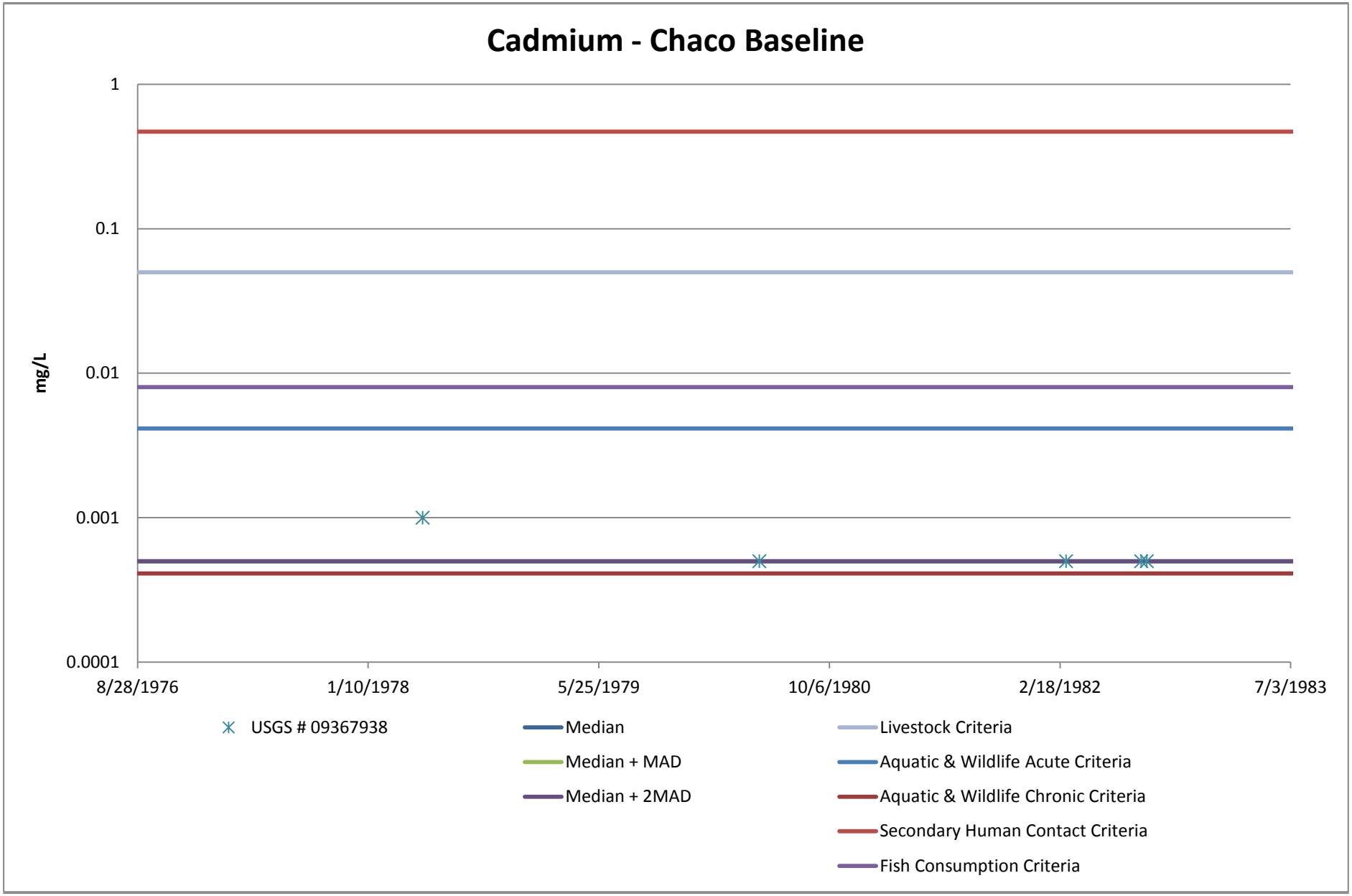
Median
Livestock Criteria
Median + MAD
Secondary Human Contact
Median + 2MAD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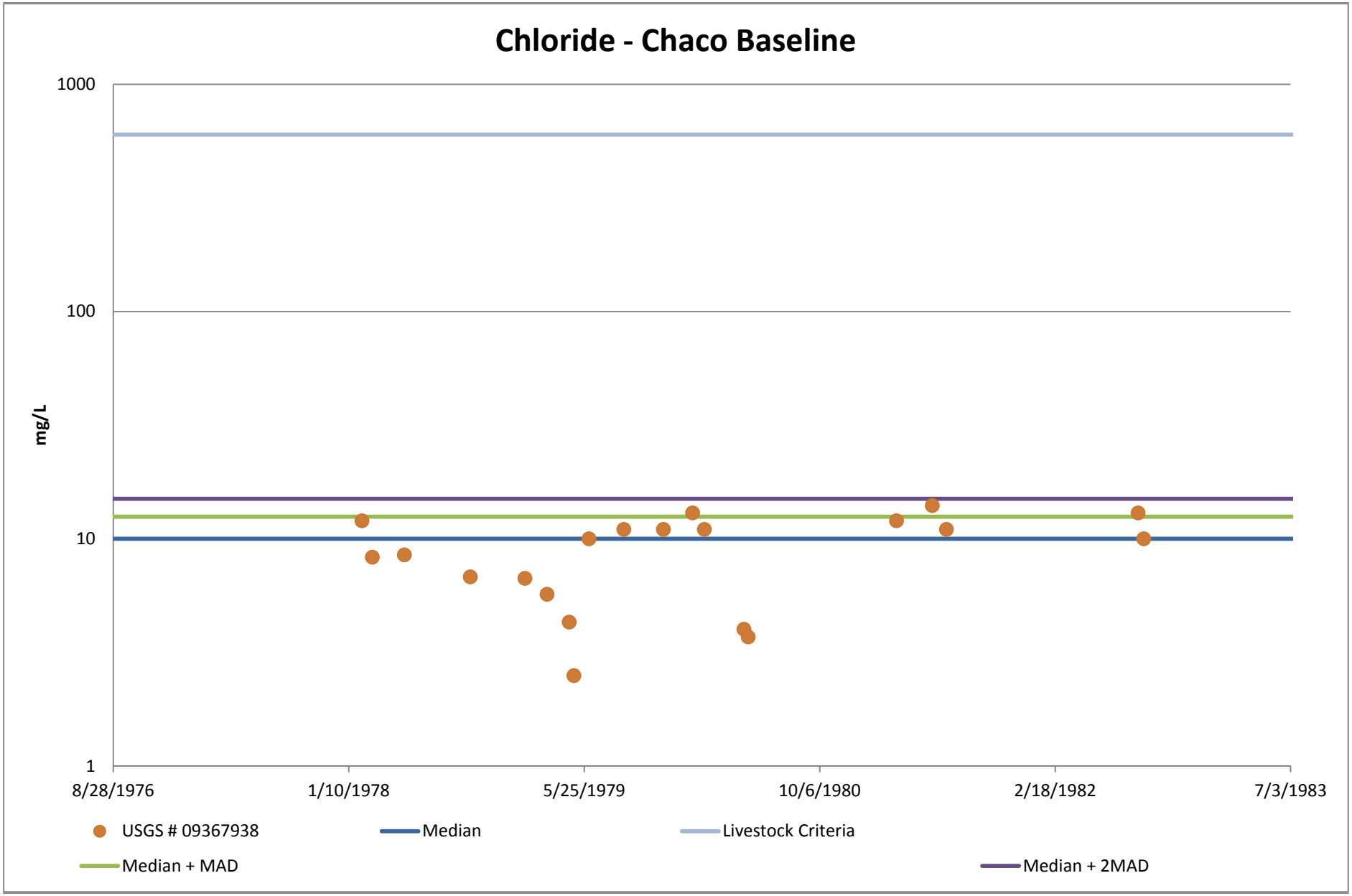
8/28/1976
1/10/1978
5/25/1979
10/6/1980
2/18/1982
7/3/1983
USGS # 09367938
Median
Median + MAD
Median + 2MAD
Livestock Criteria
Aquatic & Wildlife Acute Criteria
Aquatic & Wildlife Chronic Criteria
Secondary Human Contact Criteria
Fish Consumption Criteria


Chloride - Chaco Baseline
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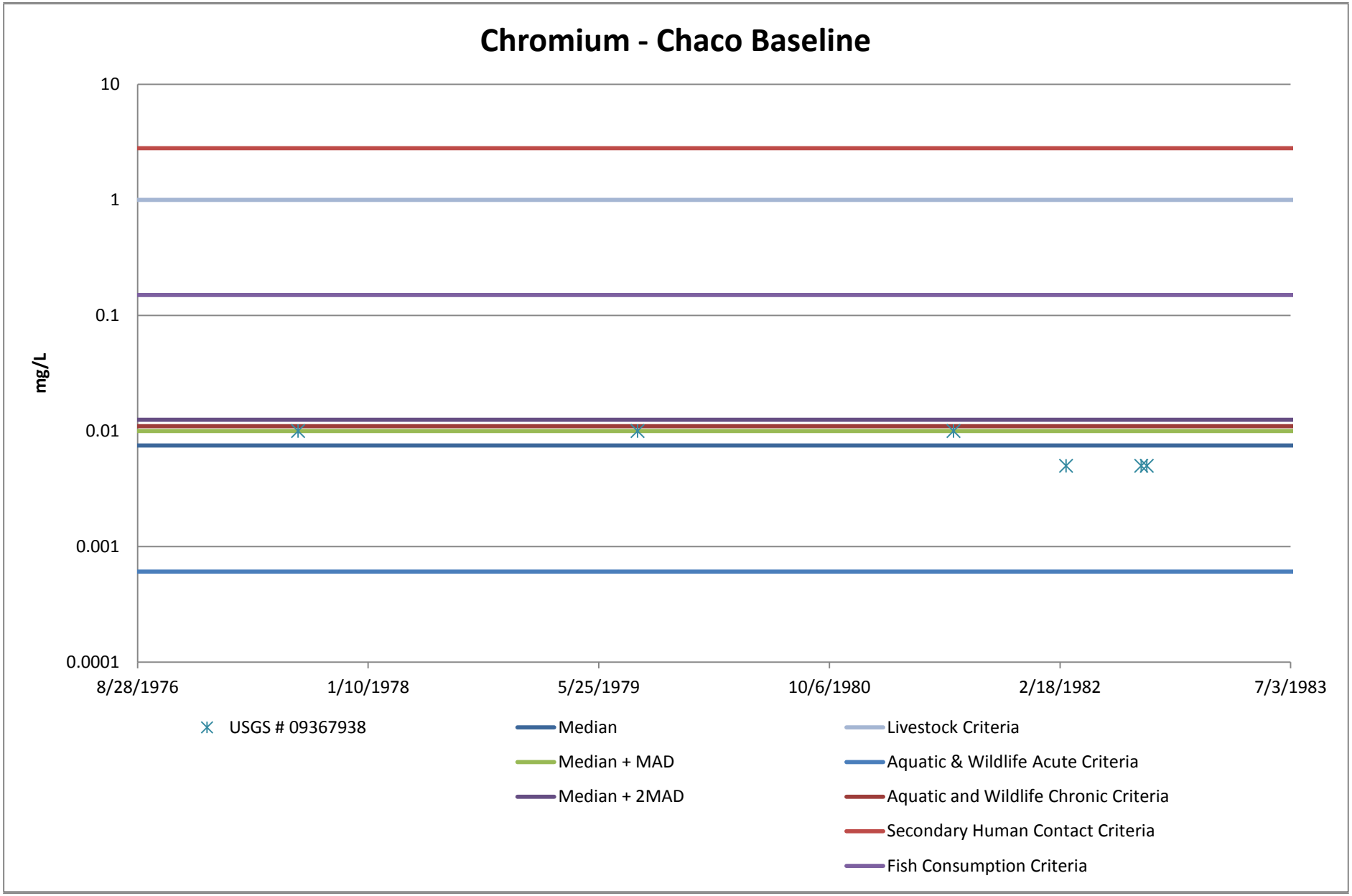
10
1
mg/L
8/28/1976
1/10/1978
5/25/1979
10/6/1980
2/18/1982
7/3/1983
USGS # 09367938
Median
Livestock Criteria
Median + MAD
Median + 2MAD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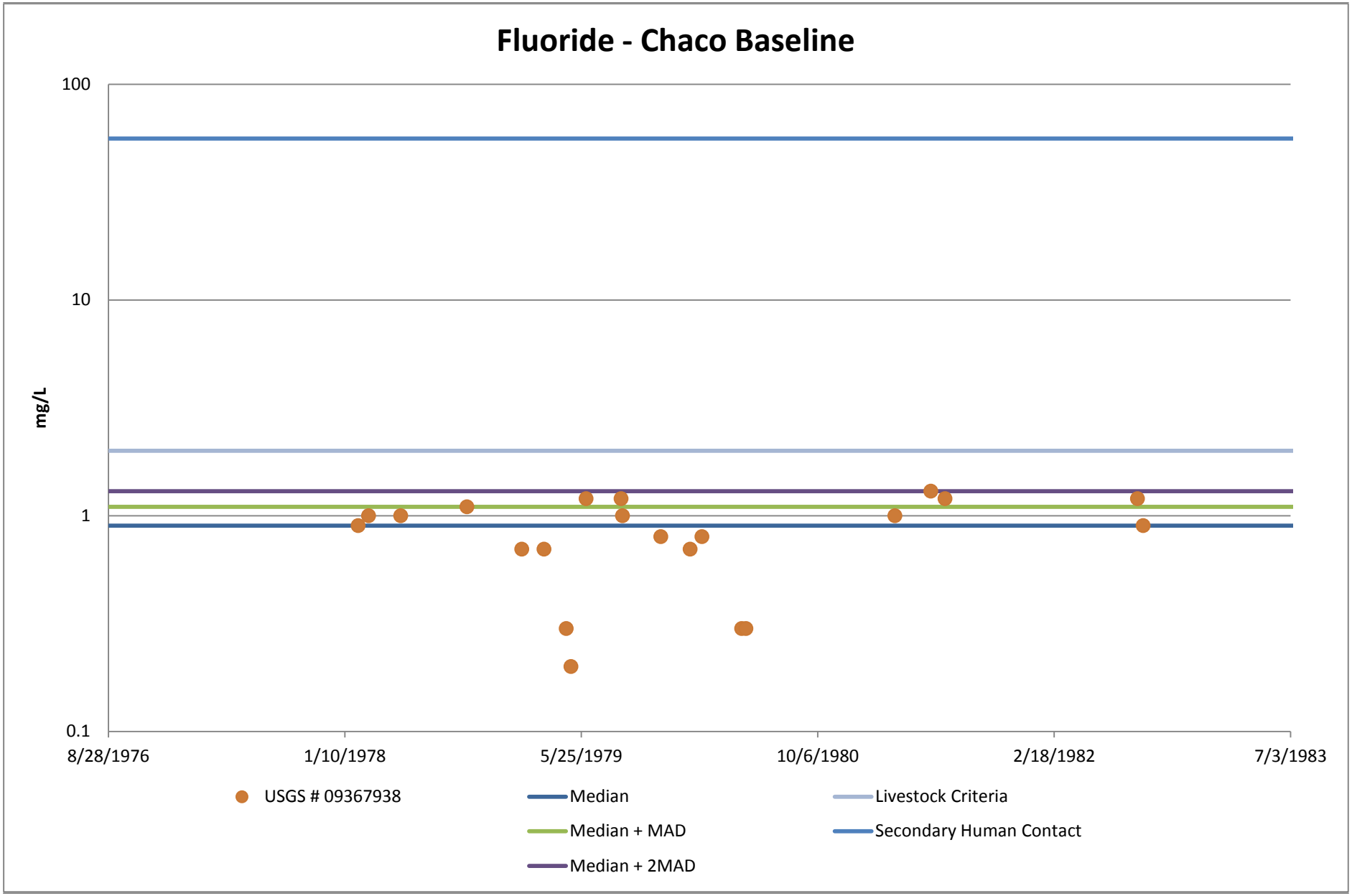
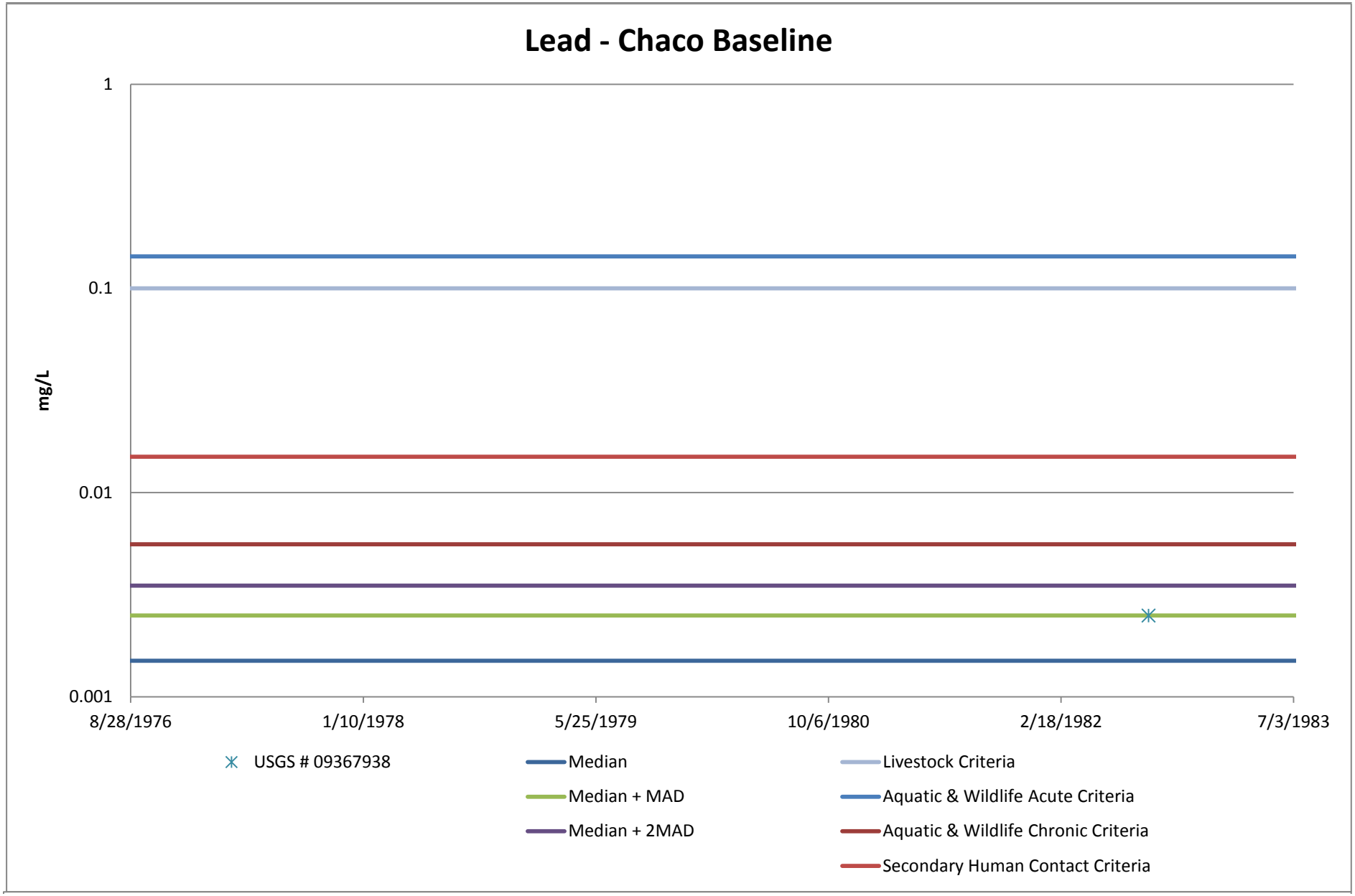
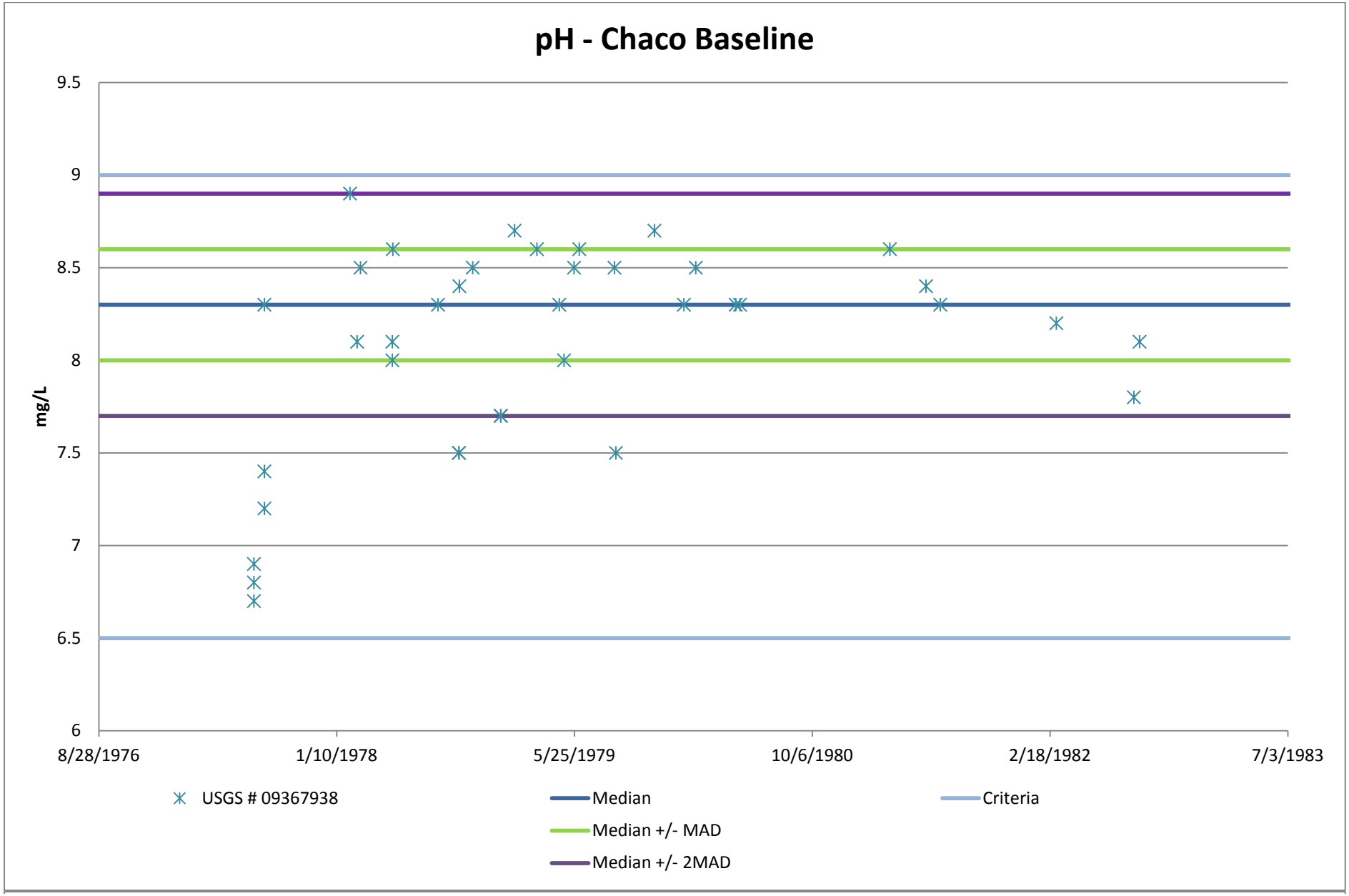
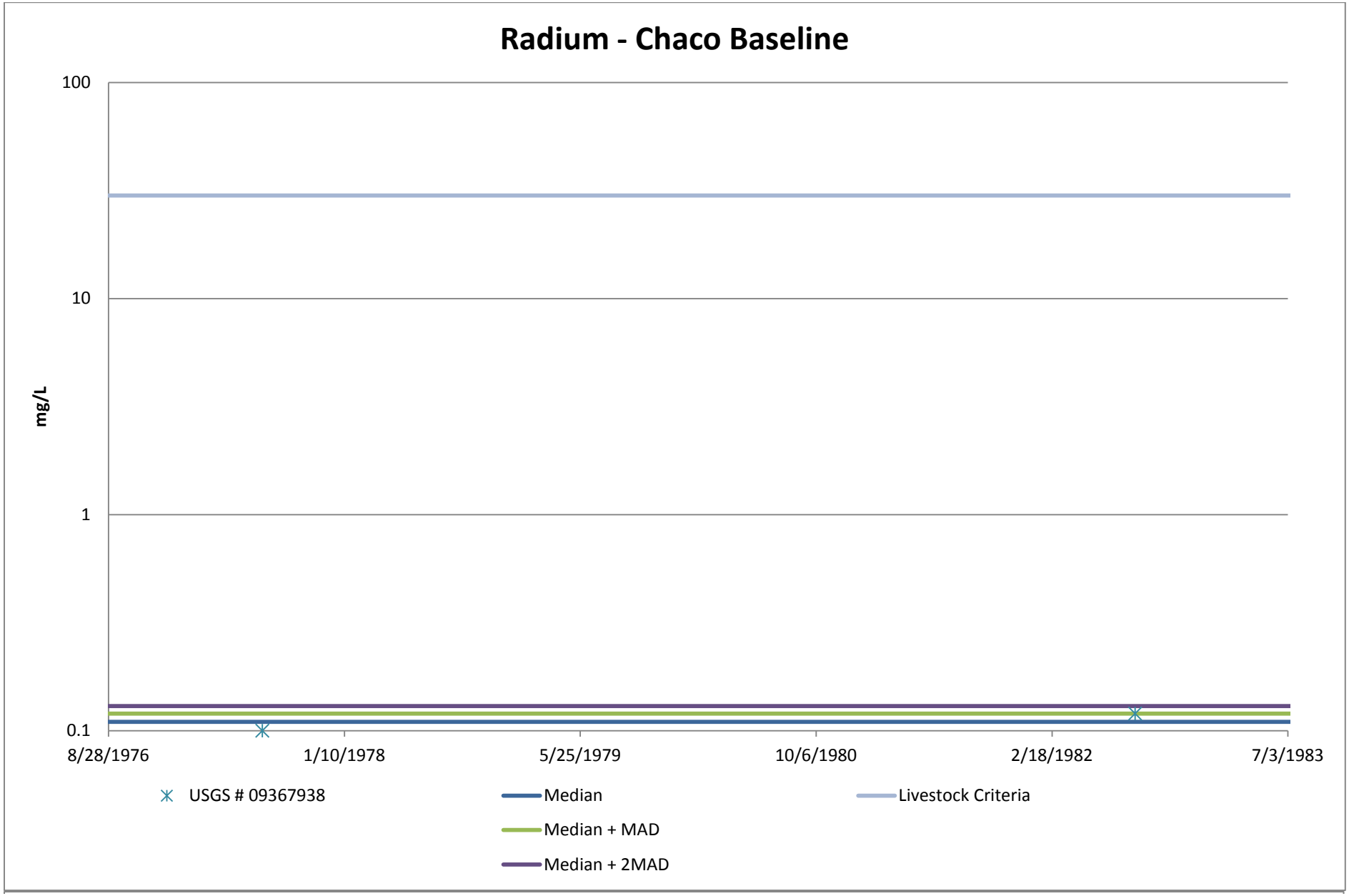
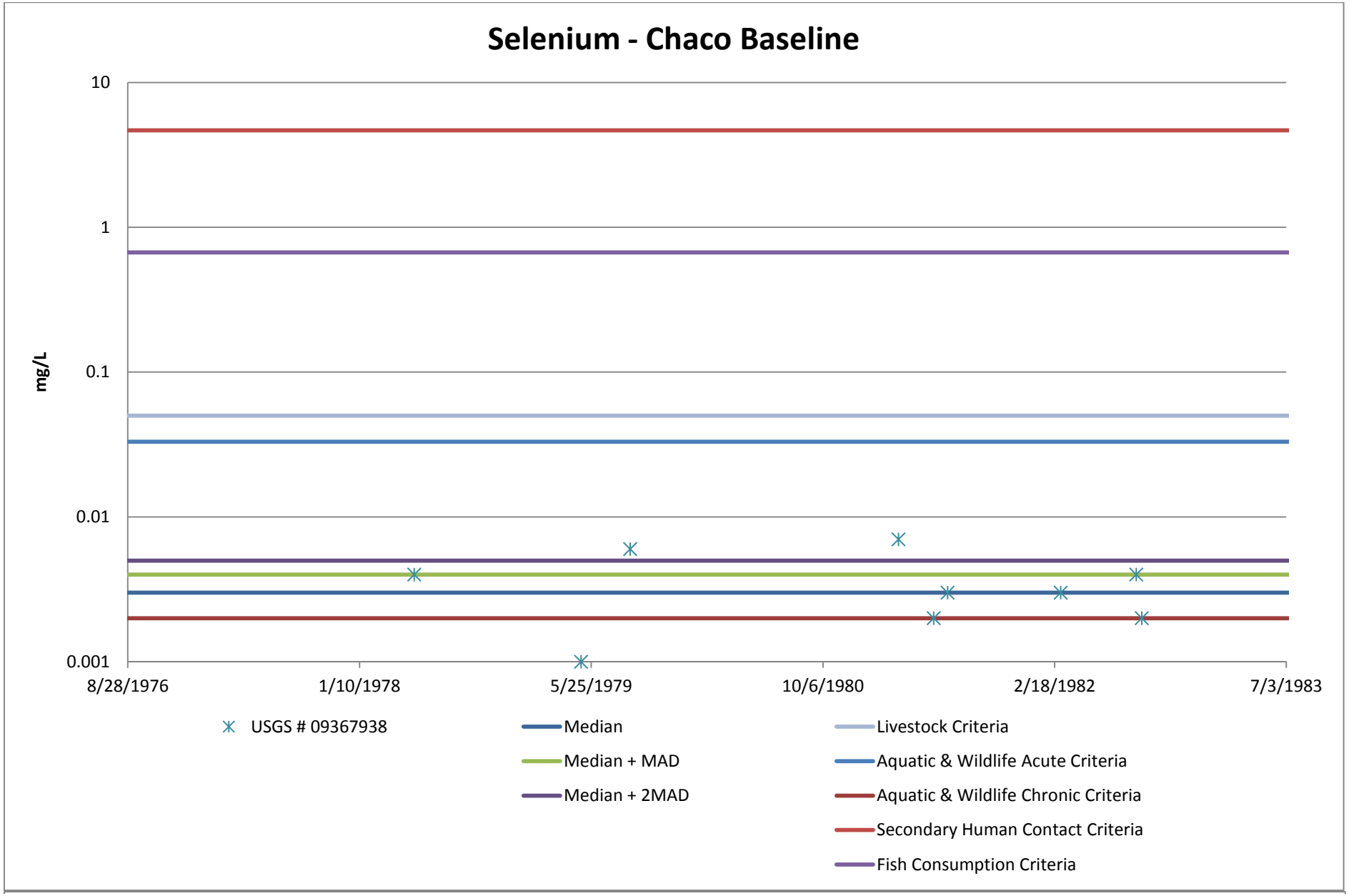
0.01
0.001
0.0001
mg/L
8/28/1976
1/10/1978
5/25/1979
10/6/1980
2/18/1982
7/3/1983
USGS # 09367938
Median
Median + MAD
Median + 2MAD
Livestock Criteria
Aquatic & Wildlife Acute Criteria
Aquatic and Wildlife Chronic Criteria
Secondary Human Contact Criteria
Fish Consumption Criteria

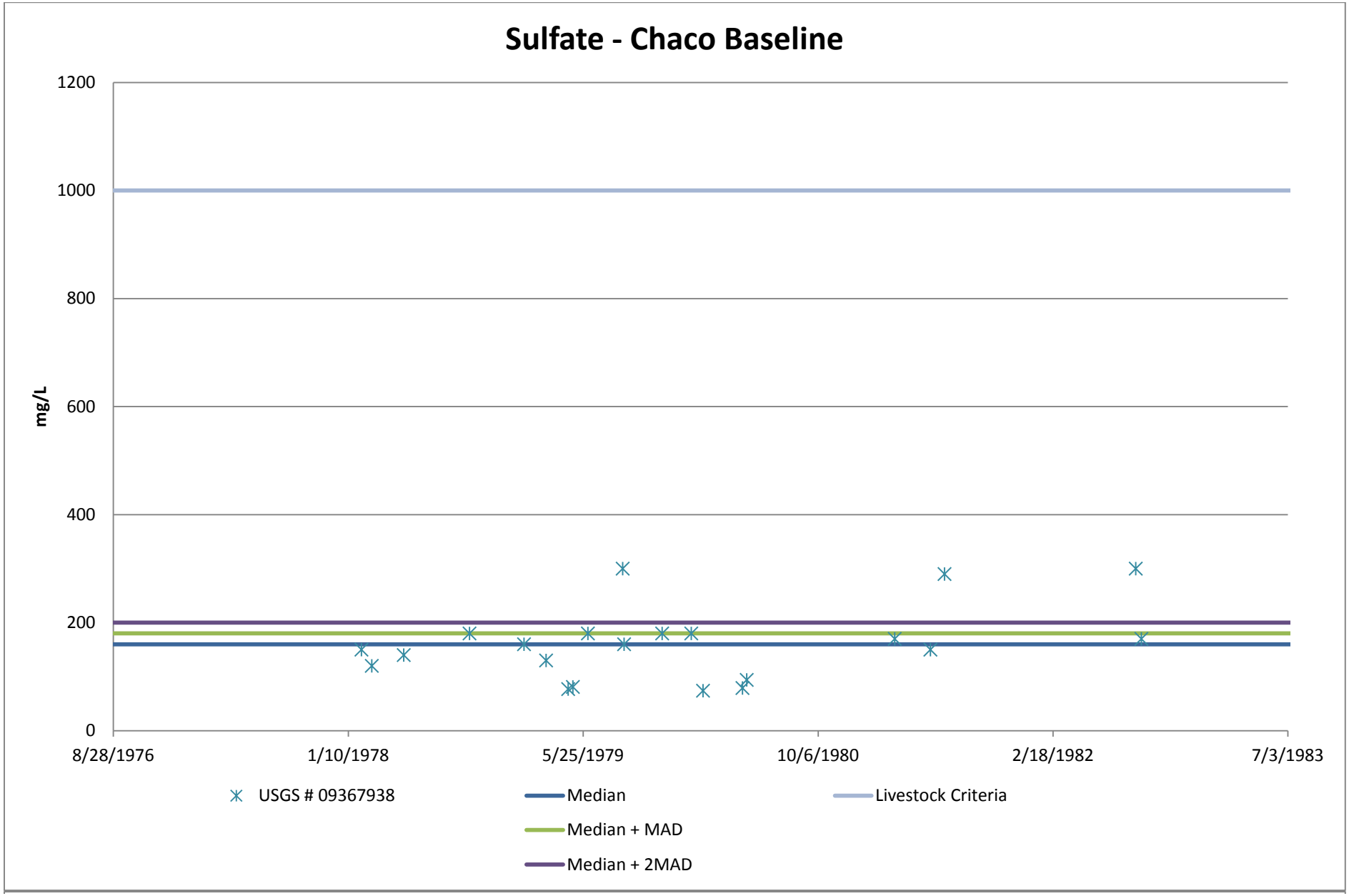

Fluoride - Chaco Baseline
100
10
1
0.1
mg/L
8/28/1976
1/10/1978
5/25/1979
10/6/1980
2/18/1982
7/3/1983
USGS # 09367938
Median
Livestock Criteria
Median + MAD
Secondary Human Contact
Median + 2MAD

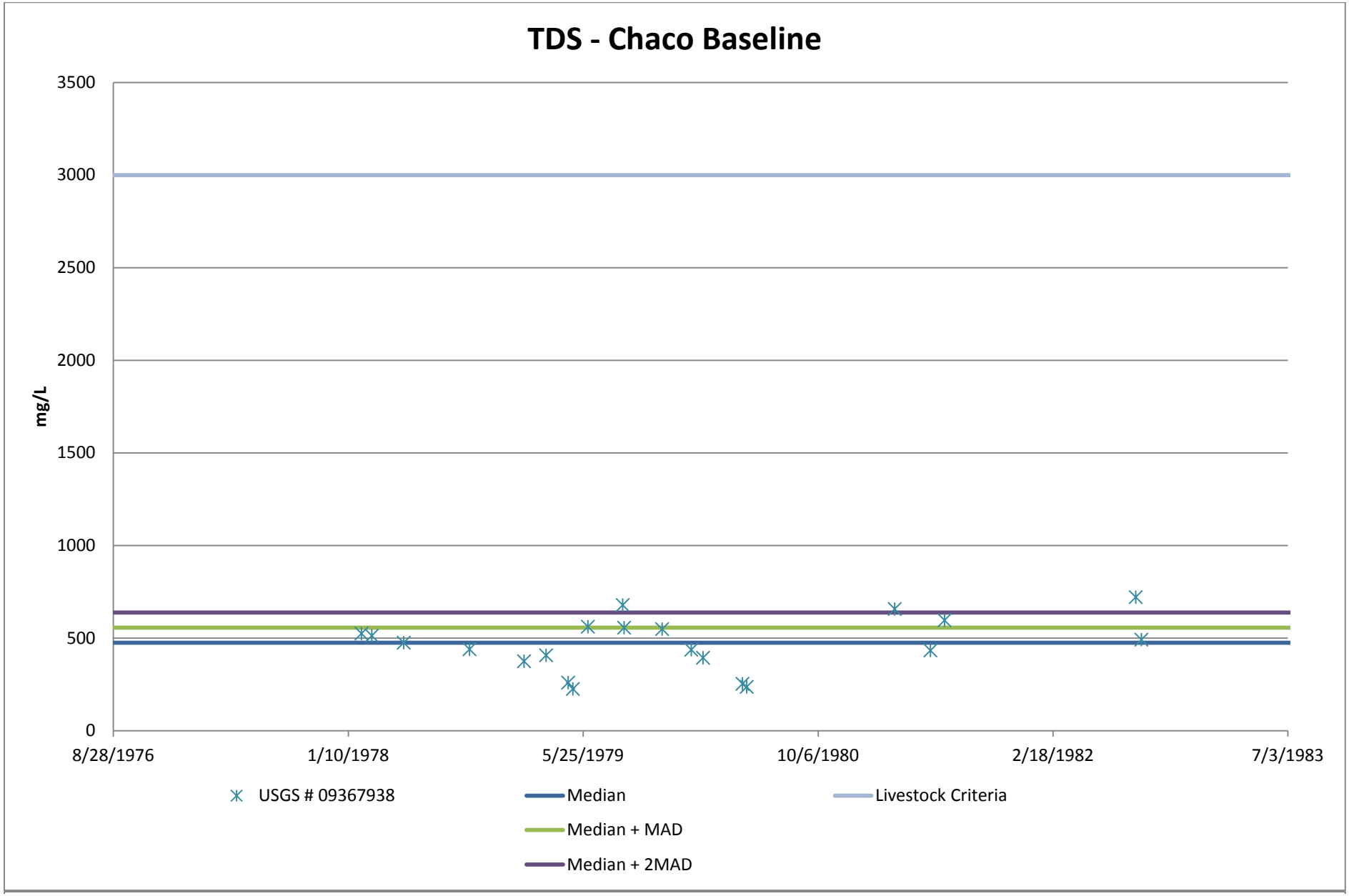

Lead - Chaco Baseline
1
0.1
0.01
0.001
mg/L
8/28/1976
1/10/1978
5/25/1979
10/6/1980
2/18/1982
7/3/1983
USGS # 09367938
Median
Median + MAD
Median + 2MAD
Livestock Criteria
Aquatic & Wildlife Acute Criteria
Aquatic & Wildlife Chronic Criteria
Secondary Human Contact Criteria

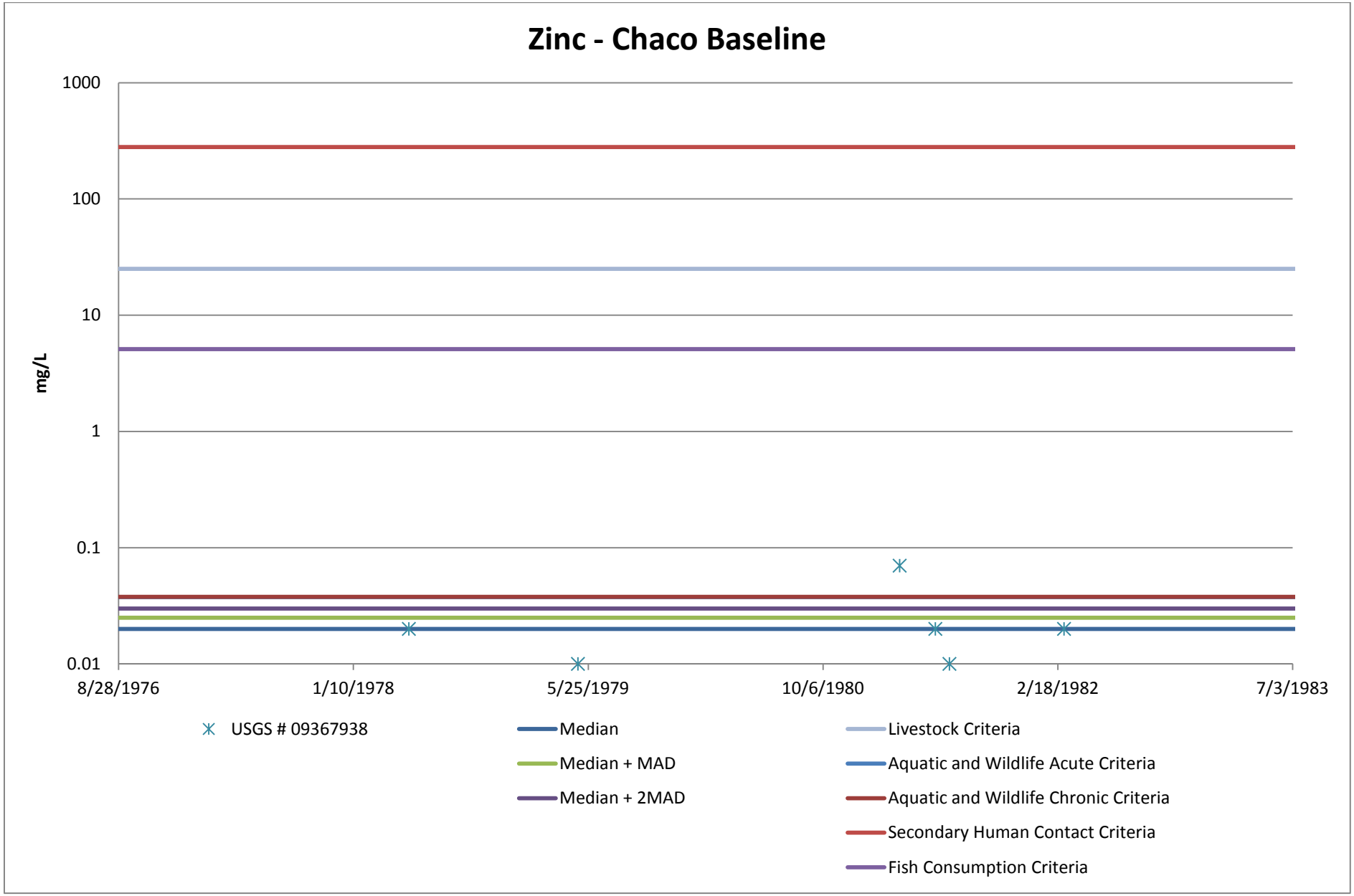

pH - Chaco Baseline
9.5
9
8.5
8
7.5
7
6.5
6
mg/L
8/28/1976
1/10/1978
5/25/1979
10/6/1980
2/18/1982
7/3/1983
USGS # 09367938
Median
Criteria
Median +/- MAD
Median +/- 2MAD

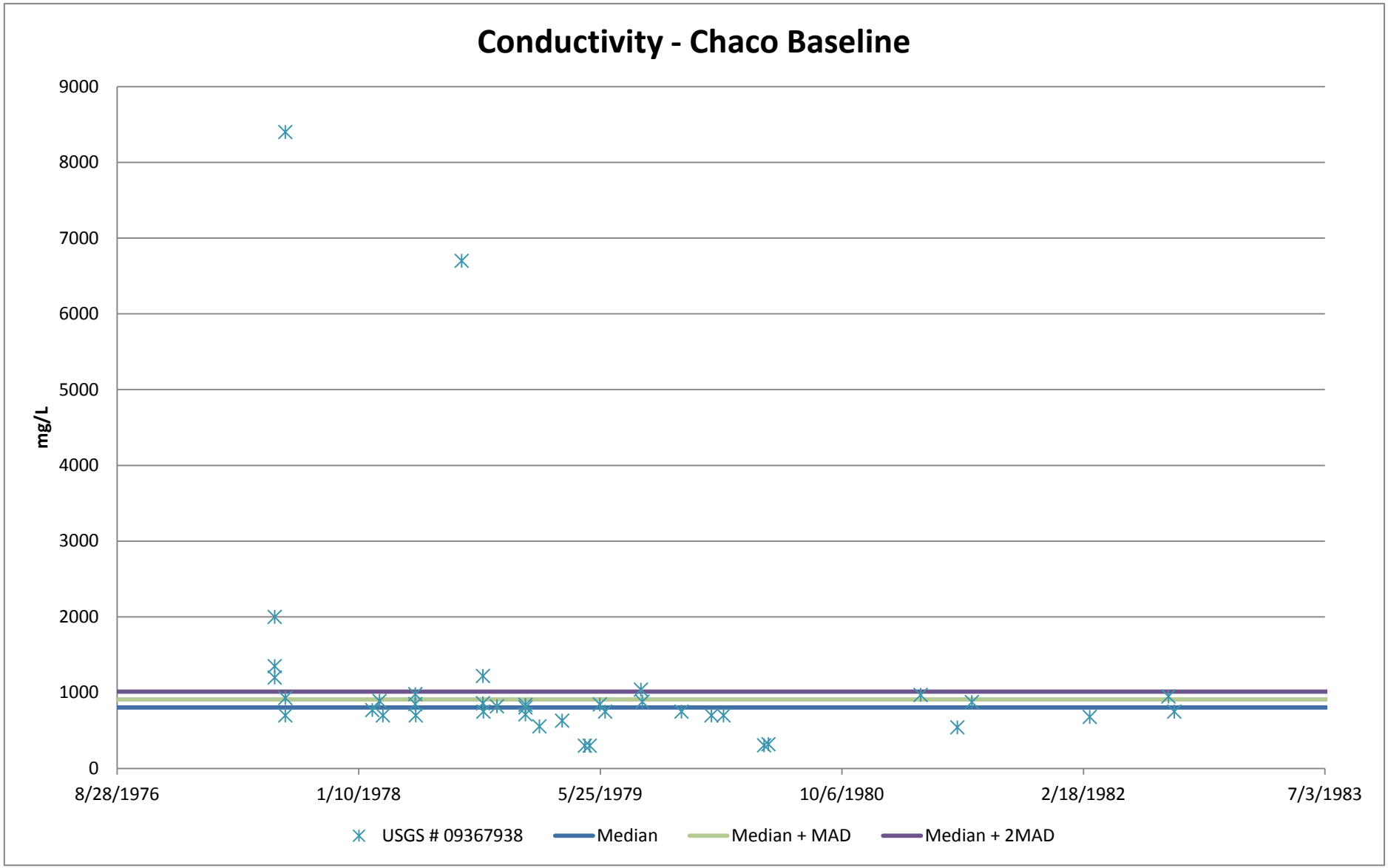

Radium - Chaco Baseline
100
10
1
0.1
mg/L
8/28/1976
1/10/1978
5/25/1979
10/6/1980
2/18/1982
7/3/1983
USGS # 09367938
Median
Livestock Criteria
Median + MAD
Median + 2MAD

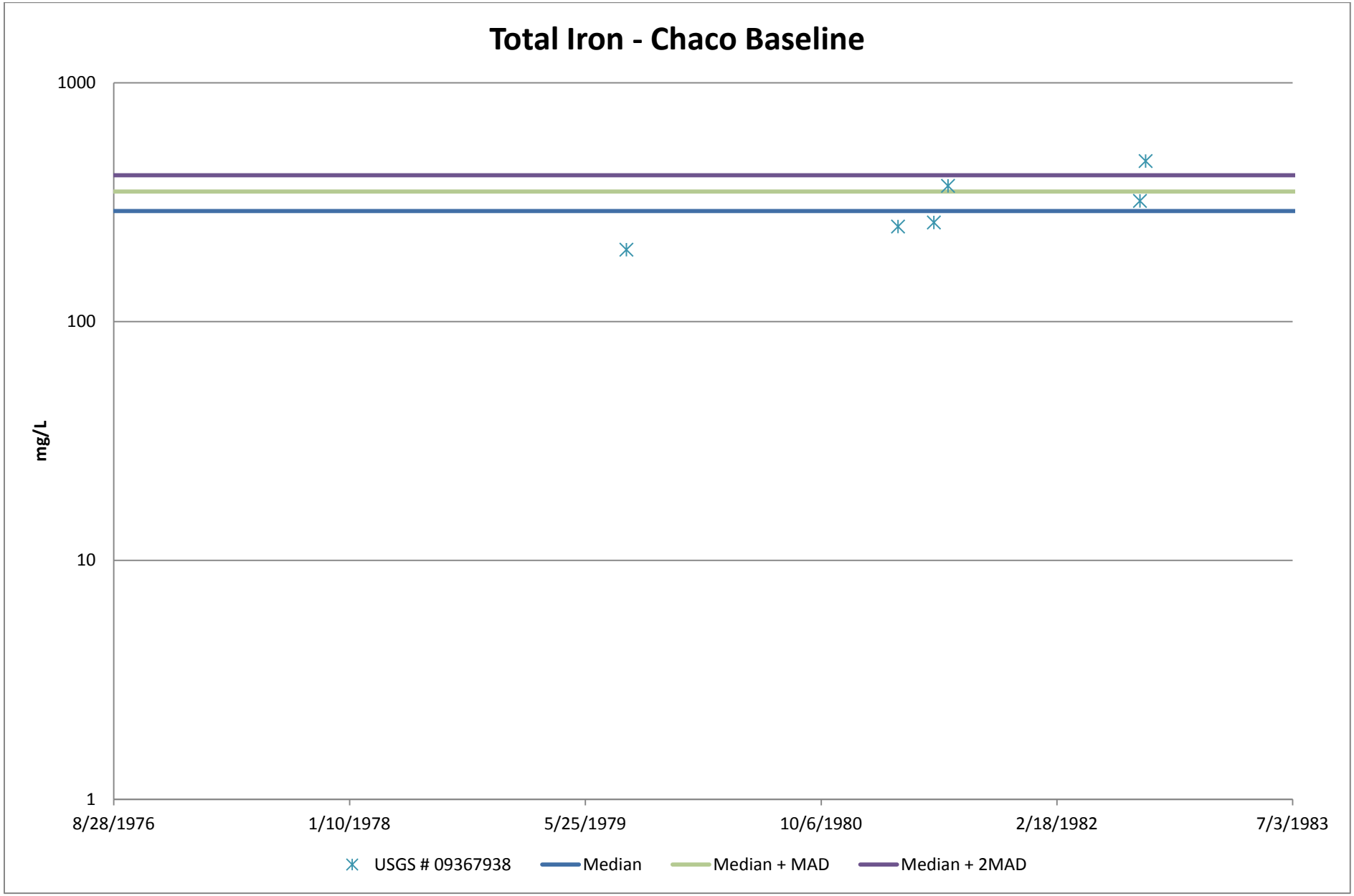

Selenium - Chaco Baseline
mg/L
10
1
0.1
0.01
0.001
8/28/1976
1/10/1978
5/25/1979
10/6/1980
2/18/1982
7/3/1983
USGS # 09367938
Median
Median + MAD
Median + 2MAD
Livestock Criteria
Aquatic & Wildlife Acute Criteria
Aquatic & Wildlife Chronic Criteria
Secondary Human Contact Criteria
Fish Consumption Criteria

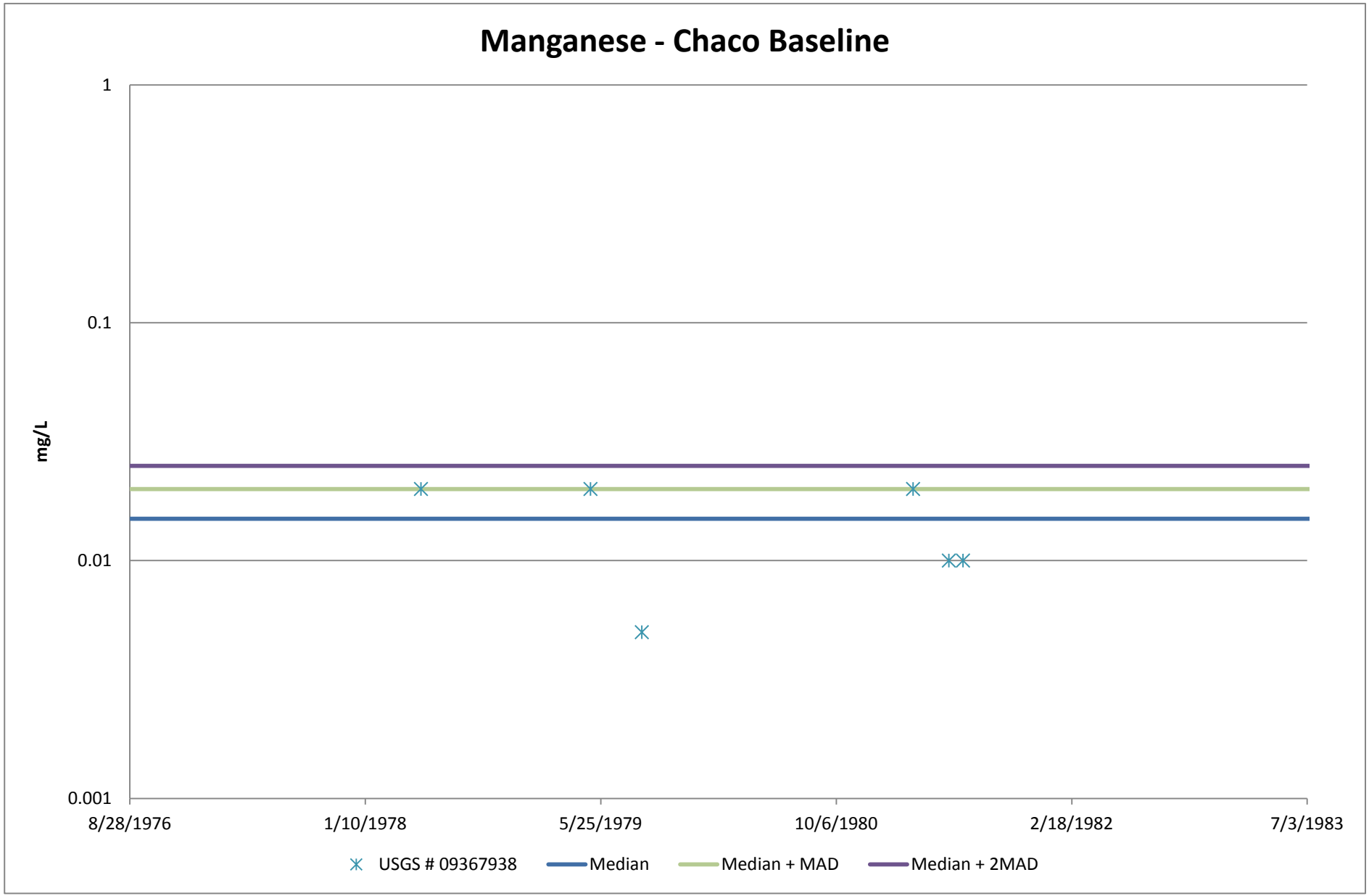

Sulfate - Chaco Baseline
1200
1000
800
600
400
200
0
mg/L
8/28/1976
1/10/1978
5/25/1979
10/6/1980
2/18/1982
7/3/1983
USGS # 09367938
Median
Livestock Criteria
Median + MAD
Median + 2MAD

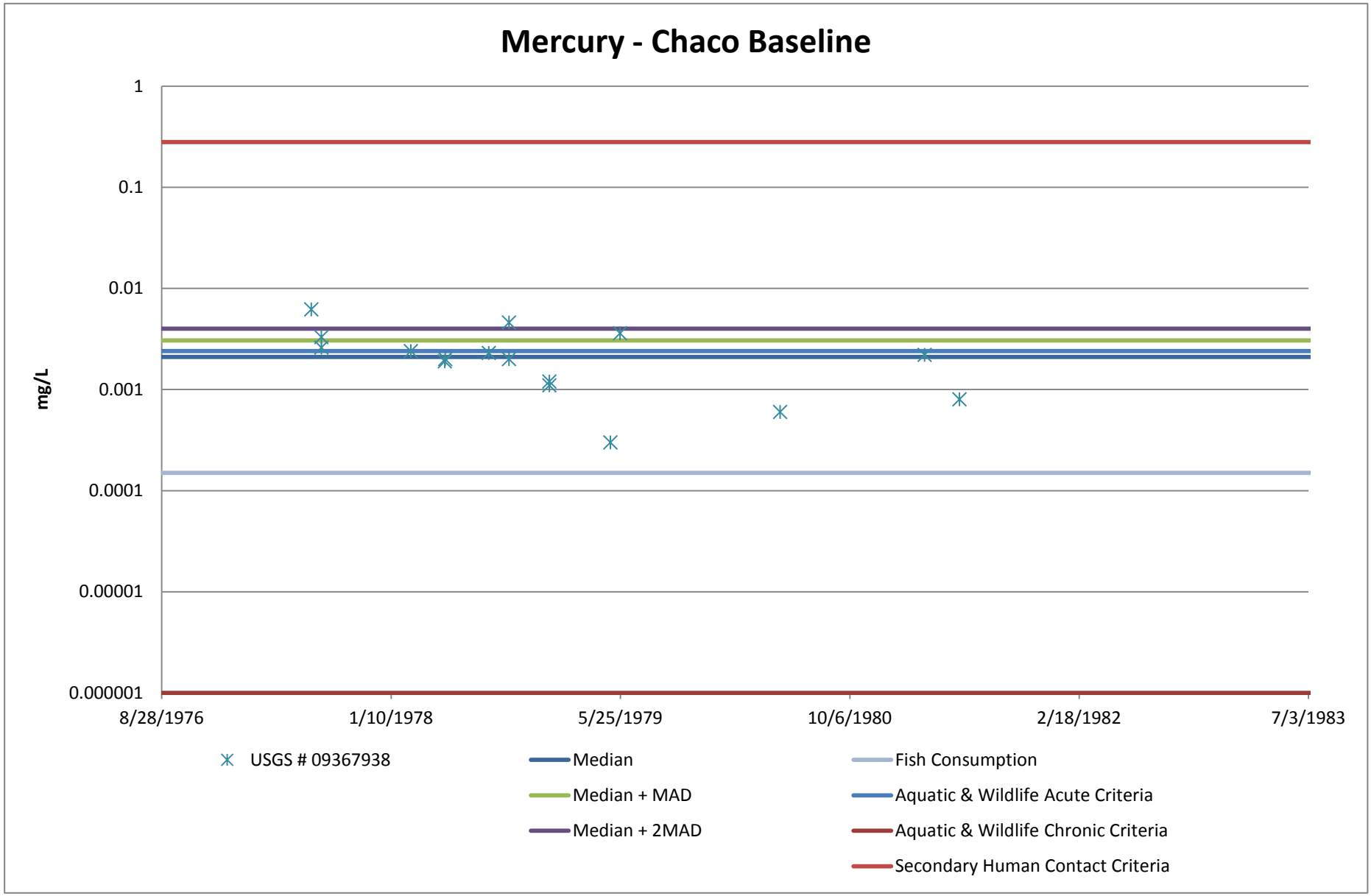

TDS - Chaco Baseline
mg/L
3500
3000
2500
2000
1500
1000
500
0
8/28/1976
1/10/1978
5/25/1979
10/6/1980
2/18/1982
7/3/1983
USGS # 09367938
Median
Livestock Criteria
Median + MAD
Median + 2MAD

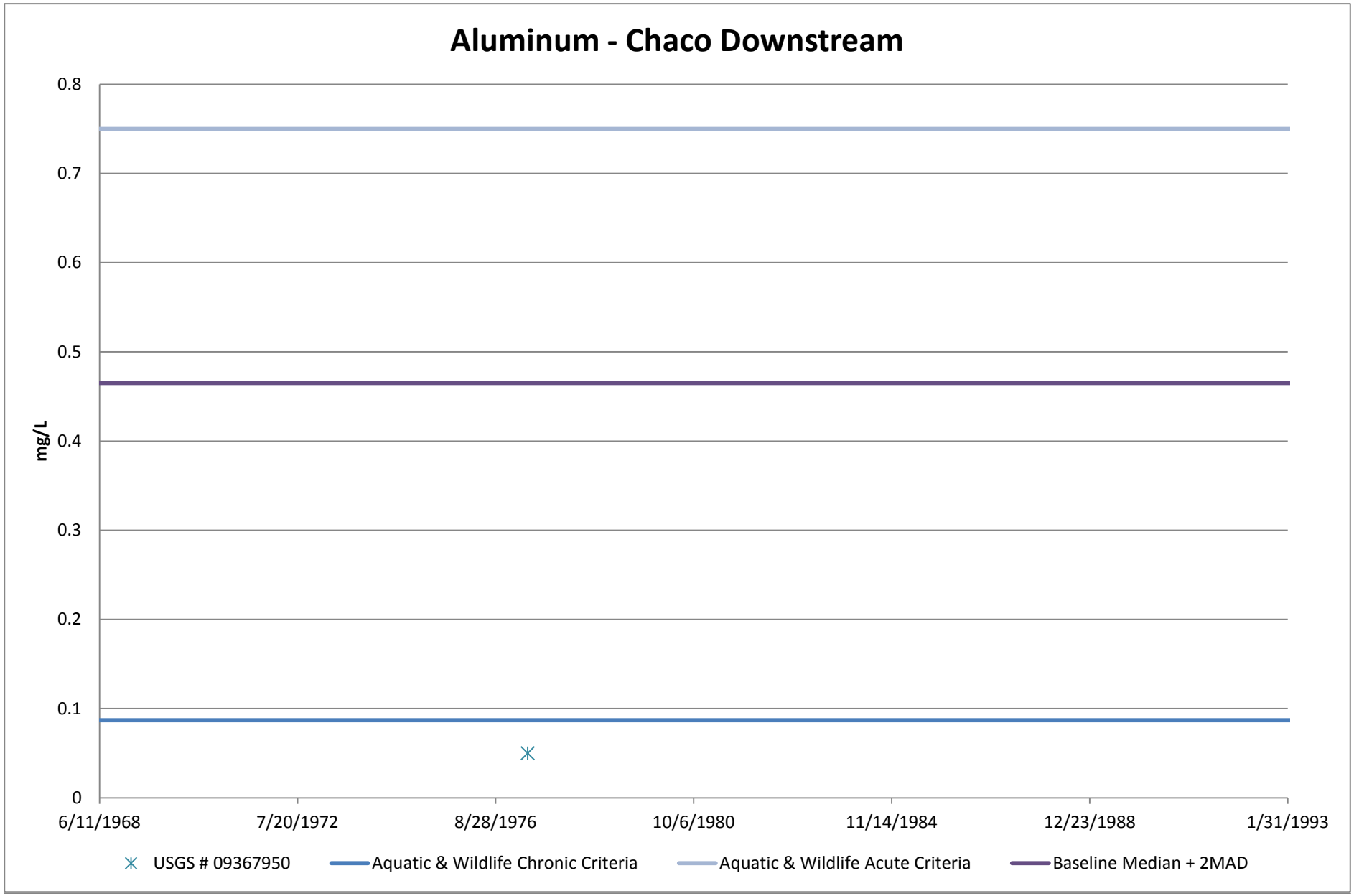

Zinc - Chaco Baseline
1000
100
10
1
0.1
0.01
mg/L
8/28/1976
1/10/1978
5/25/1979
10/6/1980
2/18/1982
7/3/1983
USGS # 09367938
Median
Median + MAD
Median + 2MAD
Livestock Criteria
Aquatic and Wildlife Acute Criteria
Aquatic and Wildlife Chronic Criteria
Secondary Human Contact Criteria
Fish Consumption Criteria

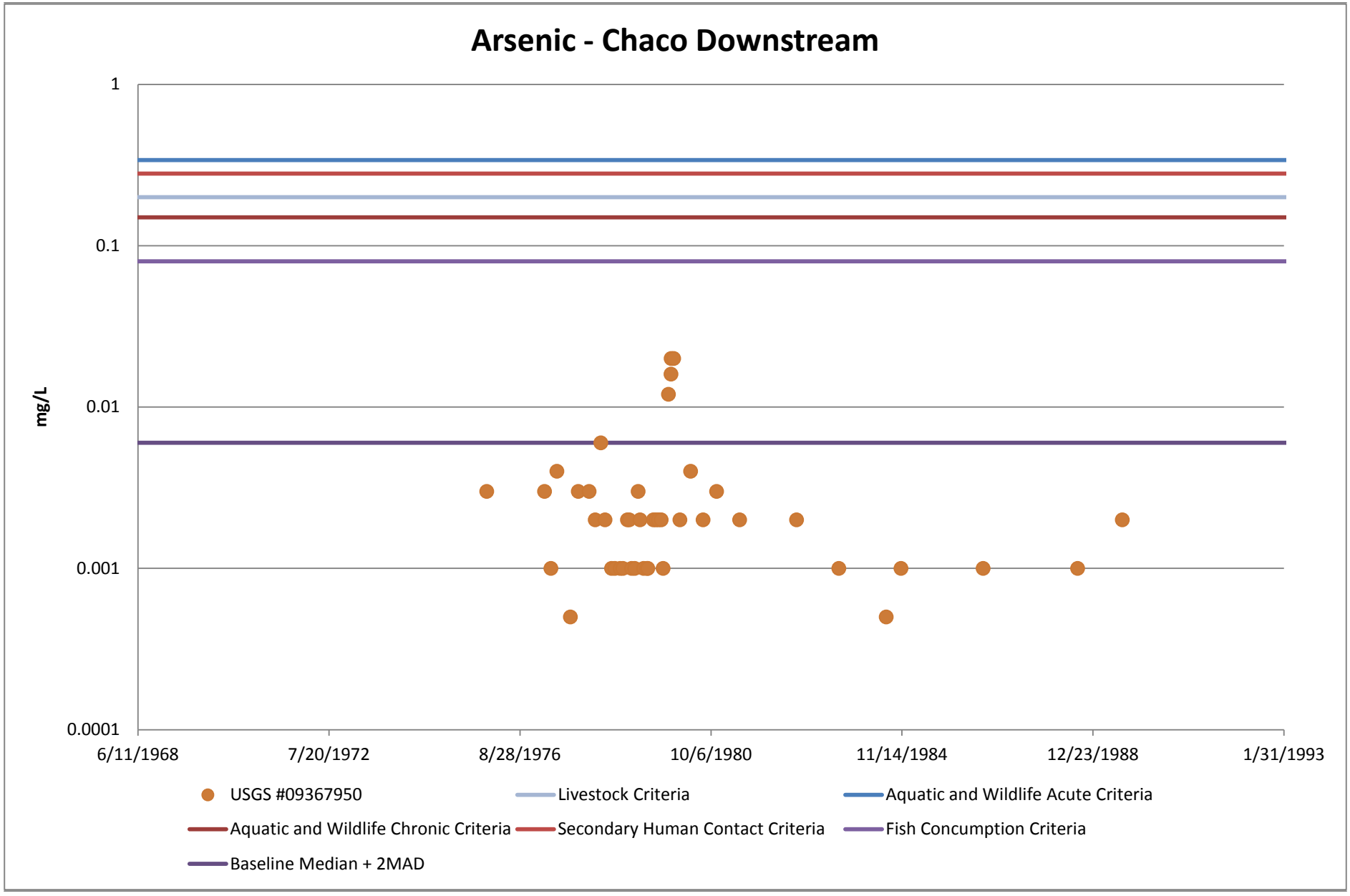

Conductivity - Chaco Baseline
mg/L
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
8/28/1976
1/10/1978
5/25/1979
10/6/1980
2/18/1982
7/3/1983
USGS # 09367938
Median
Median + MAD
Median + 2MAD

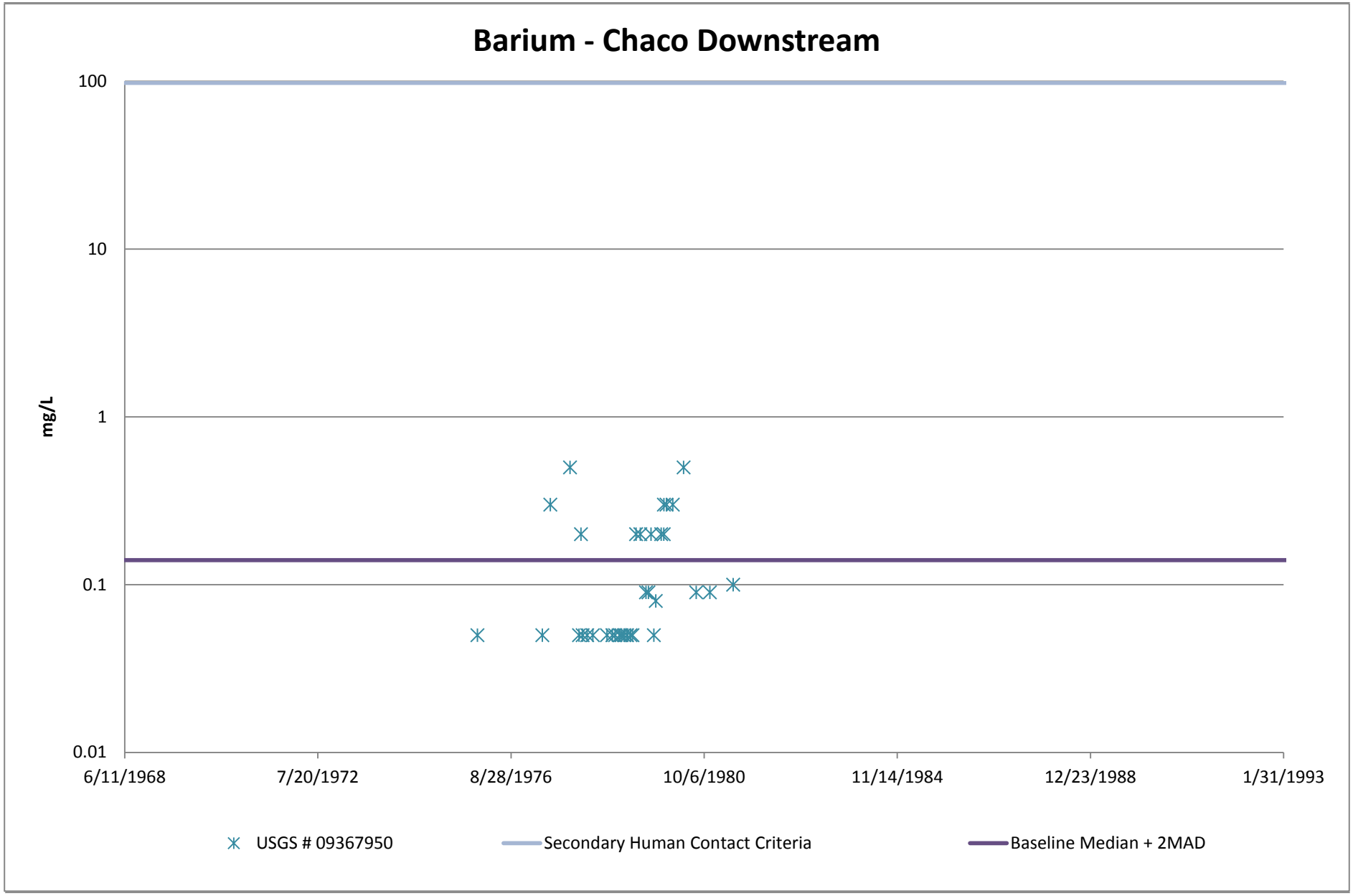

Total Iron - Chaco Baseline
1000
100
10
1
mg/L
8/28/1976
1/10/1978
5/25/1979
10/6/1980
2/18/1982
7/3/1983
USGS # 09367938
Median
Median + MAD
Median + 2MAD

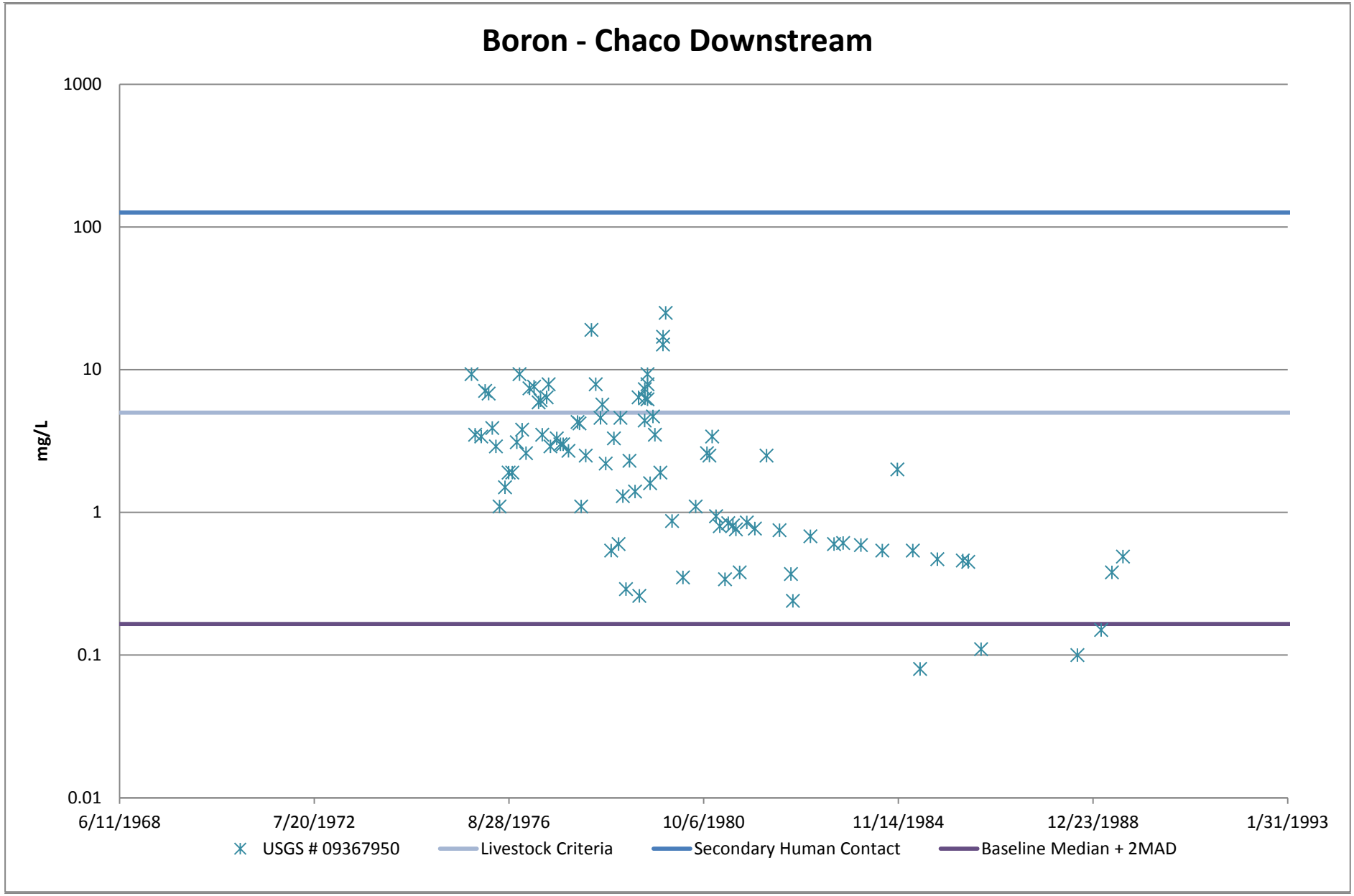

Manganese - Chaco Baseline
1
0.1
0.01
0.001
mg/L
8/28/1976
1/10/1978
5/25/1979
10/6/1980
2/18/1982
7/3/1983
USGS # 09367938
Median
Median + MAD
Median + 2MAD

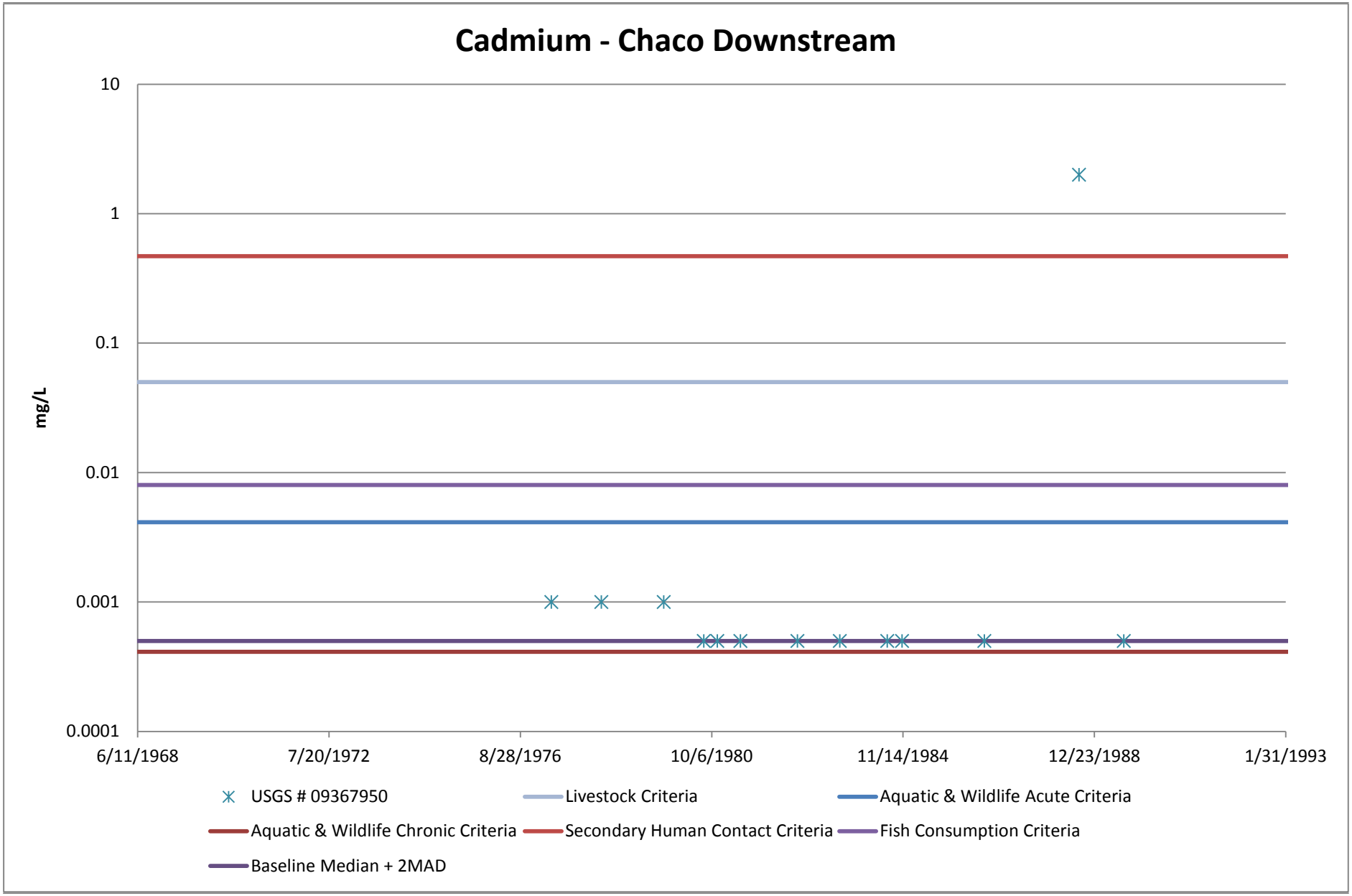

Mercury - Chaco Baseline
mg/L
1
0.1
0.01
0.001
0.0001
0.00001
0.000001
8/28/1976
1/10/1978
5/25/1979
10/6/1980
2/18/1982
7/3/1983
USGS # 09367938
Median
Median + MAD
Median + 2MAD
Fish Consumption
Aquatic & Wildlife Acute Criteria
Aquatic & Wildlife Chronic Criteria
Secondary Human Contact Criteria

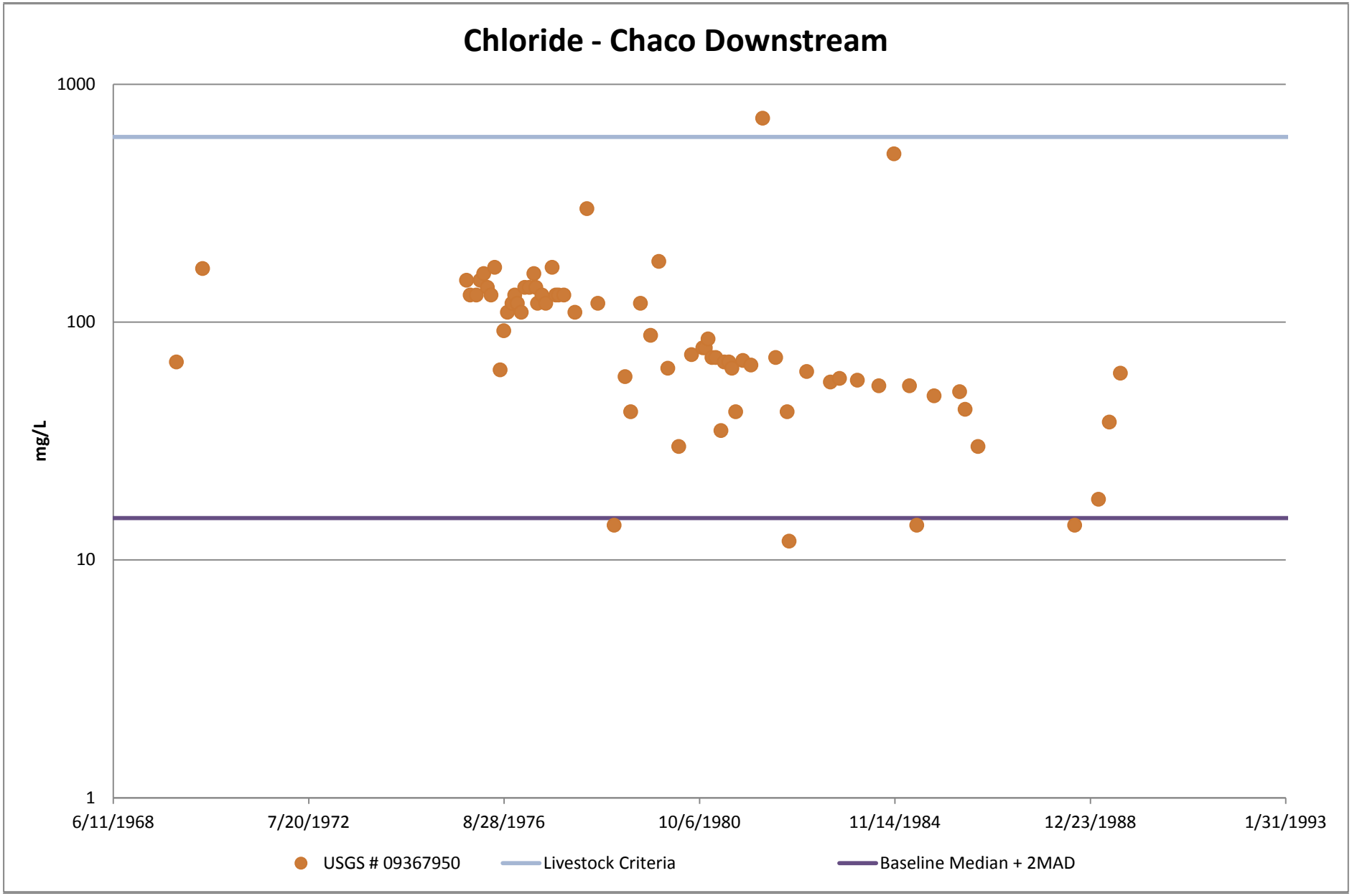

Aluminum - Chaco Downstream
mg/L
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
6/11/1968
7/20/1972
8/28/1976
10/6/1980
11/14/1984
12/23/1988
1/31/1993
USGS # 09367950
Aquatic & Wildlife Chronic Criteria
Aquatic & Wildlife Acute Criteria
Baseline Median + 2MAD

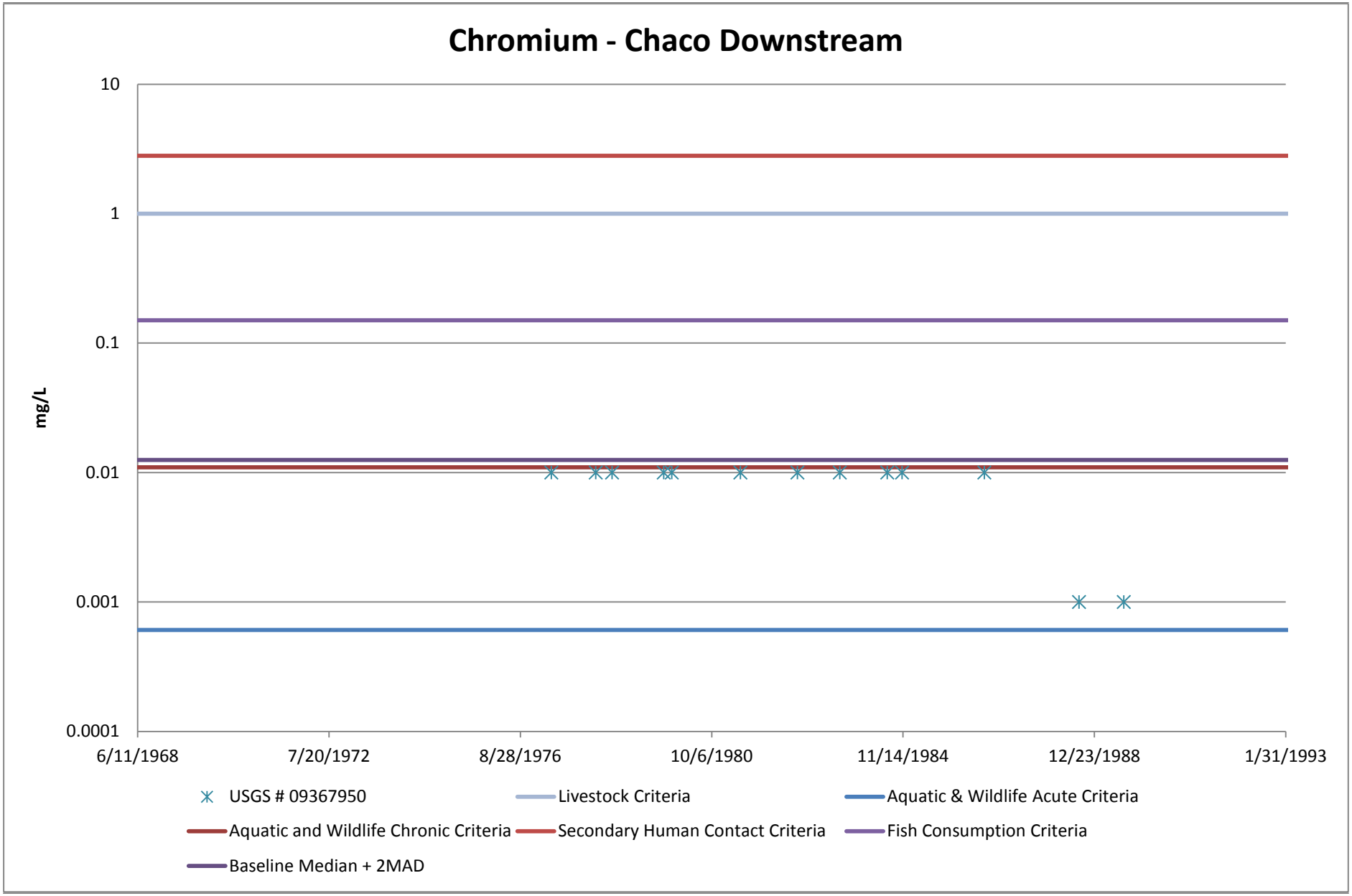

Arsenic - Chaco Downstream
mg/L
1
0.1
0.01
0.001
0.0001
6/11/1968
7/20/1972
8/28/1976
10/6/1980
11/14/1984
12/23/1988
1/31/1993
USGS #09367950
Livestock Criteria
Aquatic and Wildlife Acute Criteria
Aquatic and Wildlife Chronic Criteria
Secondary Human Contact Criteria
Fish Concumption Criteria
Baseline Median + 2MAD

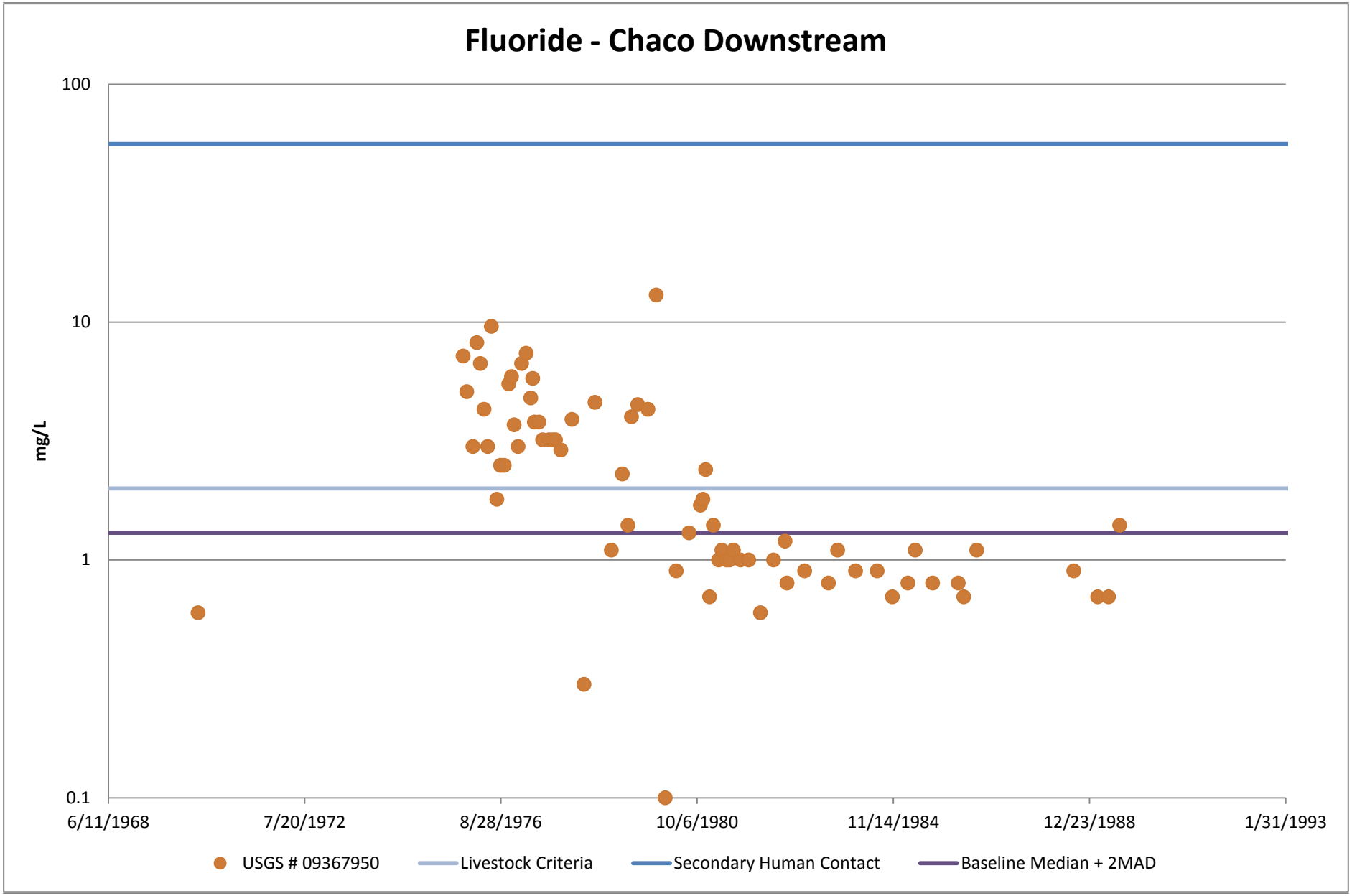

Barium - Chaco Downstream
mg/L
100
10
1
0.1
0.01
6/11/1968
7/20/1972
8/28/1976
10/6/1980
11/14/1984
12/23/1988
1/31/1993
USGS # 09367950
Secondary Human Contact Criteria
Baseline Median + 2MAD

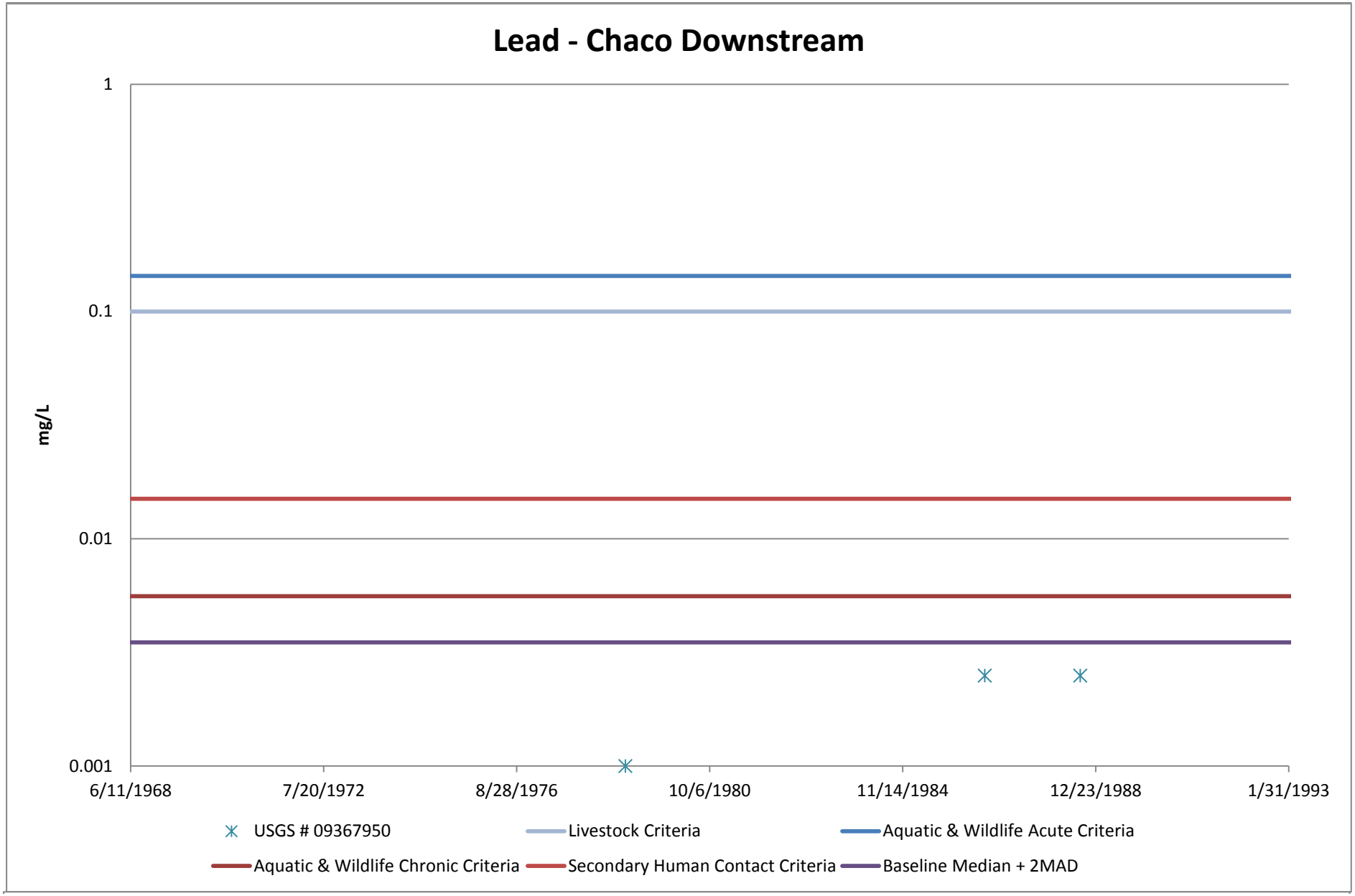

Boron - Chaco Downstream
1000
100
10
1
0.1
0.01
mg/L
6/11/1968
7/20/1972
8/28/1976
10/6/1980
11/14/1984
12/23/1988
1/31/1993
USGS # 09367950
Livestock Criteria
Secondary Human Contact
Baseline Median + 2MAD

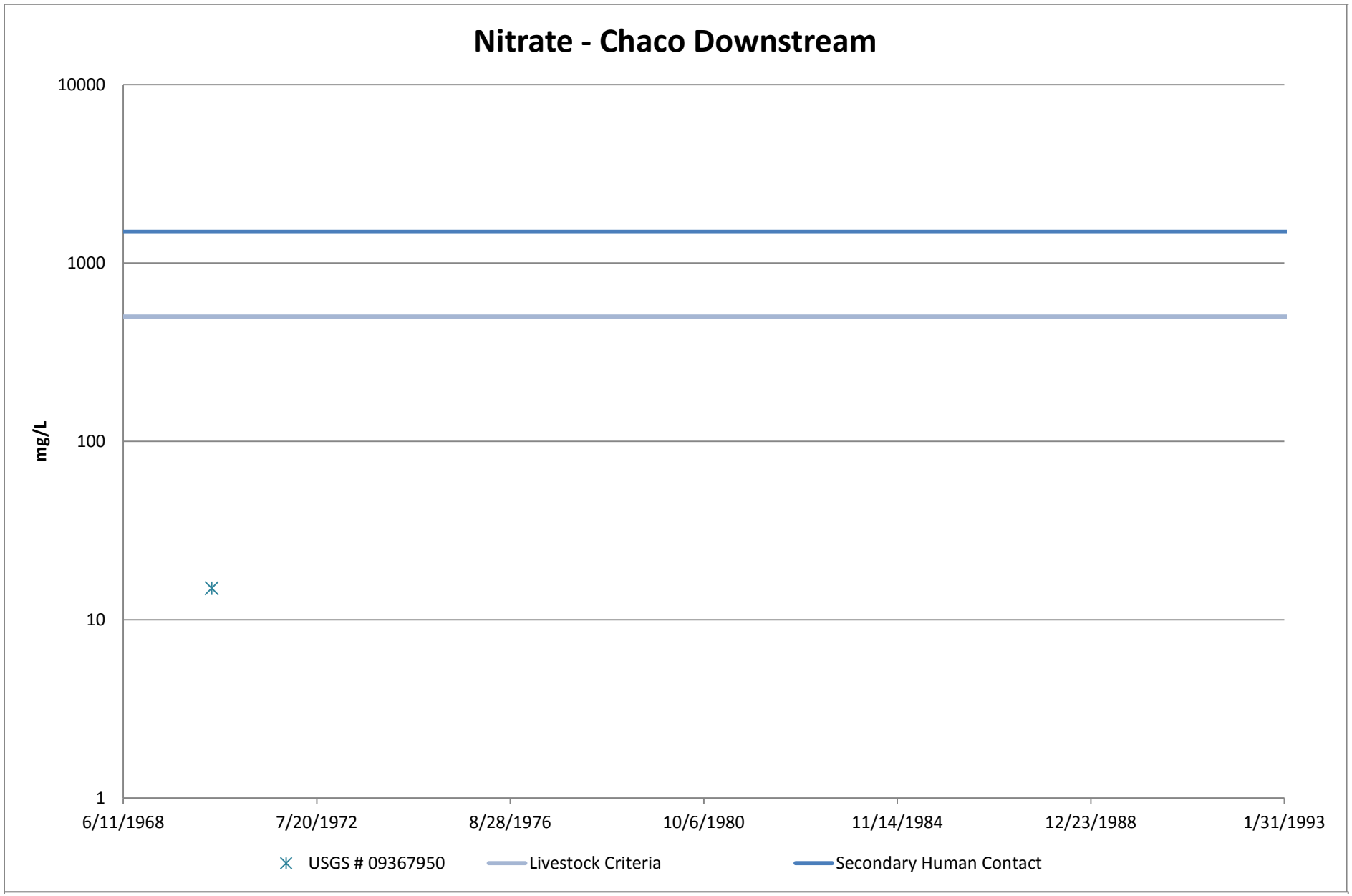

Cadmium - Chaco Downstream
mg/L
10
1
0.1
0.01
0.001
0.0001
6/11/1968
7/20/1972
8/28/1976
10/6/1980
11/14/1984
12/23/1988
1/31/1993
USGS # 09367950
Livestock Criteria
Aquatic & Wildlife Acute Criteria
Aquatic & Wildlife Chronic Criteria
Secondary Human Contact Criteria
Fish Consumption Criteria
Baseline Median + 2MAD

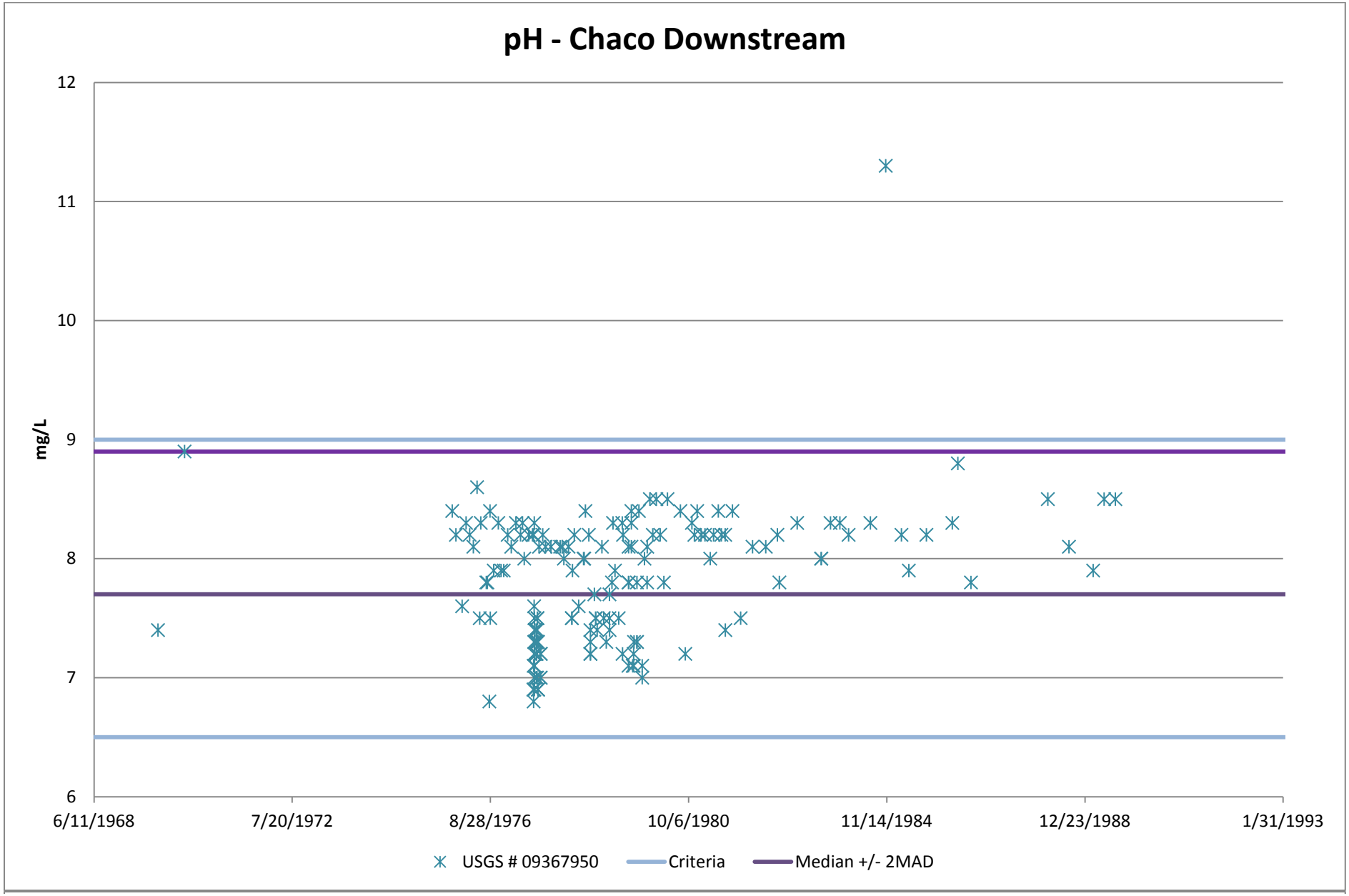

Chloride - Chaco Downstream
1000
100
10
1
mg/L
6/11/1968
7/20/1972
8/28/1976
10/6/1980
11/14/1984
12/23/1988
1/31/1993
USGS # 09367950
Livestock Criteria
Baseline Median + 2MAD

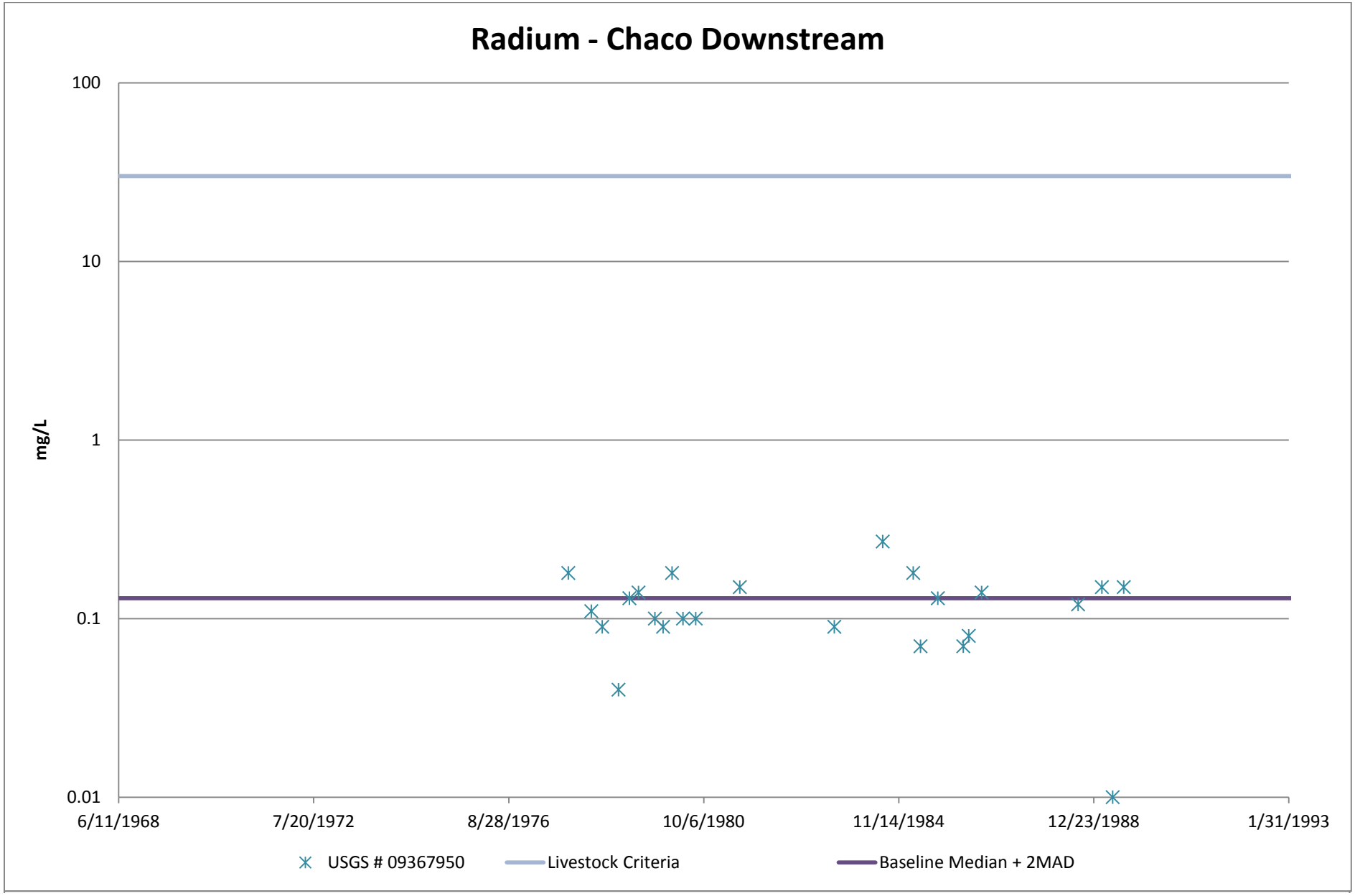

Chromium - Chaco Downstream
mg/L
10
1
0.1
0.01
0.001
0.0001
6/11/1968
7/20/1972
8/28/1976
10/6/1980
11/14/1984
12/23/1988
1/31/1993
USGS # 09367950
Livestock Criteria
Aquatic & Wildlife Acute Criteria
Aquatic and Wildlife Chronic Criteria
Secondary Human Contact Criteria
Fish Consumption Criteria
Baseline Median + 2MAD

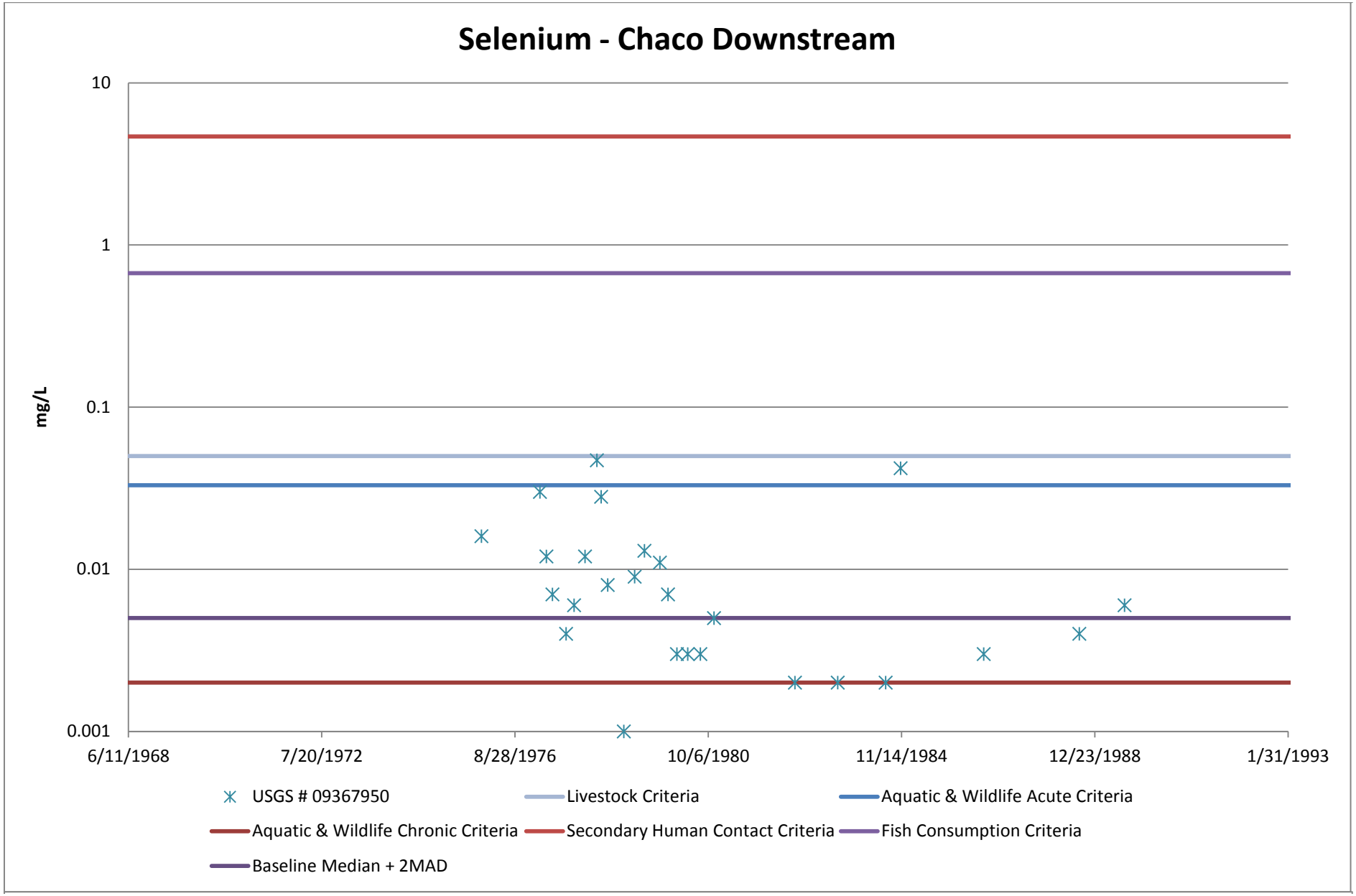

Fluoride - Chaco Downstream
100
10
1
0.1
mg/L
6/11/1968
7/20/1972
8/28/1976
10/6/1980
11/14/1984
12/23/1988
1/31/1993
USGS # 09367950
Livestock Criteria
Secondary Human Contact
Baseline Median + 2MAD

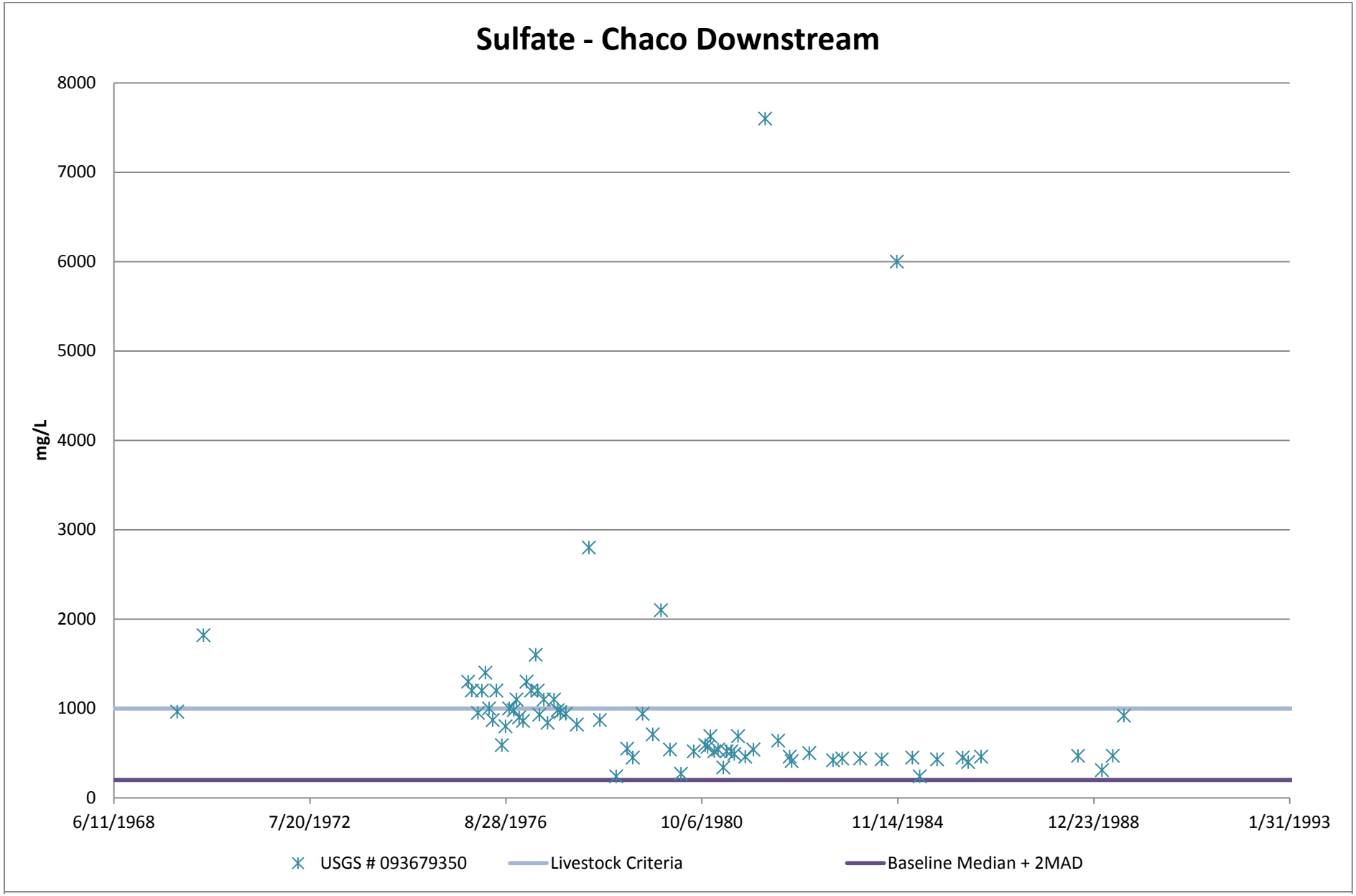

Lead - Chaco Downstream
1
0.1
0.01
0.001
mg/L
6/11/1968
7/20/1972
8/28/1976
10/6/1980
11/14/1984
12/23/1988
1/31/1993
USGS # 09367950
Livestock Criteria
Aquatic & Wildlife Acute Criteria
Aquatic & Wildlife Chronic Criteria
Secondary Human Contact Criteria
Baseline Median + 2MAD

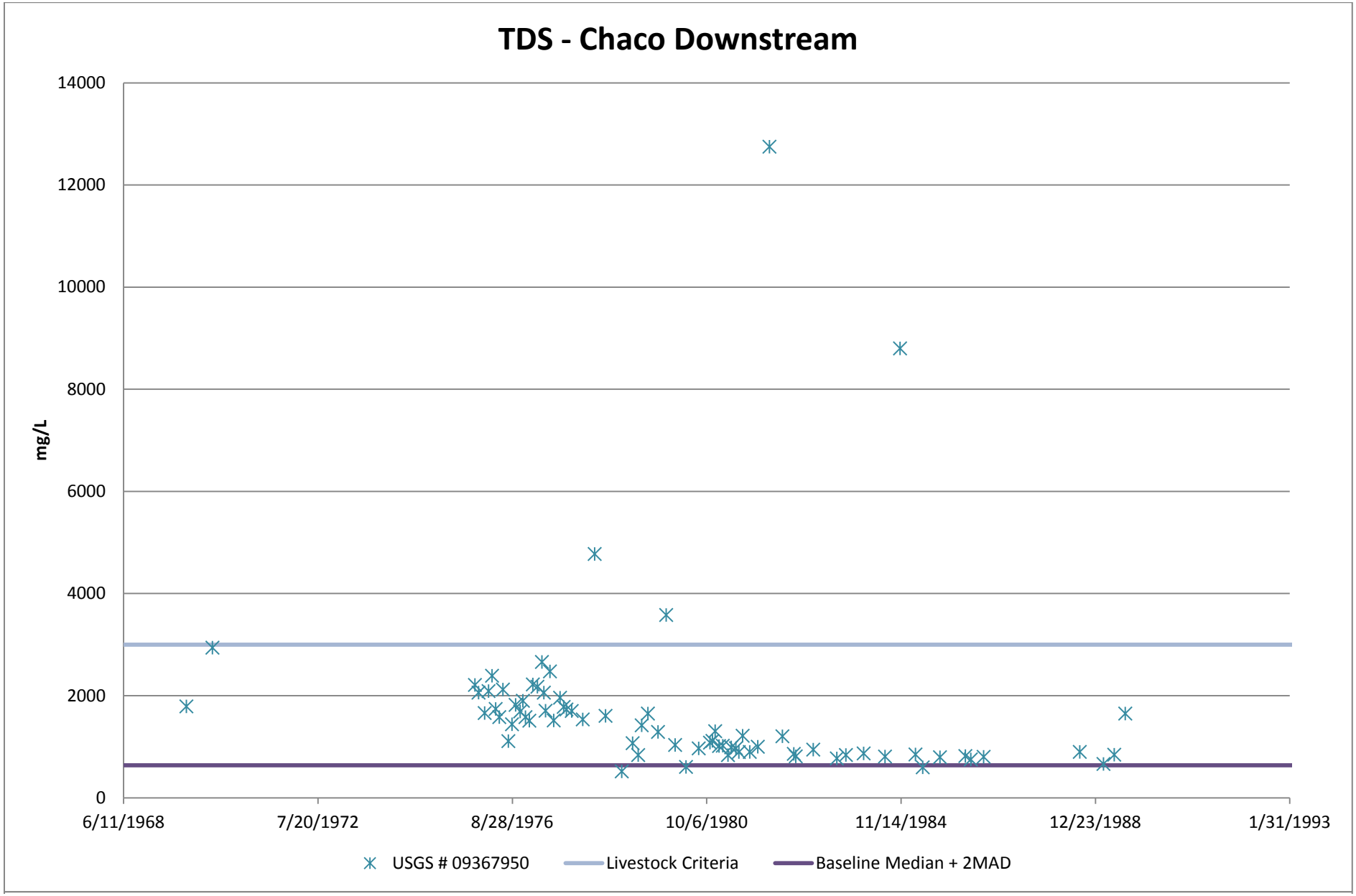

Nitrate - Chaco Downstream
10000
1000
100
10
1
mg/L
6/11/1968
7/20/1972
8/28/1976
10/6/1980
11/14/1984
12/23/1988
1/31/1993
USGS # 09367950
Livestock Criteria
Secondary Human Contact

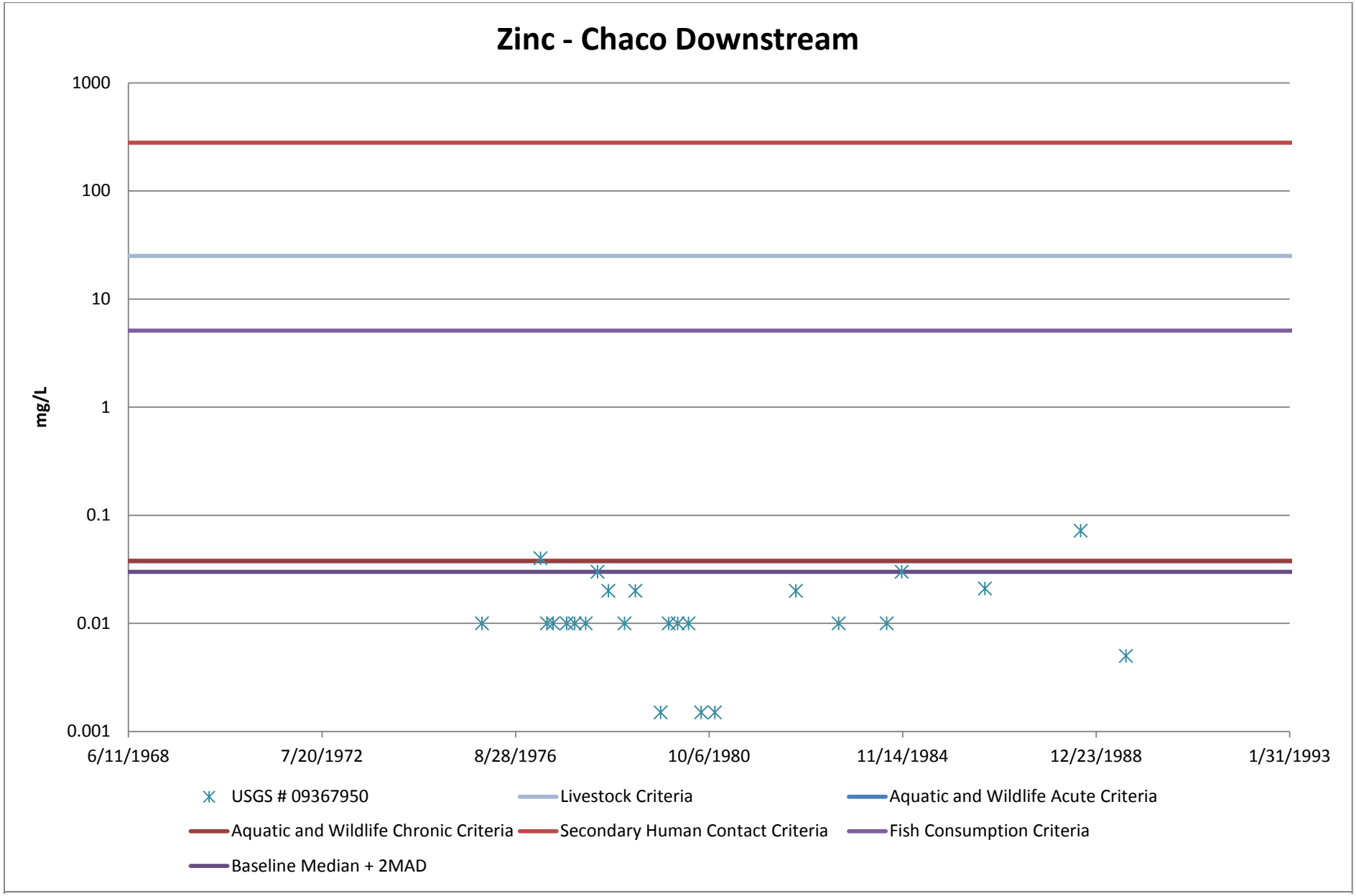

pH - Chaco Downstream
12
11
10
9
8
7
6
mg/L
6/11/1968
7/20/1972
8/28/1976
10/6/1980
11/14/1984
12/23/1988
1/31/1993
USGS # 09367950
Criteria
Median +/- 2MAD

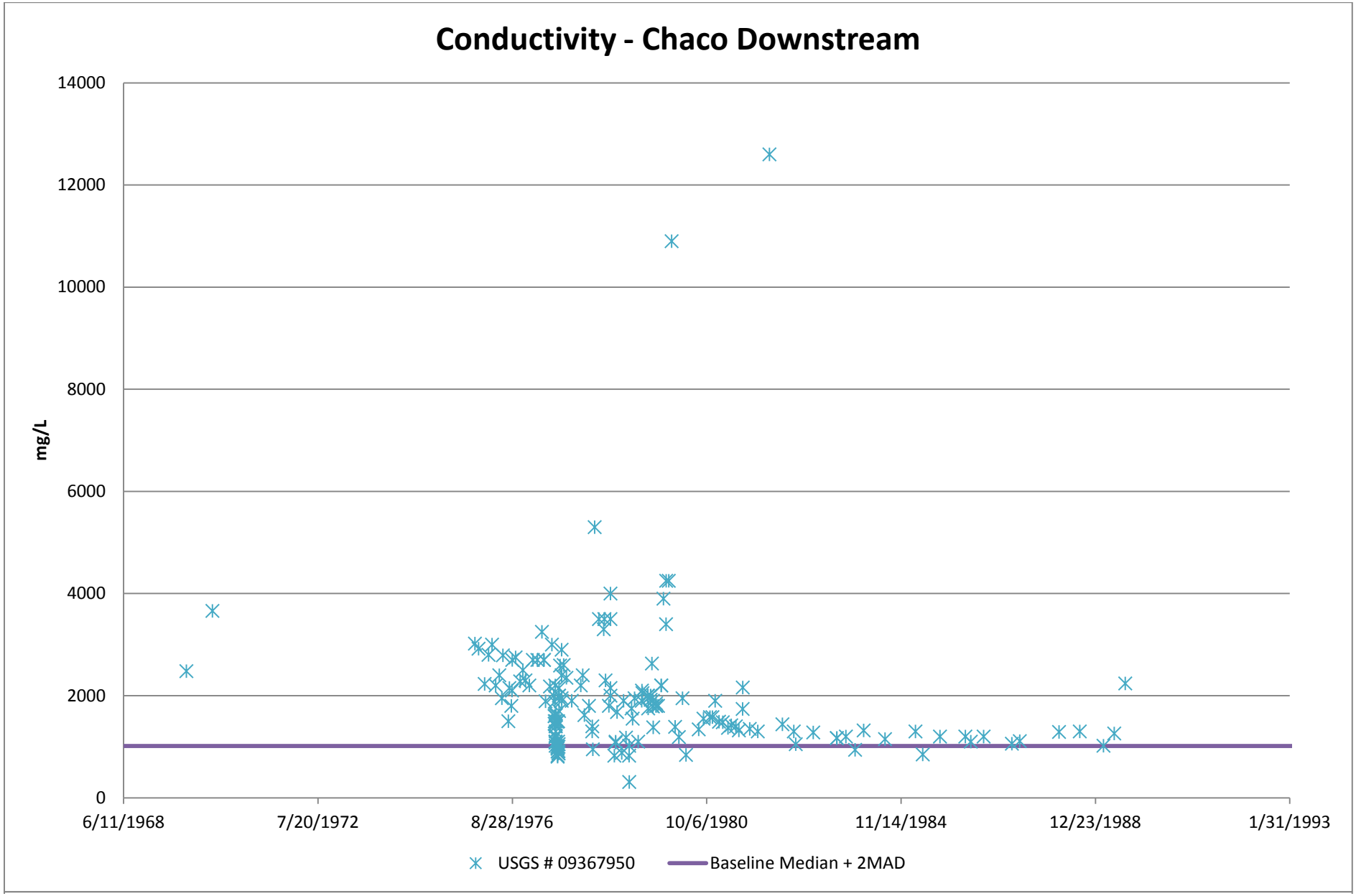

Radium - Chaco Downstream
100
10
1
0.1
0.01
mg/L
6/11/1968
7/20/1972
8/28/1976
10/6/1980
11/14/1984
12/23/1988
1/31/1993
USGS # 09367950
Livestock Criteria
Baseline Median + 2MAD

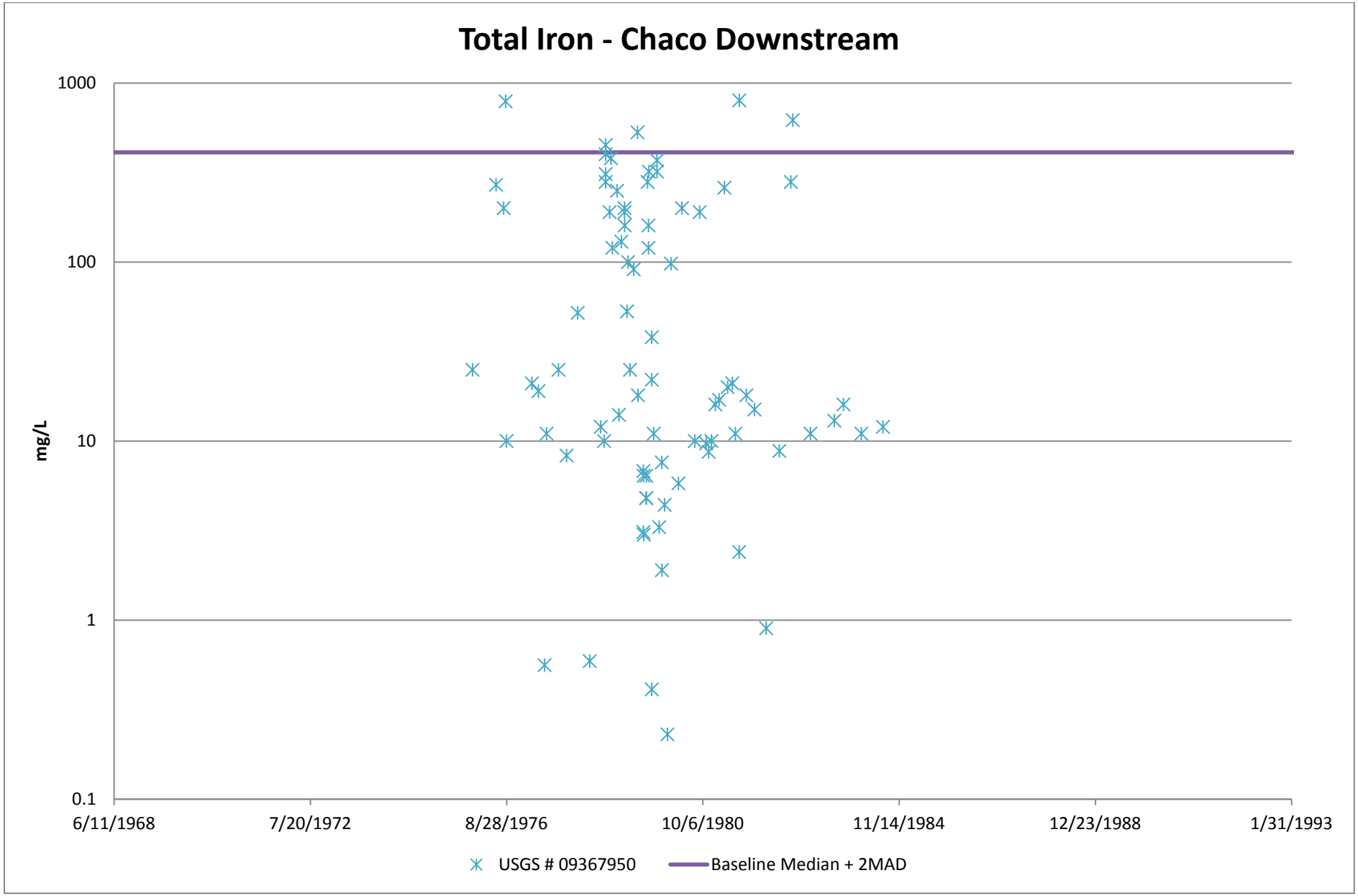

Selenium - Chaco Downstream
mg/L
10
1
0.1
0.01
0.001
6/11/1968
7/20/1972
8/28/1976
10/6/1980
11/14/1984
12/23/1988
1/31/1993
USGS # 09367950
Livestock Criteria
Aquatic & Wildlife Acute Criteria
Aquatic & Wildlife Chronic Criteria
Secondary Human Contact Criteria
Fish Consumption Criteria
Baseline Median + 2MAD

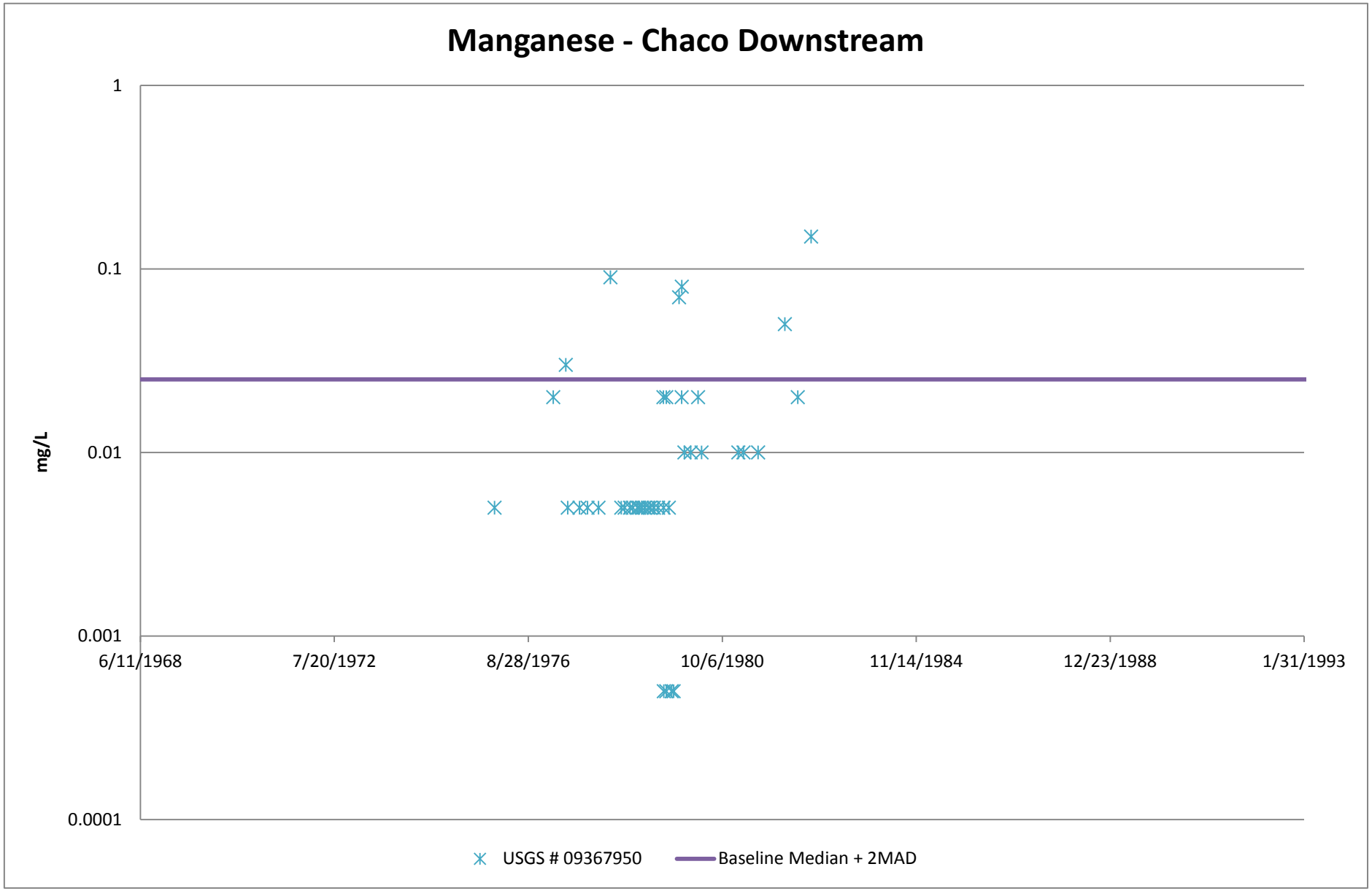

Sulfate - Chaco Downstream
mg/L
8000
7000
6000
5000
4000
3000
2000
1000
0
6/11/1968
7/20/1972
8/28/1976
10/6/1980
11/14/1984
12/23/1988
1/31/1993
USGS # 093679350
Livestock Criteria
Baseline Median + 2MAD

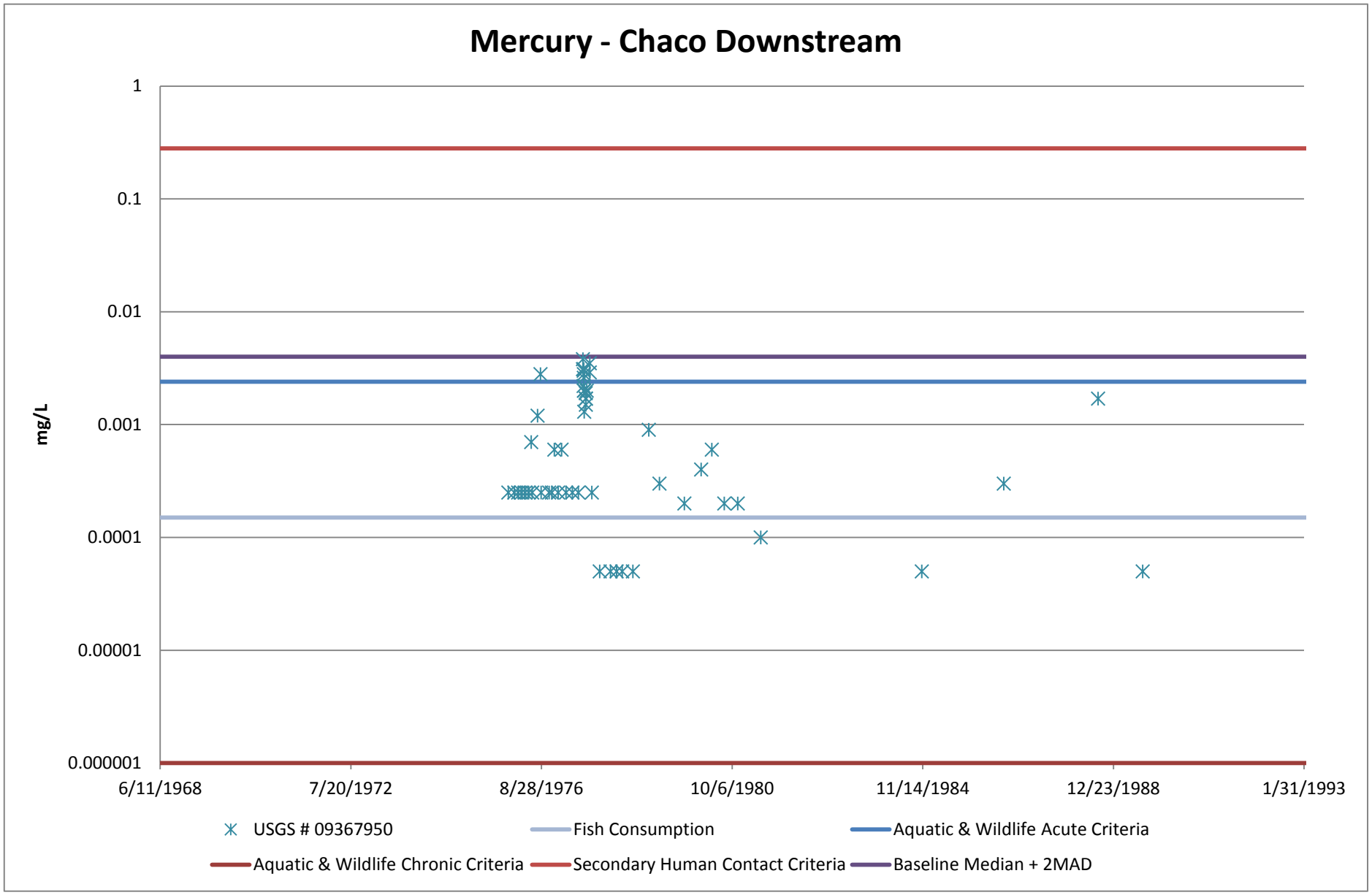

TDS - Chaco Downstream
14000
12000
10000
8000
6000
4000
2000
0
mg/L
6/11/1968
7/20/1972
8/28/1976
10/6/1980
11/14/1984
12/23/1988
1/31/1993
USGS # 09367950
Livestock Criteria
Baseline Median + 2MAD

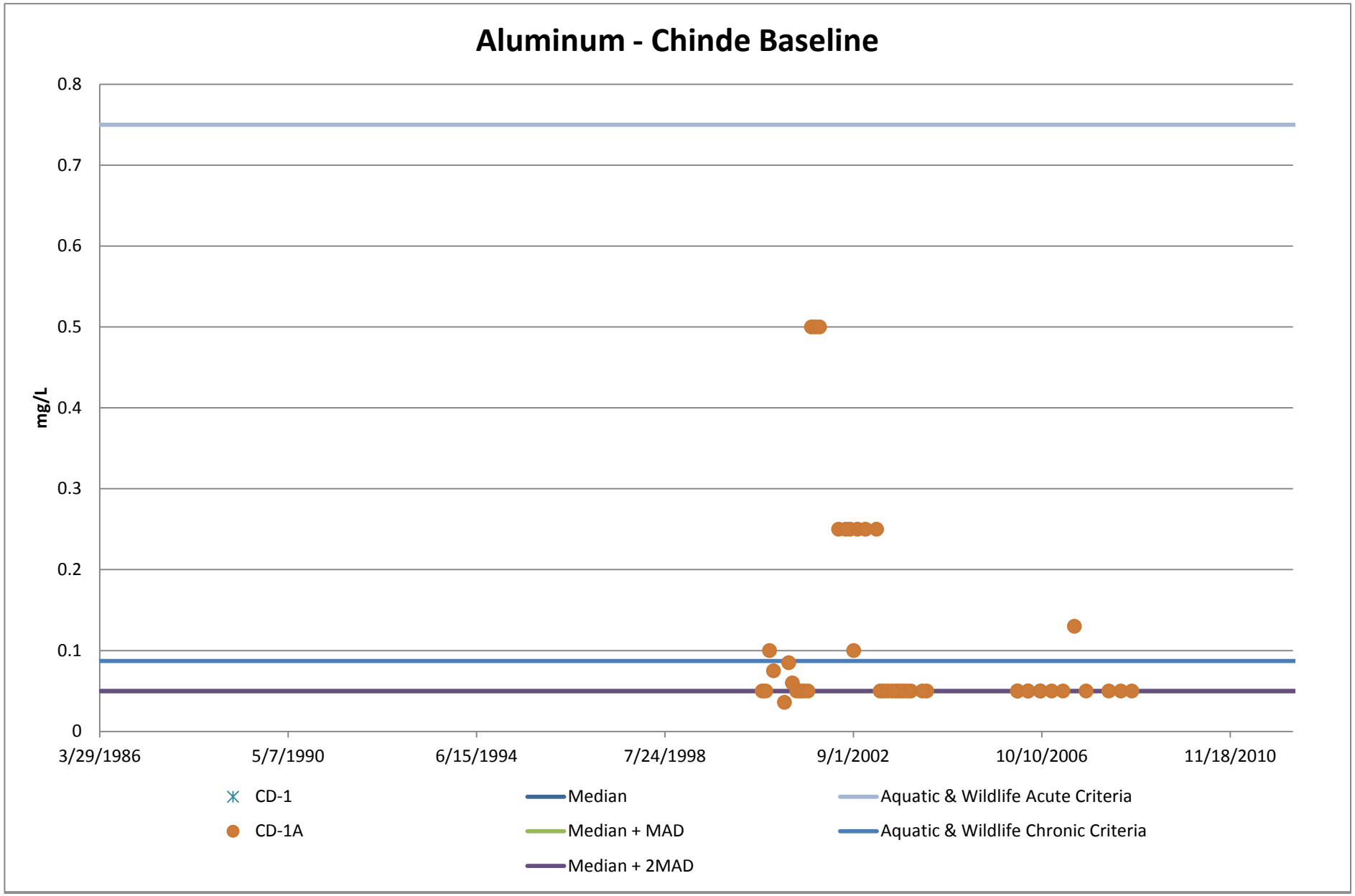

Zinc - Chaco Downstream
1000
100
10
1
0.1
0.01
0.001
mg/L
6/11/1968
7/20/1972
8/28/1976
10/6/1980
11/14/1984
12/23/1988
1/31/1993
USGS # 09367950
Livestock Criteria
Aquatic and Wildlife Acute Criteria
Aquatic and Wildlife Chronic Criteria
Secondary Human Contact Criteria
Fish Consumption Criteria
Baseline Median + 2MAD

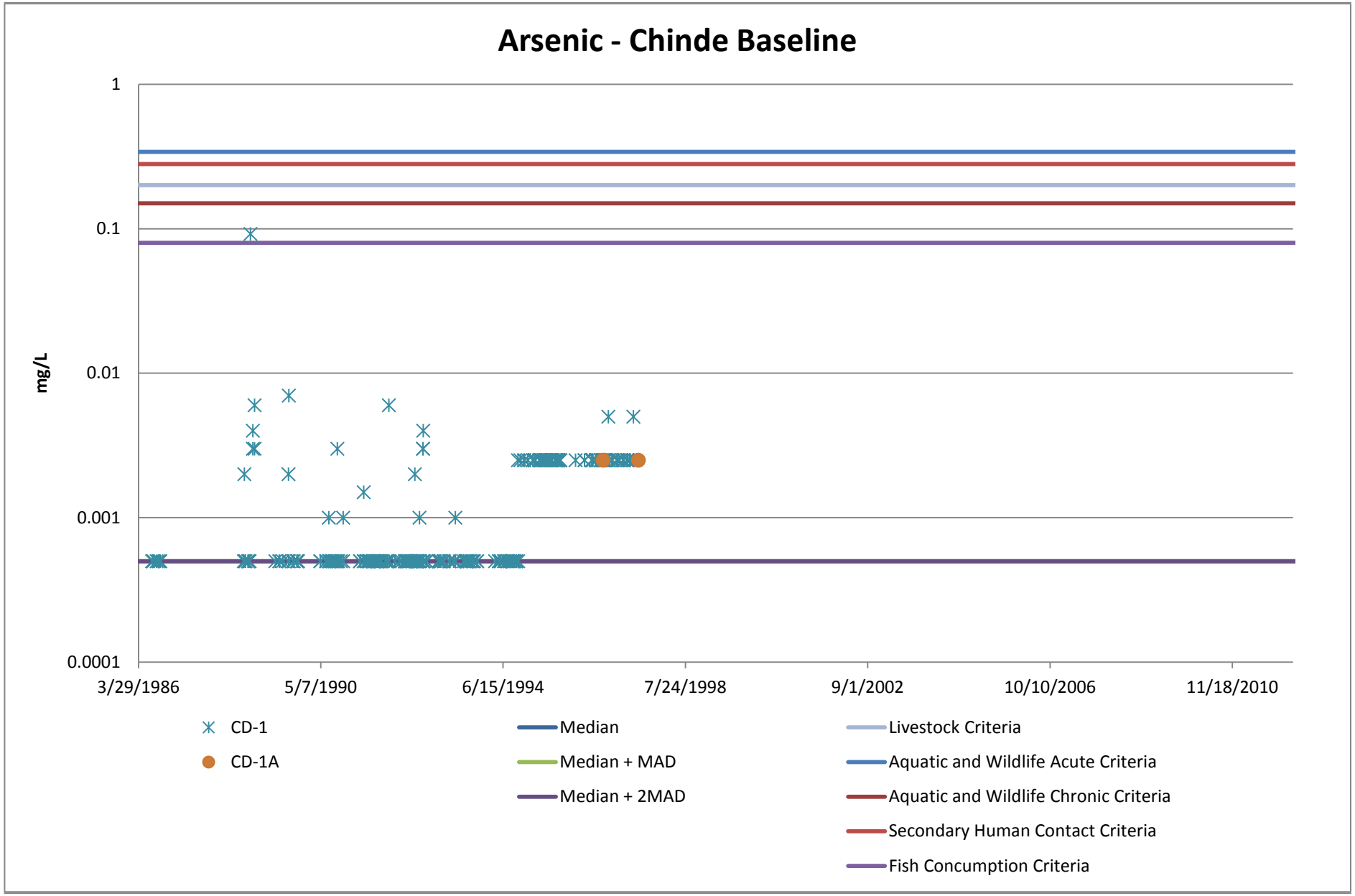

Conductivity - Chaco Downstream
14000
12000
10000
8000
6000
4000
2000
0
mg/L
6/11/1968
7/20/1972
8/28/1976
10/6/1980
11/14/1984
12/23/1988
1/31/1993
USGS # 09367950
Baseline Median + 2MAD

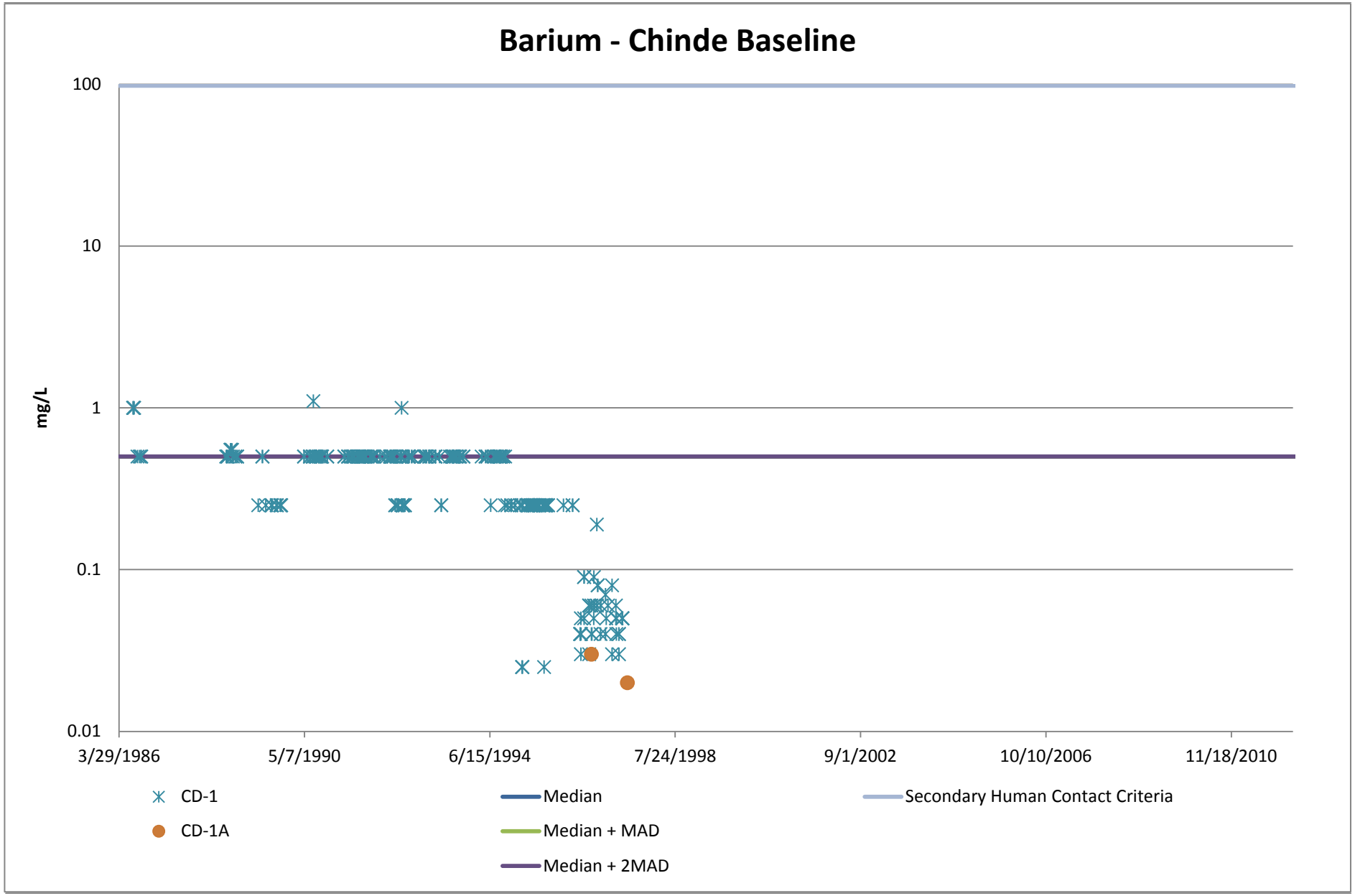

Total Iron - Chaco Downstream
1000
100
10
1
0.1
mg/L
6/11/1968
7/20/1972
8/28/1976
10/6/1980
11/14/1984
12/23/1988
1/31/1993
USGS # 09367950
Baseline Median + 2MAD

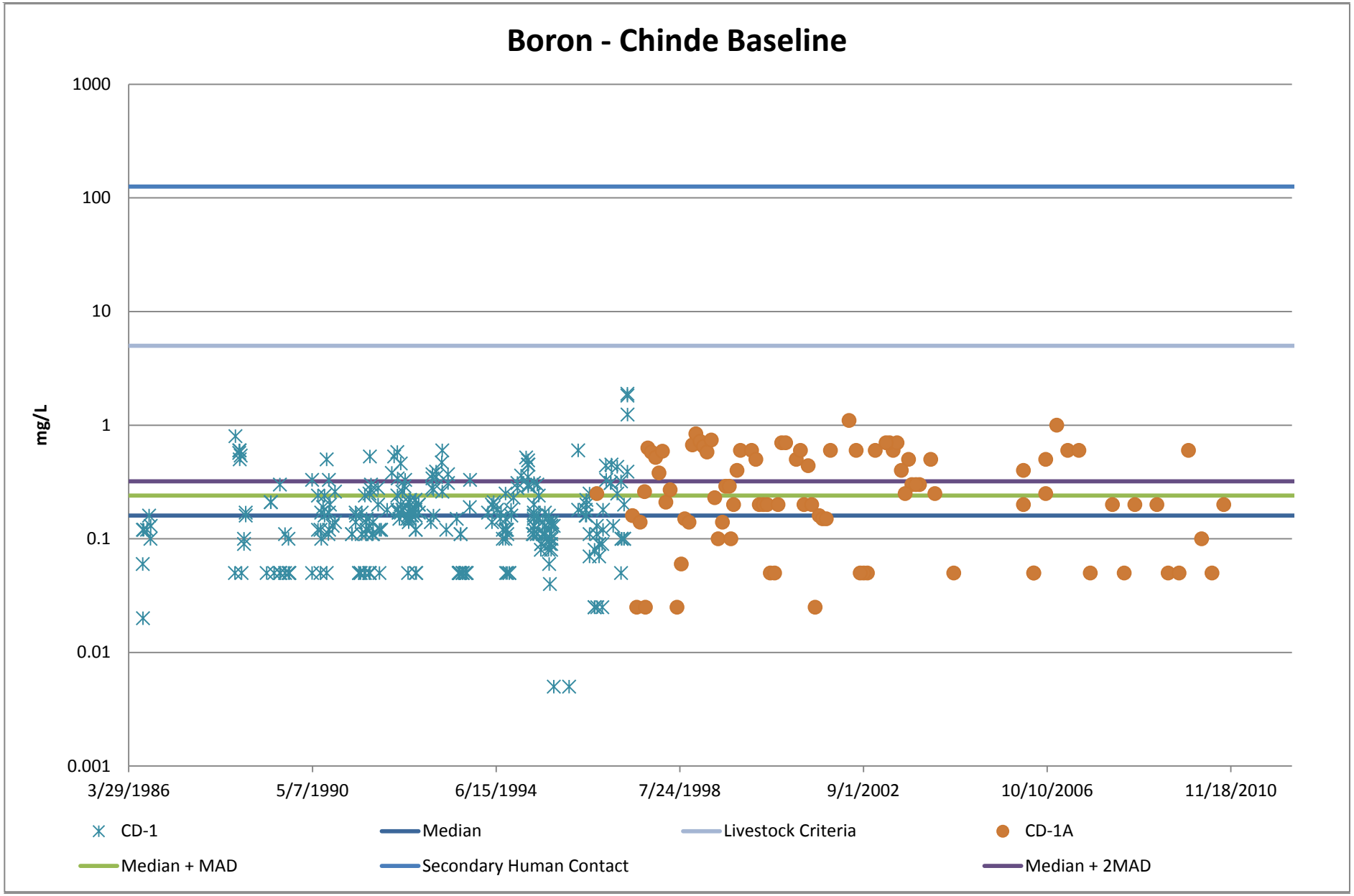

Manganese - Chaco Downstream
1
0.1
0.01
0.001
0.0001
mg/L
6/11/1968
7/20/1972
8/28/1976
10/6/1980
11/14/1984
12/23/1988
1/31/1993
USGS # 09367950
Baseline Median + 2MAD

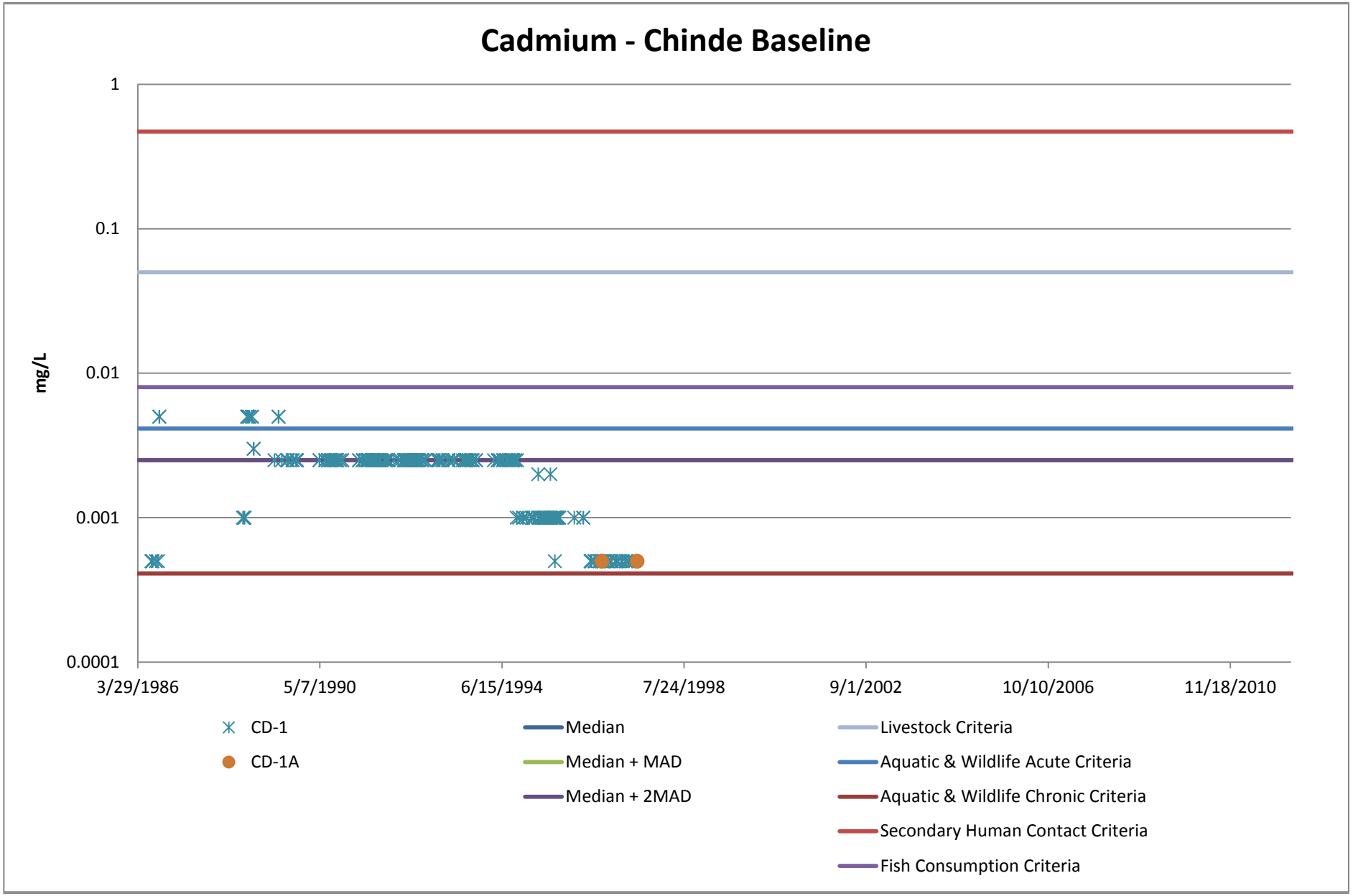

Mercury - Chaco Downstream
mg/L
1
0.1
0.01
0.001
0.0001
0.00001
0.000001
6/11/1968
7/20/1972
8/28/1976
10/6/1980
11/14/1984
12/23/1988
1/31/1993
USGS # 09367950
Fish Consumption
Aquatic & Wildlife Acute Criteria
Aquatic & Wildlife Chronic Criteria
Secondary Human Contact Criteria
Baseline Median + 2MAD

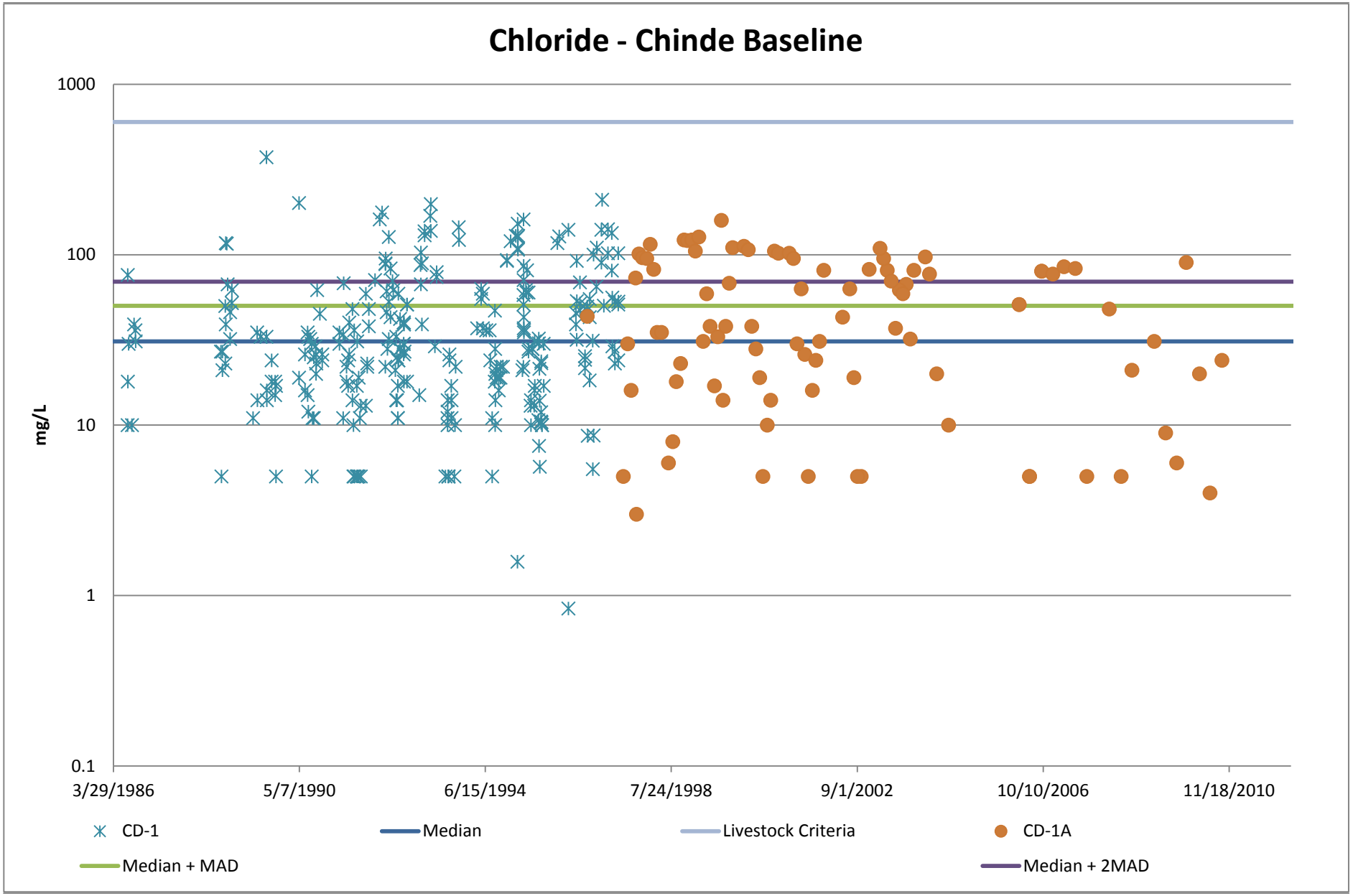

Aluminum - Chinde Baseline
mg/L
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
3/29/1986
5/7/1990
6/15/1994
7/24/1998
9/1/2002
10/10/2006
11/18/2010
CD-1
CD-1A
Median
Median + MAD
Median + 2MAD
Aquatic & Wildlife Acute Criteria
Aquatic & Wildlife Chronic Criteria

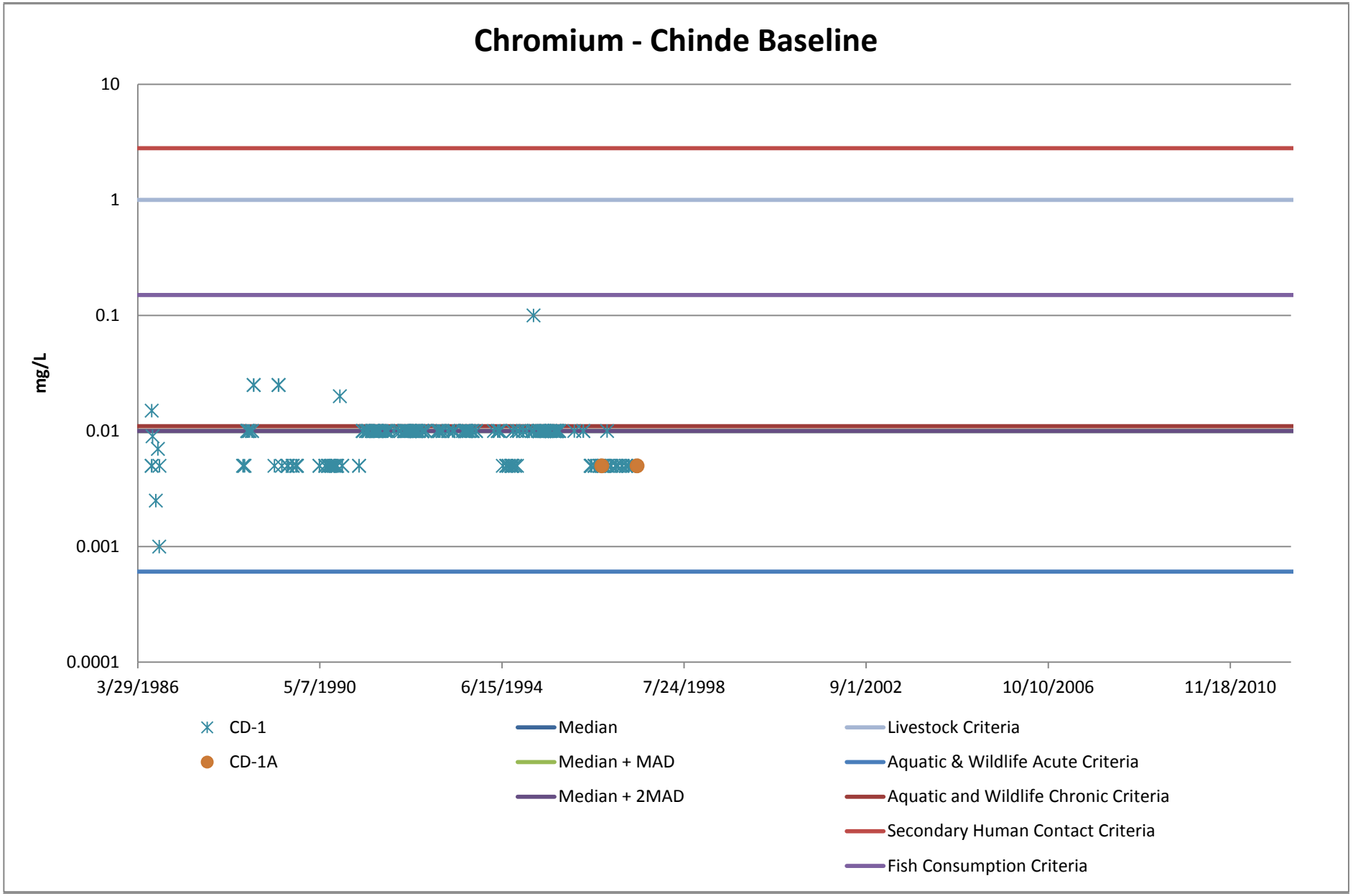

Arsenic - Chinde Baseline
mg/L
1
0.1
0.01
0.001
0.0001
3/29/1986
5/7/1990
6/15/1994
7/24/1998
9/1/2002
10/10/2006
11/18/2010
CD-1
CD-1A
Median
Median + MAD
Median + 2MAD
Livestock Criteria
Aquatic and Wildlife Acute Criteria
Aquatic and Wildlife Chronic Criteria
Secondary Human Contact Criteria
Fish Concumption Criteria

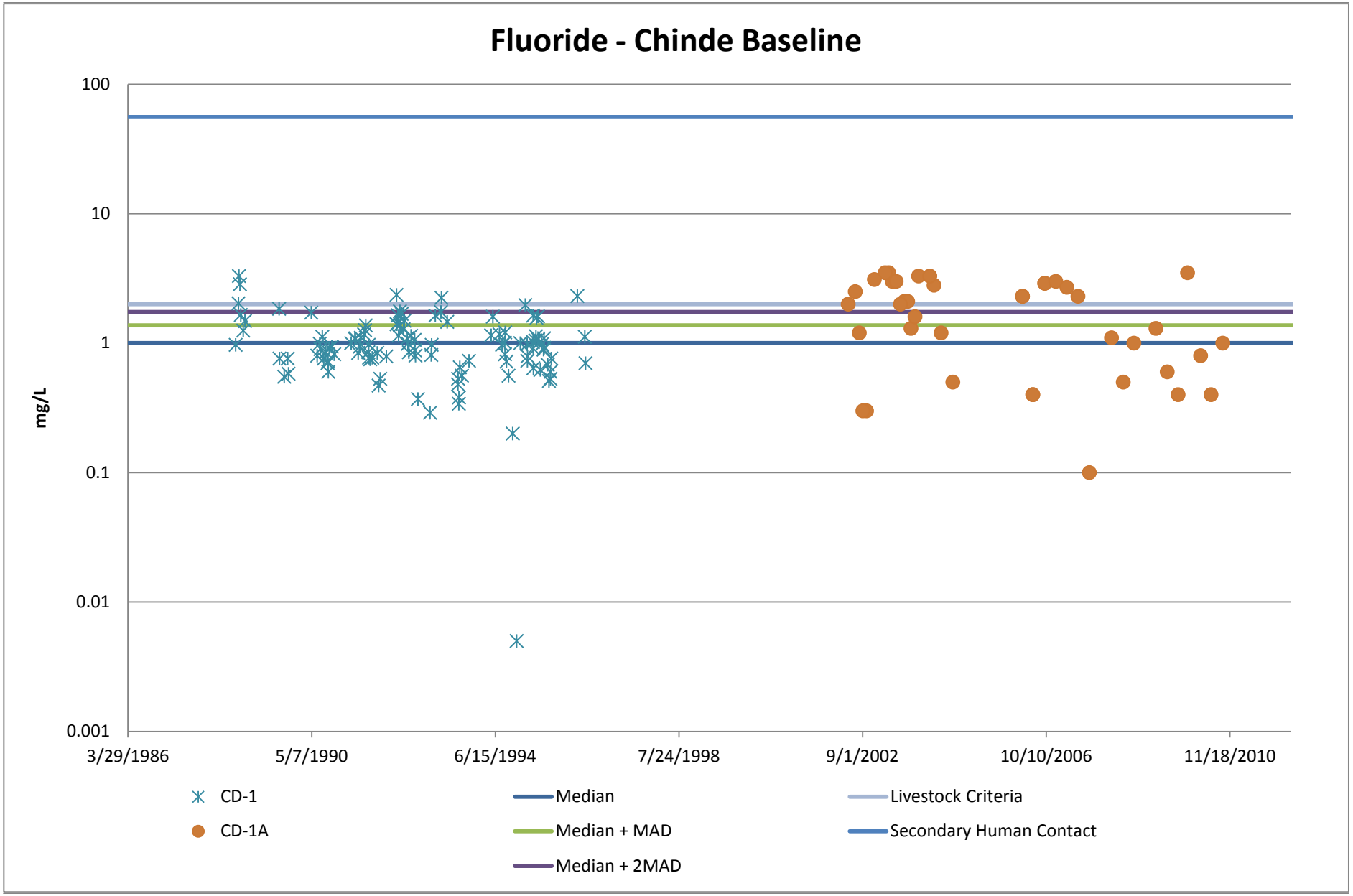

Barium - Chinde Baseline
mg/L
100
10
1
0.1
0.01
3/29/1986
5/7/1990
6/15/1994
7/24/1998
9/1/2002
10/10/2006
11/18/2010
CD-1
CD-1A
Median
Median + MAD
Median + 2MAD
Secondary Human Contact Criteria

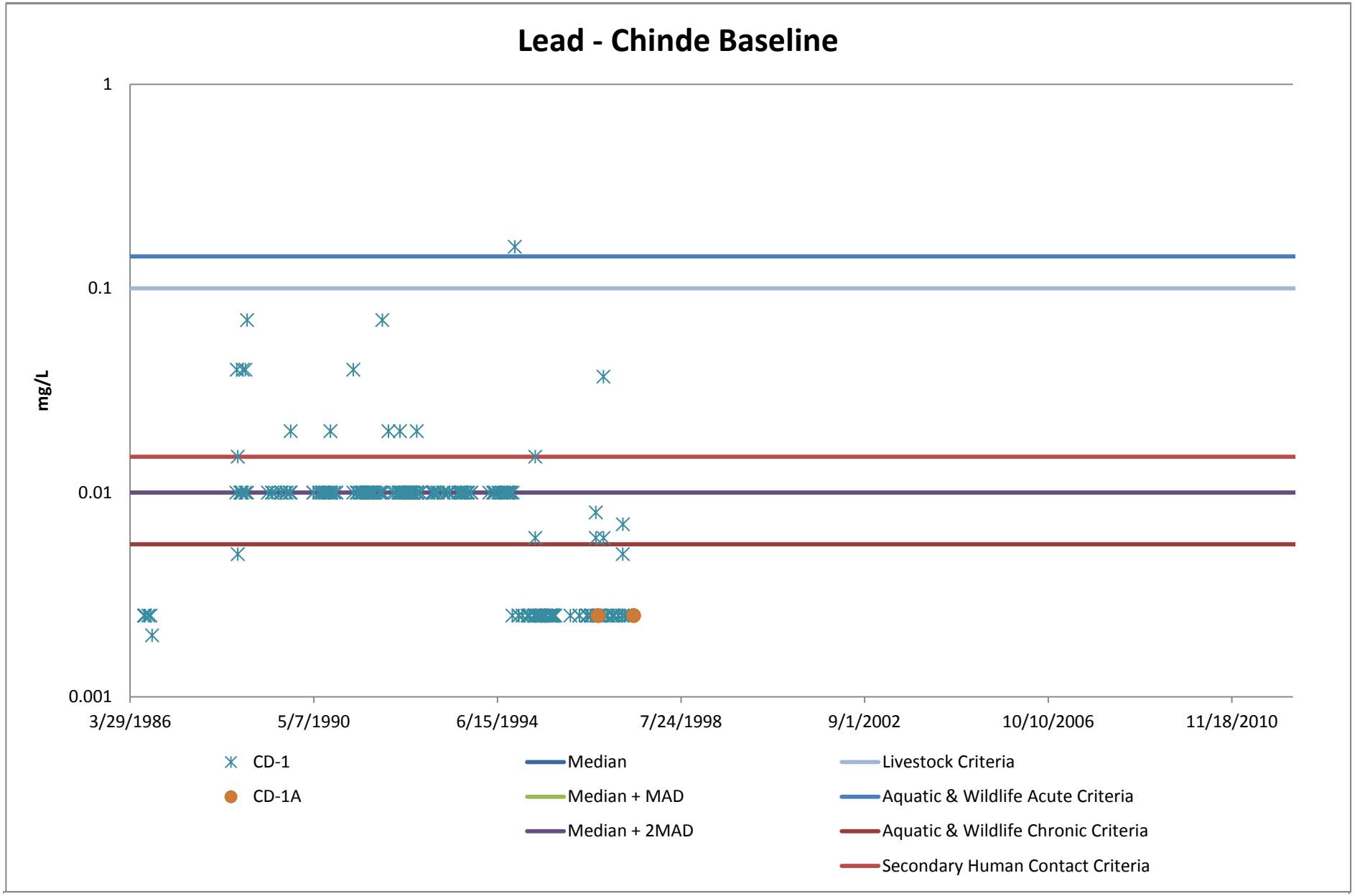

Boron - Chinde Baseline
mg/L
1000
100
10
1
0.1
0.01
0.001
3/29/1986
5/7/1990
6/15/1994
7/24/1998
9/1/2002
10/10/2006
11/18/2010
CD-1
Median
Livestock Criteria
CD-1A
Median + MAD
Secondary Human Contact
Median + 2MAD

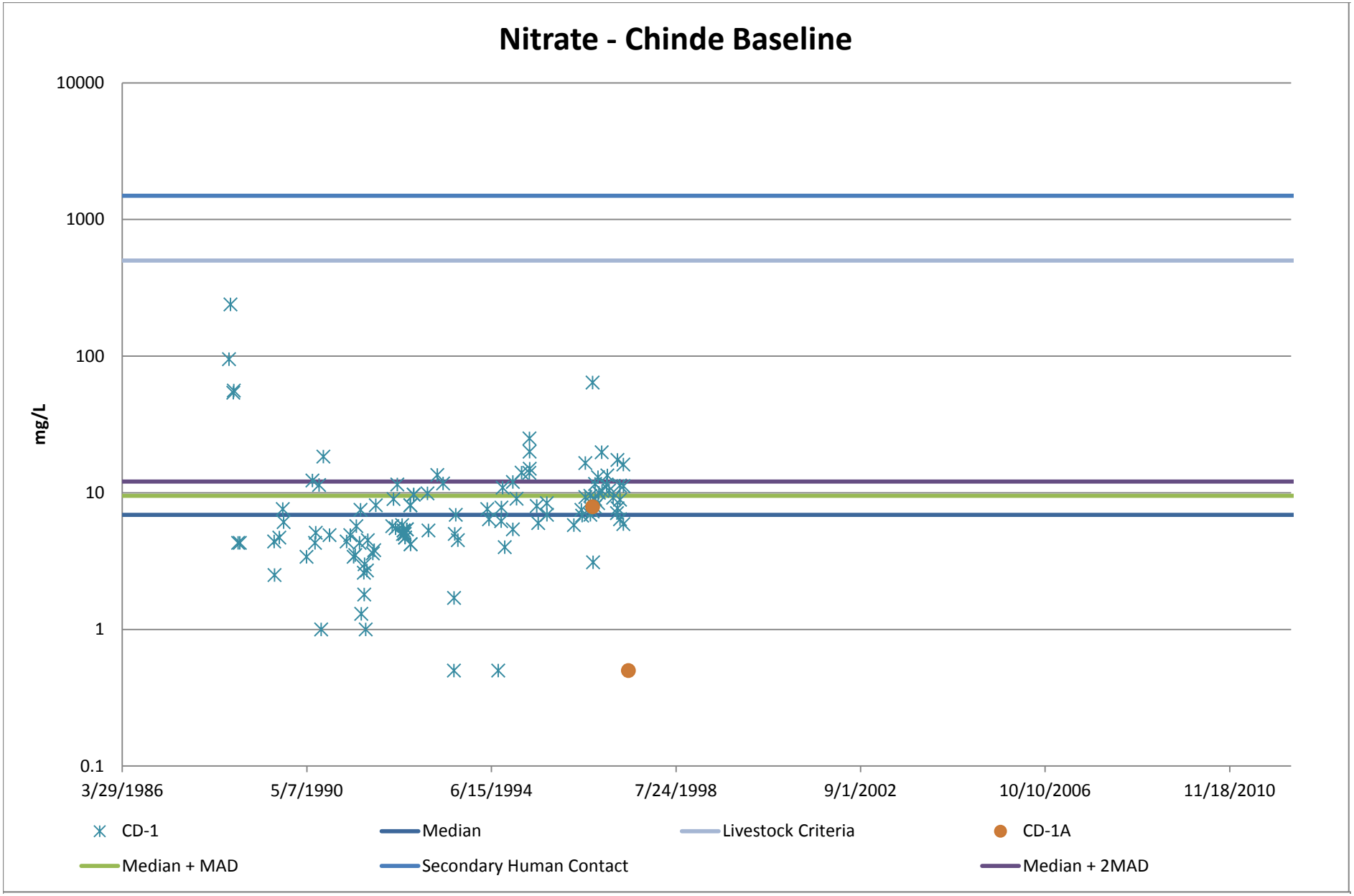

Cadmium - Chinde Baseline
mg/L
1
0.1
0.01
0.001
0.0001
3/29/1986
5/7/1990
6/15/1994
7/24/1998
9/1/2002
10/10/2006
11/18/2010
CD-1
CD-1A
Median
Median + MAD
Median + 2MAD
Livestock Criteria
Aquatic & Wildlife Acute Criteria
Aquatic & Wildlife Chronic Criteria
Secondary Human Contact Criteria
Fish Consumption Criteria

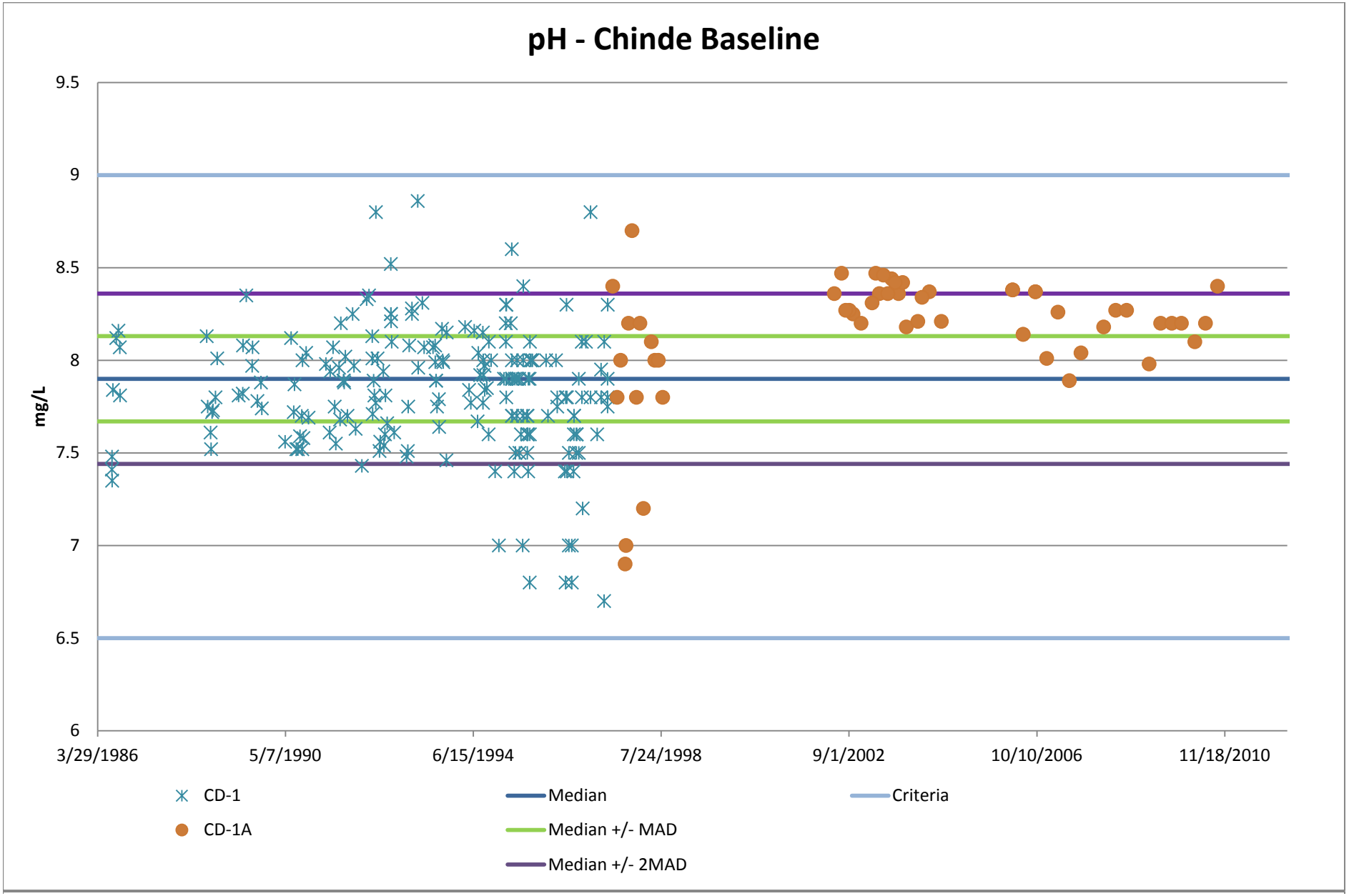

Chloride - Chinde Baseline
1000
100
10
1
0.1
mg/L
3/29/1986
5/7/1990
6/15/1994
7/24/1998
9/1/2002
10/10/2006
11/18/2010
CD-1
Median
Livestock Criteria
CD-1A
Median + MAD
Median + 2MAD

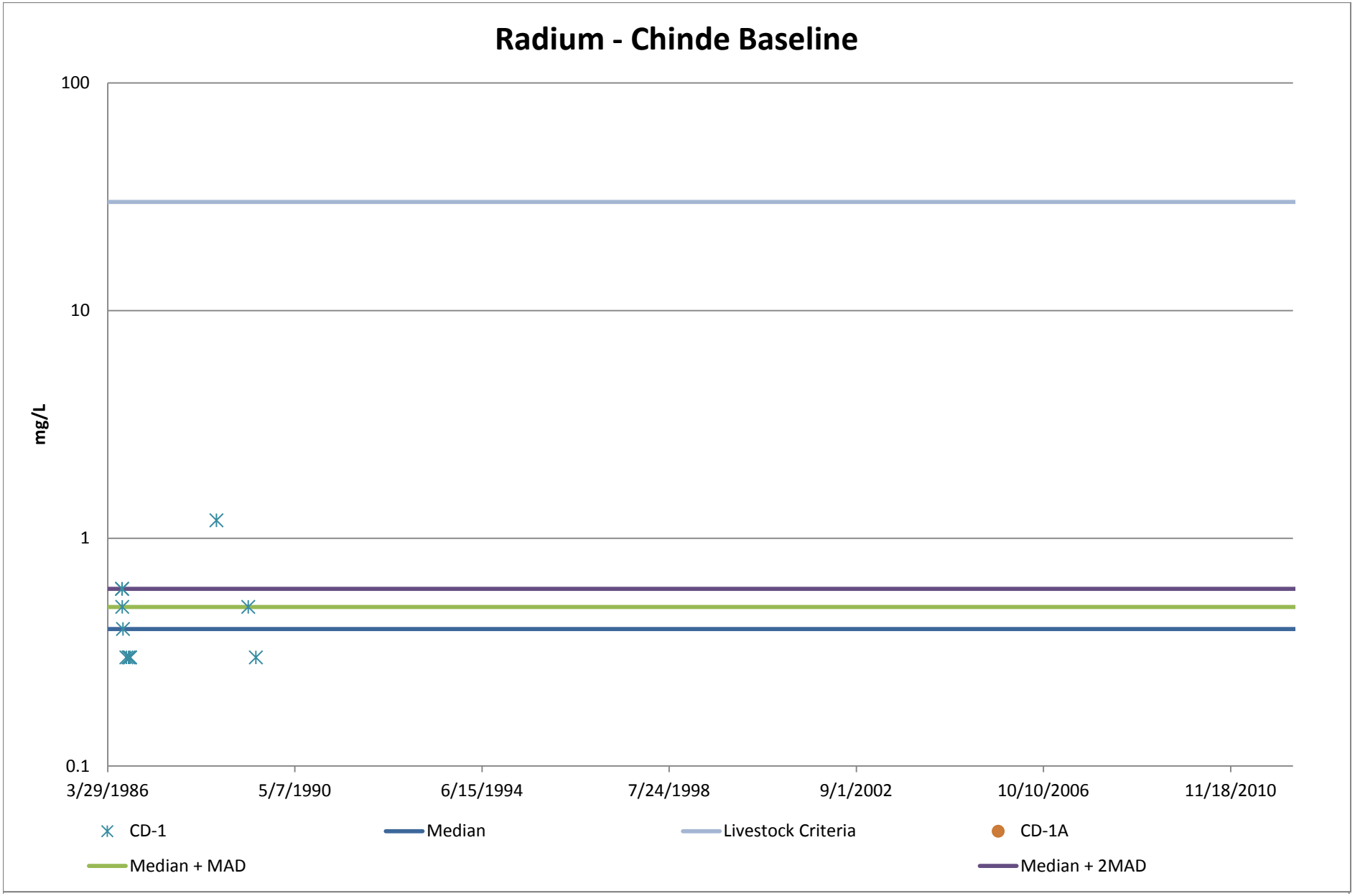

Chromium - Chinde Baseline
mg/L
10
1
0.1
0.01
0.001
0.0001
3/29/1986
5/7/1990
6/15/1994
7/24/1998
9/1/2002
10/10/2006
11/18/2010
CD-1
CD-1A
Median
Median + MAD
Median + 2MAD
Livestock Criteria
Aquatic & Wildlife Acute Criteria
Aquatic and Wildlife Chronic Criteria
Secondary Human Contact Criteria
Fish Consumption Criteria

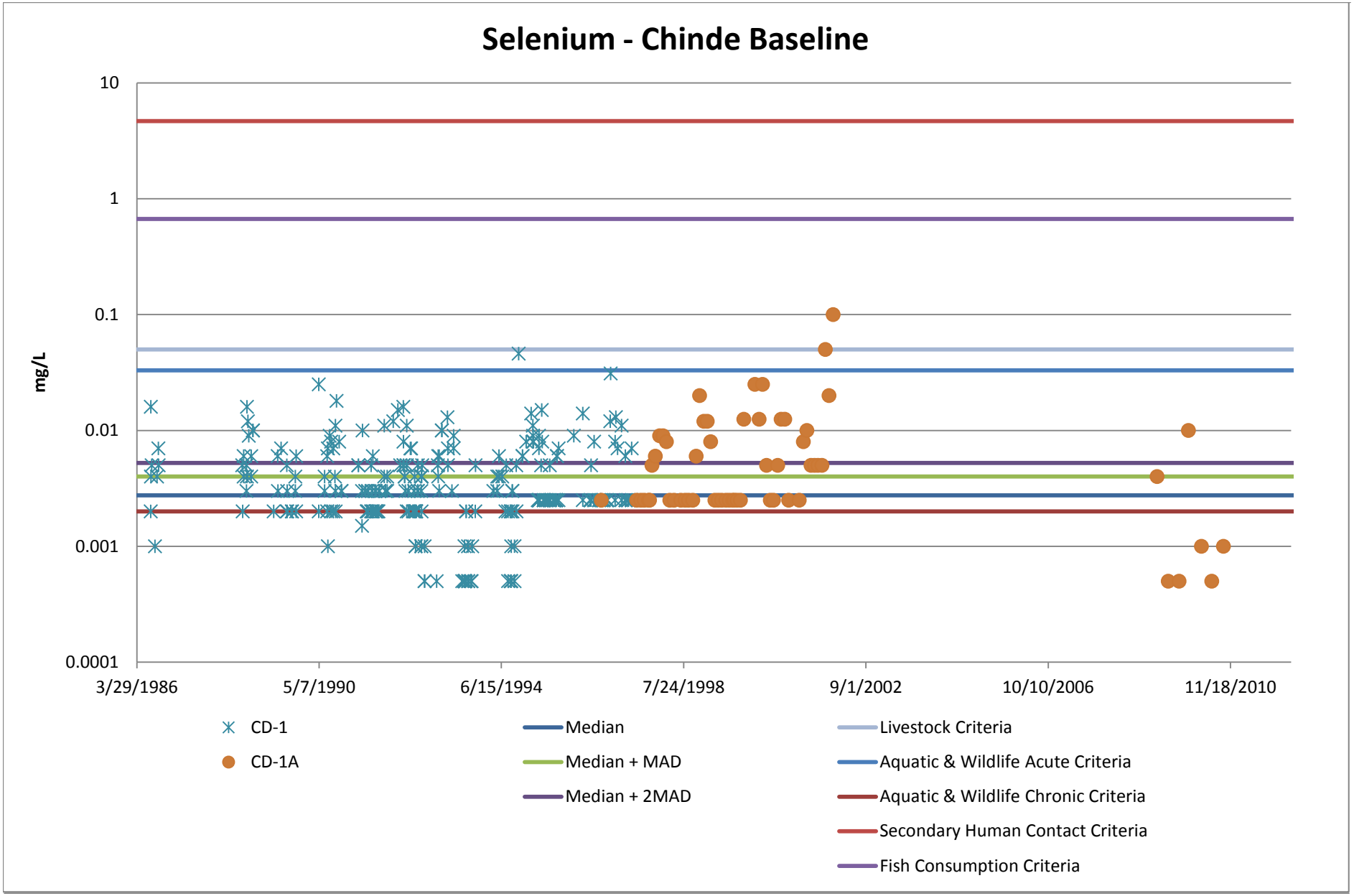

Fluoride - Chinde Baseline
100
10
1
0.1
0.01
0.001
mg/L
3/29/1986
5/7/1990
6/15/1994
7/24/1998
9/1/2002
10/10/2006
11/18/2010
CD-1
CD-1A
Median
Median + MAD
Median + 2MAD
Livestock Criteria
Secondary Human Contact

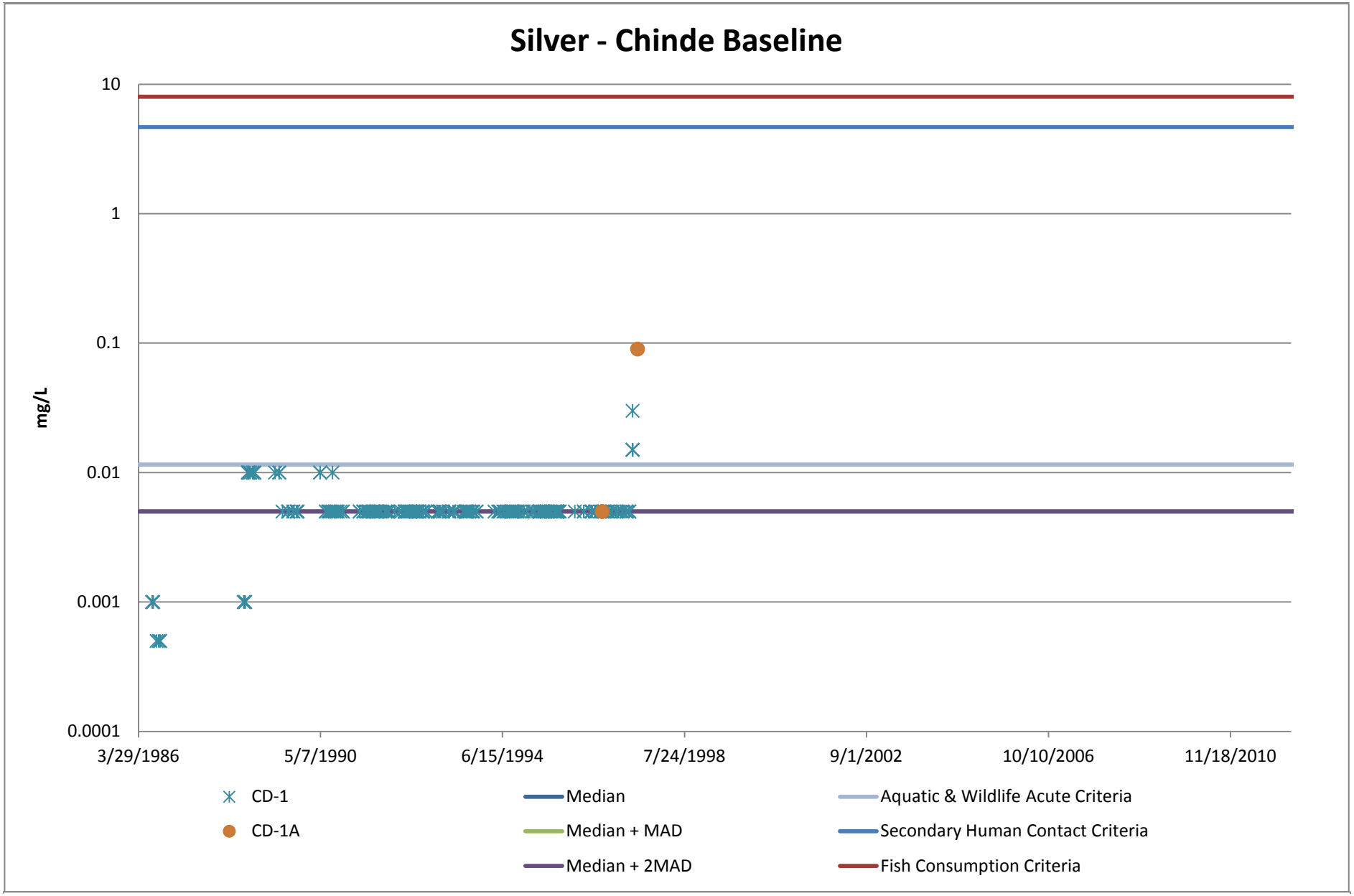

Lead - Chinde Baseline
mg/L
1
0.1
0.01
0.001
3/29/1986
5/7/1990
6/15/1994
7/24/1998
9/1/2002
10/10/2006
11/18/2010
CD-1
CD-1A
Median
Median + MAD
Median + 2MAD
Livestock Criteria
Aquatic & Wildlife Acute Criteria
Aquatic & Wildlife Chronic Criteria
Secondary Human Contact Criteria

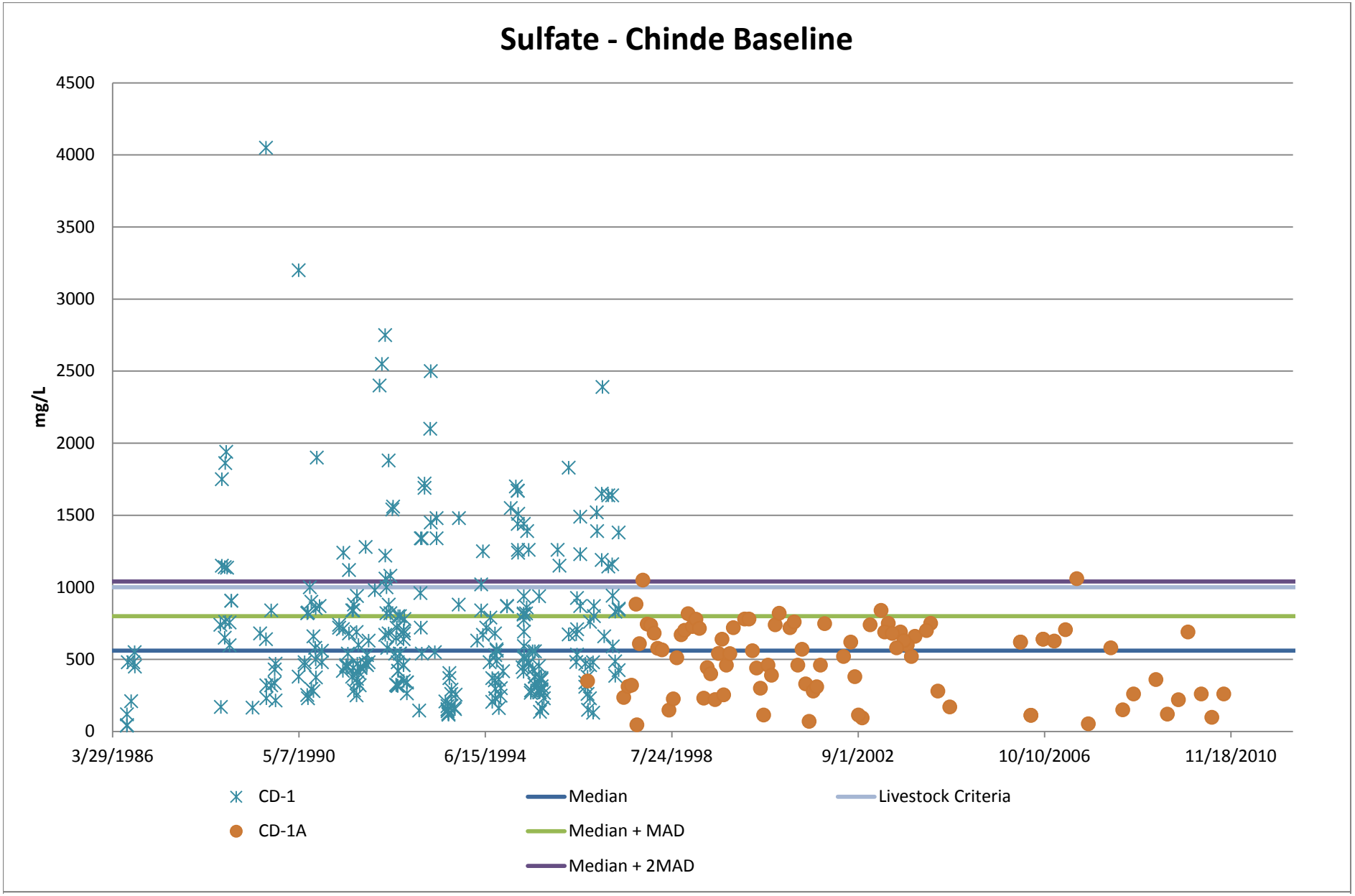

Nitrate - Chinde Baseline
10000
1000
100
10
1
0.1
mg/L
3/29/1986
5/7/1990
6/15/1994
7/24/1998
9/1/2002
10/10/2006
11/18/2010
CD-1
Median
Livestock Criteria
CD-1A
Median + MAD
Secondary Human Contact
Median + 2MAD

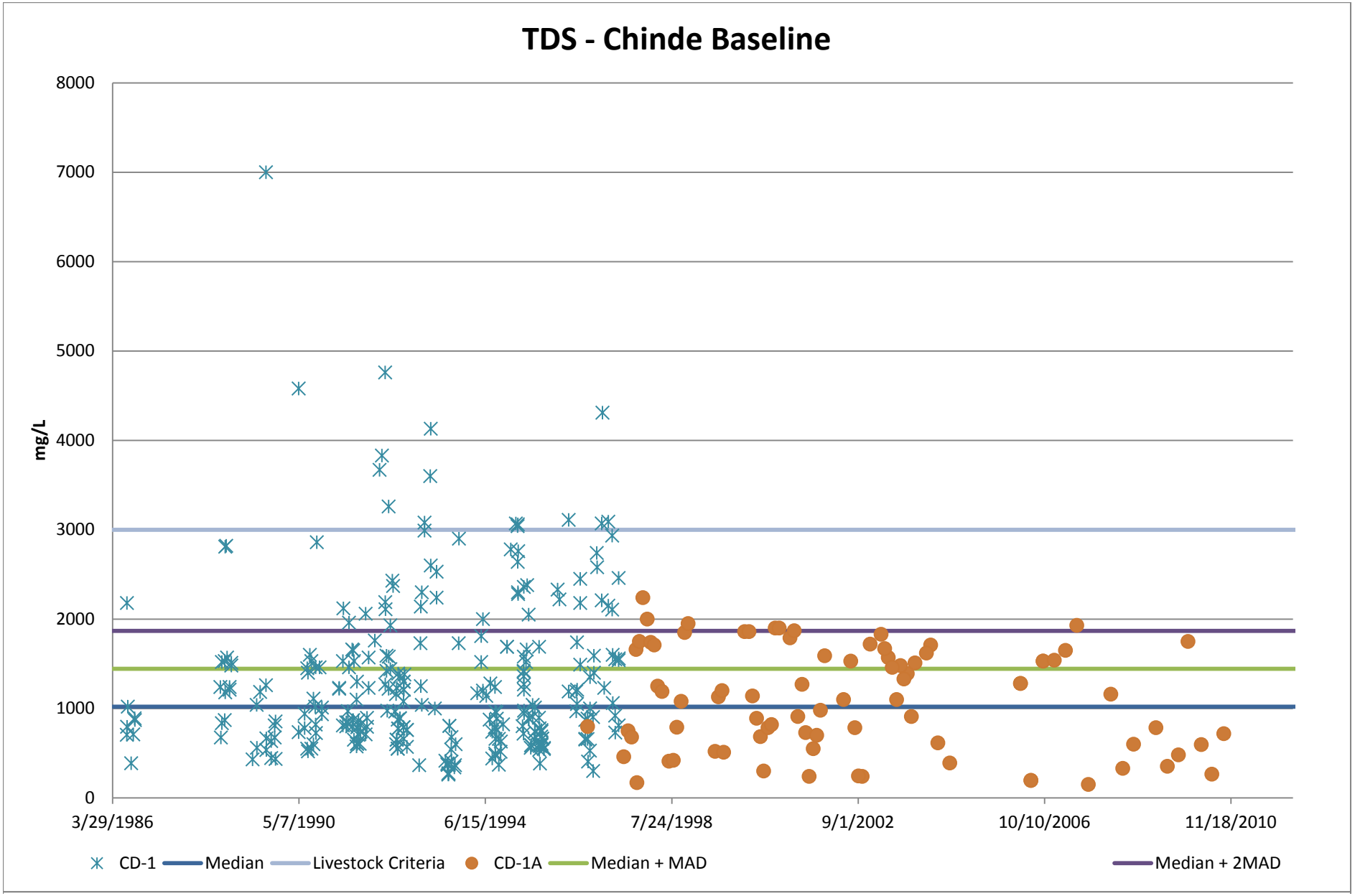

pH - Chinde Baseline
9.5
9
8.5
8
7.5
7
6.5
6
mg/L
3/29/1986
5/7/1990
6/15/1994
7/24/1998
9/1/2002
10/10/2006
11/18/2010
CD-1
CD-1A
Median
Median +/- MAD
Median +/- 2MAD
Criteria

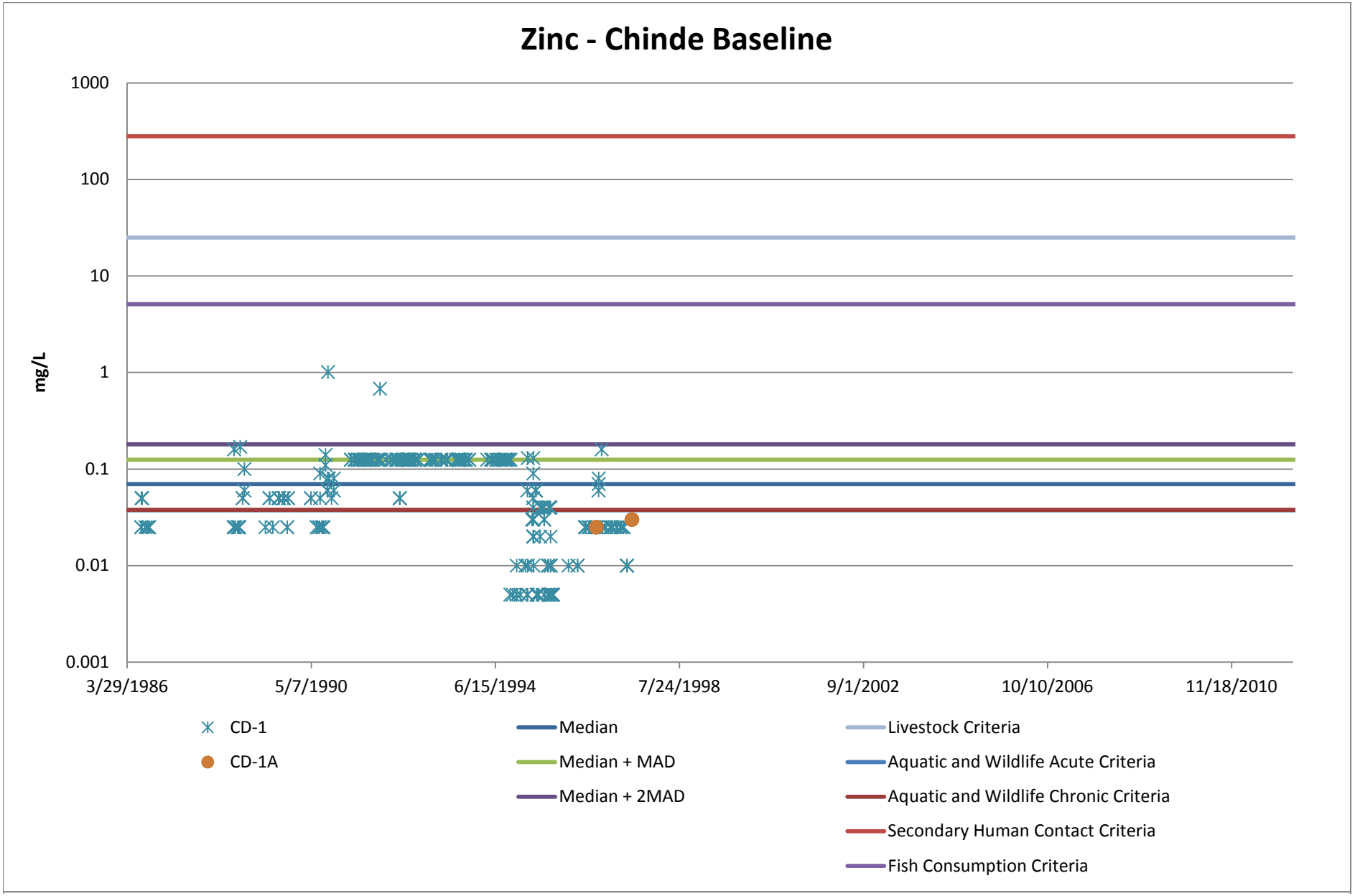

Radium - Chinde Baseline
100
10
1
0.1
mg/L
3/29/1986
5/7/1990
6/15/1994
7/24/1998
9/1/2002
10/10/2006
11/18/2010
CD-1
Median
Livestock Criteria
CD-1A
Median + MAD
Median + 2MAD

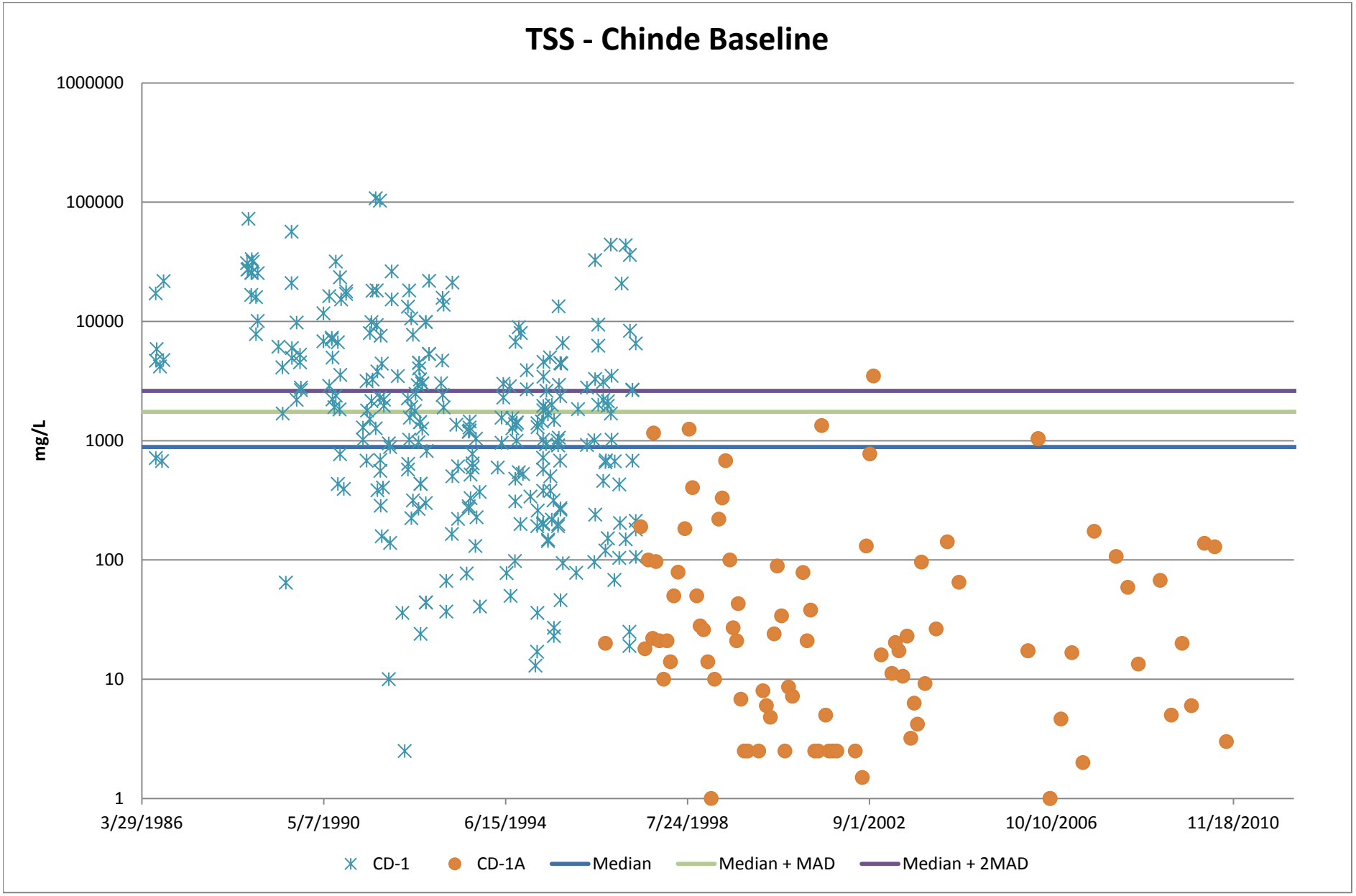

Selenium - Chinde Baseline
mg/L
10
1
0.1
0.01
0.001
0.0001
3/29/1986
5/7/1990
6/15/1994
7/24/1998
9/1/2002
10/10/2006
11/18/2010
CD-1
CD-1A
Median
Median + MAD
Median + 2MAD
Livestock Criteria
Aquatic & Wildlife Acute Criteria
Aquatic & Wildlife Chronic Criteria
Secondary Human Contact Criteria
Fish Consumption Criteria

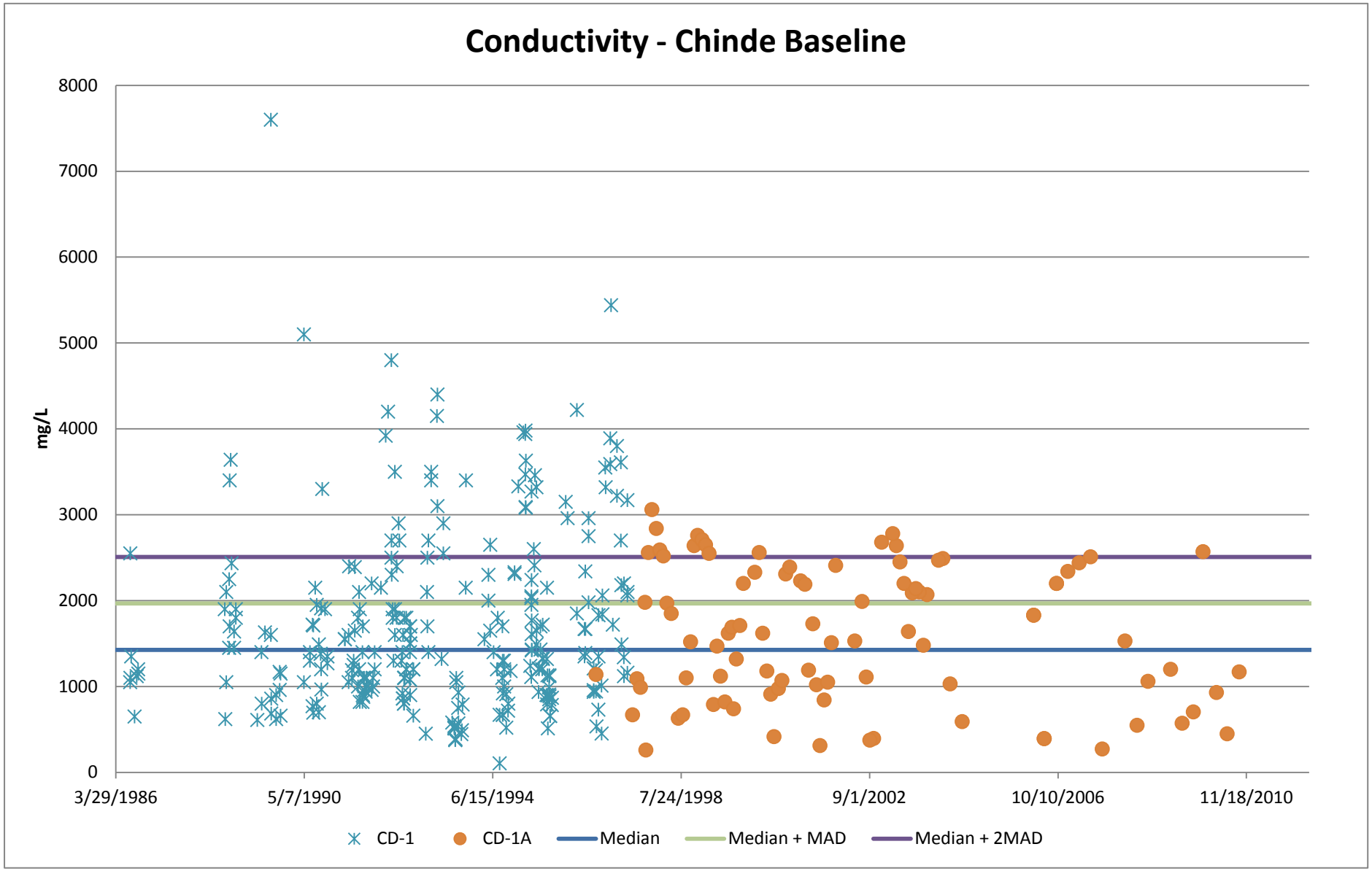

Silver - Chinde Baseline
mg/L
10
1
0.1
0.01
0.001
0.0001
3/29/1986
5/7/1990
6/15/1994
7/24/1998
9/1/2002
10/10/2006
11/18/2010
CD-1
CD-1A
Median
Median + MAD
Median + 2MAD
Aquatic & Wildlife Acute Criteria
Secondary Human Contact Criteria
Fish Consumption Criteria

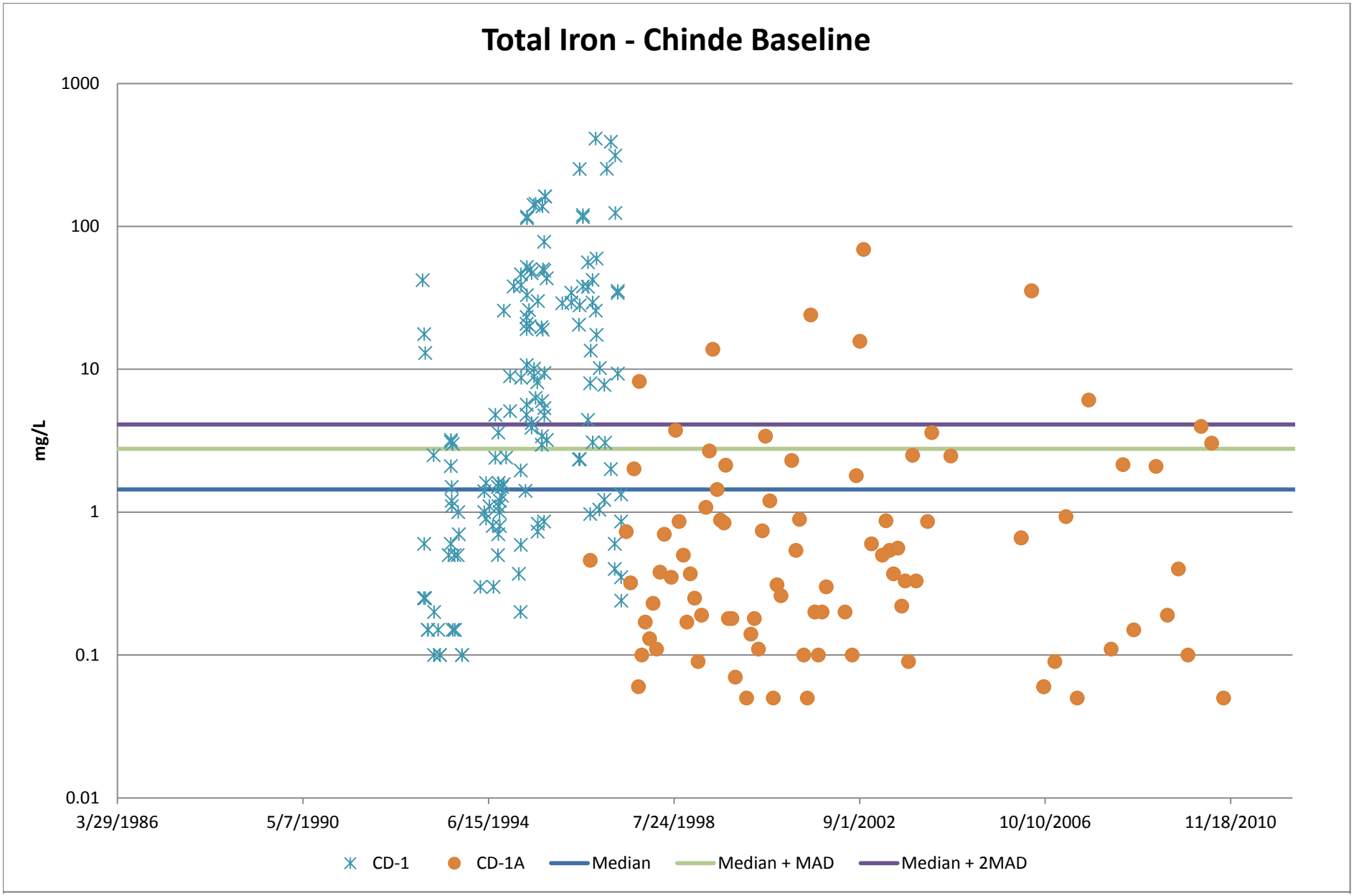

Sulfate - Chinde Baseline
mg/L
4500
4000
3500
3000
2500
2000
1500
1000
500
0
3/29/1986
5/7/1990
6/15/1994
7/24/1998
9/1/2002
10/10/2006
11/18/2010
CD-1
CD-1A
Median
Median + MAD
Median + 2MAD
Livestock Criteria

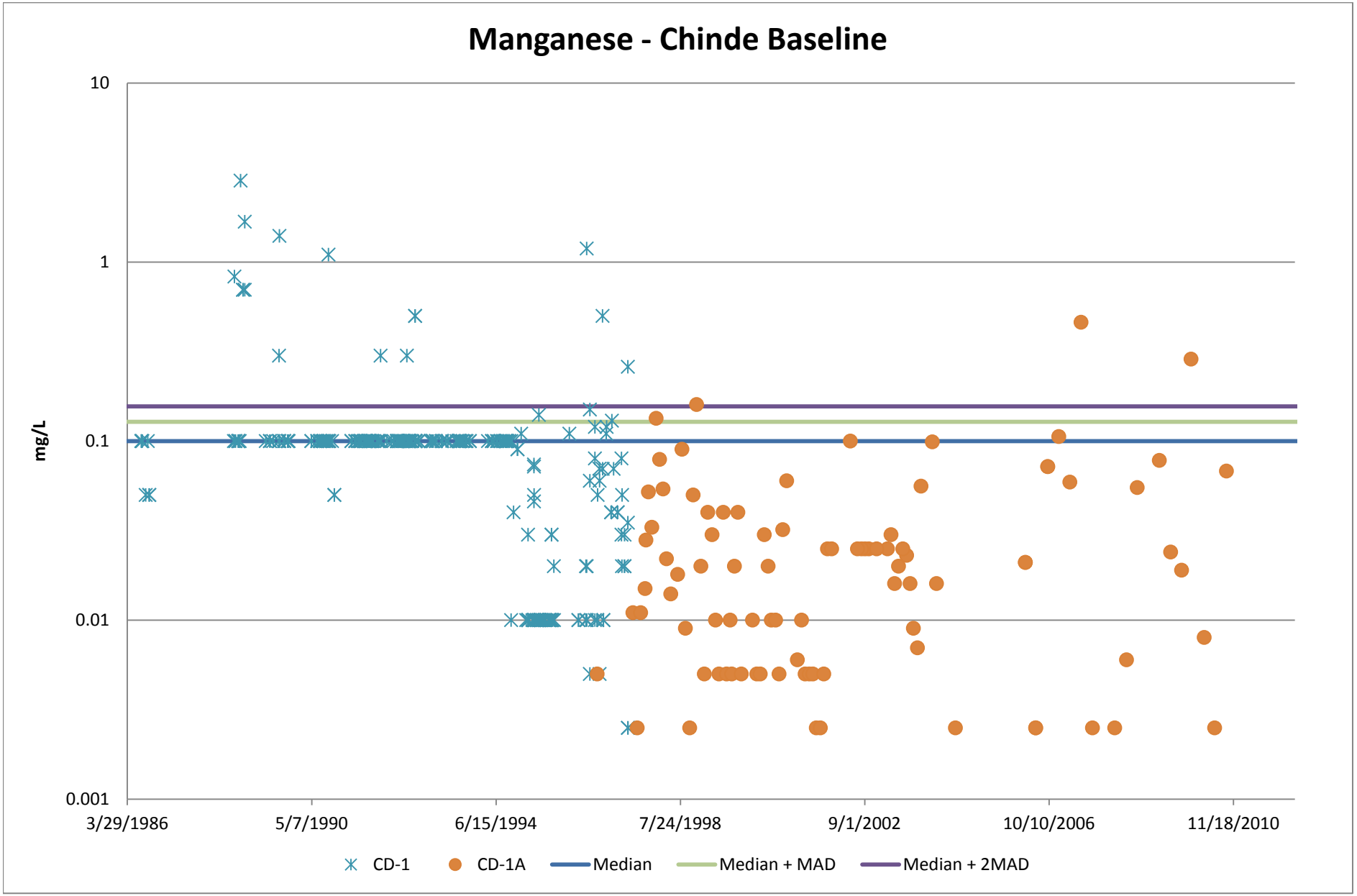

TDS - Chinde Baseline
mg/L
8000
7000
6000
5000
4000
3000
2000
1000
0
3/29/1986
5/7/1990
6/15/1994
7/24/1998
9/1/2002
10/10/2006
11/18/2010
CD-1
Median
Livestock Criteria
CD-1A
Median + MAD
Median + 2MAD

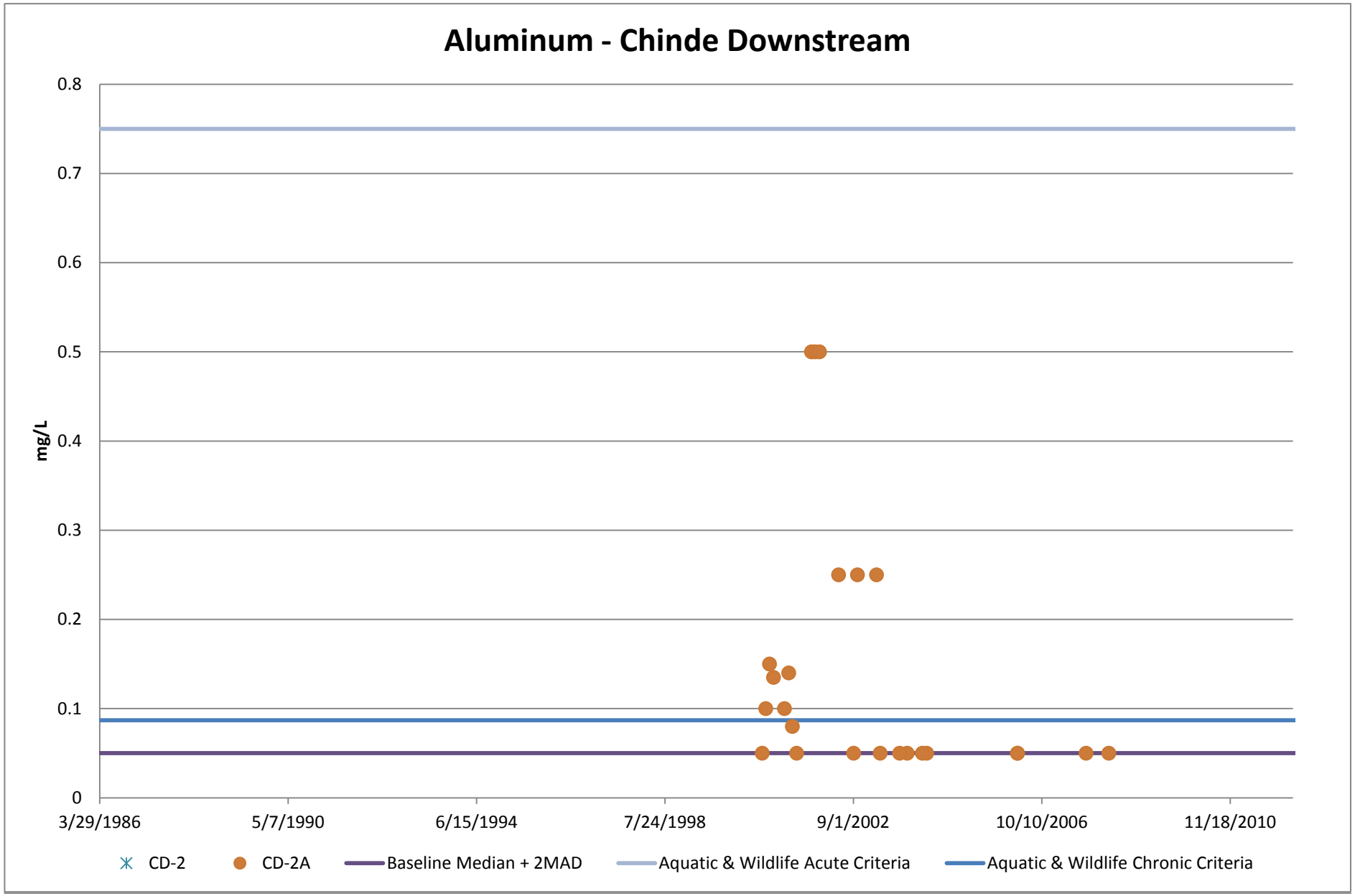

Zinc - Chinde Baseline
mg/L
1000
100
10
1
0.1
0.01
0.001
3/29/1986
5/7/1990
6/15/1994
7/24/1998
9/1/2002
10/10/2006
11/18/2010
CD-1
CD-1A
Median
Median + MAD
Median + 2MAD
Livestock Criteria
Aquatic and Wildlife Acute Criteria
Aquatic and Wildlife Chronic Criteria
Secondary Human Contact Criteria
Fish Consumption Criteria

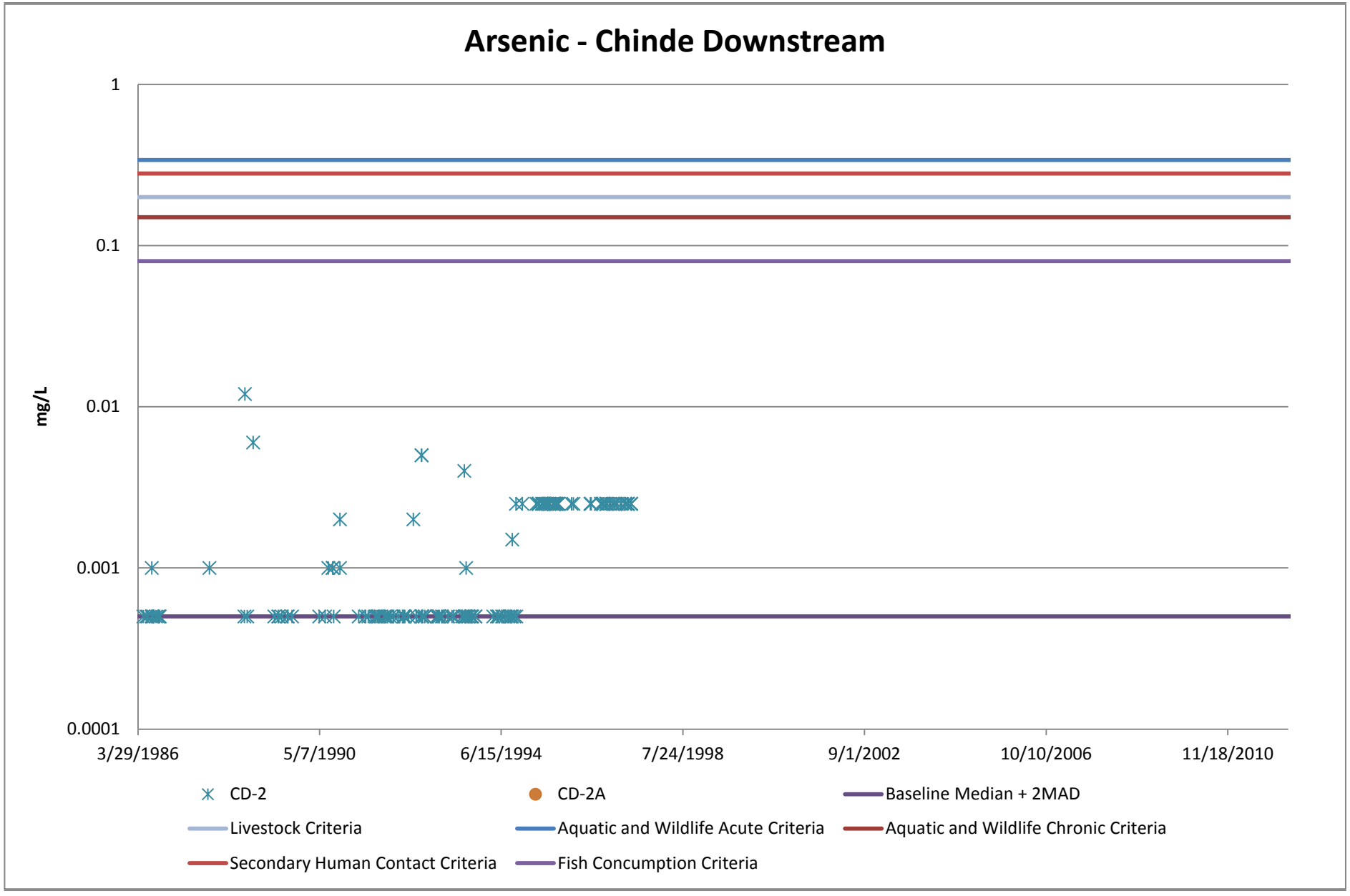

TSS - Chinde Baseline
1000000
100000
10000
1000
100
10
1
mg/L
3/29/1986
5/7/1990
6/15/1994
7/24/1998
9/1/2002
10/10/2006
11/18/2010
CD-1
CD-1A
Median
Median + MAD
Median + 2MAD

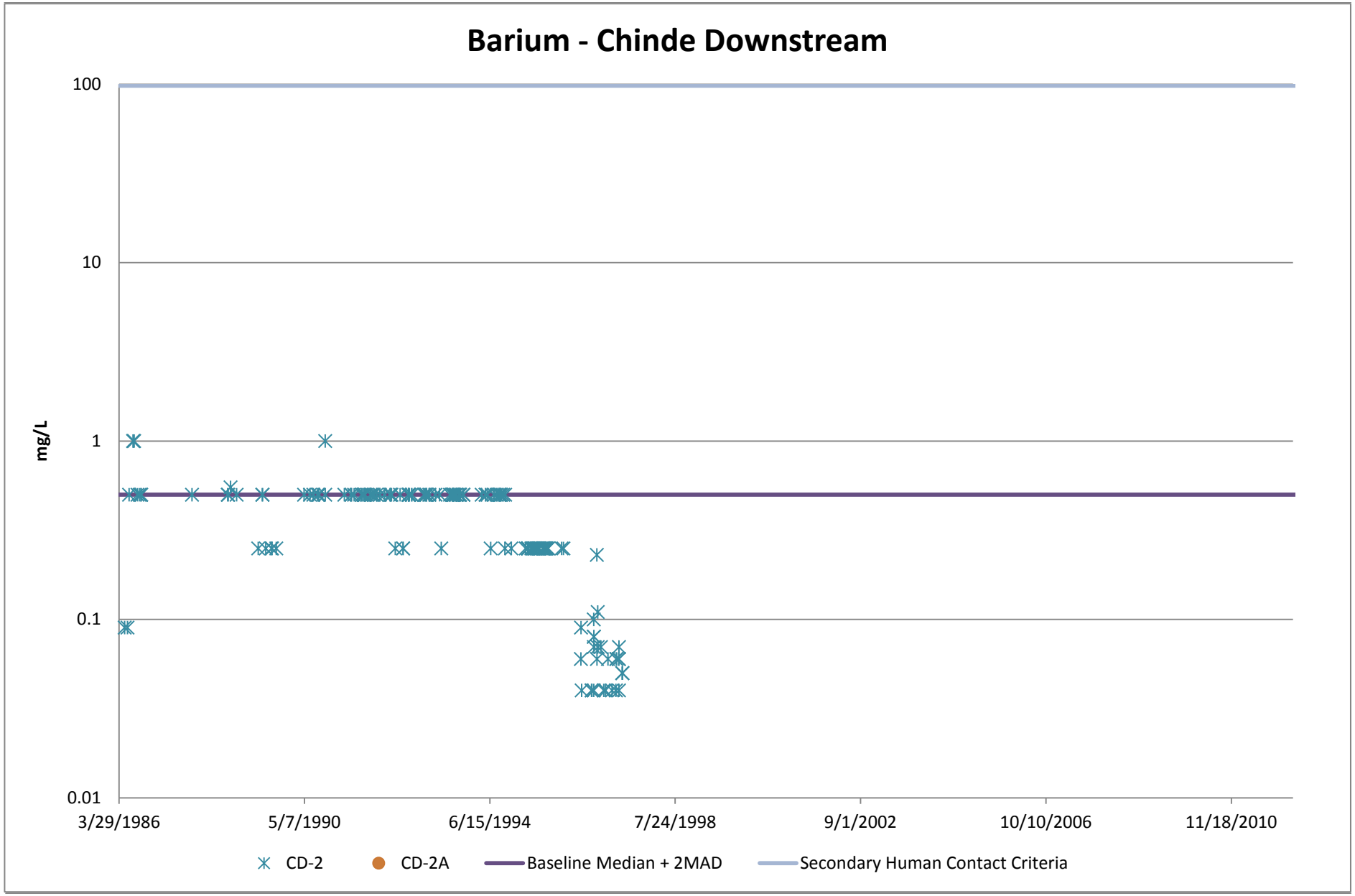

Conductivity - Chinde Baseline
mg/L
8000
7000
6000
5000
4000
3000
2000
1000
0
3/29/1986
5/7/1990
6/15/1994
7/24/1998
9/1/2002
10/10/2006
11/18/2010
CD-1
CD-1A
Median
Median + MAD
Median + 2MAD

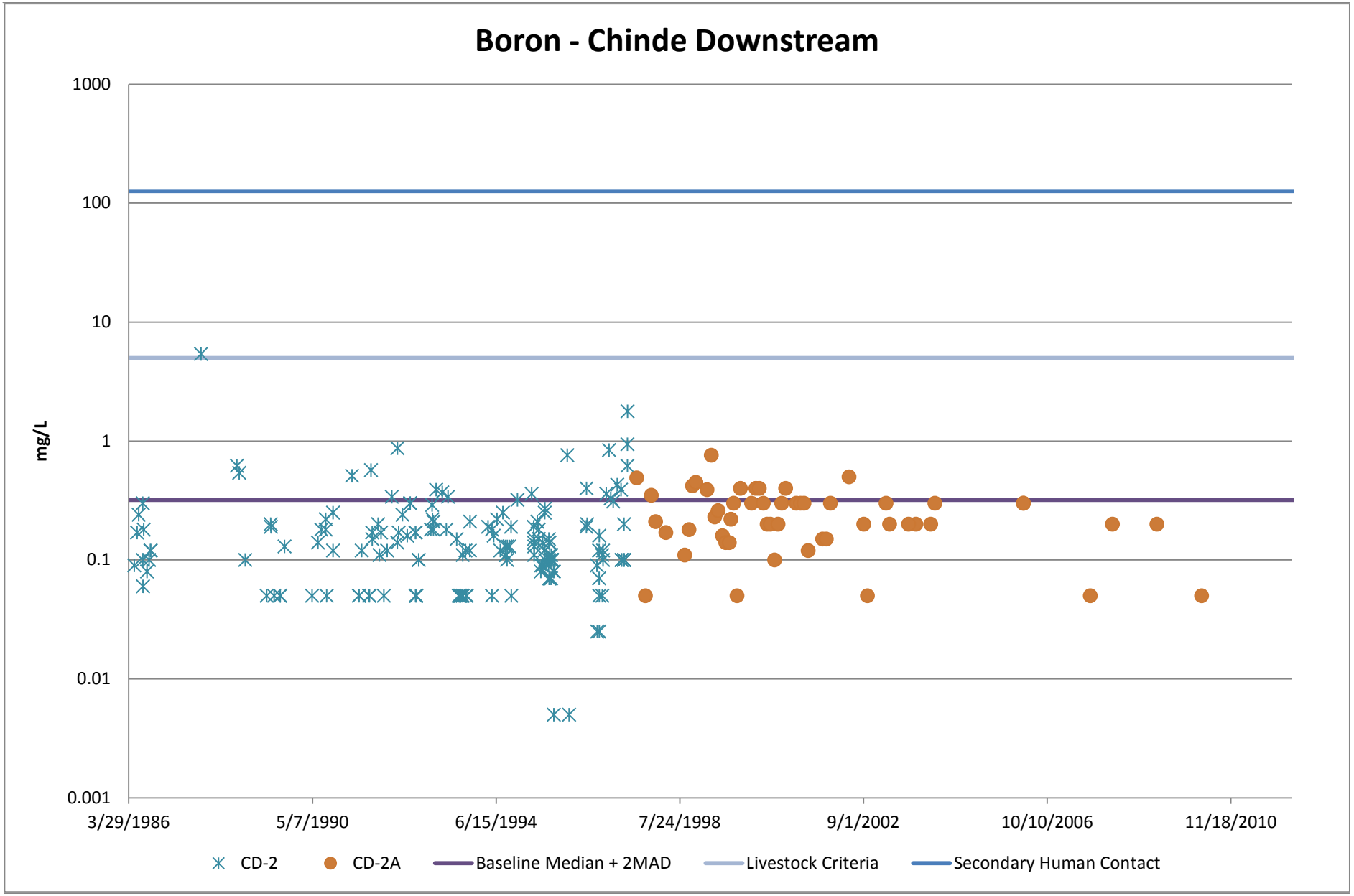

Total Iron - Chinde Baseline
1000
100
10
1
0.1
0.01
mg/L
3/29/1986
5/7/1990
6/15/1994
7/24/1998
9/1/2002
10/10/2006
11/18/2010
CD-1
CD-1A
Median
Median + MAD
Median + 2MAD

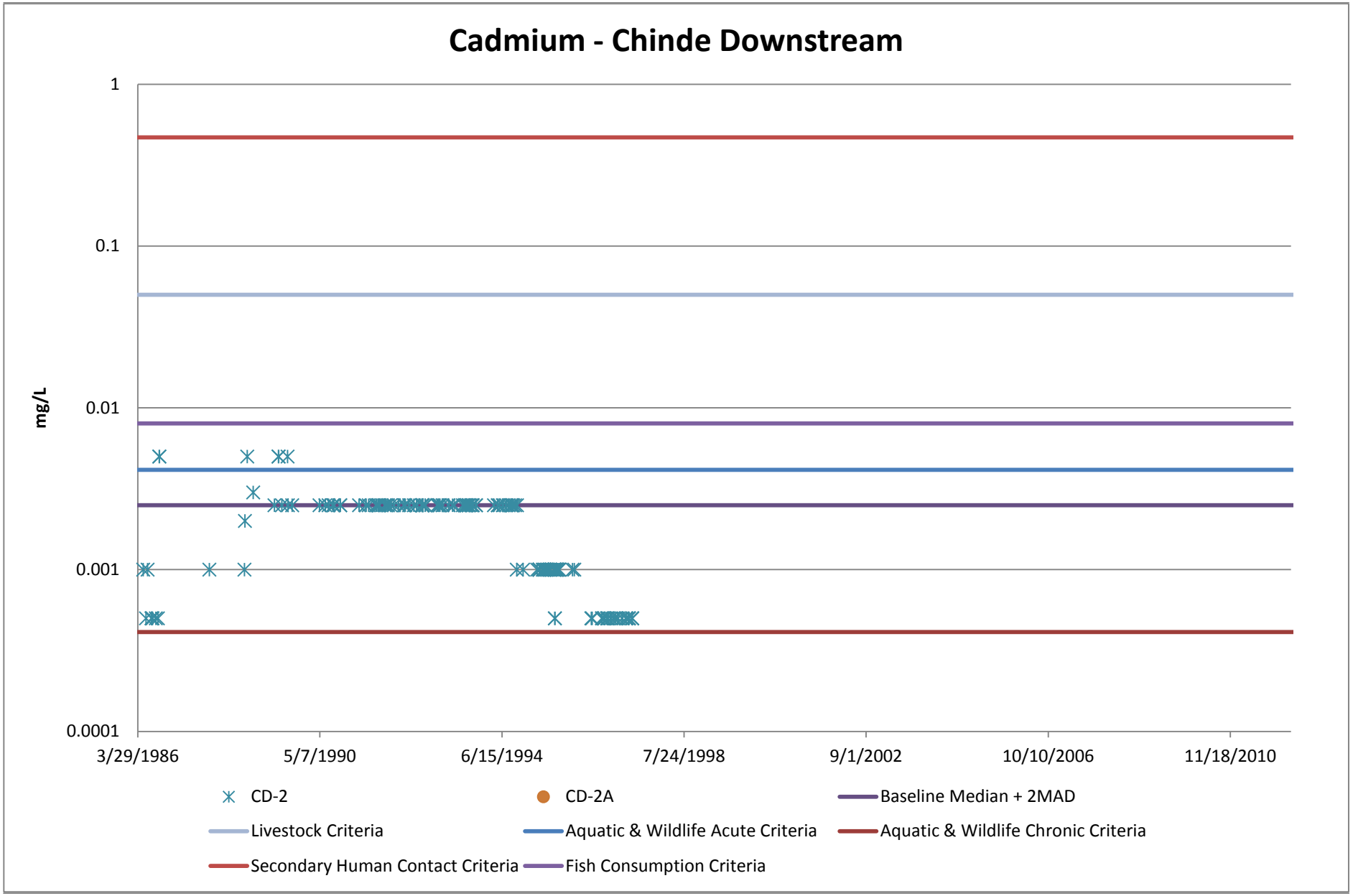

Manganese - Chinde Baseline
10
1
0.1
0.01
0.001
mg/L
3/29/1986
5/7/1990
6/15/1994
7/24/1998
9/1/2002
10/10/2006
11/18/2010
CD-1
CD-1A
Median
Median + MAD
Median + 2MAD

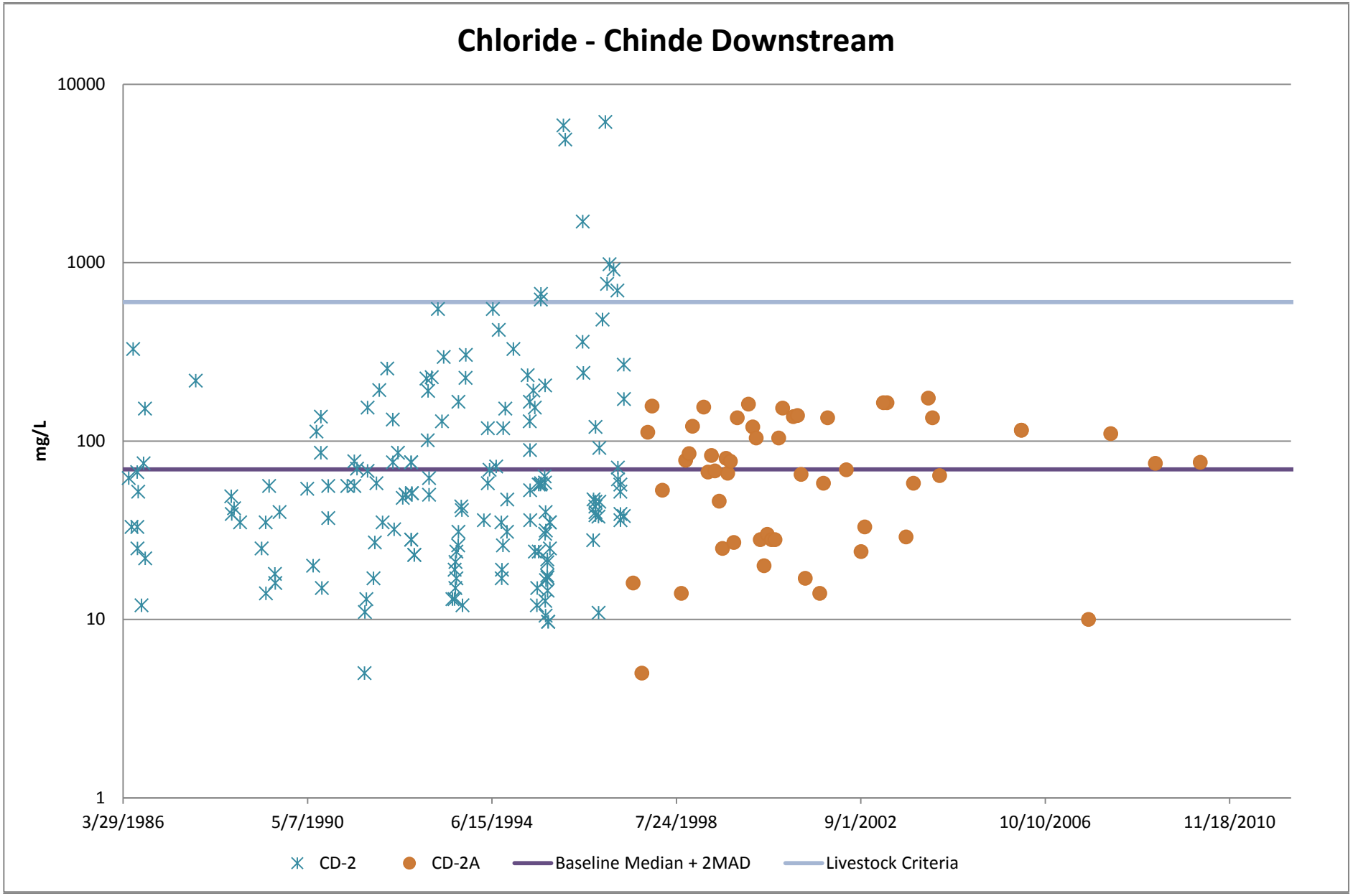

Aluminum - Chinde Downstream
mg/L
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
3/29/1986
5/7/1990
6/15/1994
7/24/1998
9/1/2002
10/10/2006
11/18/2010
CD-2
CD-2A
Baseline Median + 2MAD
Aquatic & Wildlife Acute Criteria
Aquatic & Wildlife Chronic Criteria

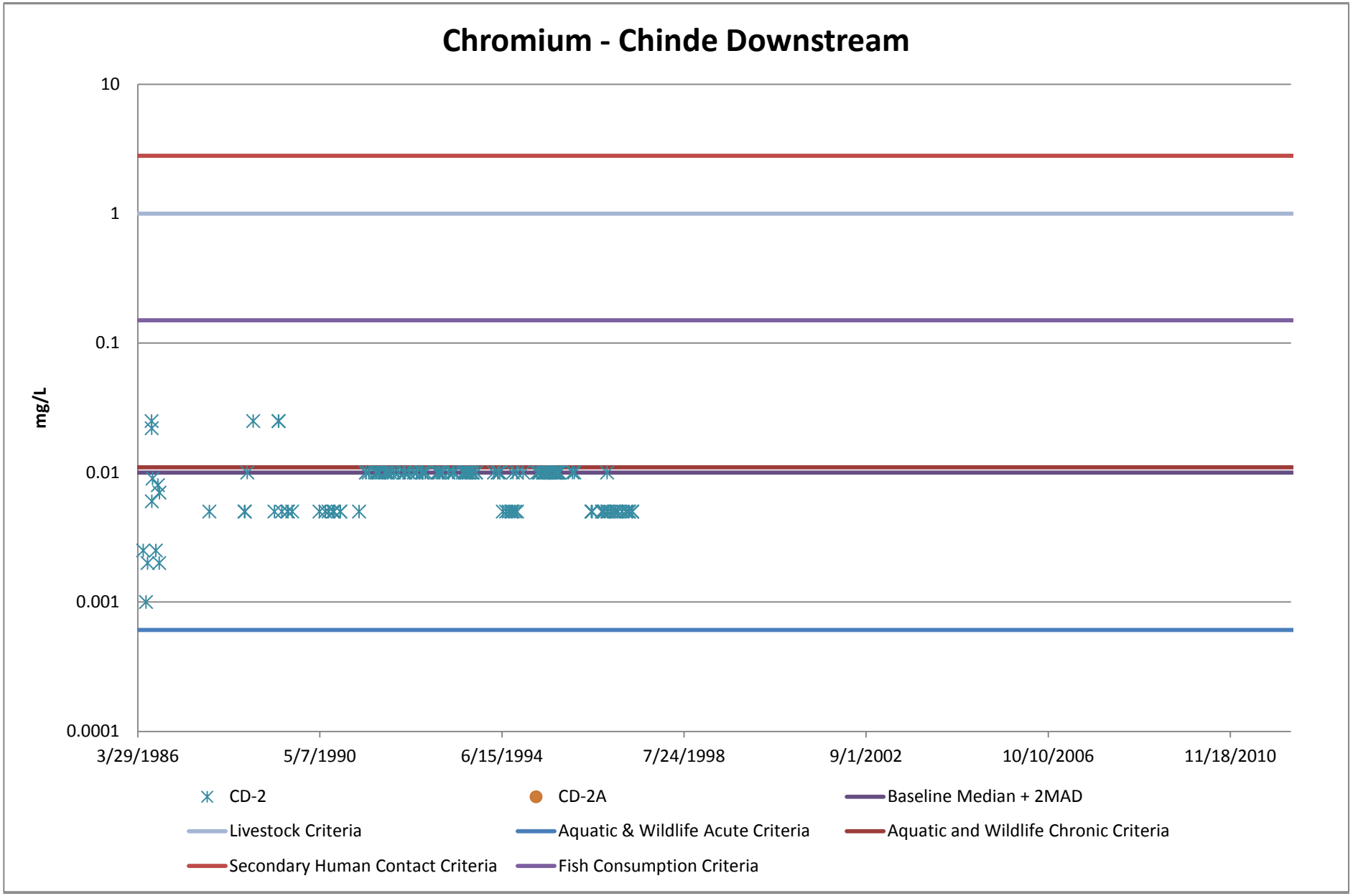

Arsenic - Chinde Downstream
mg/L
1
0.1
0.01
0.001
0.0001
3/29/1986
5/7/1990
6/15/1994
7/24/1998
9/1/2002
10/10/2006
11/18/2010
CD-2
CD-2A
Baseline Median + 2MAD
Livestock Criteria
Aquatic and Wildlife Acute Criteria
Aquatic and Wildlife Chronic Criteria
Secondary Human Contact Criteria
Fish Concumption Criteria

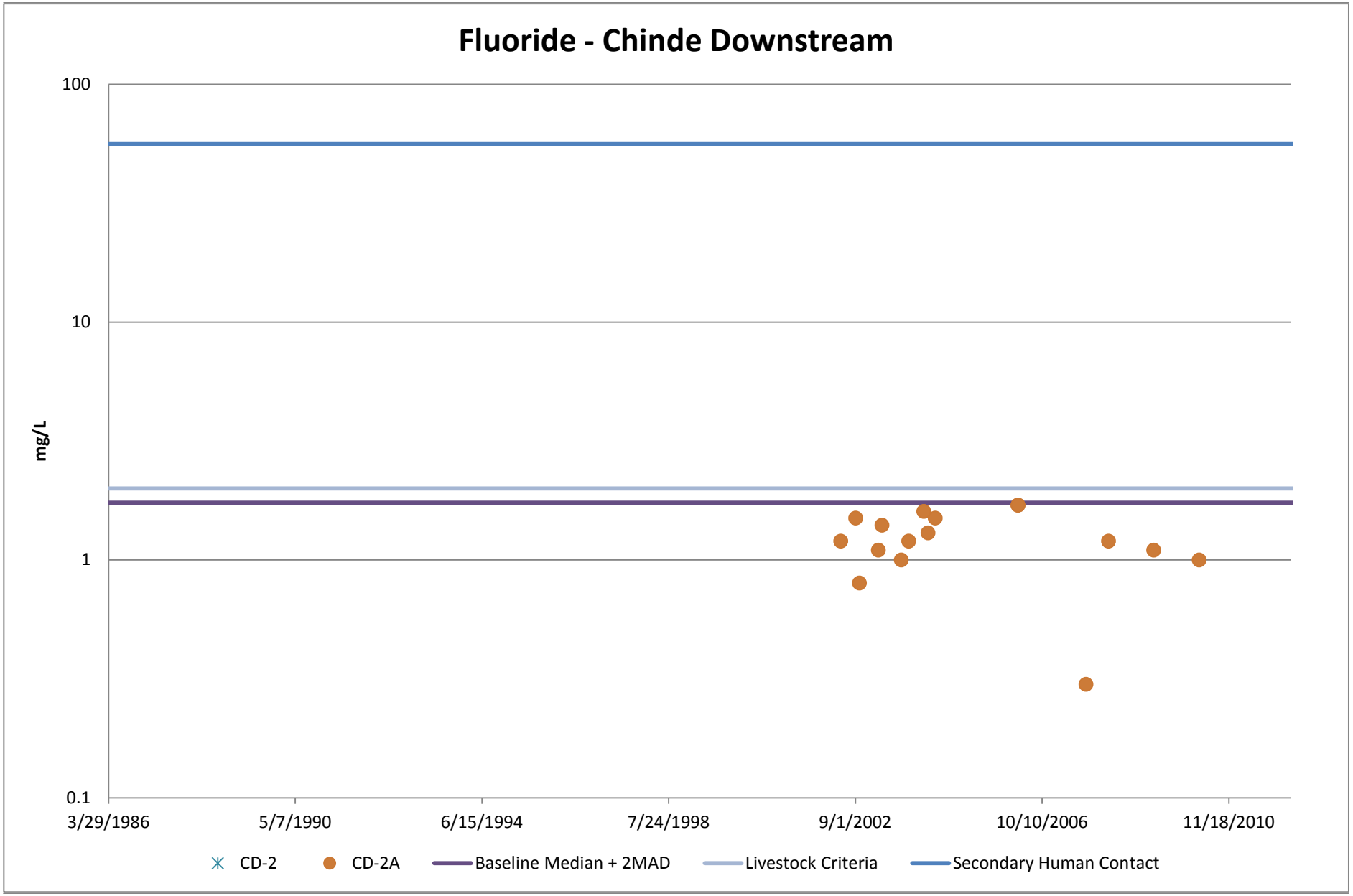

Barium - Chinde Downstream
mg/L
100
10
1
0.1
0.01
3/29/1986
5/7/1990
6/15/1994
7/24/1998
9/1/2002
10/10/2006
11/18/2010
CD-2
CD-2A
Baseline Median + 2MAD
Secondary Human Contact Criteria

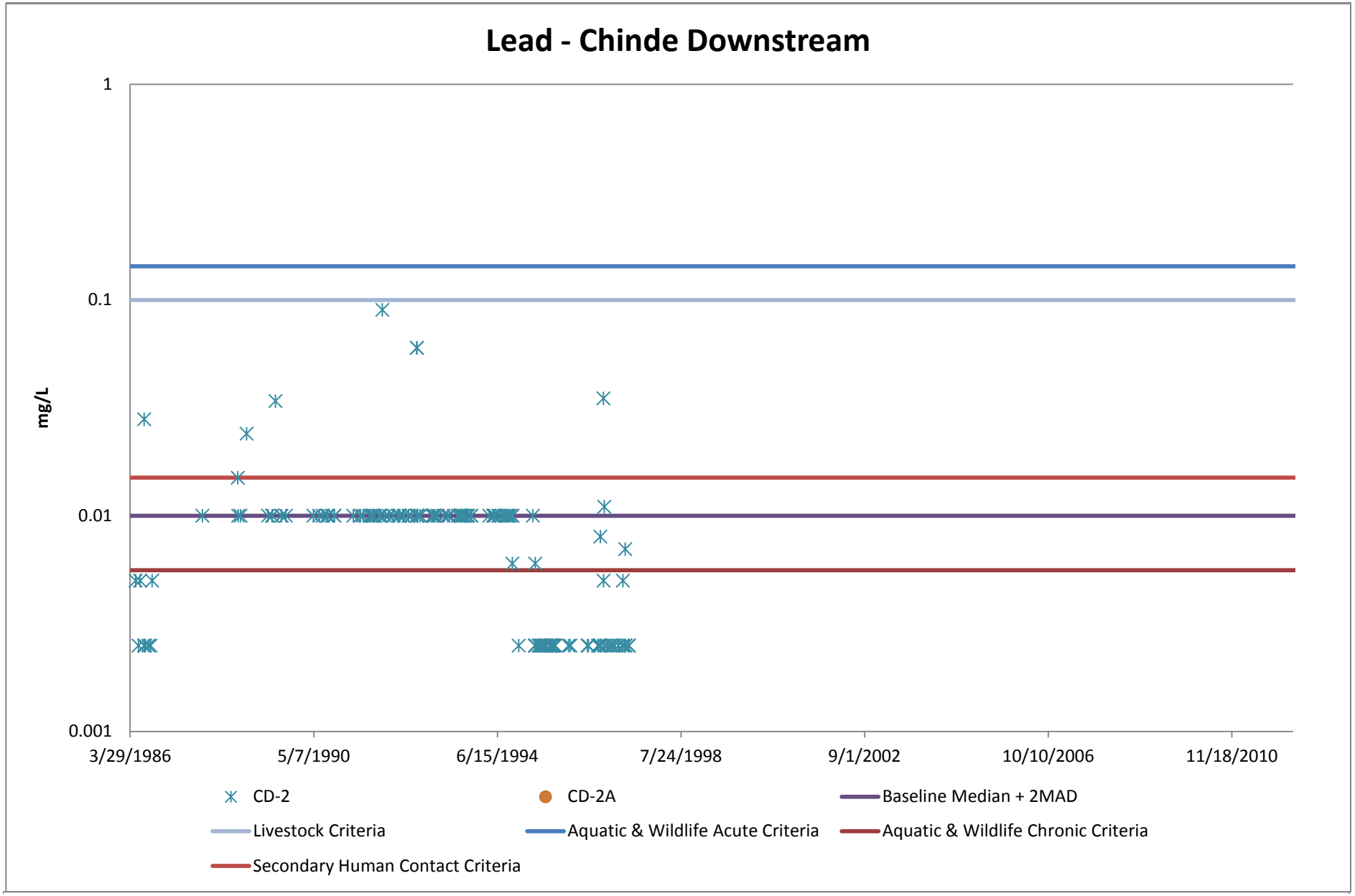

Boron - Chinde Downstream
1000
100
10
1
0.1
0.01
0.001
mg/L
3/29/1986
5/7/1990
6/15/1994
7/24/1998
9/1/2002
10/10/2006
11/18/2010
CD-2
CD-2A
Baseline Median + 2MAD
Livestock Criteria
Secondary Human Contact

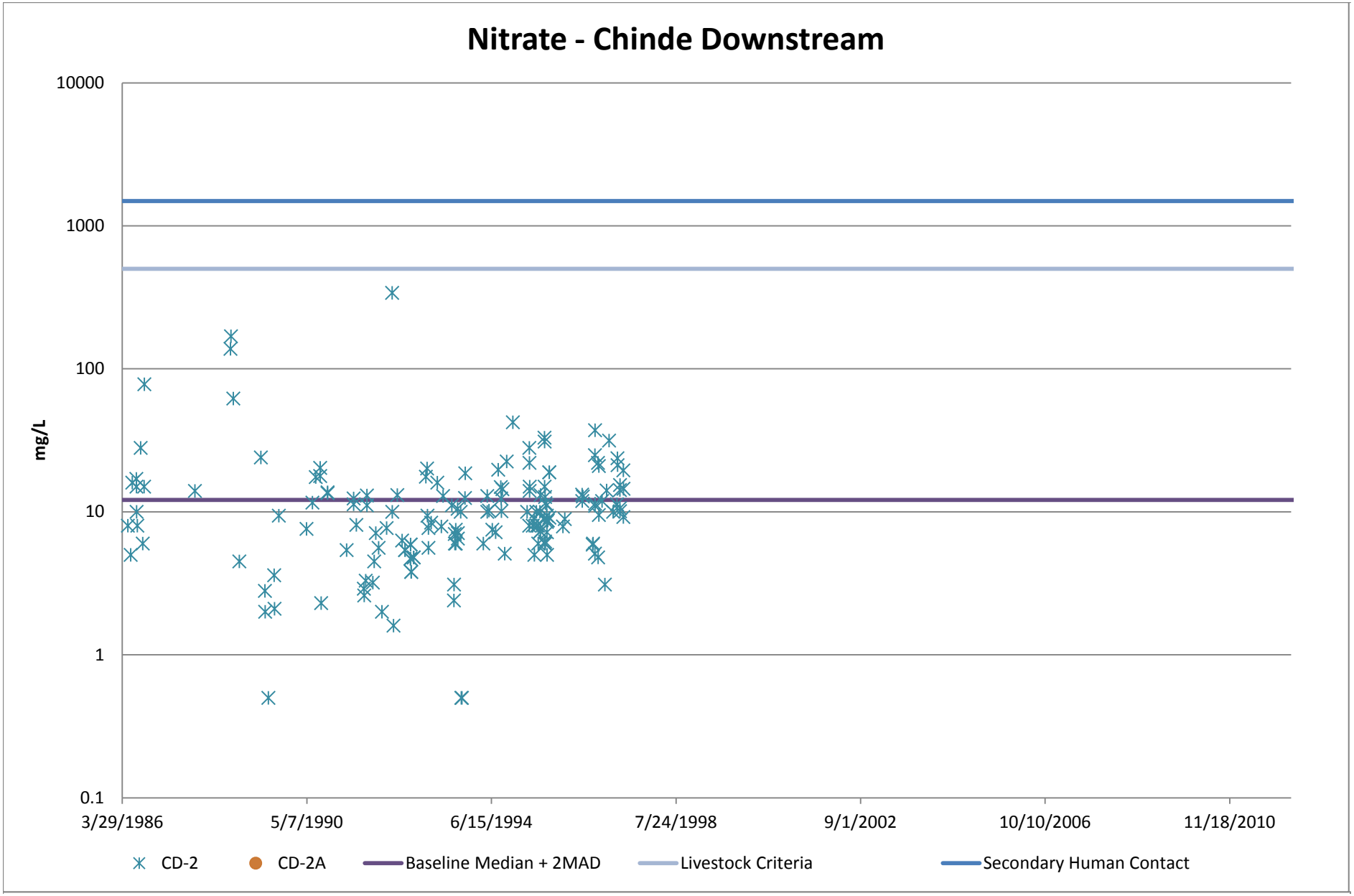

Cadmium - Chinde Downstream
mg/L
1
0.1
0.01
0.001
0.0001
3/29/1986
5/7/1990
6/15/1994
7/24/1998
9/1/2002
10/10/2006
11/18/2010
CD-2
CD-2A
Baseline Median + 2MAD
Livestock Criteria
Aquatic & Wildlife Acute Criteria
Aquatic & Wildlife Chronic Criteria
Secondary Human Contact Criteria
Fish Consumption Criteria

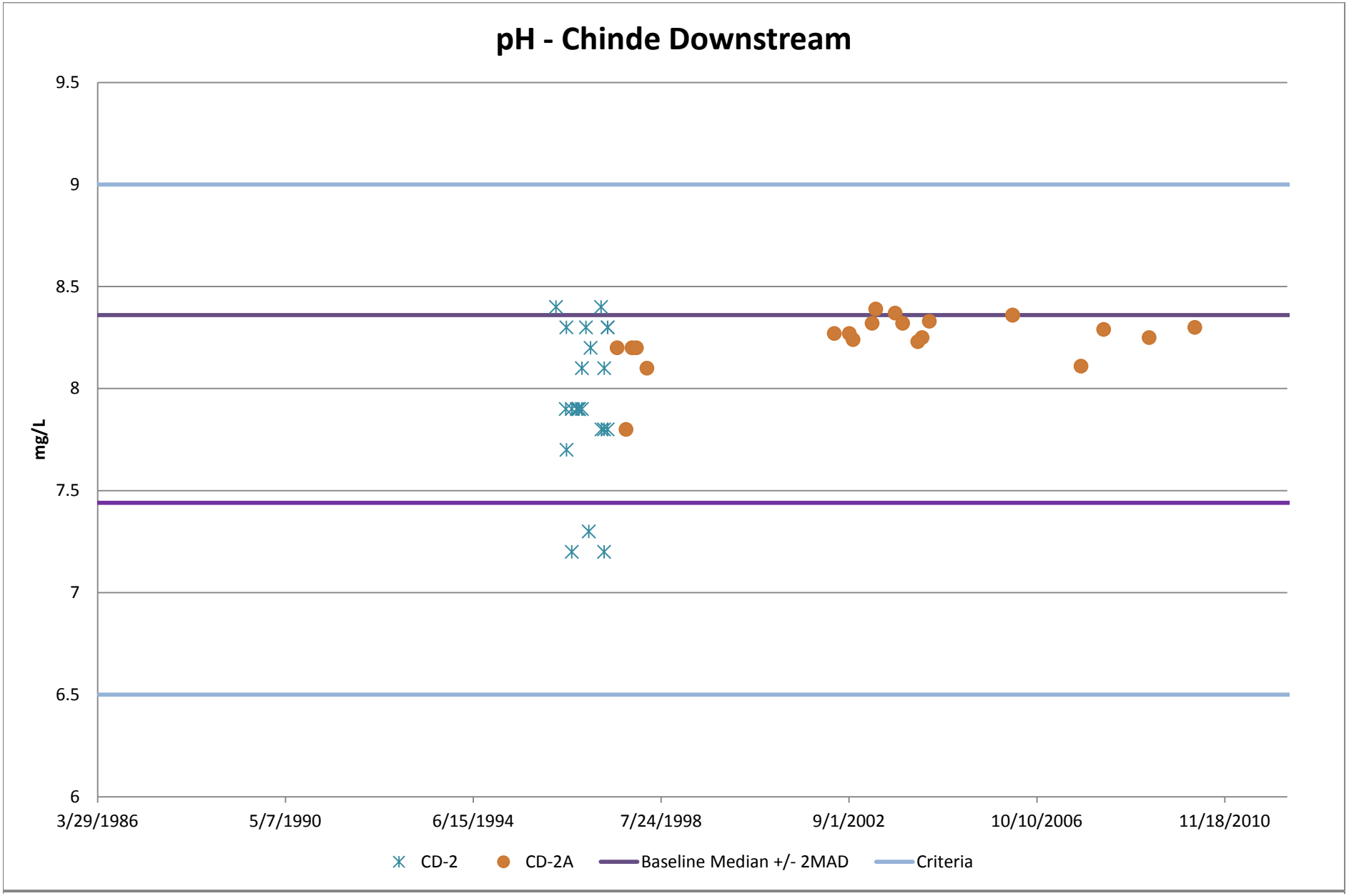

Chloride - Chinde Downstream
10000
1000
100
10
1
mg/L
3/29/1986
5/7/1990
6/15/1994
7/24/1998
9/1/2002
10/10/2006
11/18/2010
CD-2
CD-2A
Baseline Median + 2MAD
Livestock Criteria

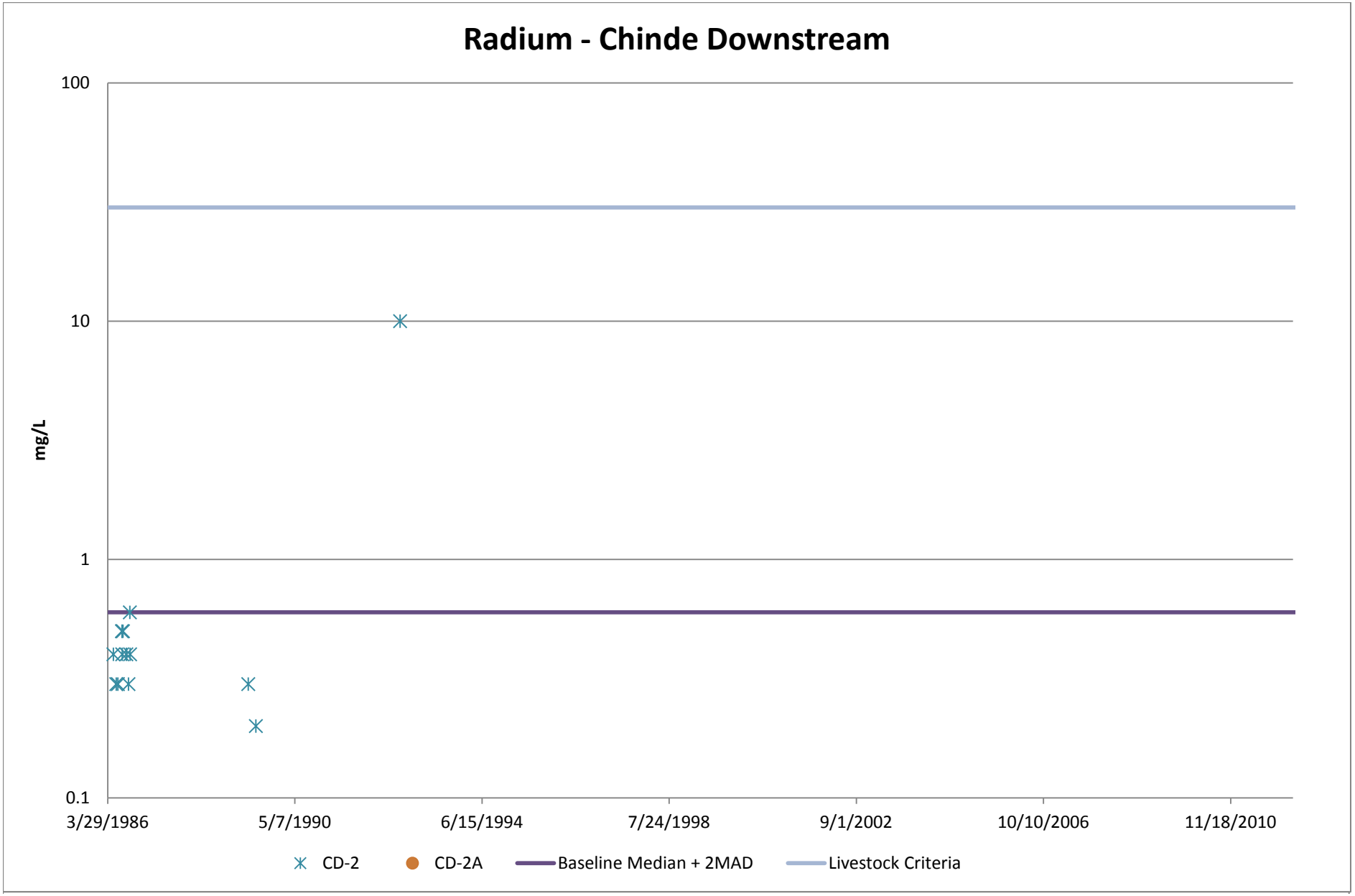

Chromium - Chinde Downstream
mg/L
10
1
0.1
0.01
0.001
0.0001
3/29/1986
5/7/1990
6/15/1994
7/24/1998
9/1/2002
10/10/2006
11/18/2010
CD-2
CD-2A
Baseline Median + 2MAD
Livestock Criteria
Aquatic & Wildlife Acute Criteria
Aquatic and Wildlife Chronic Criteria
Secondary Human Contact Criteria
Fish Consumption Criteria

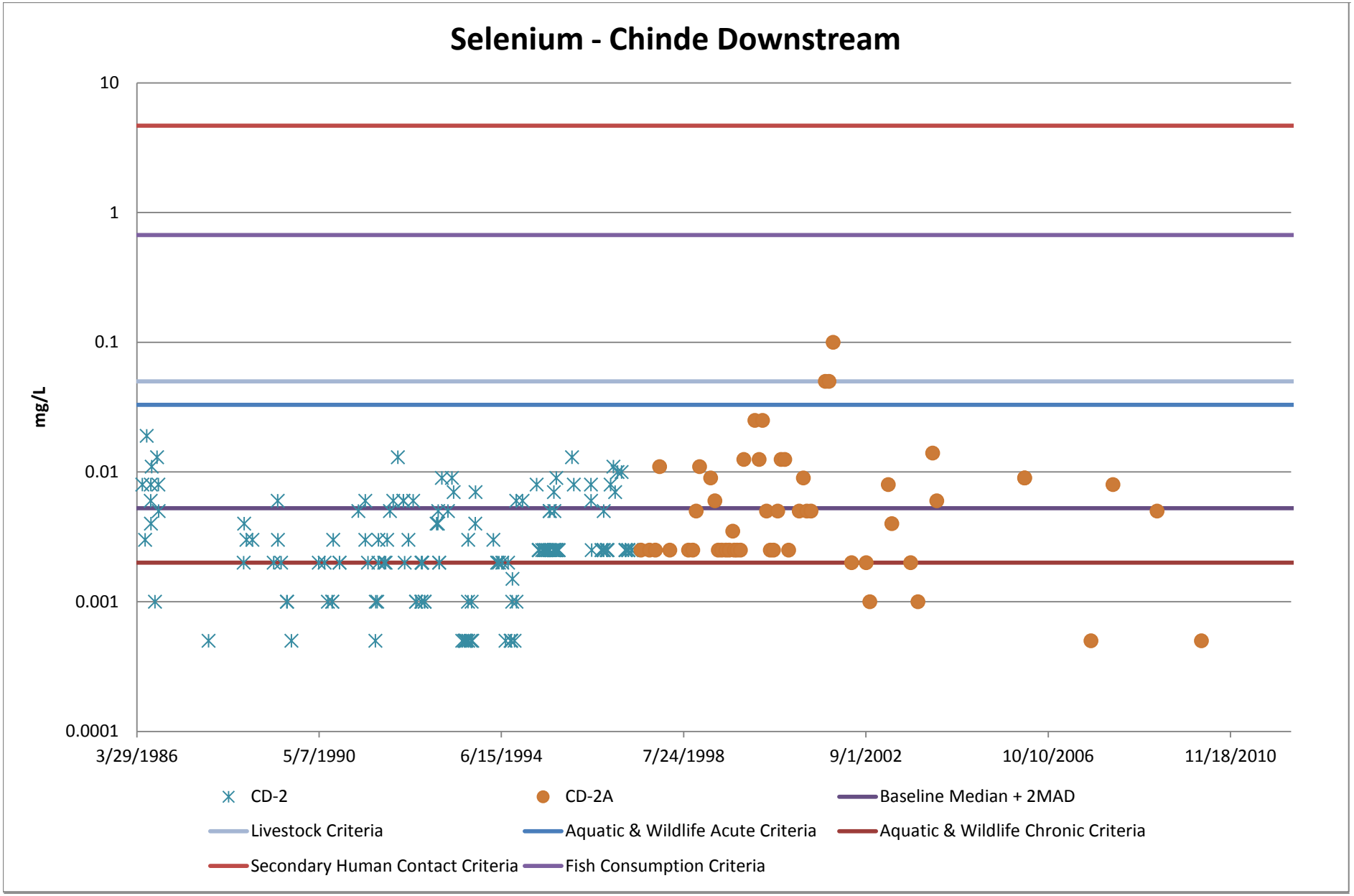

Fluoride - Chinde Downstream
100
10
1
0.1
mg/L
3/29/1986
5/7/1990
6/15/1994
7/24/1998
9/1/2002
10/10/2006
11/18/2010
CD-2
CD-2A
Baseline Median + 2MAD
Livestock Criteria
Secondary Human Contact

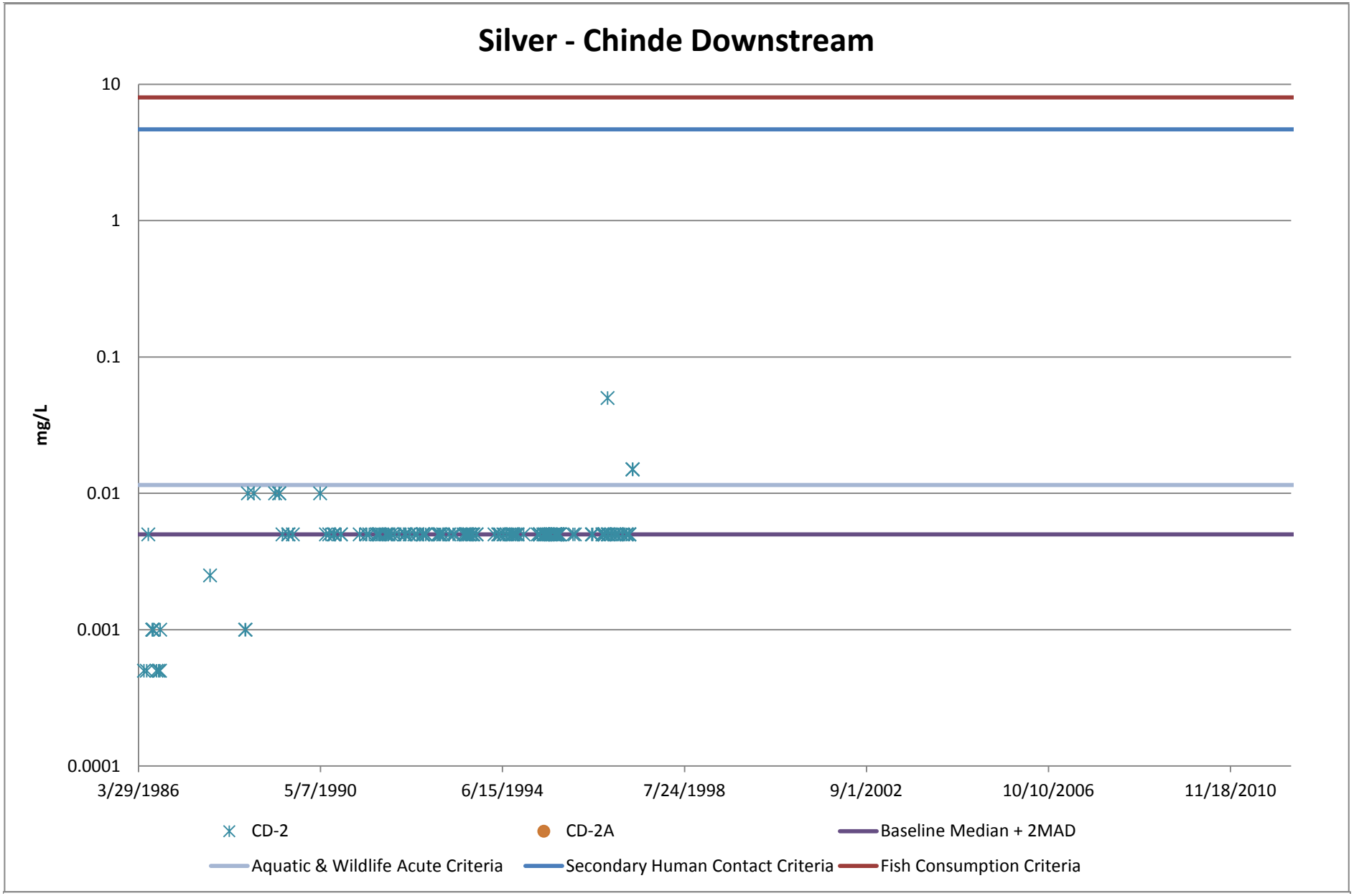

Lead - Chinde Downstream
mg/L
1
0.1
0.01
0.001
3/29/1986
5/7/1990
6/15/1994
7/24/1998
9/1/2002
10/10/2006
11/18/2010
CD-2
CD-2A
Baseline Median + 2MAD
Livestock Criteria
Aquatic & Wildlife Acute Criteria
Aquatic & Wildlife Chronic Criteria
Secondary Human Contact Criteria

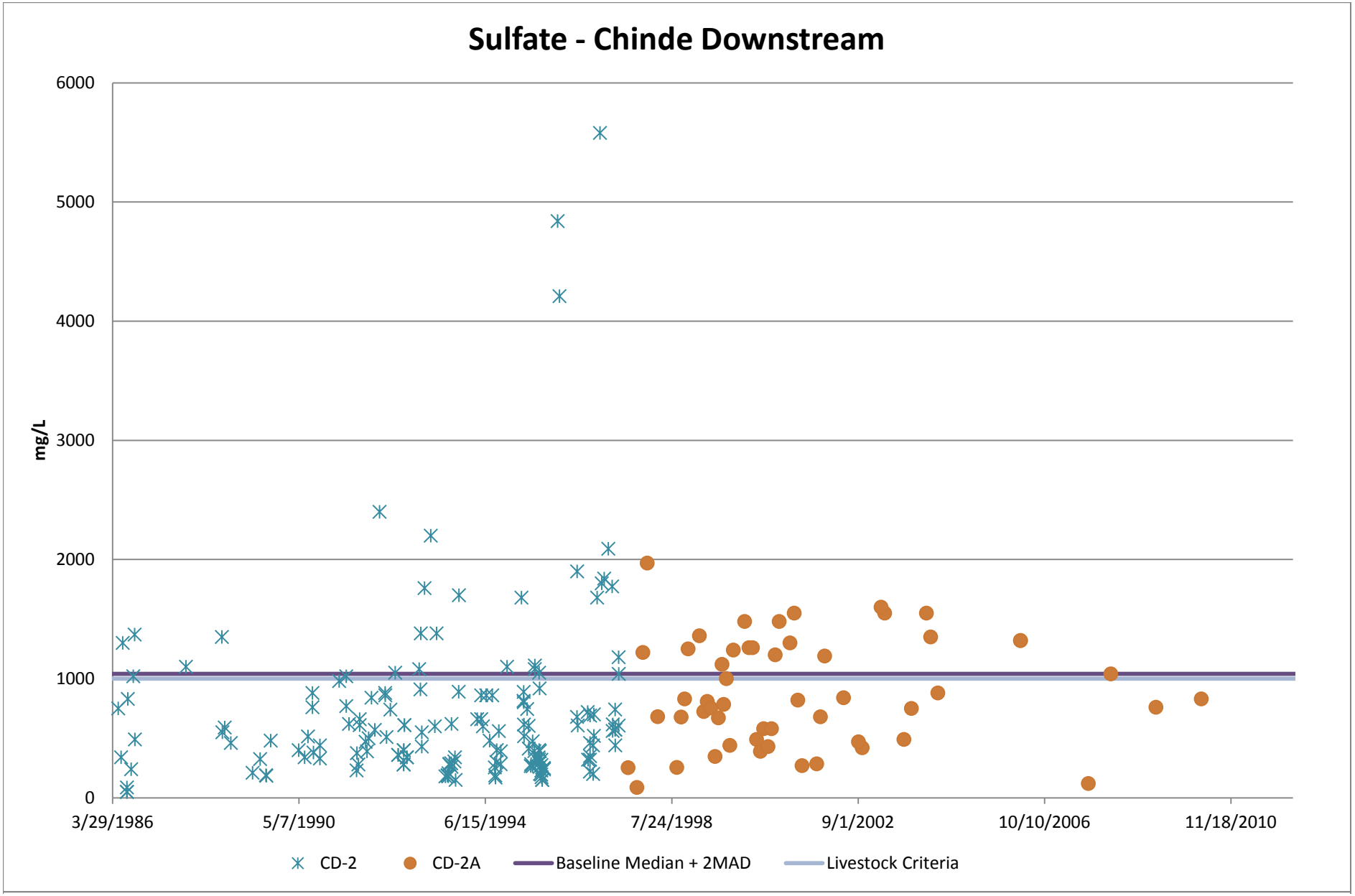

Nitrate - Chinde Downstream
10000
1000
100
10
1
0.1
mg/L
3/29/1986
5/7/1990
6/15/1994
7/24/1998
9/1/2002
10/10/2006
11/18/2010
CD-2
CD-2A
Baseline Median + 2MAD
Livestock Criteria
Secondary Human Contact

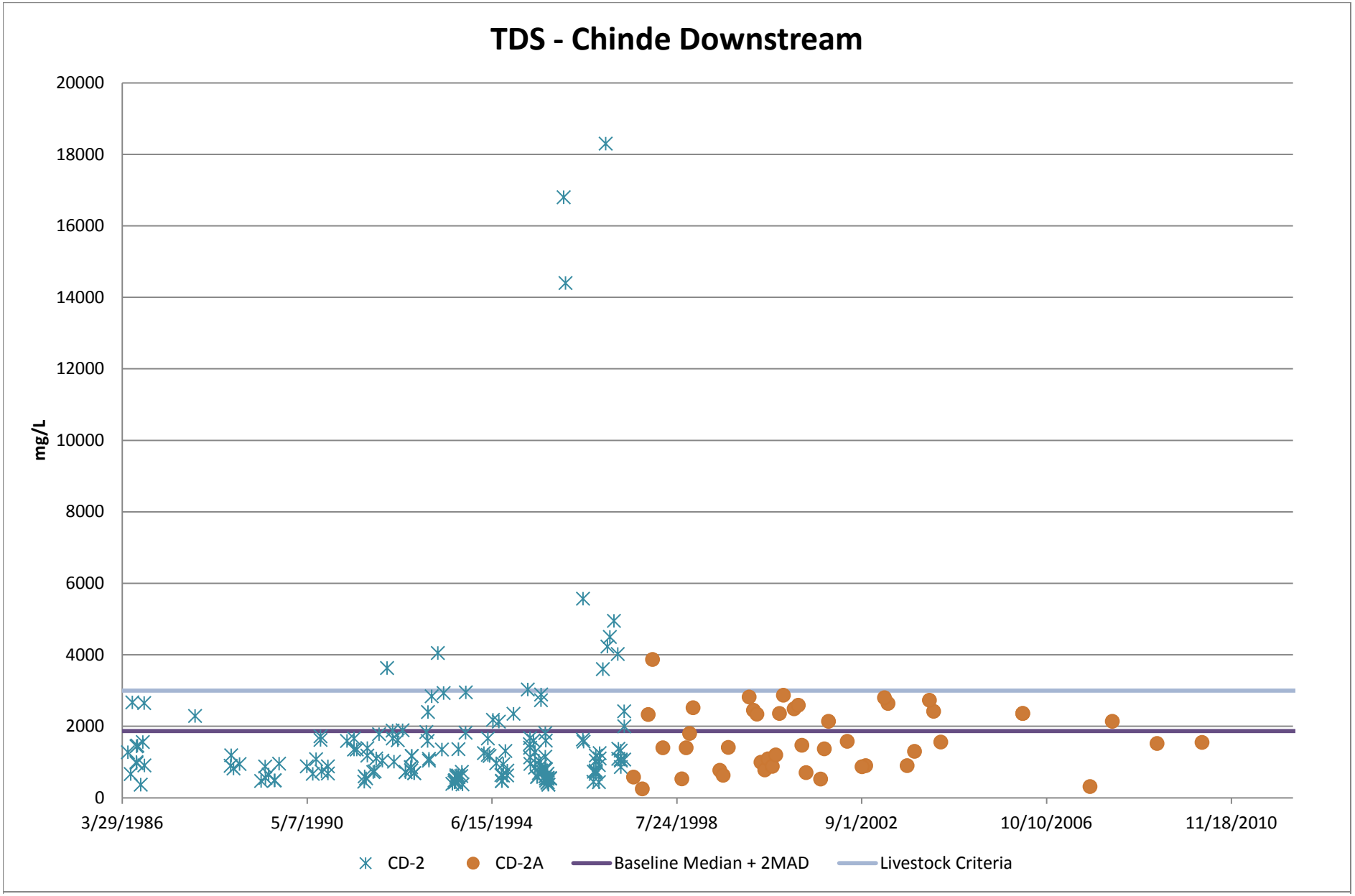

pH - Chinde Downstream
9.5
9
8.5
8
7.5
7
6.5
6
mg/L
3/29/1986
5/7/1990
6/15/1994
7/24/1998
9/1/2002
10/10/2006
11/18/2010
CD-2
CD-2A
Baseline Median +/- 2MAD
Criteria

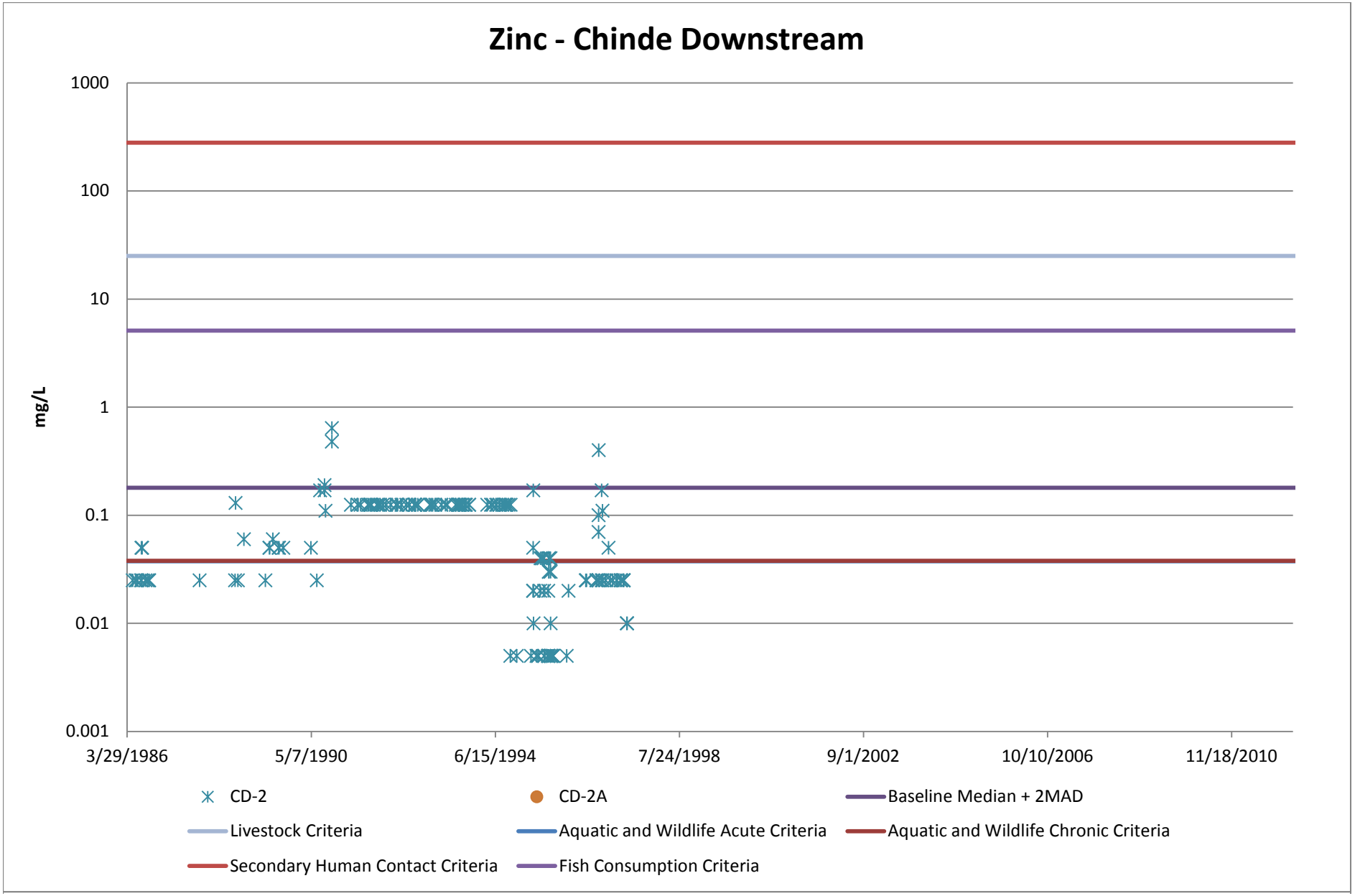

Radium - Chinde Downstream
100
10
1
0.1
mg/L
3/29/1986
5/7/1990
6/15/1994
7/24/1998
9/1/2002
10/10/2006
11/18/2010
CD-2
CD-2A
Baseline Median + 2MAD
Livestock Criteria

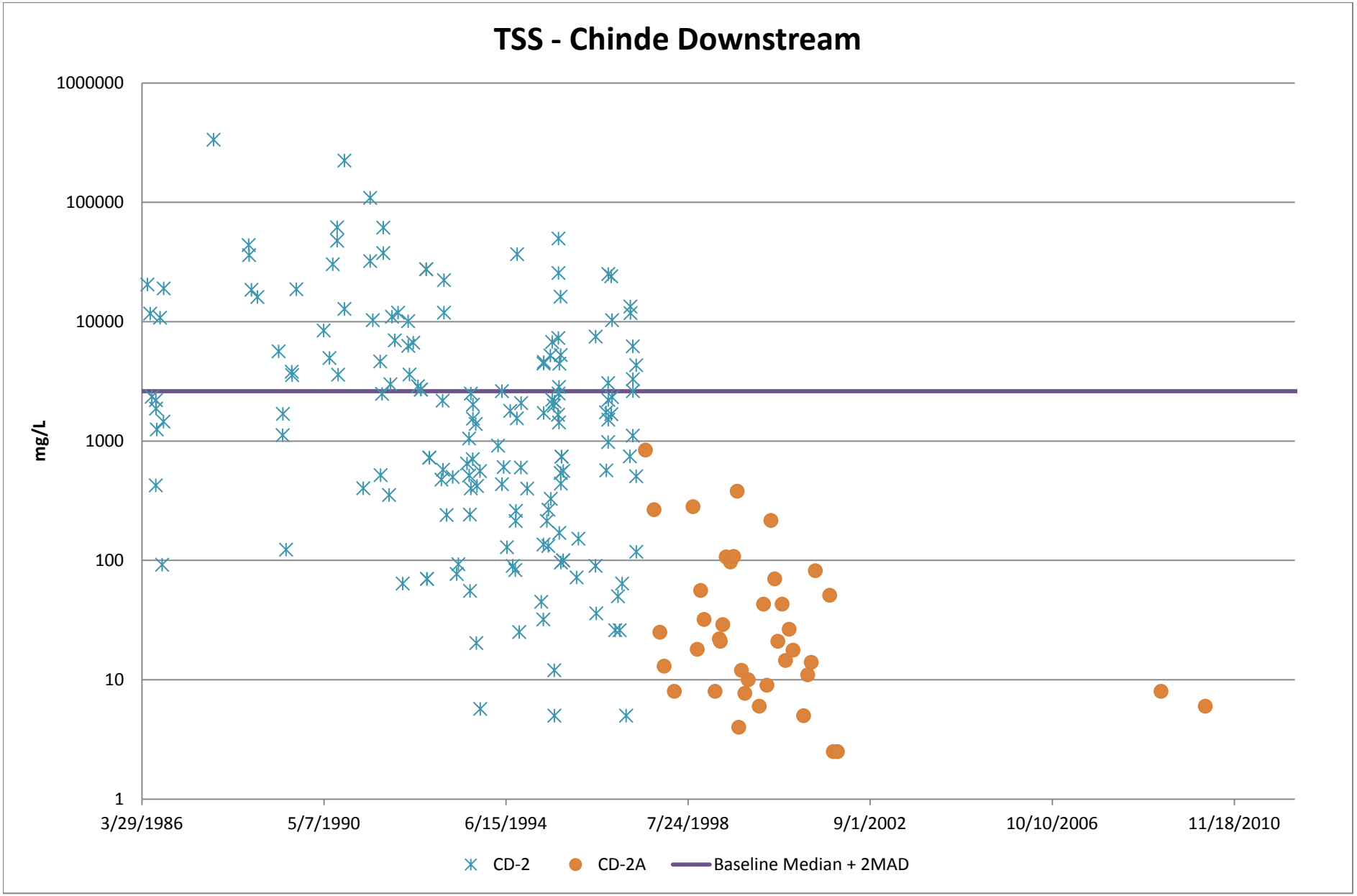

Selenium - Chinde Downstream
mg/L
10
1
0.1
0.01
0.001
0.0001
3/29/1986
5/7/1990
6/15/1994
7/24/1998
9/1/2002
10/10/2006
11/18/2010
CD-2
CD-2A
Baseline Median + 2MAD
Livestock Criteria
Aquatic & Wildlife Acute Criteria
Aquatic & Wildlife Chronic Criteria
Secondary Human Contact Criteria
Fish Consumption Criteria

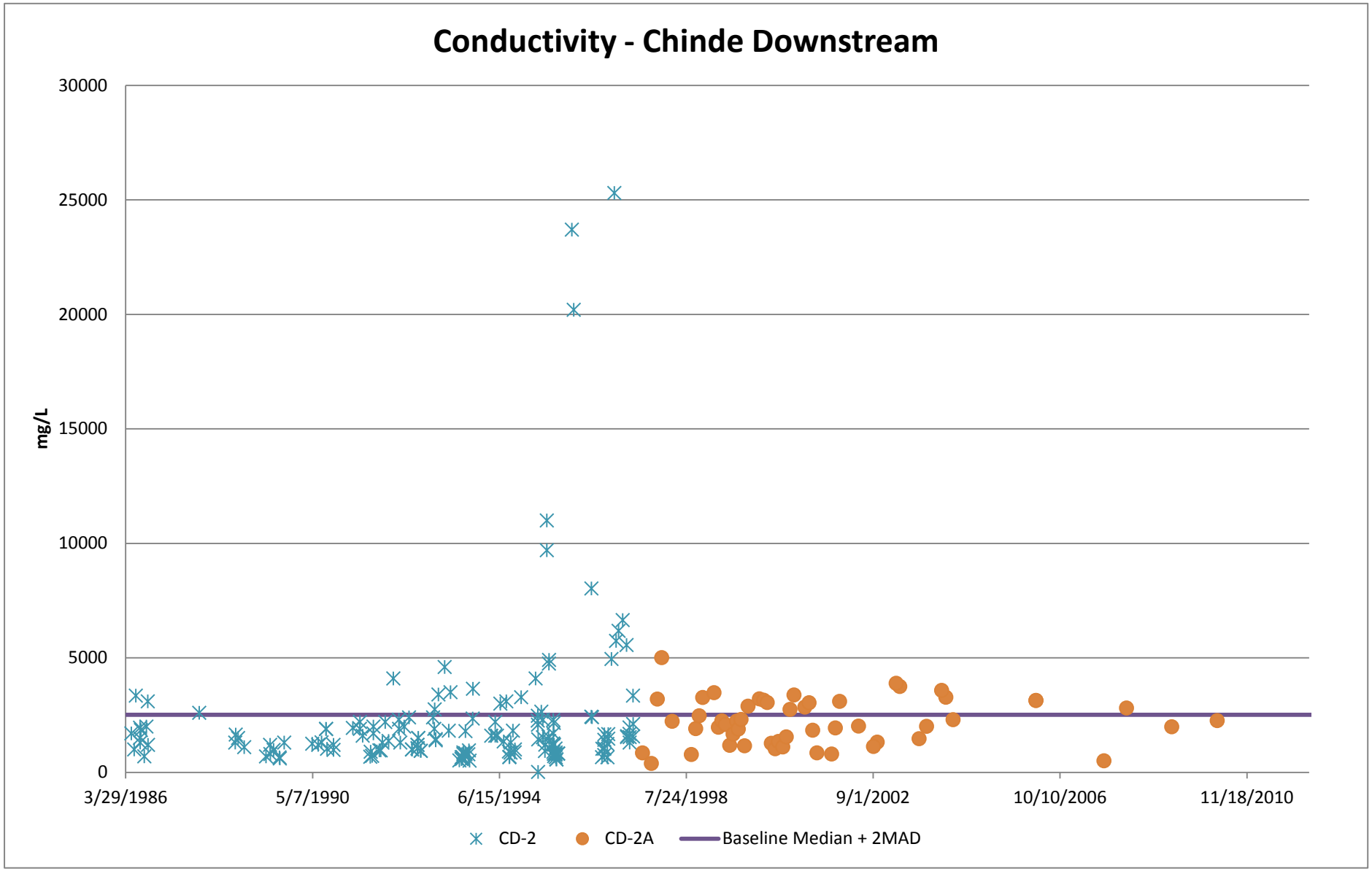

Silver - Chinde Downstream
mg/L
10
1
0.1
0.01
0.001
0.0001
3/29/1986
5/7/1990
6/15/1994
7/24/1998
9/1/2002
10/10/2006
11/18/2010
CD-2
CD-2A
Baseline Median + 2MAD
Aquatic & Wildlife Acute Criteria
Secondary Human Contact Criteria
Fish Consumption Criteria

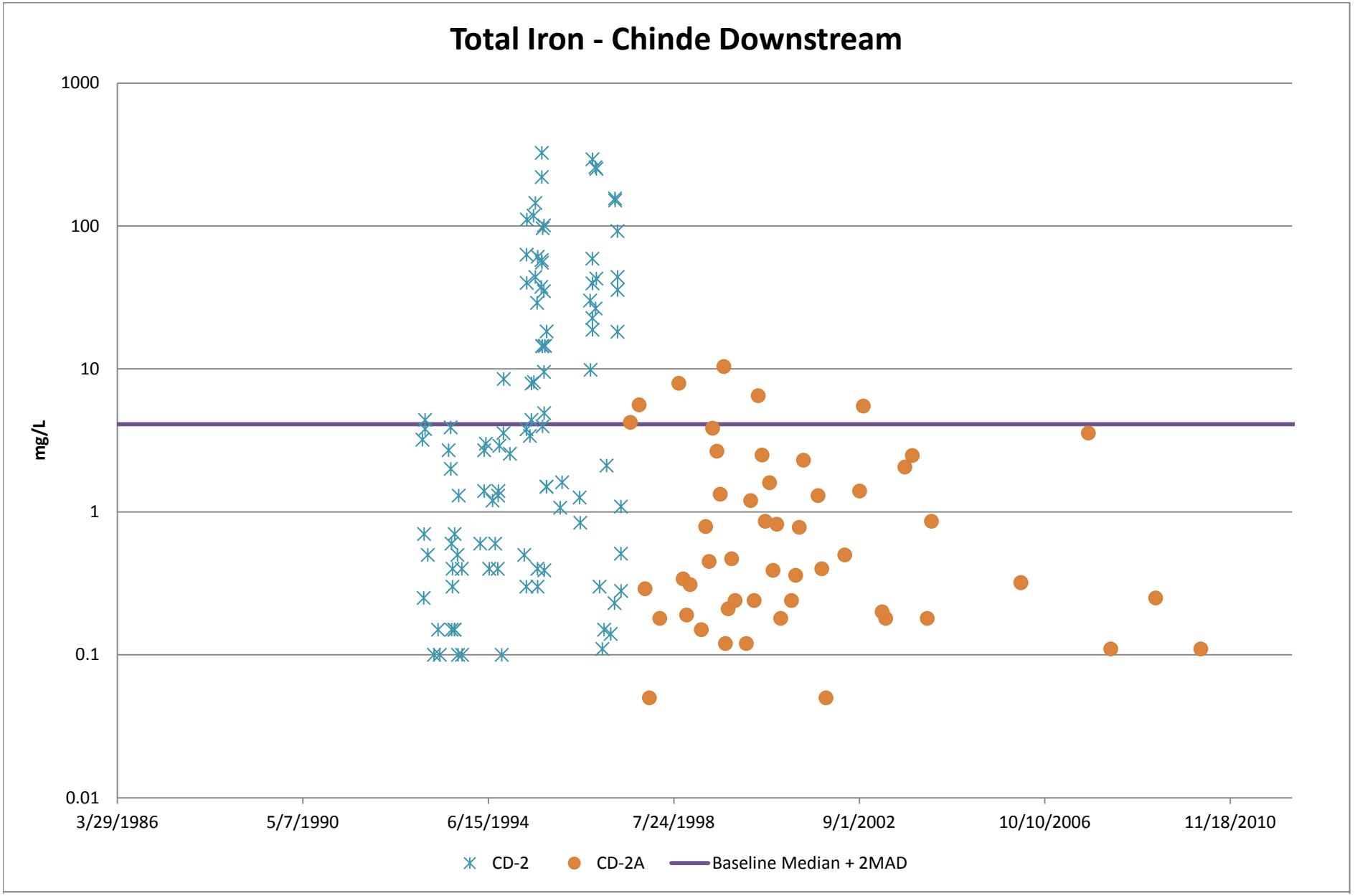

Sulfate - Chinde Downstream
mg/L
6000
5000
4000
3000
2000
1000
0
3/29/1986
5/7/1990
6/15/1994
7/24/1998
9/1/2002
10/10/2006
11/18/2010
CD-2
CD-2A
Baseline Median + 2MAD
Livestock Criteria

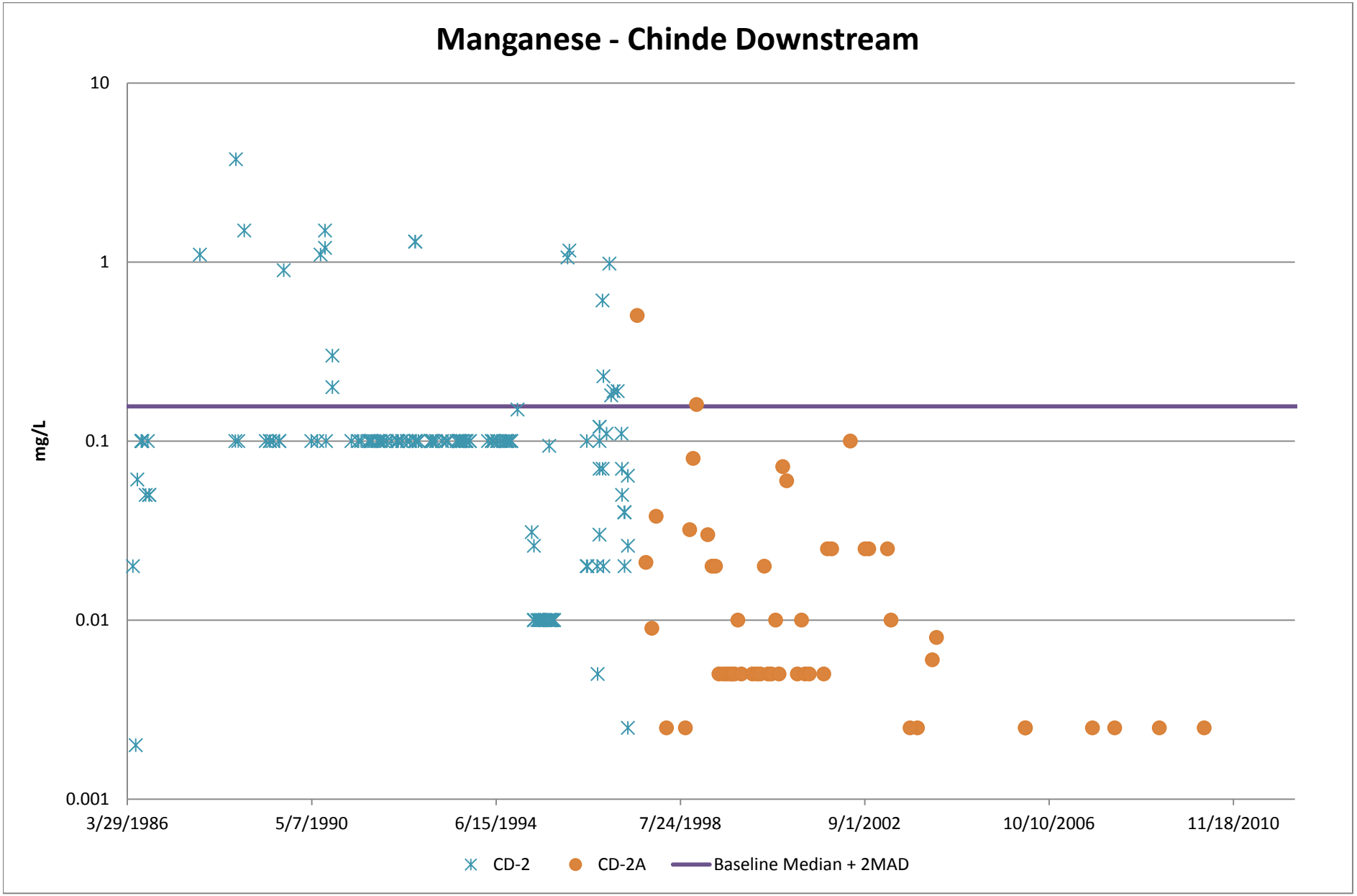

TDS - Chinde Downstream
mg/L
20000
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
3/29/1986
5/7/1990
6/15/1994
7/24/1998
9/1/2002
10/10/2006
11/18/2010
CD-2
CD-2A
Baseline Median + 2MAD
Livestock Criteria

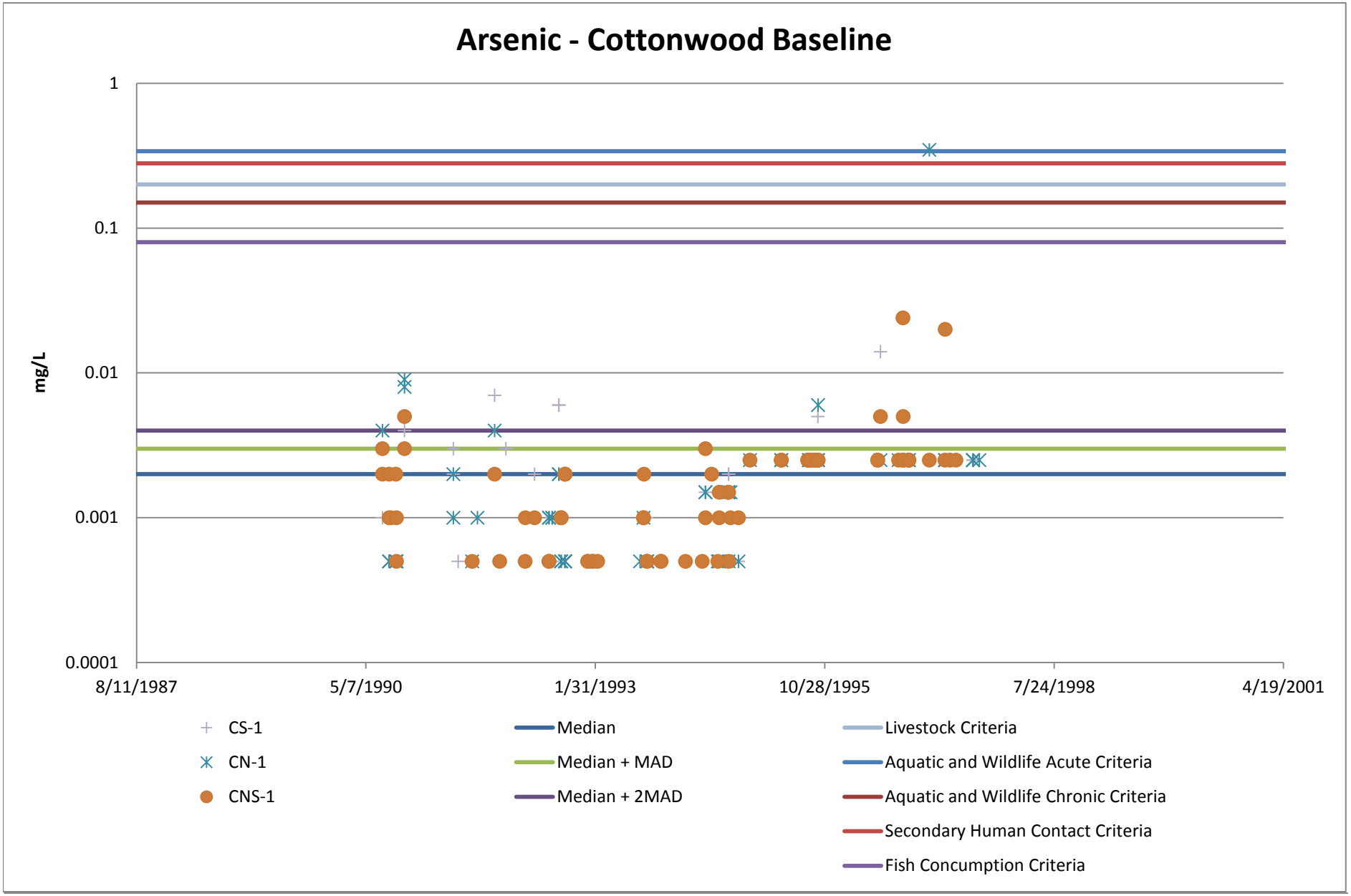

Zinc - Chinde Downstream
mg/L
1000
100
10
1
0.1
0.01
0.001
3/29/1986
5/7/1990
6/15/1994
7/24/1998
9/1/2002
10/10/2006
11/18/2010
CD-2
CD-2A
Baseline Median + 2MAD
Livestock Criteria
Aquatic and Wildlife Acute Criteria
Aquatic and Wildlife Chronic Criteria
Secondary Human Contact Criteria
Fish Consumption Criteria

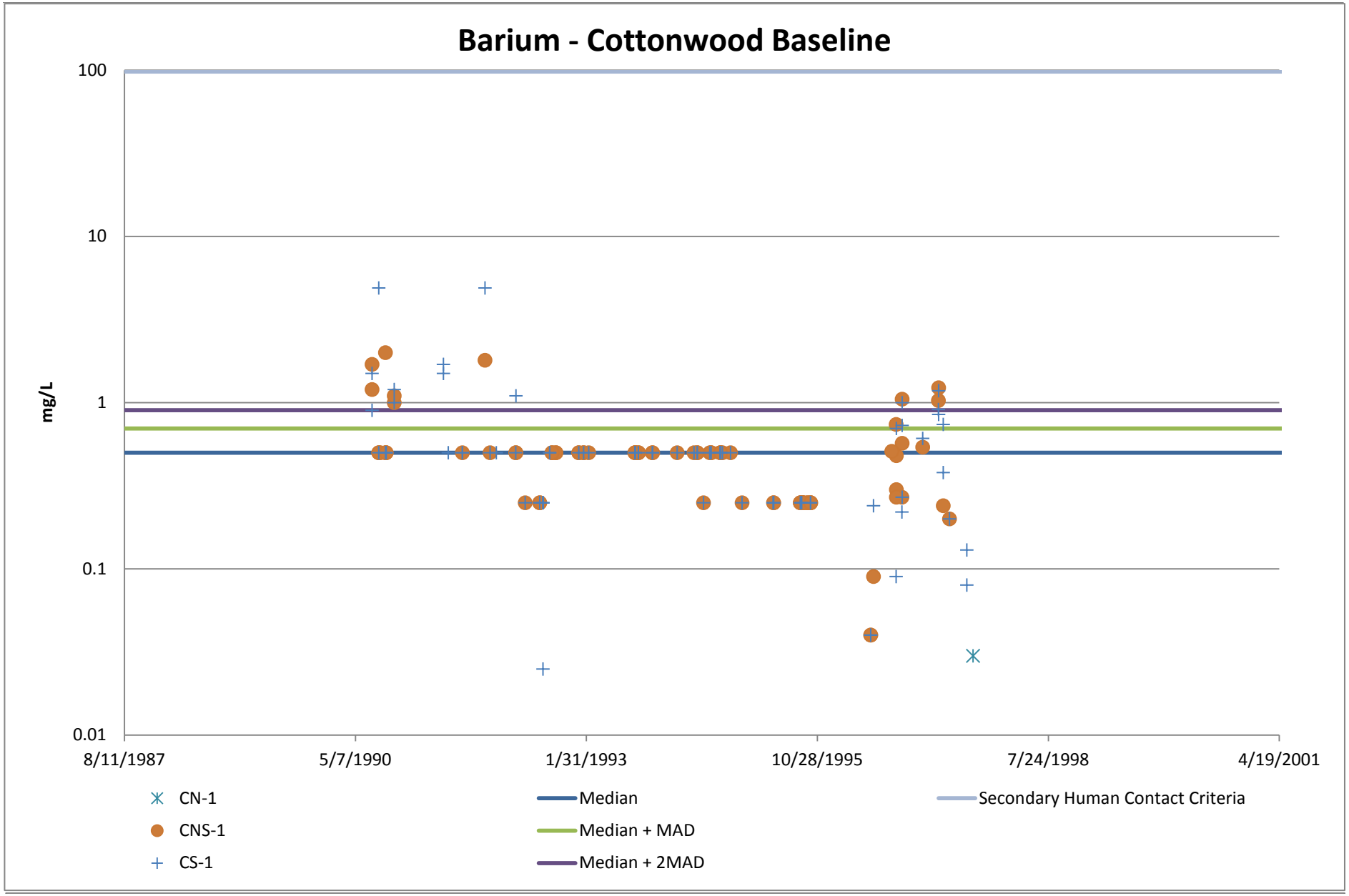

TSS - Chinde Downstream
mg/L
1000000
100000
10000
1000
100
10
1
3/29/1986
5/7/1990
6/15/1994
7/24/1998
9/1/2002
10/10/2006
11/18/2010
CD-2
CD-2A
Baseline Median + 2MAD

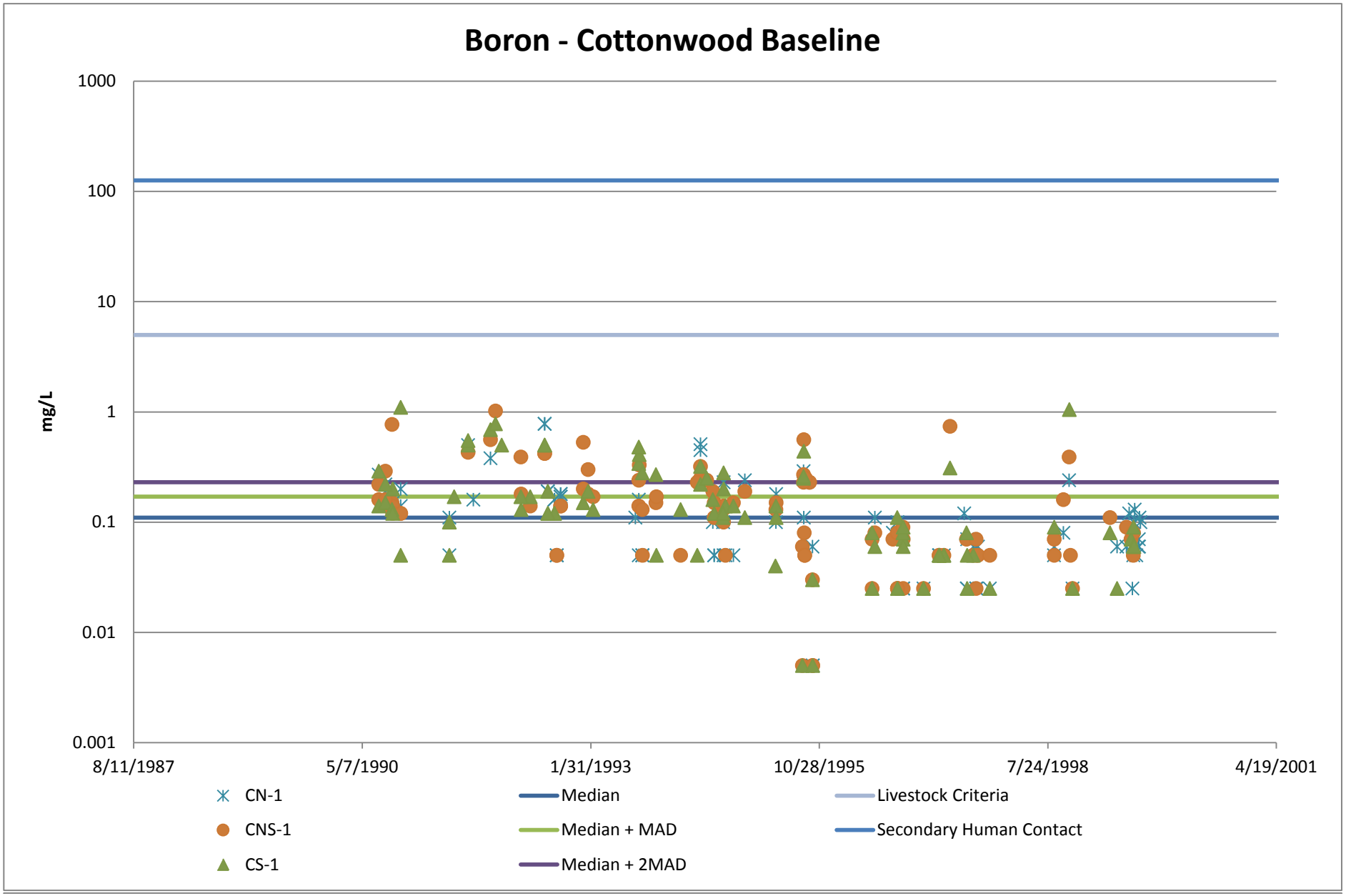

Conductivity - Chinde Downstream
mg/L
30000
25000
20000
15000
10000
5000
0
3/29/1986
5/7/1990
6/15/1994
7/24/1998
9/1/2002
10/10/2006
11/18/2010
CD-2
CD-2A
Baseline Median + 2MAD

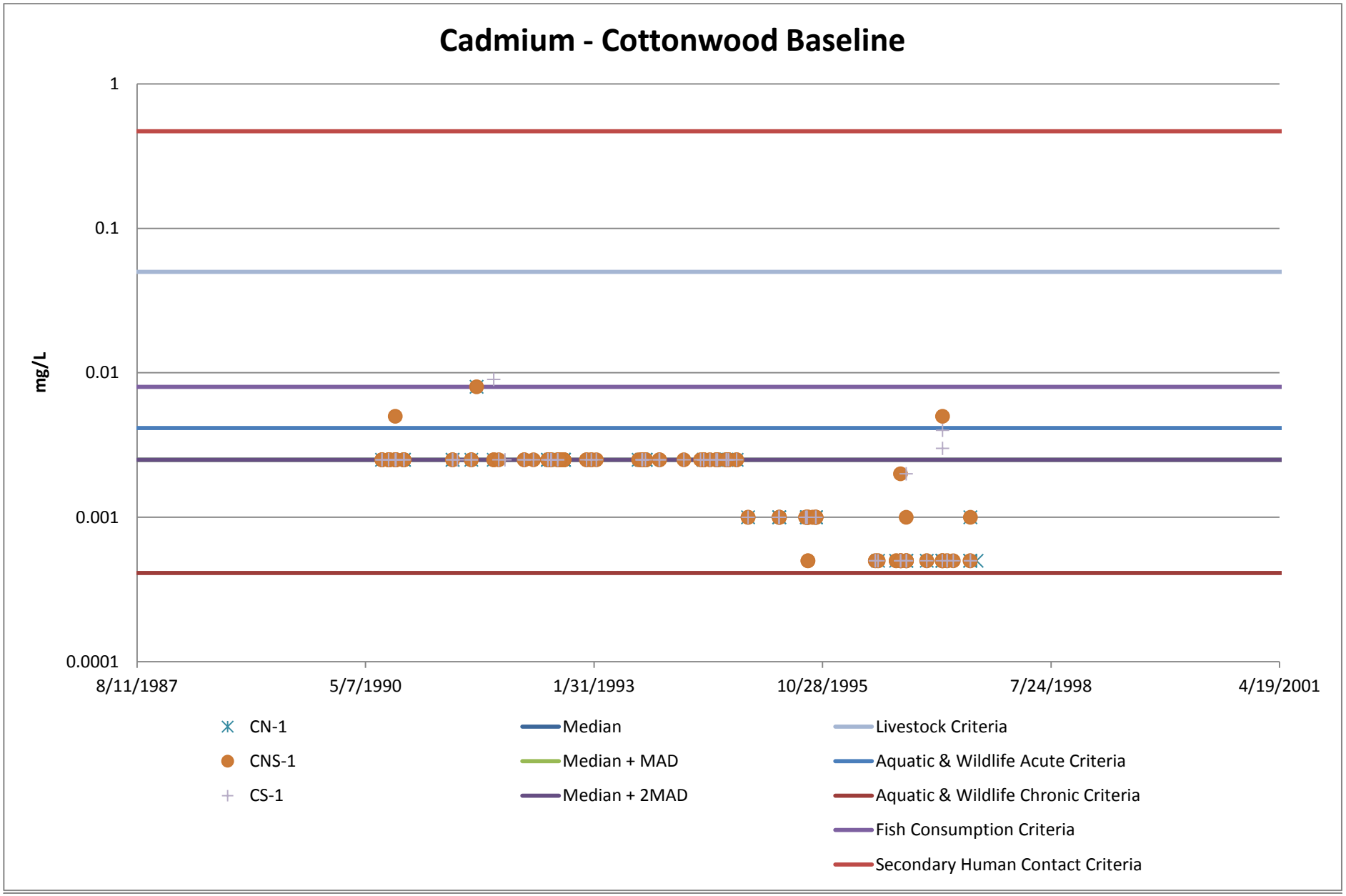

Total Iron - Chinde Downstream
1000
100
10
1
0.1
0.01
mg/L
3/29/1986
5/7/1990
6/15/1994
7/24/1998
9/1/2002
10/10/2006
11/18/2010
CD-2
CD-2A
Baseline Median + 2MAD

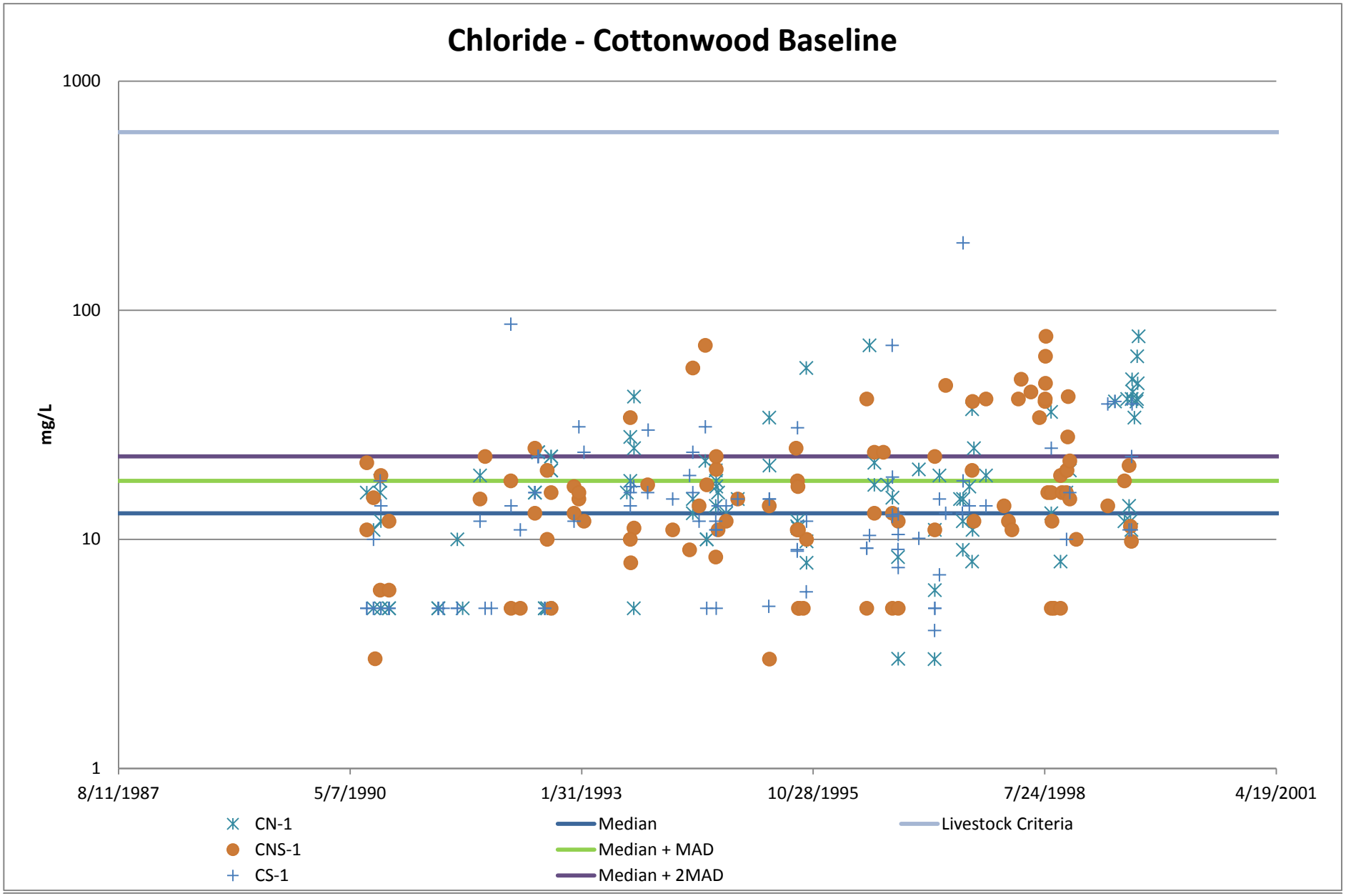

Manganese - Chinde Downstream
10
1
0.1
0.01
0.001
mg/L
3/29/1986
5/7/1990
6/15/1994
7/24/1998
9/1/2002
10/10/2006
11/18/2010
CD-2
CD-2A
Baseline Median + 2MAD

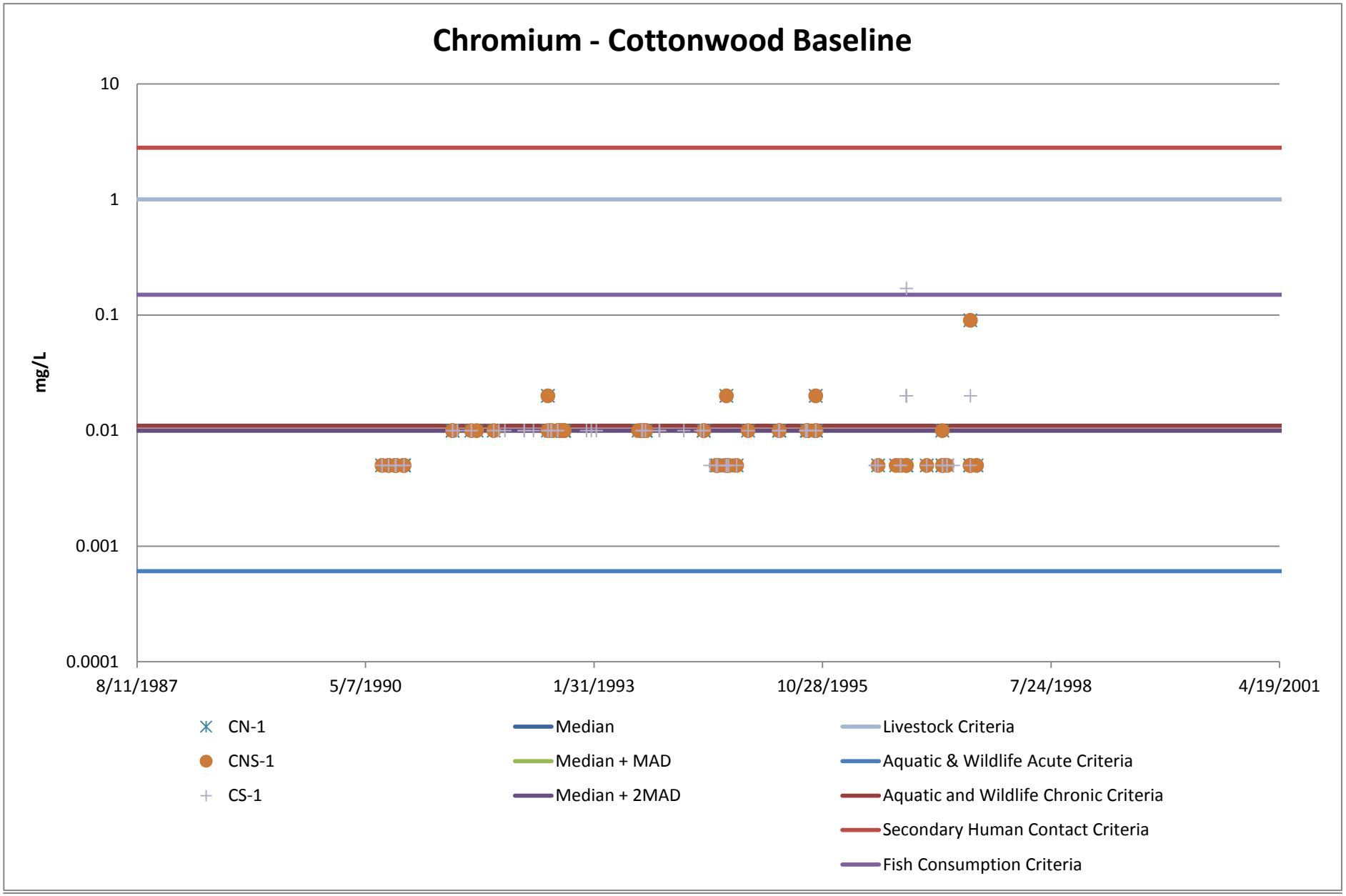

Arsenic - Cottonwood Baseline
mg/L
1
0.1
0.01
0.001
0.0001
8/11/1987
5/7/1990
1/31/1993
10/28/1995
7/24/1998
4/19/2001
CS-1
CN-1
CNS-1
Median
Median + MAD
Median + 2MAD
Livestock Criteria
Aquatic and Wildlife Acute Criteria
Aquatic and Wildlife Chronic Criteria
Secondary Human Contact Criteria
Fish Concumption Criteria

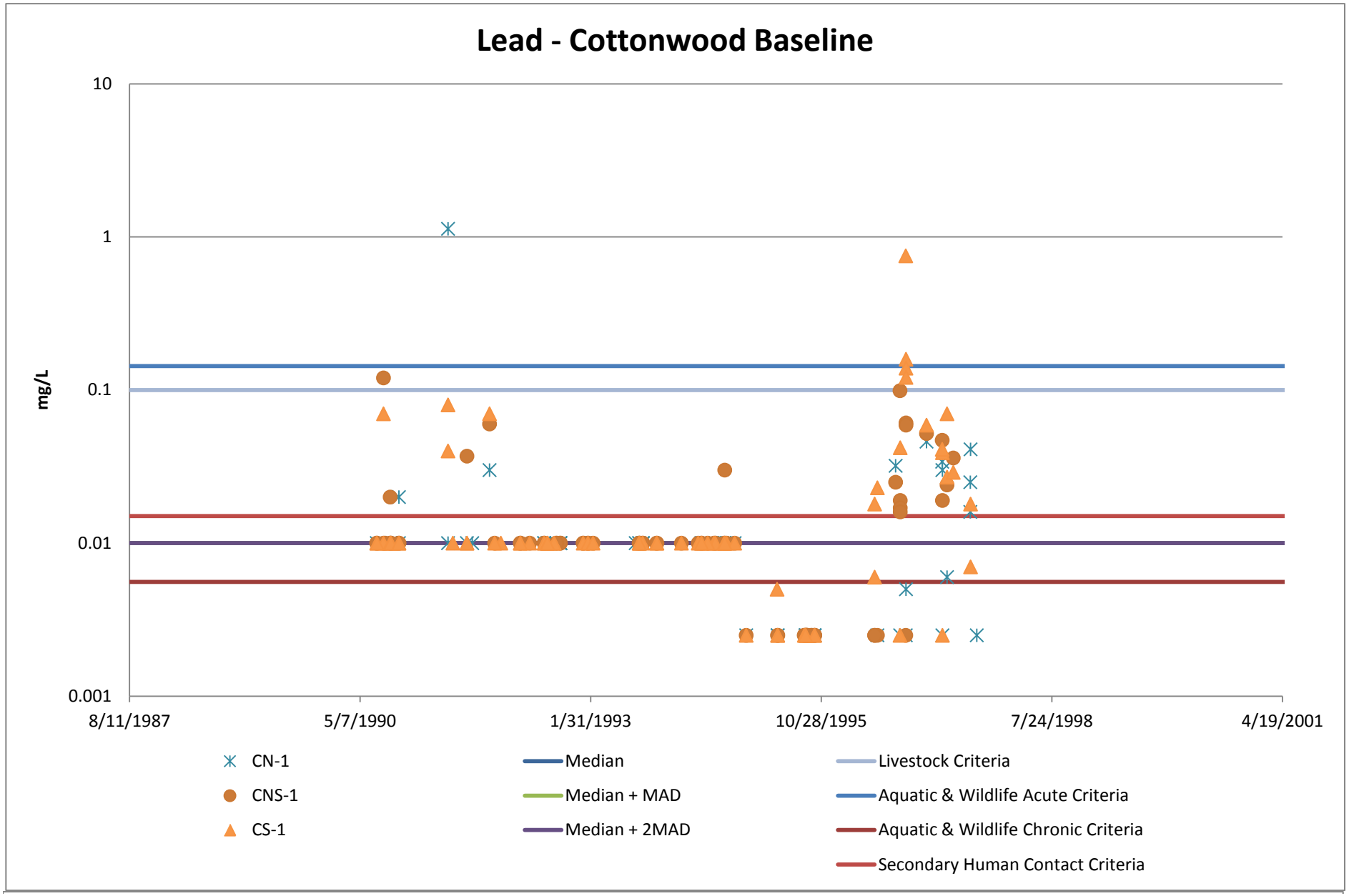

Barium - Cottonwood Baseline
100
10
1
0.1
0.01
mg/L
8/11/1987
5/7/1990
1/31/1993
10/28/1995
7/24/1998
4/19/2001
CN-1
CNS-1
CS-1
Median
Median + MAD
Median + 2MAD
Secondary Human Contact Criteria

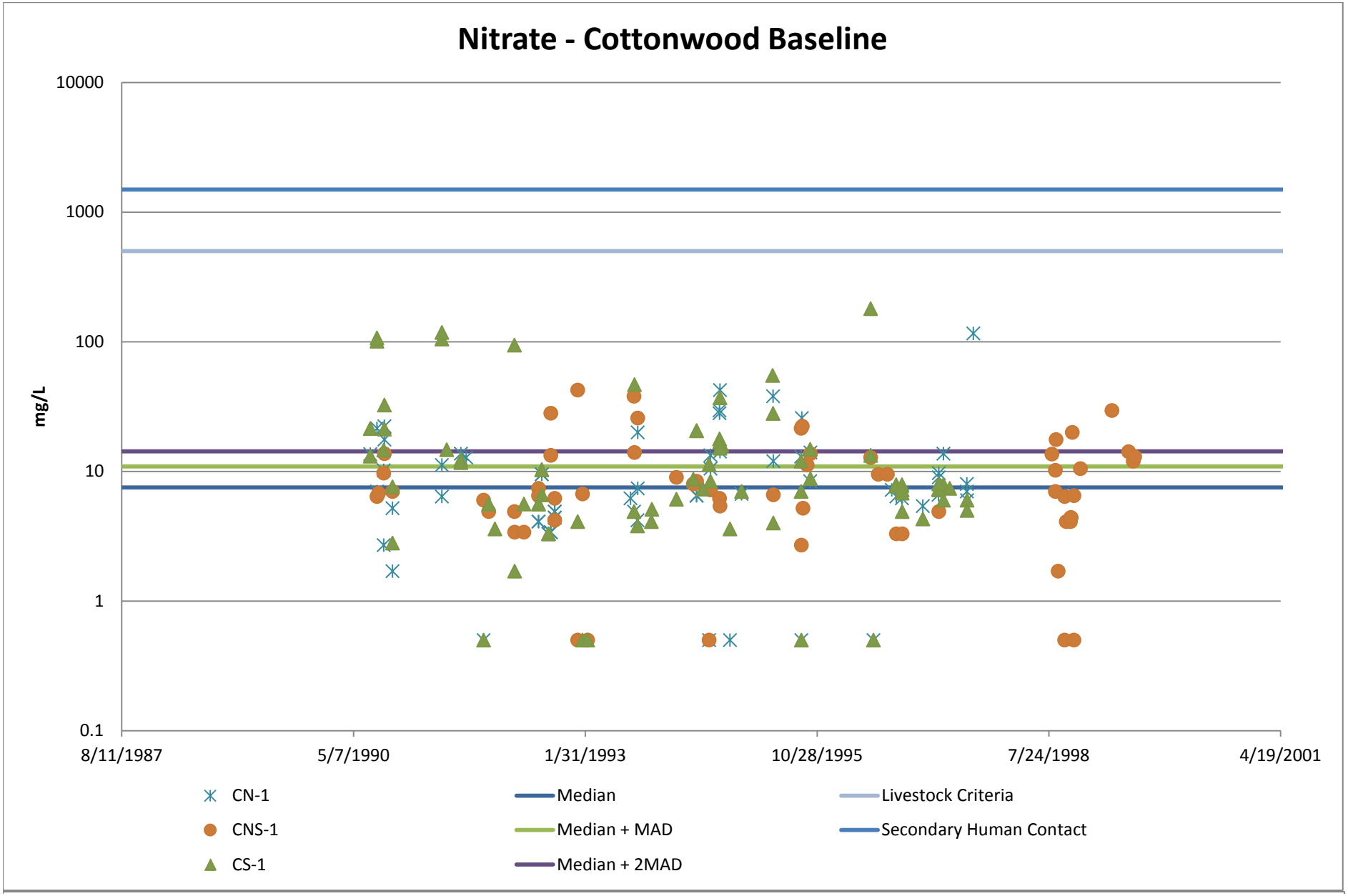

Boron - Cottonwood Baseline
mg/L
1000
100
10
1
0.1
0.01
0.001
8/11/1987
5/7/1990
1/31/1993
10/28/1995
7/24/1998
4/19/2001
CN-1
CNS-1
CS-1
Median
Median + MAD
Median + 2MAD
Livestock Criteria
Secondary Human Contact

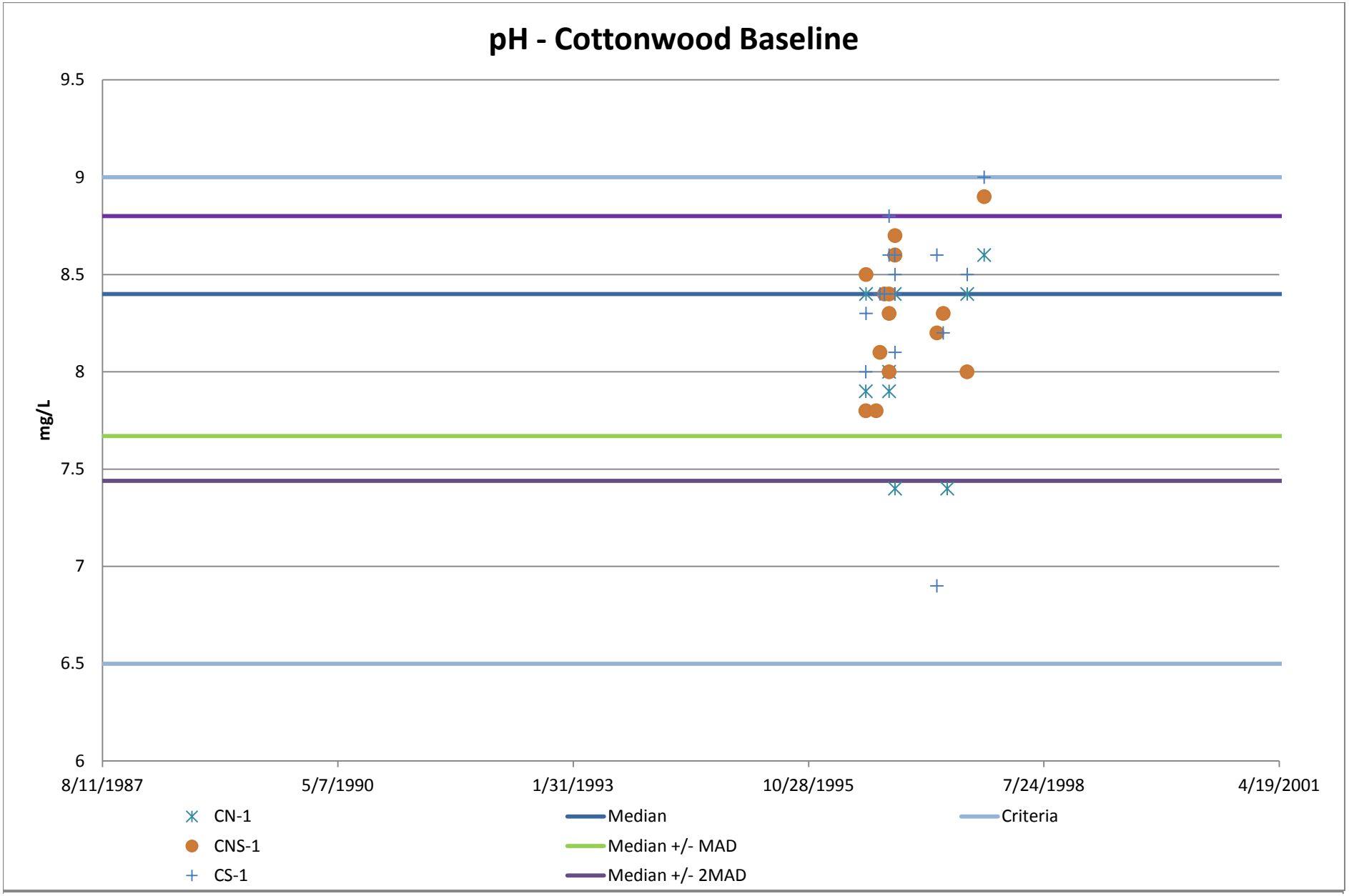

Cadmium - Cottonwood Baseline
mg/L
1
0.1
0.01
0.001
0.0001
8/11/1987
5/7/1990
1/31/1993
10/28/1995
7/24/1998
4/19/2001
CN-1
CNS-1
CS-1
Median
Median + MAD
Median + 2MAD
Livestock Criteria
Aquatic & Wildlife Acute Criteria
Aquatic & Wildlife Chronic Criteria
Fish Consumption Criteria
Secondary Human Contact Criteria

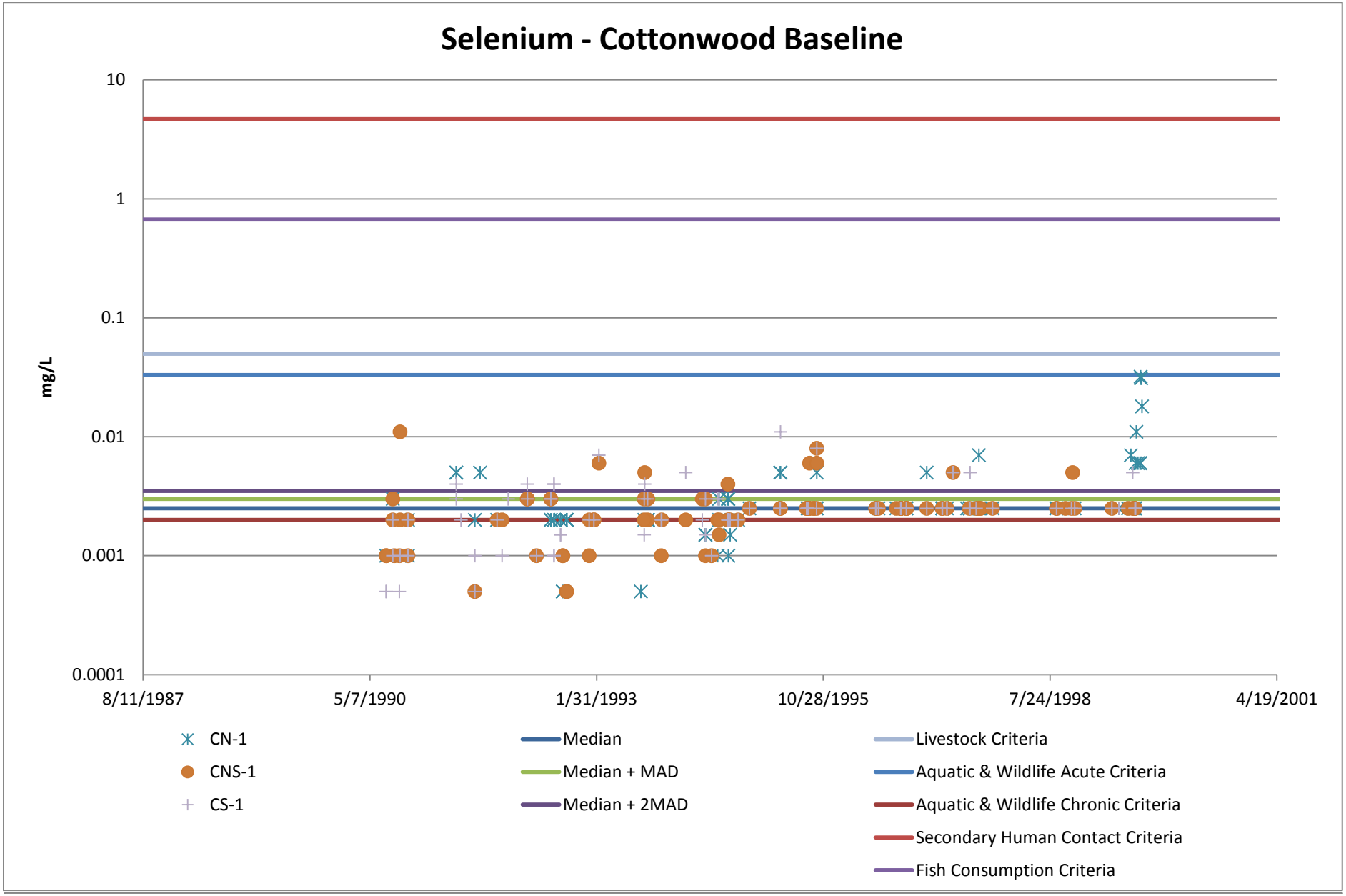

Chloride - Cottonwood Baseline
1000
100
10
1
mg/L
8/11/1987
5/7/1990
1/31/1993
10/28/1995
7/24/1998
4/19/2001
CN-1
CNS-1
CS-1
Median
Median + MAD
Median + 2MAD
Livestock Criteria

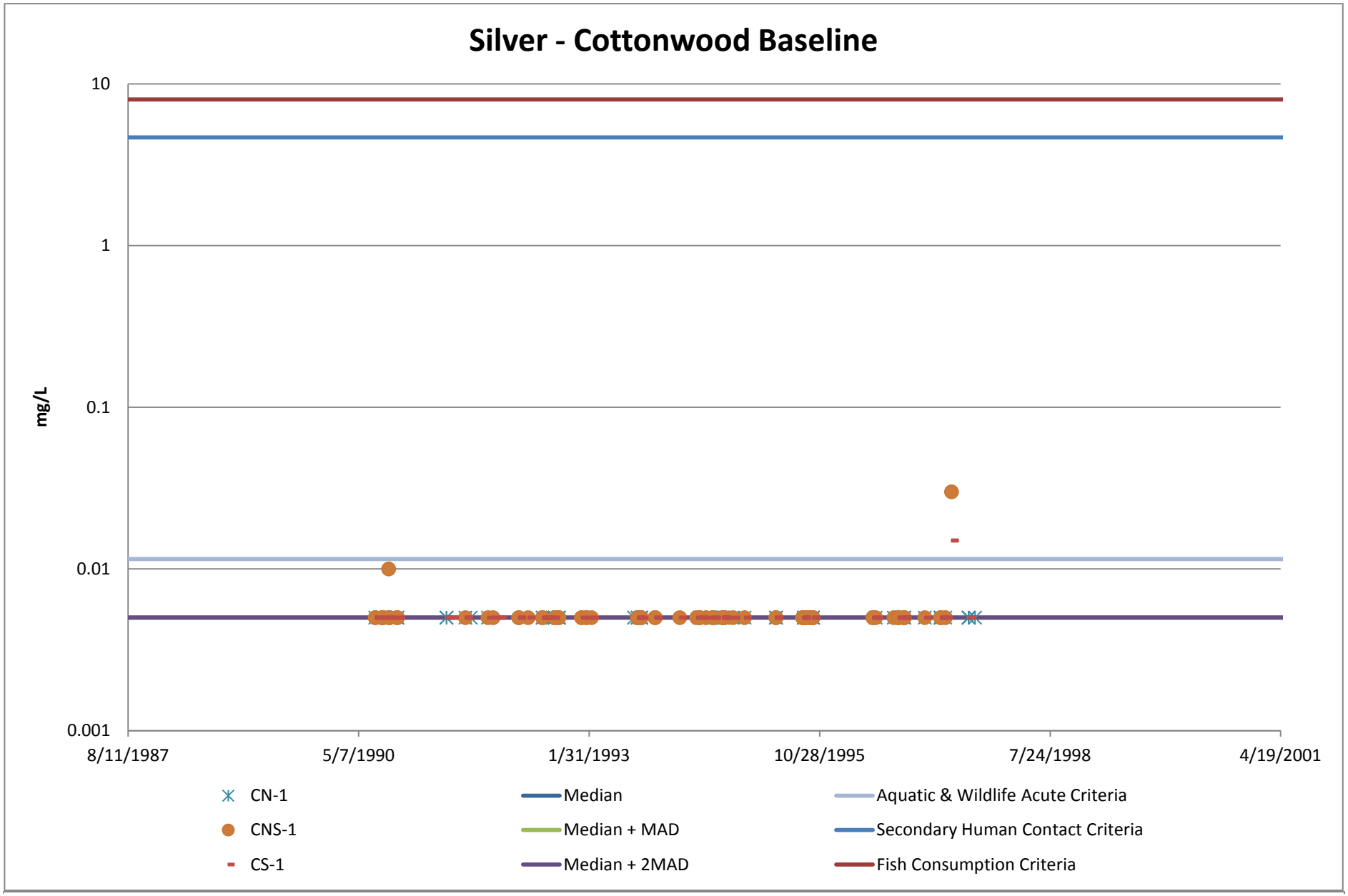

Chromium - Cottonwood Baseline
mg/L
10
1
0.1
0.01
0.001
0.0001
8/11/1987
5/7/1990
1/31/1993
10/28/1995
7/24/1998
4/19/2001
CN-1
CNS-1
CS-1
Median
Median + MAD
Median + 2MAD
Livestock Criteria
Aquatic & Wildlife Acute Criteria
Aquatic and Wildlife Chronic Criteria
Secondary Human Contact Criteria
Fish Consumption Criteria

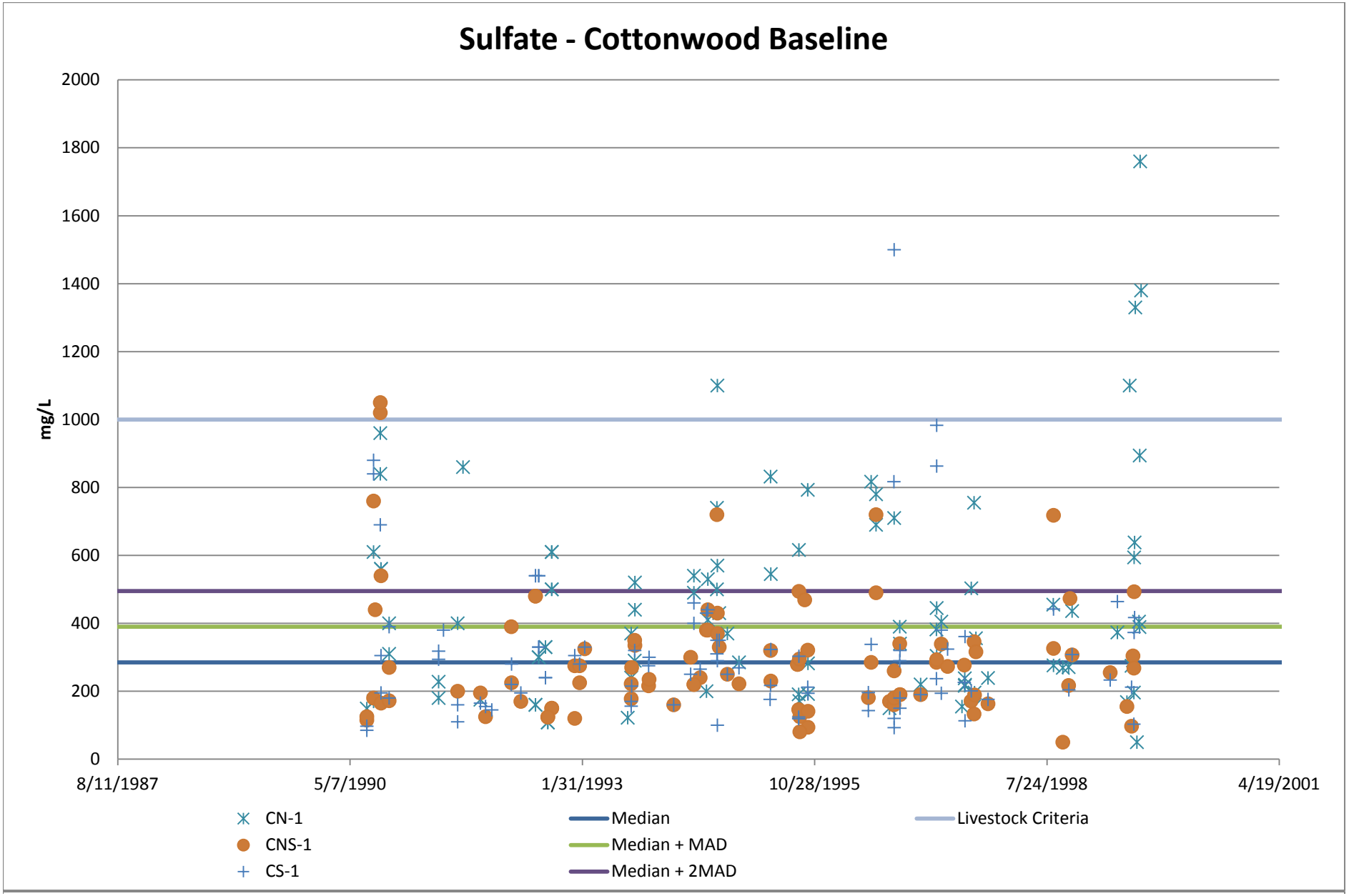

Lead - Cottonwood Baseline
10
1
0.1
0.01
0.001
mg/L
8/11/1987
5/7/1990
1/31/1993
10/28/1995
7/24/1998
4/19/2001
CN-1
CNS-1
CS-1
Median
Median + MAD
Median + 2MAD
Livestock Criteria
Aquatic & Wildlife Acute Criteria
Aquatic & Wildlife Chronic Criteria
Secondary Human Contact Criteria

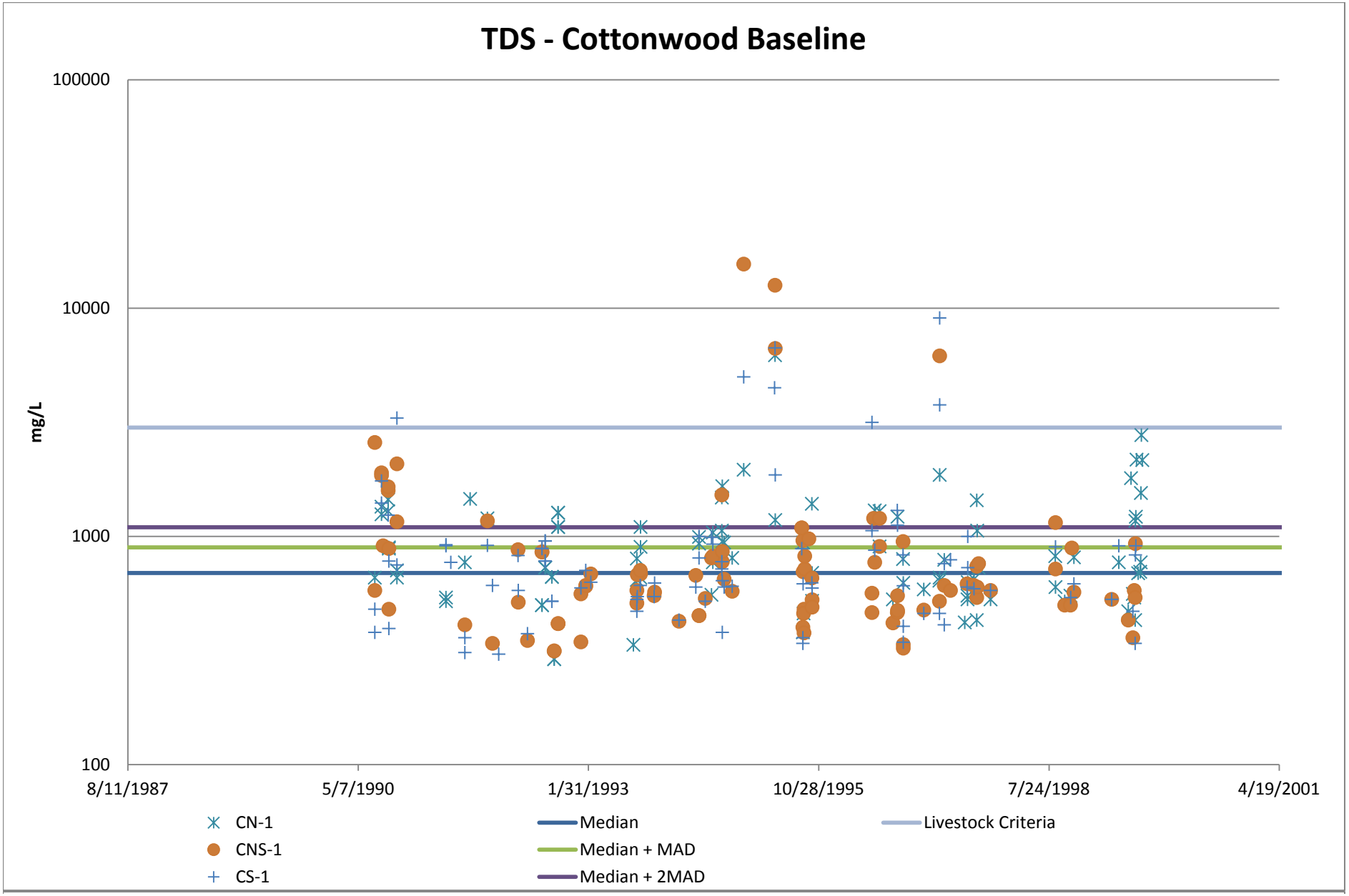

Nitrate - Cottonwood Baseline
10000
1000
100
10
1
0.1
mg/L
8/11/1987
5/7/1990
1/31/1993
10/28/1995
7/24/1998
4/19/2001
CN-1
CNS-1
CS-1
Median
Median + MAD
Median + 2MAD
Livestock Criteria
Secondary Human Contact

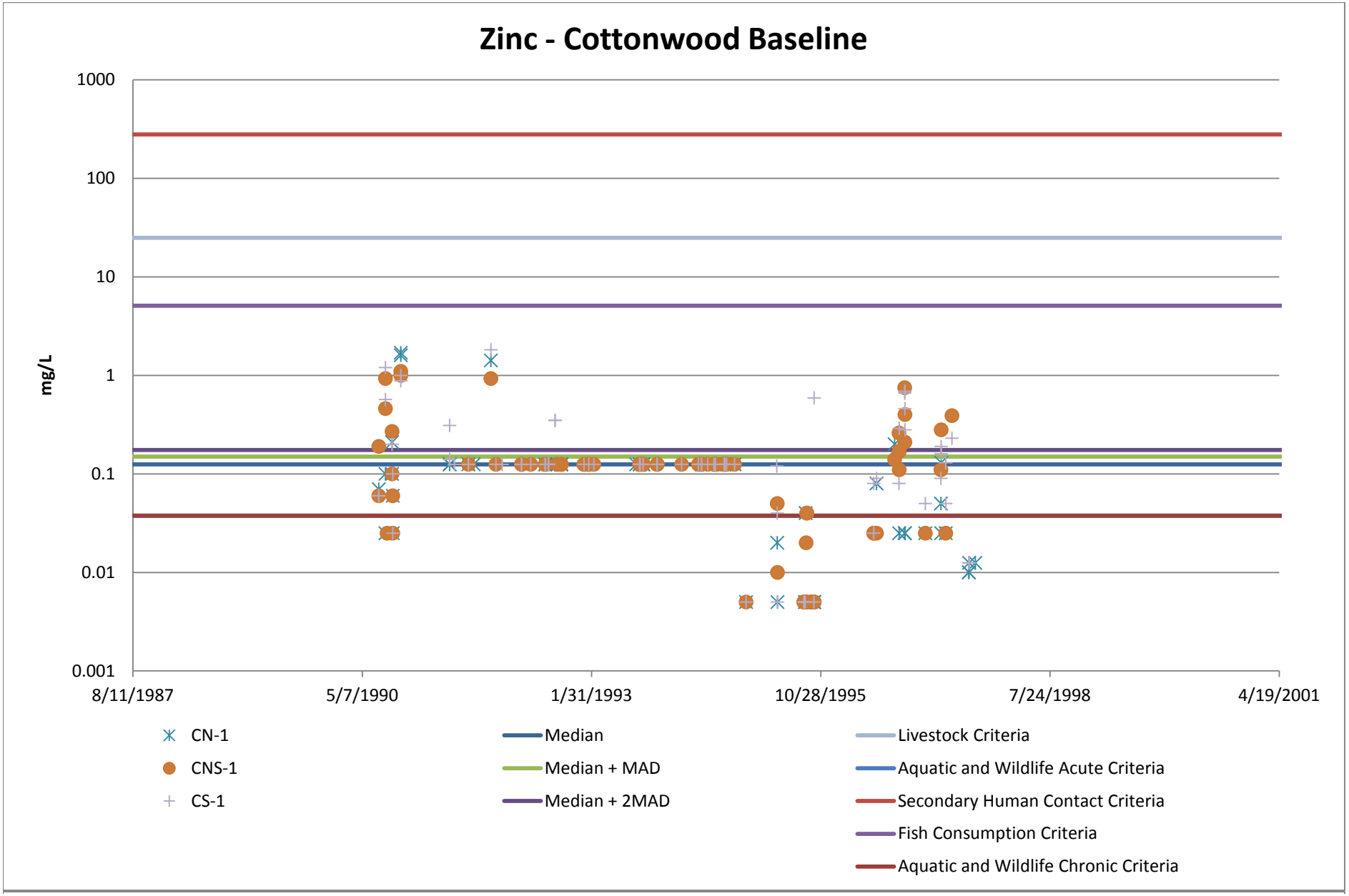

pH - Cottonwood Baseline
9.5
9
8.5
8
7.5
7
6.5
6
mg/L
8/11/1987
5/7/1990
1/31/1993
10/28/1995
7/24/1998
4/19/2001
CN-1
CNS-1
CS-1
Median
Median +/- MAD
Median +/- 2MAD
Criteria

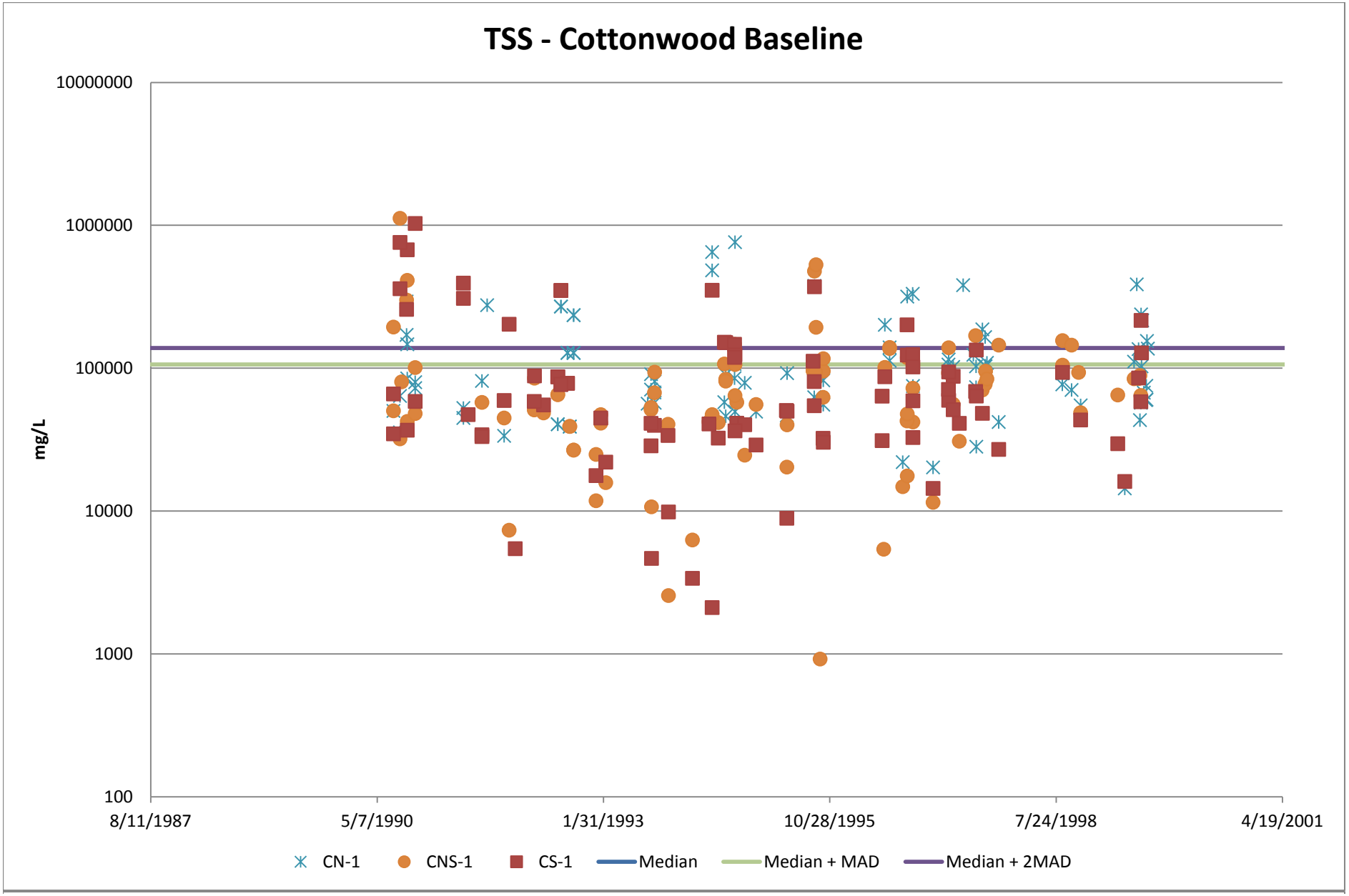

Selenium - Cottonwood Baseline
mg/L
10
1
0.1
0.01
0.001
0.0001
8/11/1987
5/7/1990
1/31/1993
10/28/1995
7/24/1998
4/19/2001
CN-1
CNS-1
CS-1
Median
Median + MAD
Median + 2MAD
Livestock Criteria
Aquatic & Wildlife Acute Criteria
Aquatic & Wildlife Chronic Criteria
Secondary Human Contact Criteria
Fish Consumption Criteria

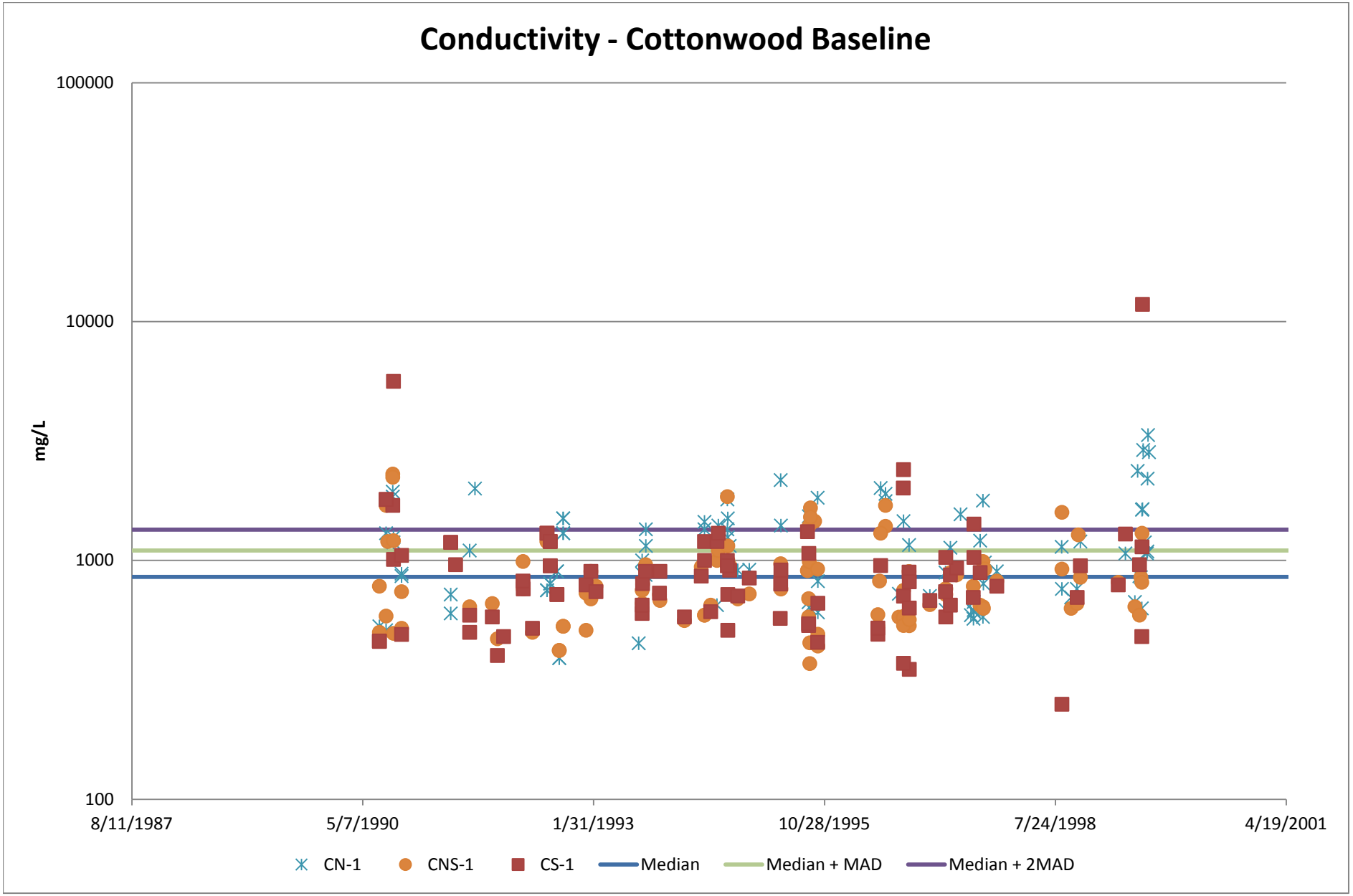

Silver - Cottonwood Baseline
mg/L
10
1
0.1
0.01
0.001
8/11/1987
5/7/1990
1/31/1993
10/28/1995
7/24/1998
4/19/2001
CN-1
CNS-1
CS-1
Median
Median + MAD
Median + 2MAD
Aquatic & Wildlife Acute Criteria
Secondary Human Contact Criteria
Fish Consumption Criteria

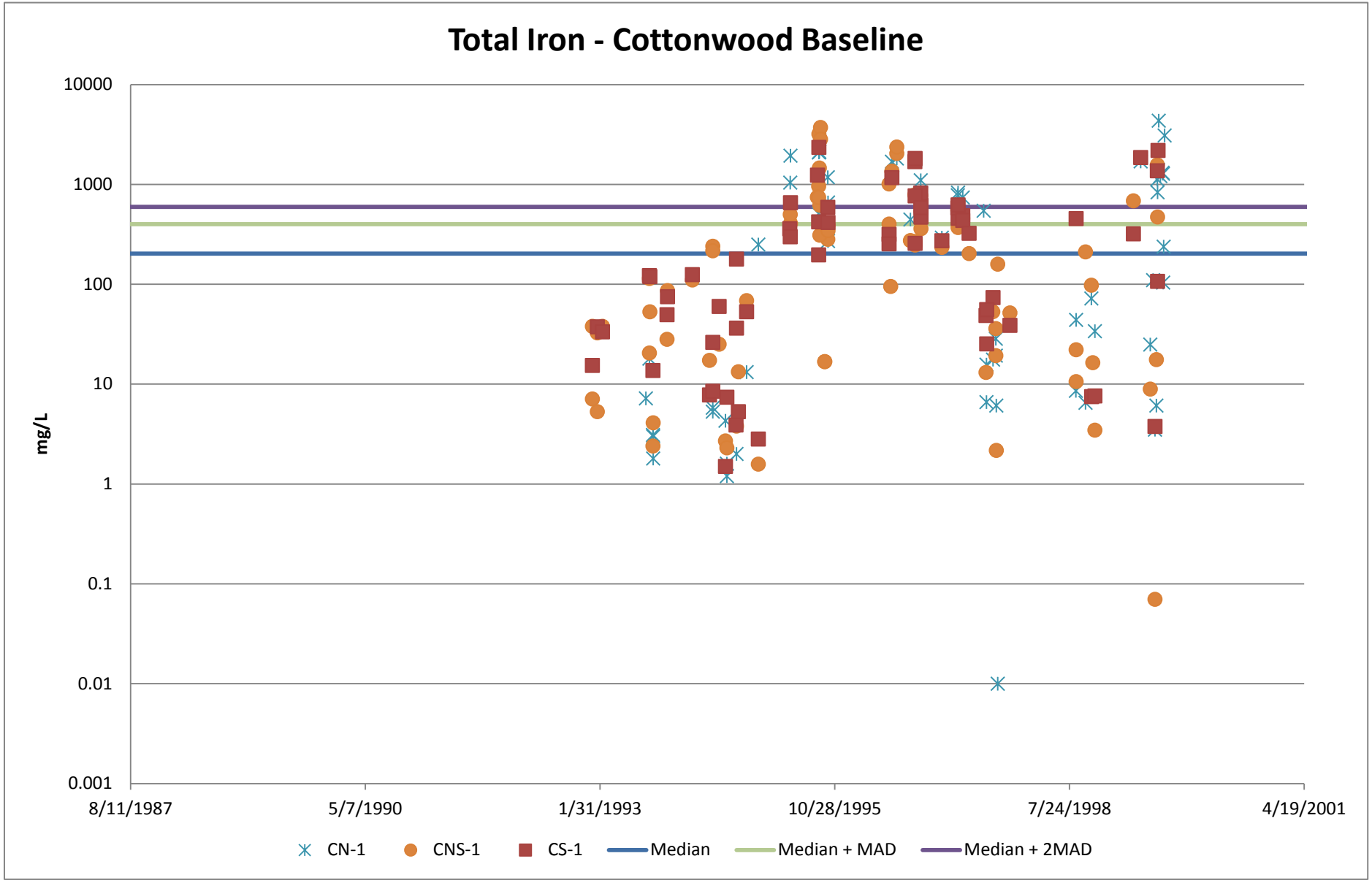

Sulfate - Cottonwood Baseline
mg/L
2000
1800
1600
1400
1200
1000
800
600
400
200
0
8/11/1987
5/7/1990
1/31/1993
10/28/1995
7/24/1998
4/19/2001
CN-1
CNS-1
CS-1
Median
Median + MAD
Median + 2MAD
Livestock Criteria

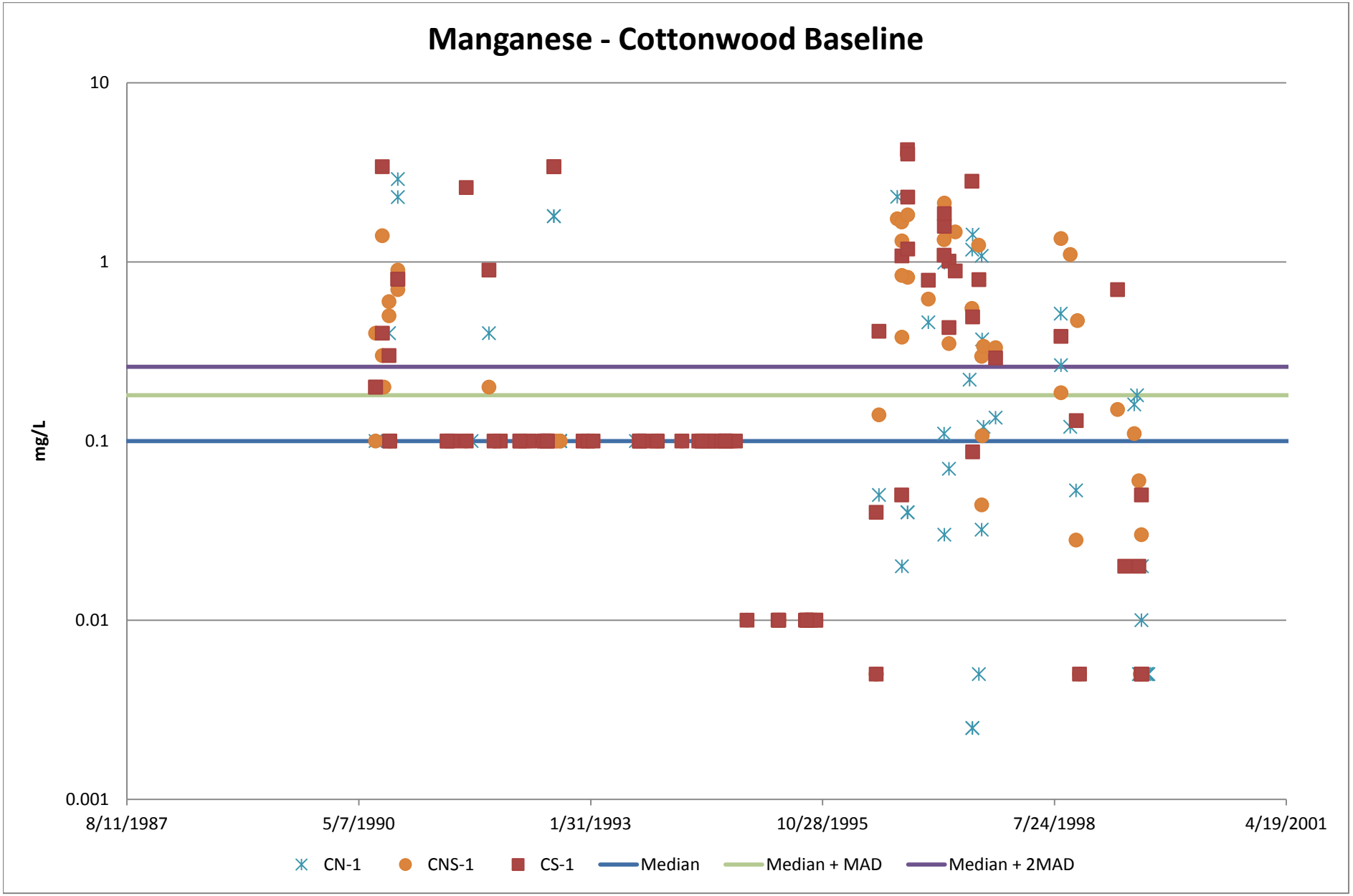

TDS - Cottonwood Baseline
100000
10000
1000
100
mg/L
8/11/1987
5/7/1990
1/31/1993
10/28/1995
7/24/1998
4/19/2001
CN-1
CNS-1
CS-1
Median
Median + MAD
Median + 2MAD
Livestock Criteria

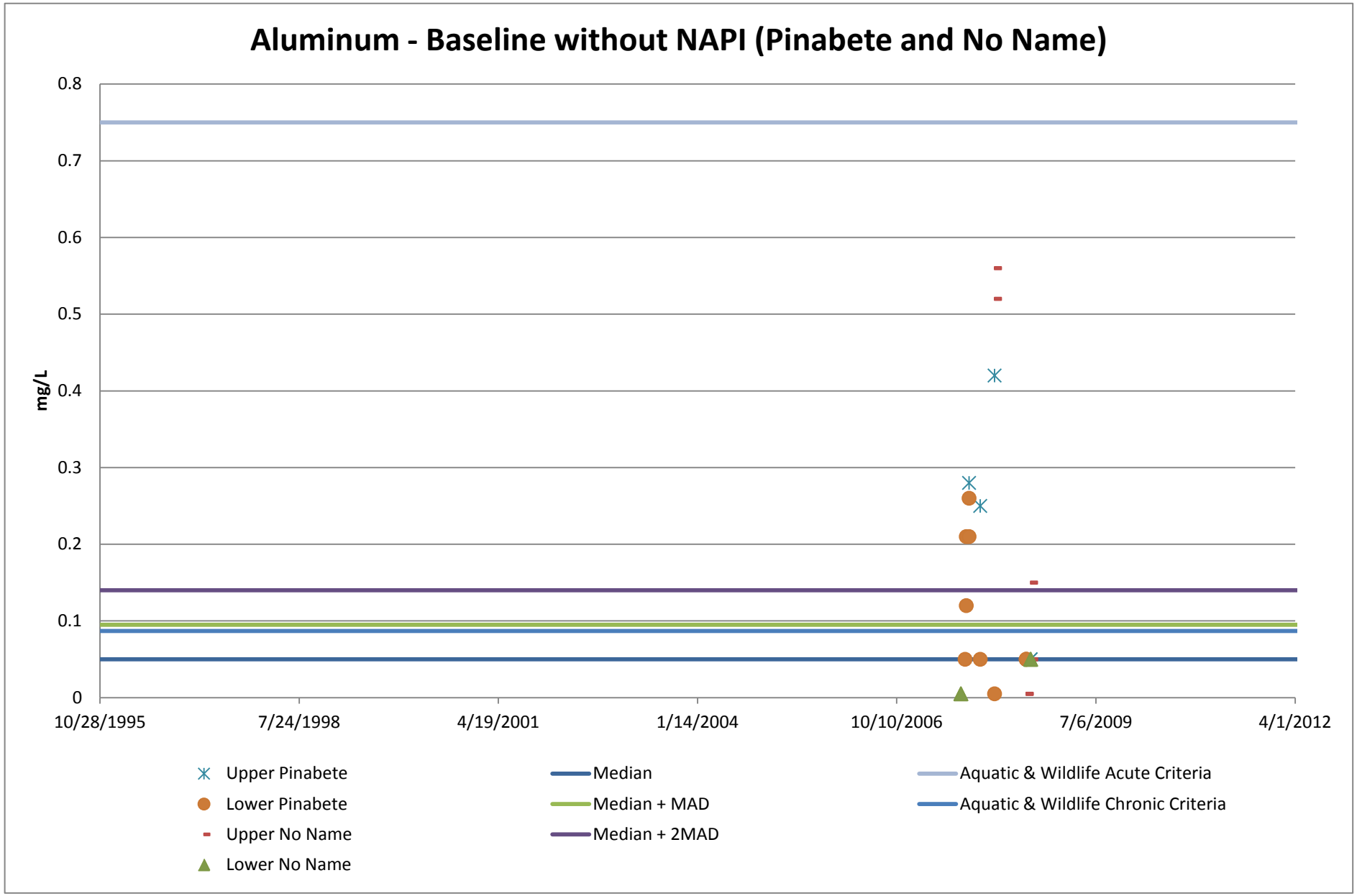

Zinc - Cottonwood Baseline
mg/L
1000
100
10
1
0.1
0.01
0.001
8/11/1987
5/7/1990
1/31/1993
10/28/1995
7/24/1998
4/19/2001
CN-1
CNS-1
CS-1
Median
Median + MAD
Median + 2MAD
Livestock Criteria
Aquatic and Wildlife Acute Criteria
Secondary Human Contact Criteria
Fish Consumption Criteria
Aquatic and Wildlife Chronic Criteria

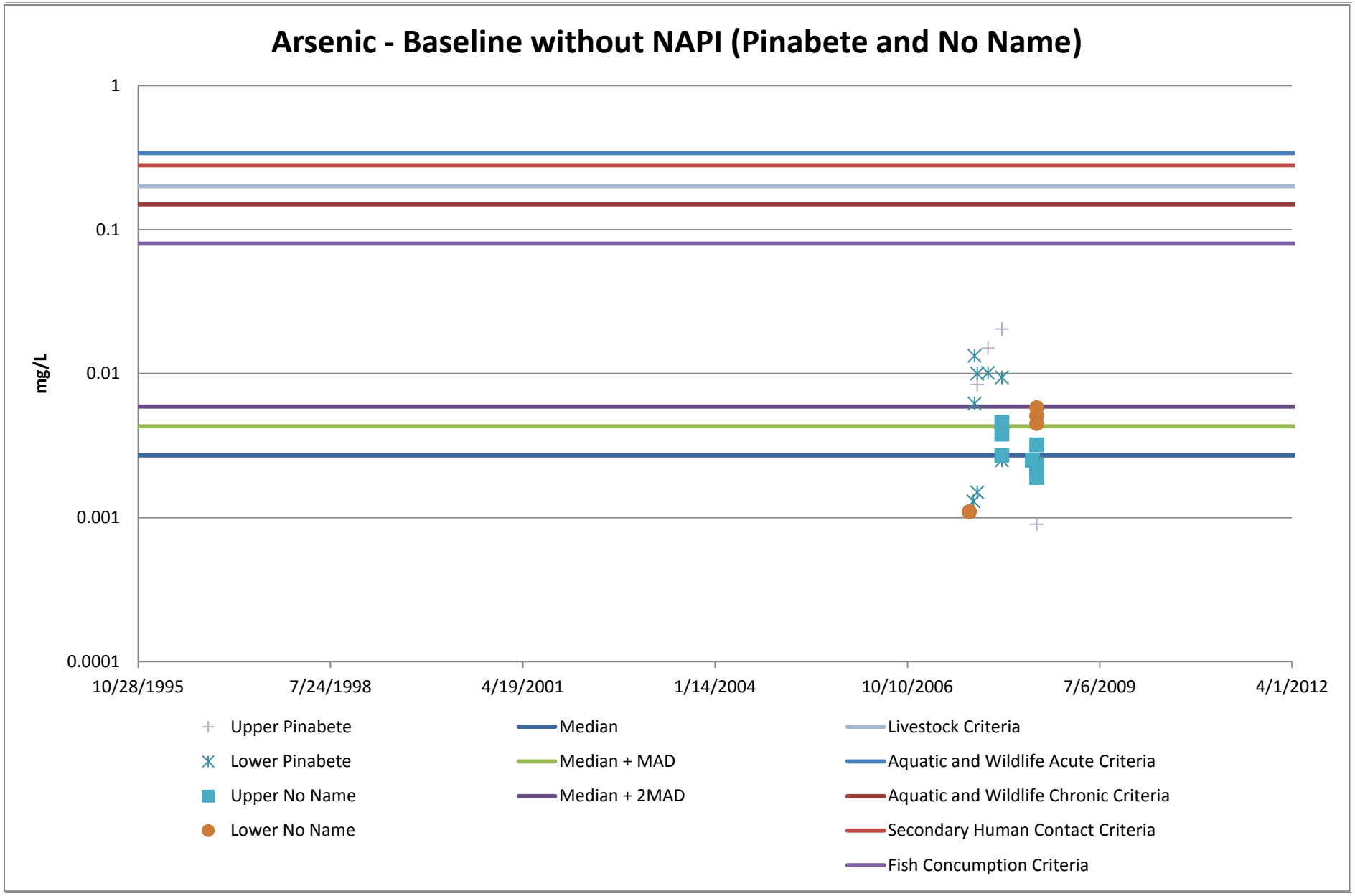

TSS - Cottonwood Baseline
10000000
1000000
100000
10000
1000
100
mg/L
8/11/1987
5/7/1990
1/31/1993
10/28/1995
7/24/1998
4/19/2001
CN-1
CNS-1
CS-1
Median
Median + MAD
Median + 2MAD

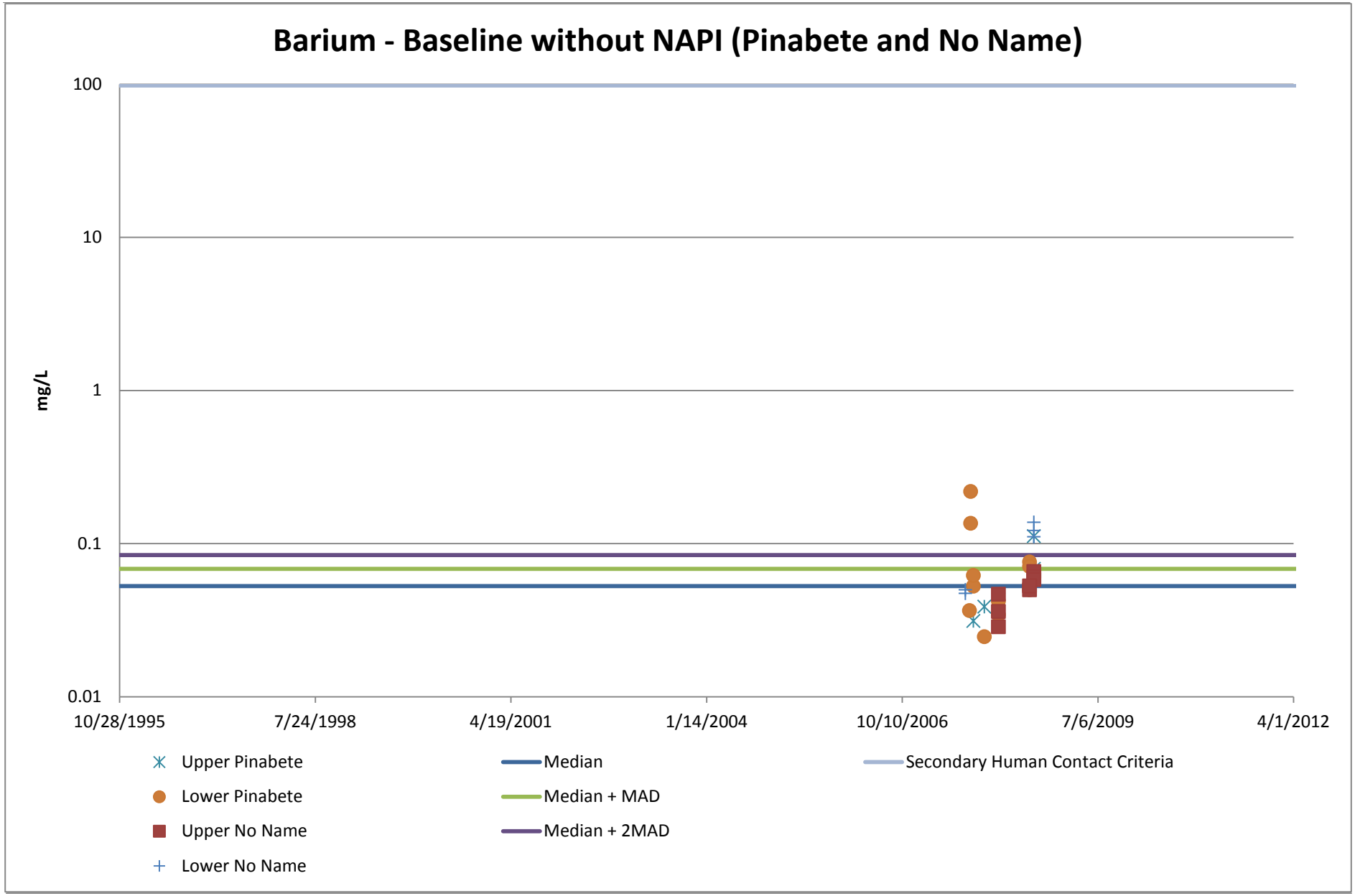

Conductivity - Cottonwood Baseline
100000
10000
1000
100
mg/L
8/11/1987
5/7/1990
1/31/1993
10/28/1995
7/24/1998
4/19/2001
CN-1
CNS-1
CS-1
Median
Median + MAD
Median + 2MAD

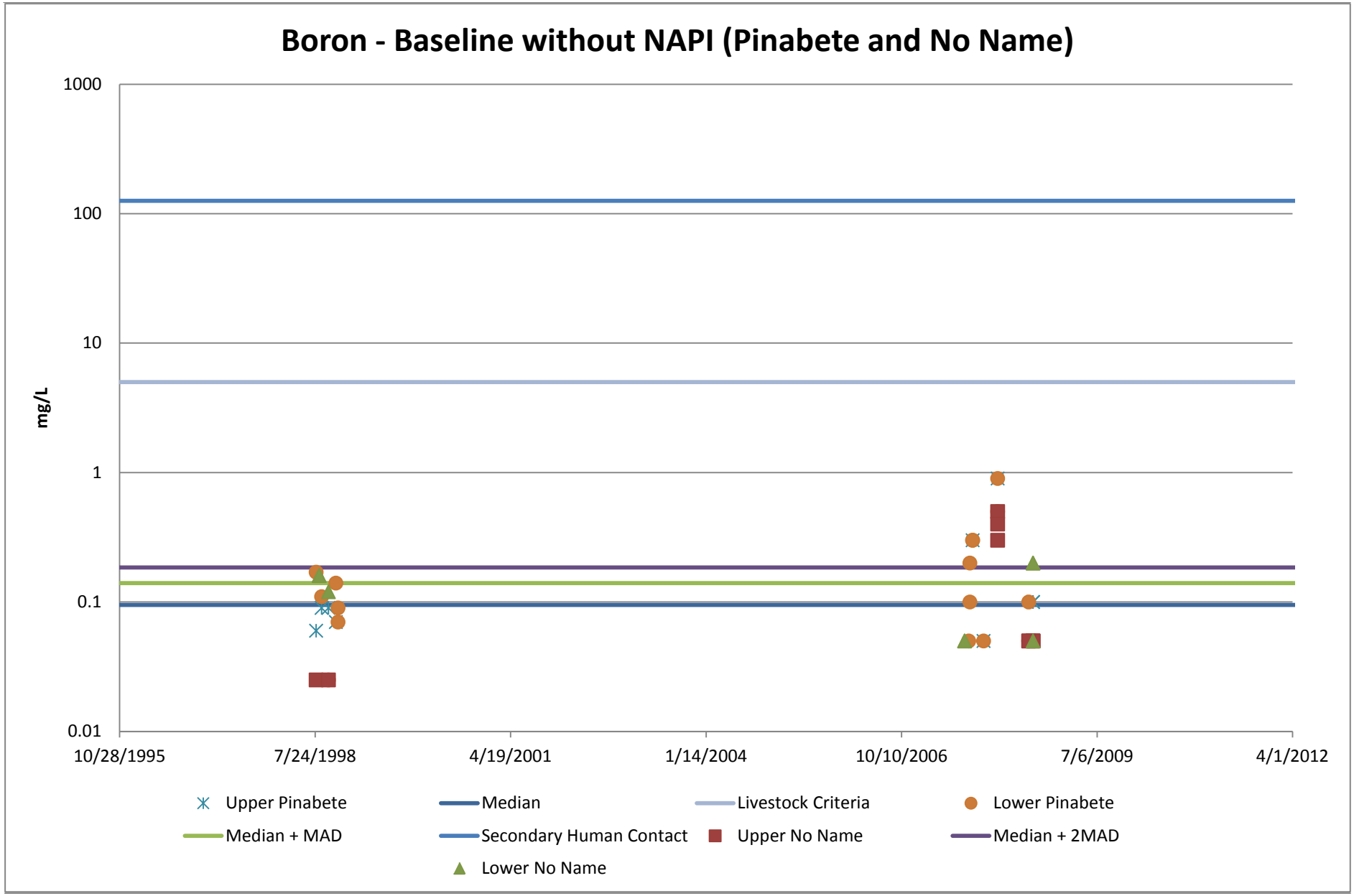

Total Iron - Cottonwood Baseline
mg/L
10000
1000
100
10
1
0.1
0.01
0.001
8/11/1987
5/7/1990
1/31/1993
10/28/1995
7/24/1998
4/19/2001
CN-1
CNS-1
CS-1
Median
Median + MAD
Median + 2MAD

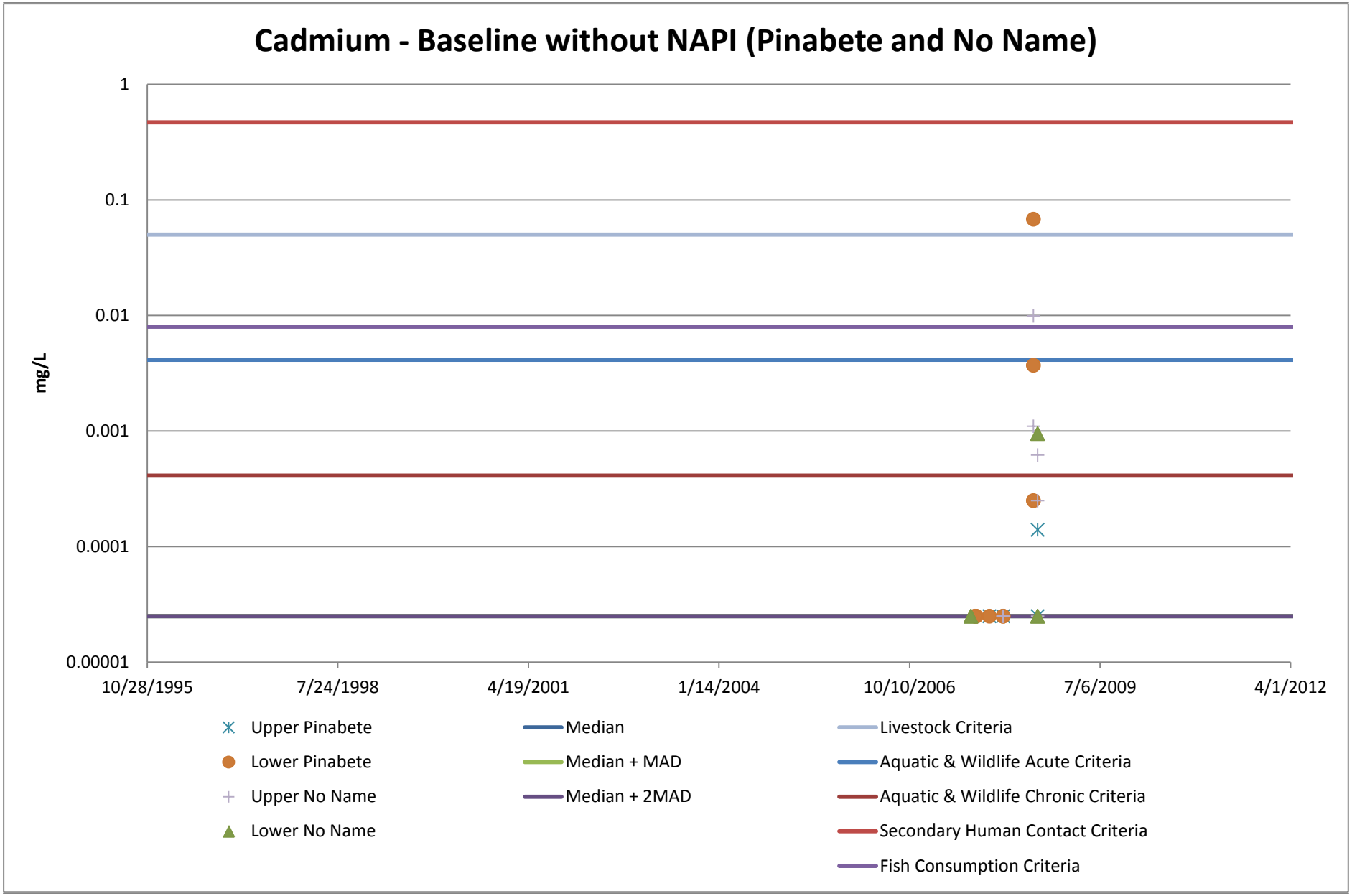

Manganese - Cottonwood Baseline
10
1
0.1
0.01
0.001
mg/L
8/11/1987
5/7/1990
1/31/1993
10/28/1995
7/24/1998
4/19/2001
CN-1
CNS-1
CS-1
Median
Median + MAD
Median + 2MAD

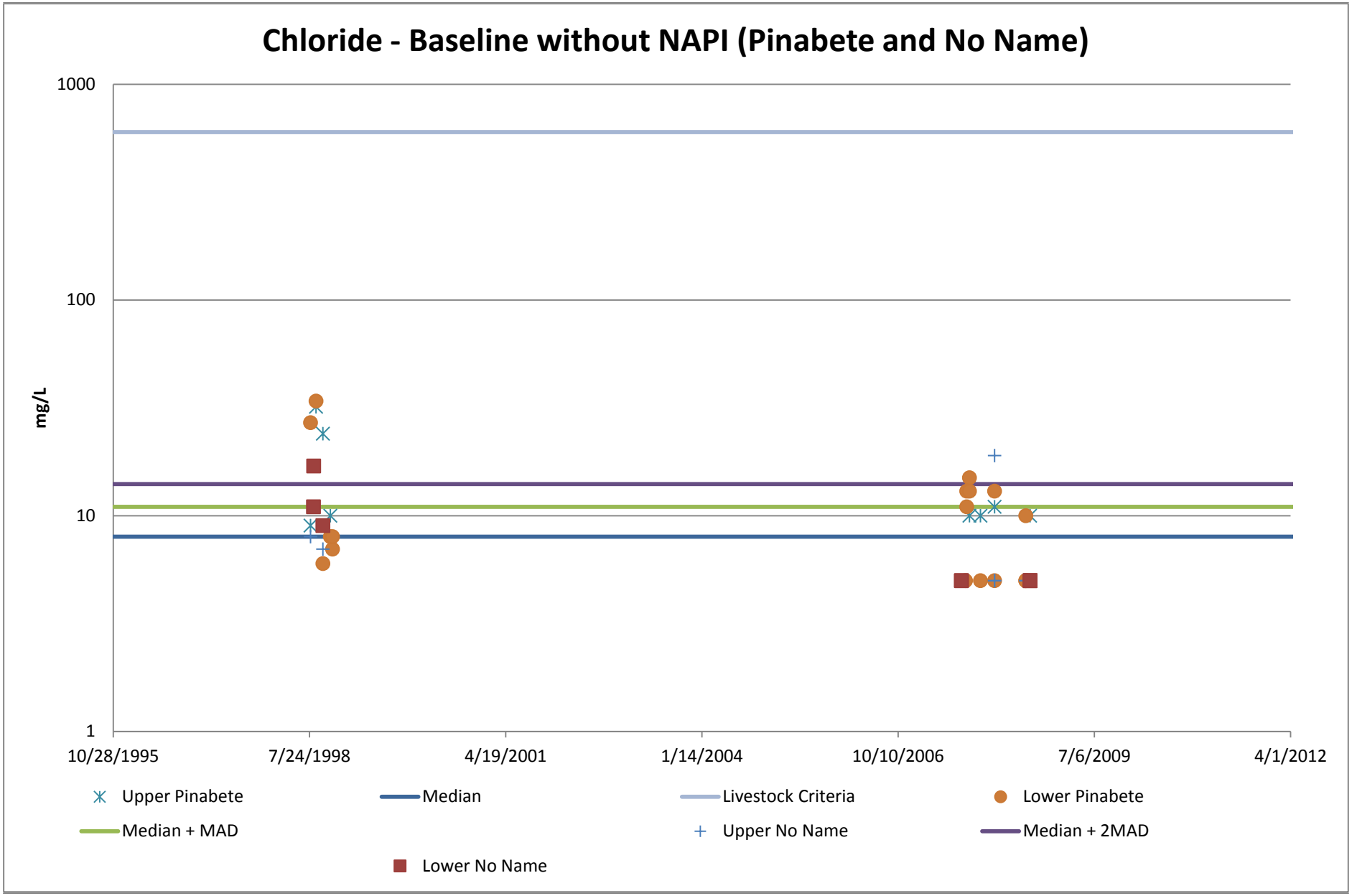

Aluminum - Baseline without NAPI (Pinabete and No Name)
mg/L
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Upper Pinabete
Lower Pinabete
Upper No Name
Lower No Name
Median
Median + MAD
Median + 2MAD
Aquatic & Wildlife Acute Criteria
Aquatic & Wildlife Chronic Criteria

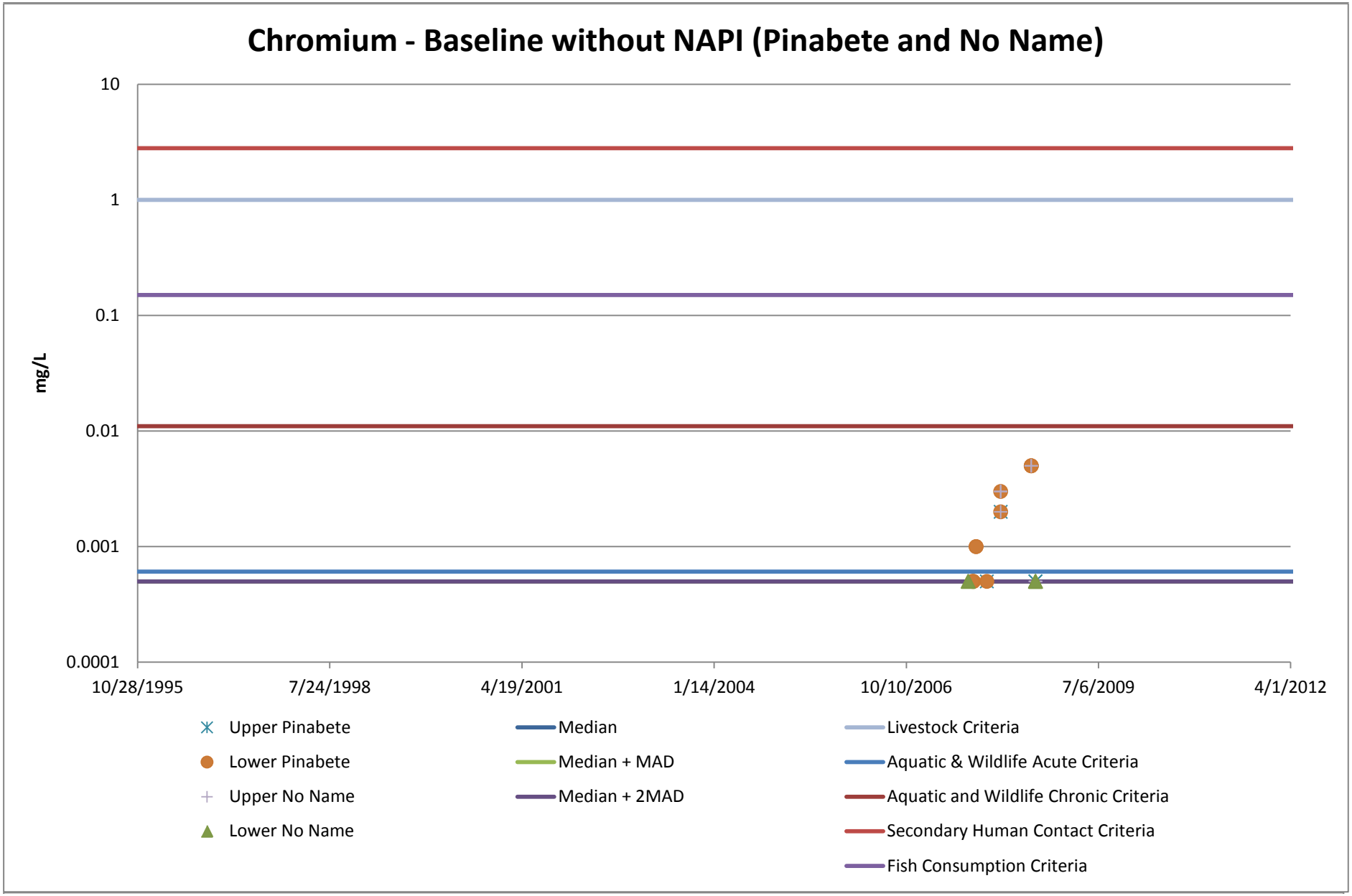

Arsenic - Baseline without NAPI (Pinabete and No Name)
mg/L
1
0.1
0.01
0.001
0.0001
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Upper Pinabete
Lower Pinabete
Upper No Name
Lower No Name
Median
Median + MAD
Median + 2MAD
Livestock Criteria
Aquatic and Wildlife Acute Criteria
Aquatic and Wildlife Chronic Criteria
Secondary Human Contact Criteria
Fish Concumption Criteria

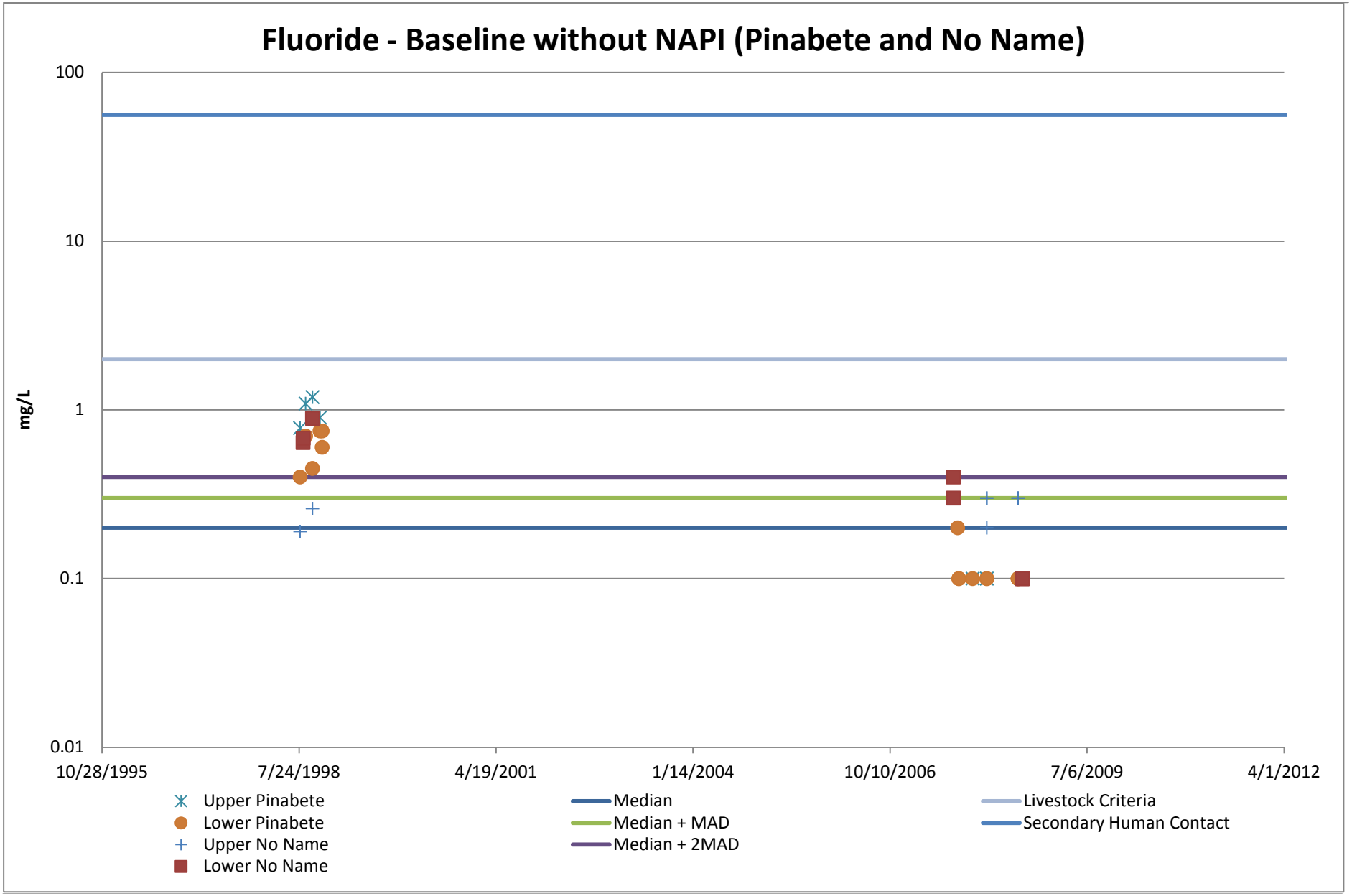

Barium - Baseline without NAPI (Pinabete and No Name)
mg/L
100
10
1
0.1
0.01
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Upper Pinabete
Lower Pinabete
Upper No Name
Lower No Name
Median
Median + MAD
Median + 2MAD
Secondary Human Contact Criteria

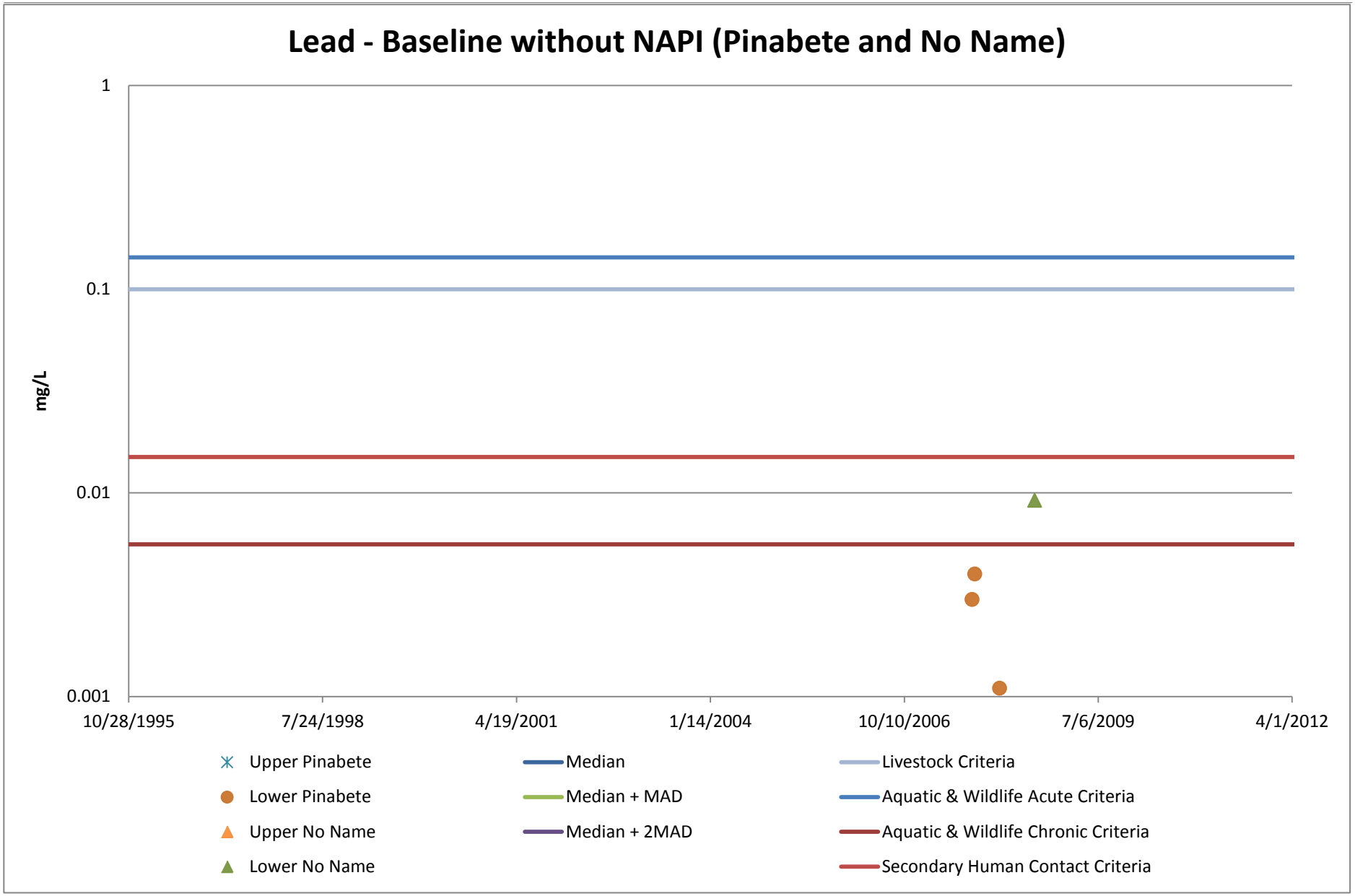

Boron - Baseline without NAPI (Pinabete and No Name)
1000
100
10
1
0.1
0.01
mg/L
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Upper Pinabete
Median
Livestock Criteria
Lower Pinabete
Median + MAD
Secondary Human Contact
Upper No Name
Median + 2MAD
Lower No Name

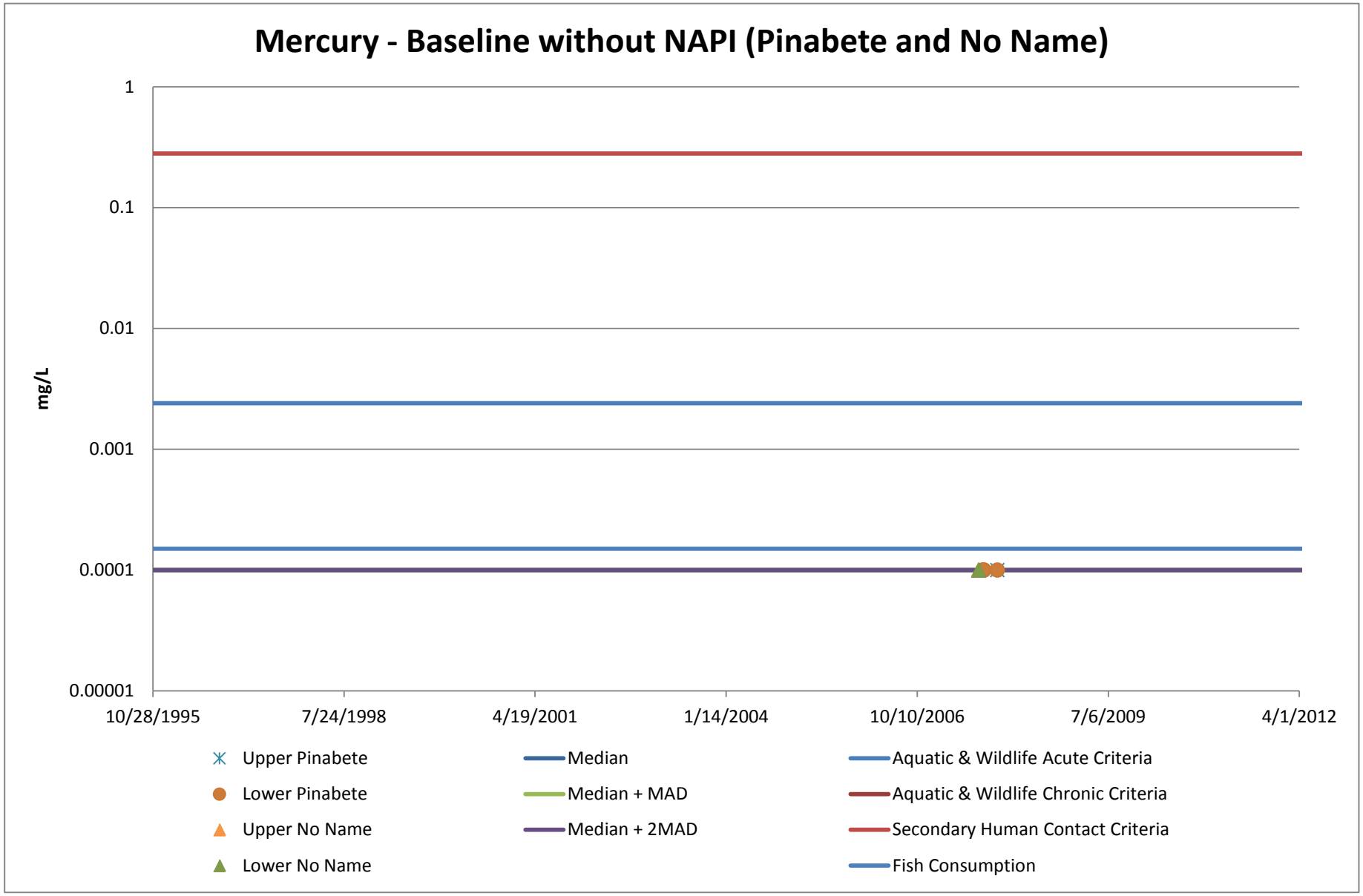

Cadmium - Baseline without NAPI (Pinabete and No Name)
mg/L
1
0.1
0.01
0.001
0.0001
0.00001
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Upper Pinabete
Lower Pinabete
Upper No Name
Lower No Name
Median
Median + MAD
Median + 2MAD
Livestock Criteria
Aquatic & Wildlife Acute Criteria
Aquatic & Wildlife Chronic Criteria
Secondary Human Contact Criteria
Fish Consumption Criteria

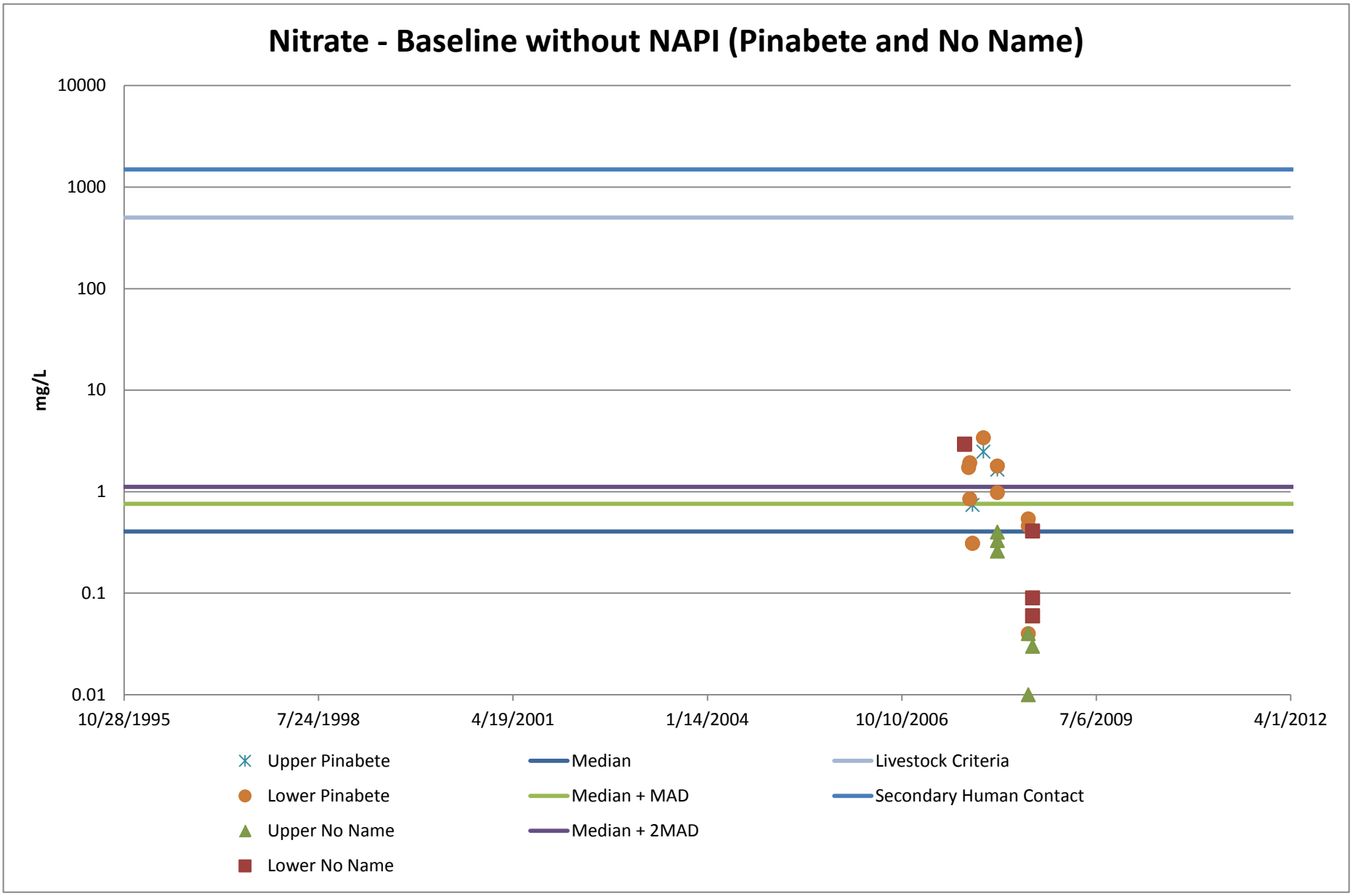

Chloride - Baseline without NAPI (Pinabete and No Name)
1000
100
10
1
mg/L
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Upper Pinabete
Median
Livestock Criteria
Lower Pinabete
Median + MAD
Upper No Name
Median + 2MAD
Lower No Name

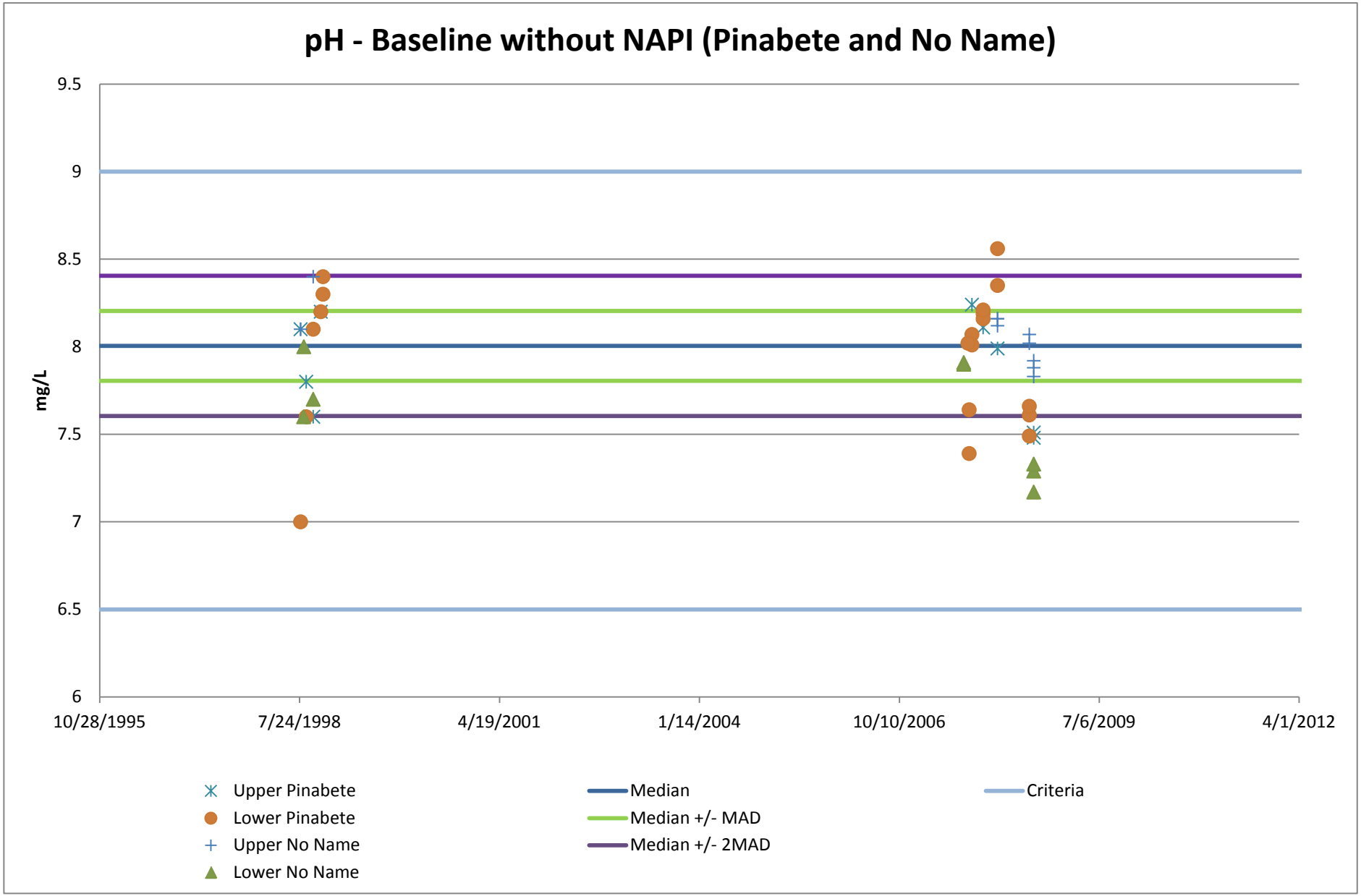

Chromium - Baseline without NAPI (Pinabete and No Name)
mg/L
10
1
0.1
0.01
0.001
0.0001
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Upper Pinabete
Lower Pinabete
Upper No Name
Lower No Name
Median
Median + MAD
Median + 2MAD
Livestock Criteria
Aquatic & Wildlife Acute Criteria
Aquatic and Wildlife Chronic Criteria
Secondary Human Contact Criteria
Fish Consumption Criteria

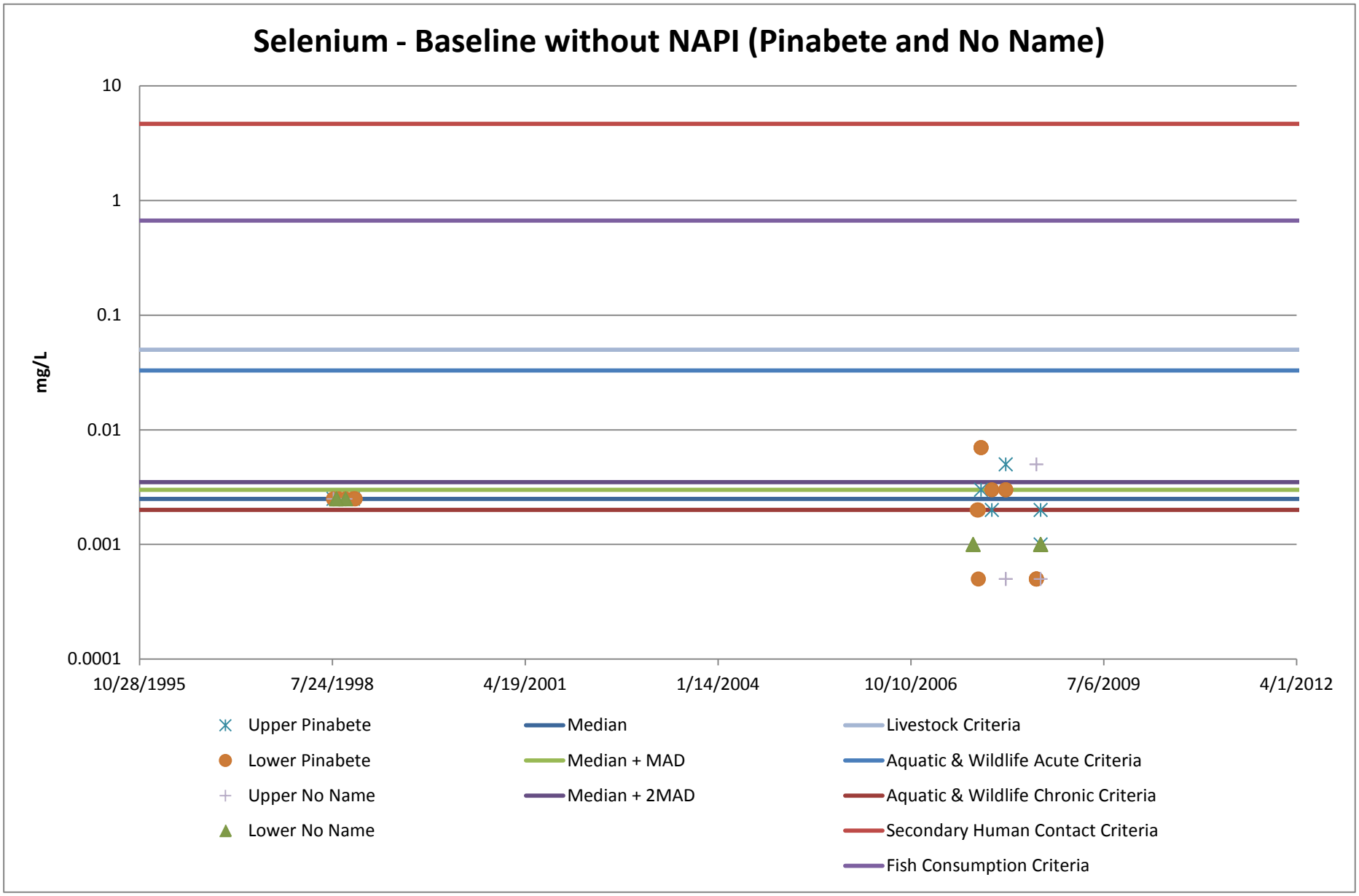

Fluoride - Baseline without NAPI (Pinabete and No Name)
mg/L
100
10
1
0.1
0.01
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Upper Pinabete
Lower Pinabete
Upper No Name
Lower No Name
Median
Median + MAD
Median + 2MAD
Livestock Criteria
Secondary Human Contact

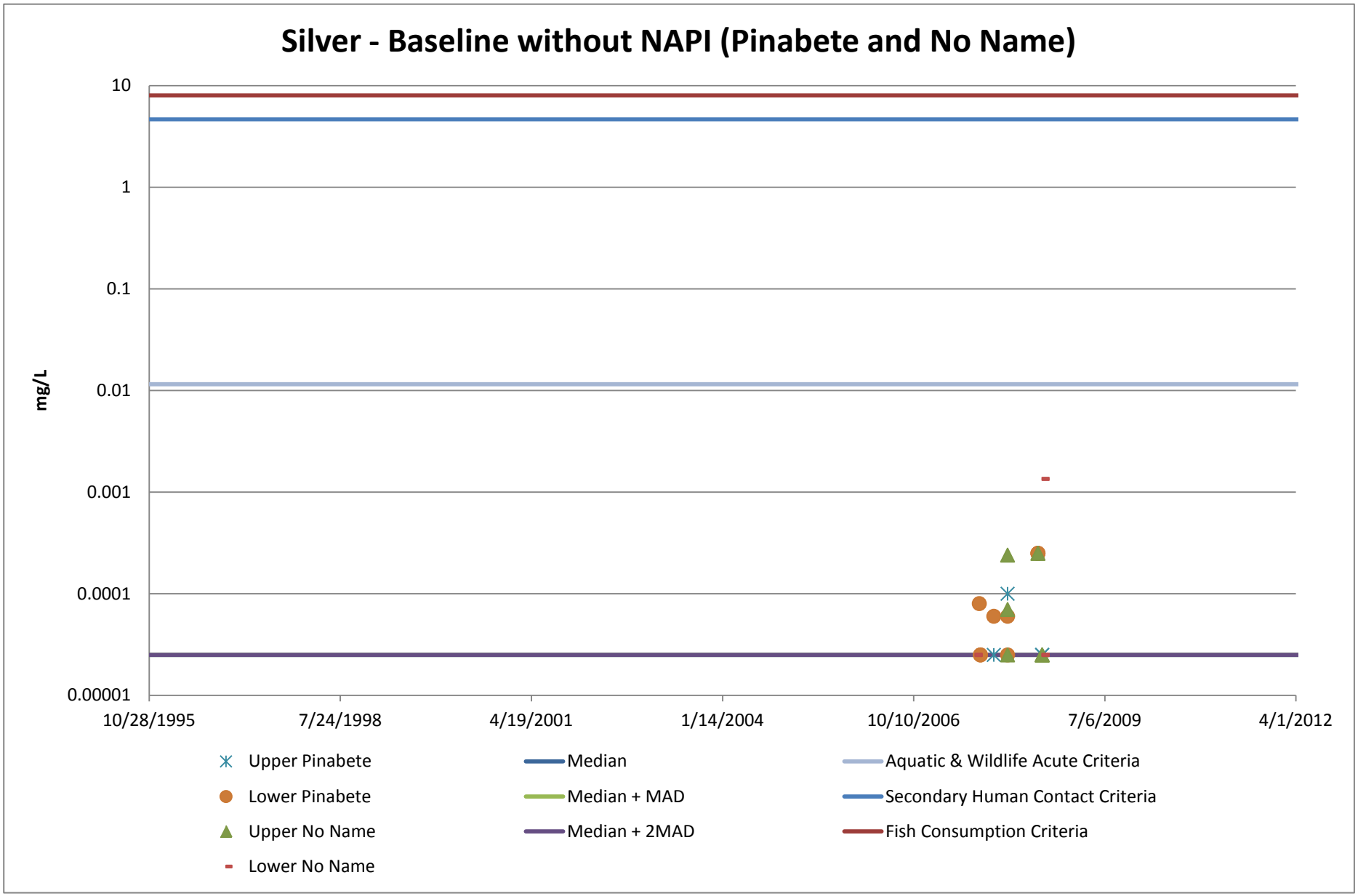

Lead - Baseline without NAPI (Pinabete and No Name)
mg/L
1
0.1
0.01
0.001
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Upper Pinabete
Lower Pinabete
Upper No Name
Lower No Name
Median
Median + MAD
Median + 2MAD
Livestock Criteria
Aquatic & Wildlife Acute Criteria
Aquatic & Wildlife Chronic Criteria
Secondary Human Contact Criteria

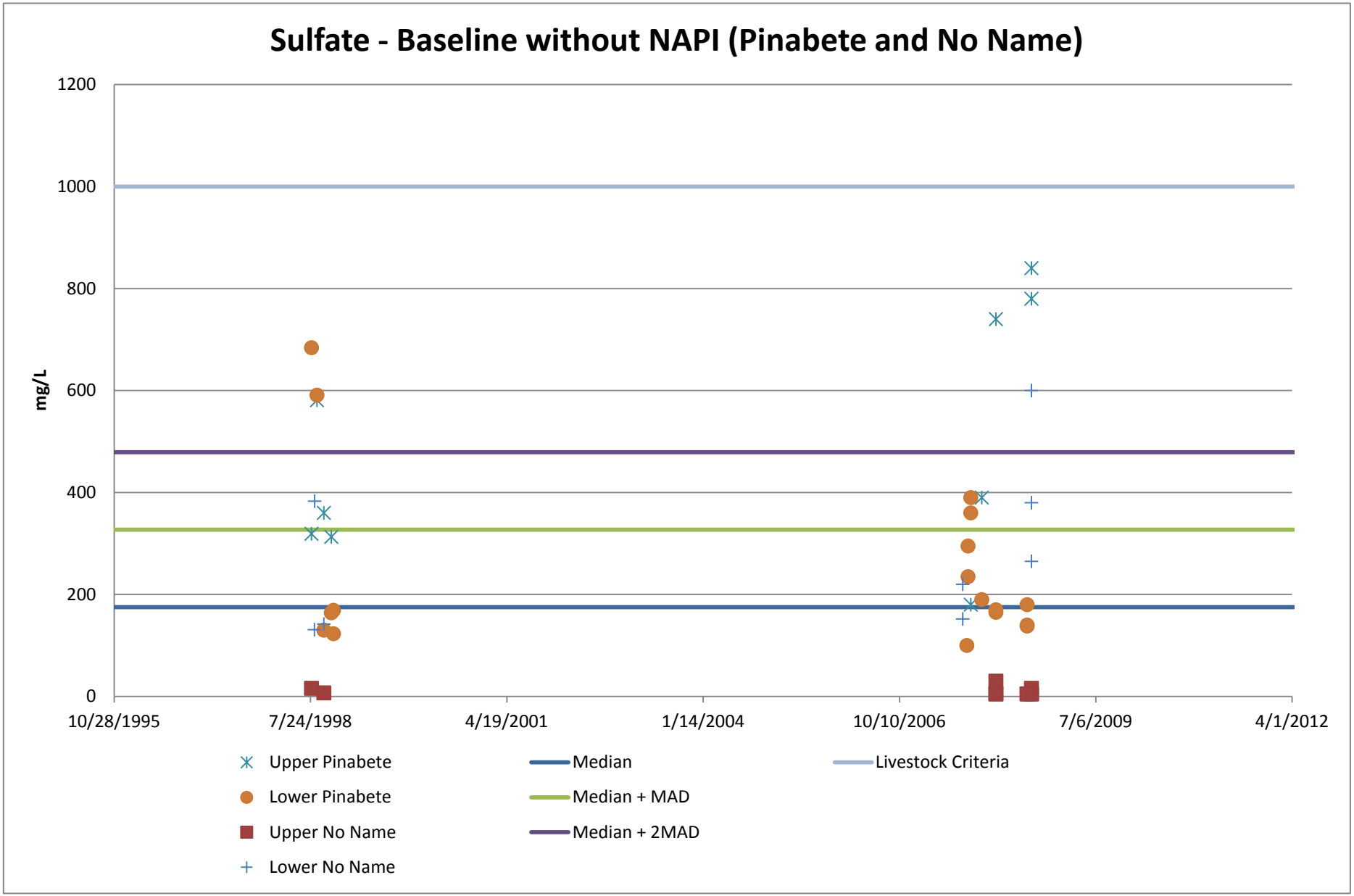

Mercury - Baseline without NAPI (Pinabete and No Name)
mg/L
1
0.1
0.01
0.001
0.0001
0.00001
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Upper Pinabete
Lower Pinabete
Upper No Name
Lower No Name
Median
Median + MAD
Median + 2MAD
Aquatic & Wildlife Acute Criteria
Aquatic & Wildlife Chronic Criteria
Secondary Human Contact Criteria
Fish Consumption

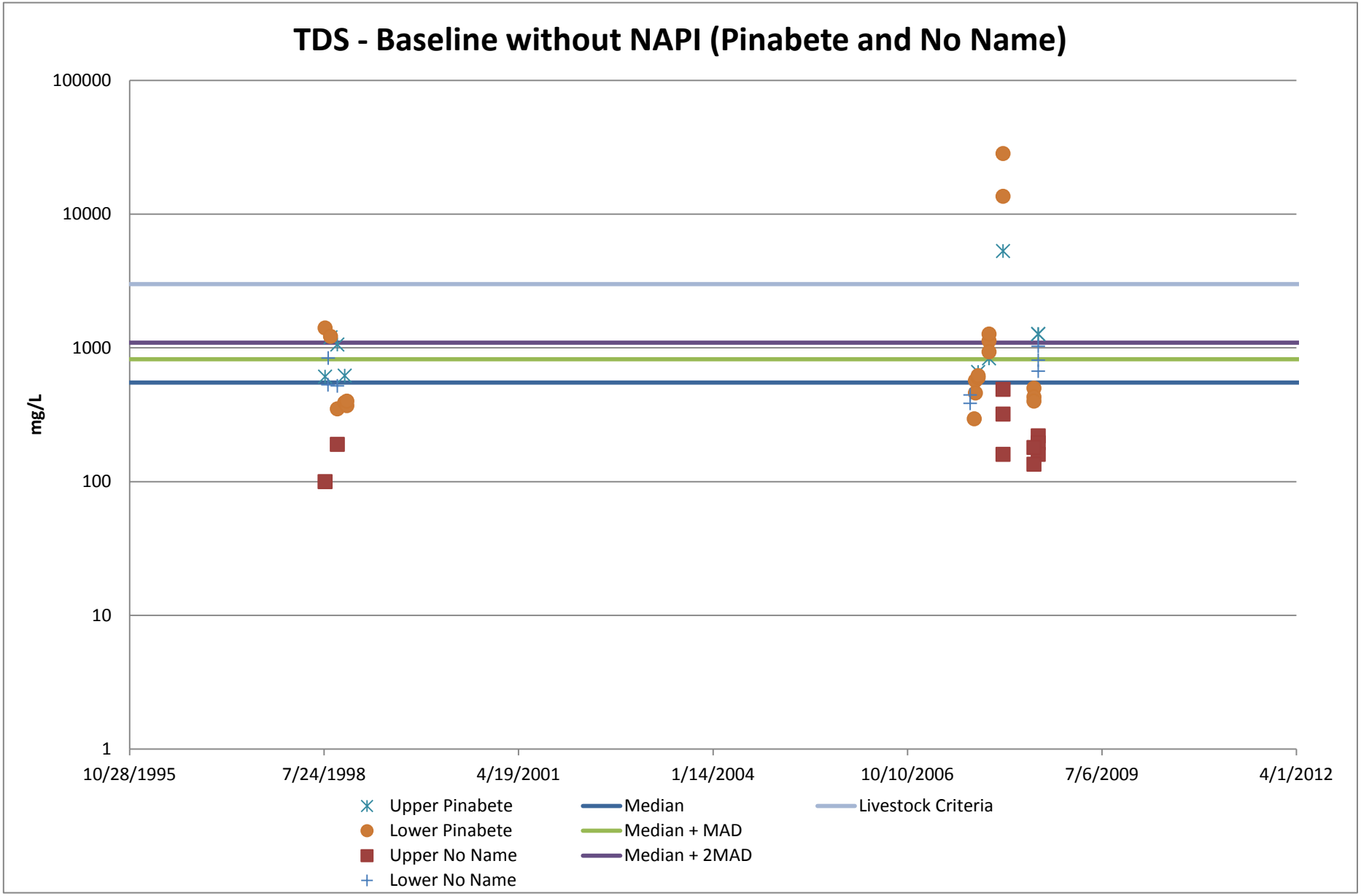

Nitrate - Baseline without NAPI (Pinabete and No Name)
mg/L
10000
1000
100
10
1
0.1
0.01
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Upper Pinabete
Lower Pinabete
Upper No Name
Lower No Name
Median
Median + MAD
Median + 2MAD
Livestock Criteria
Secondary Human Contact

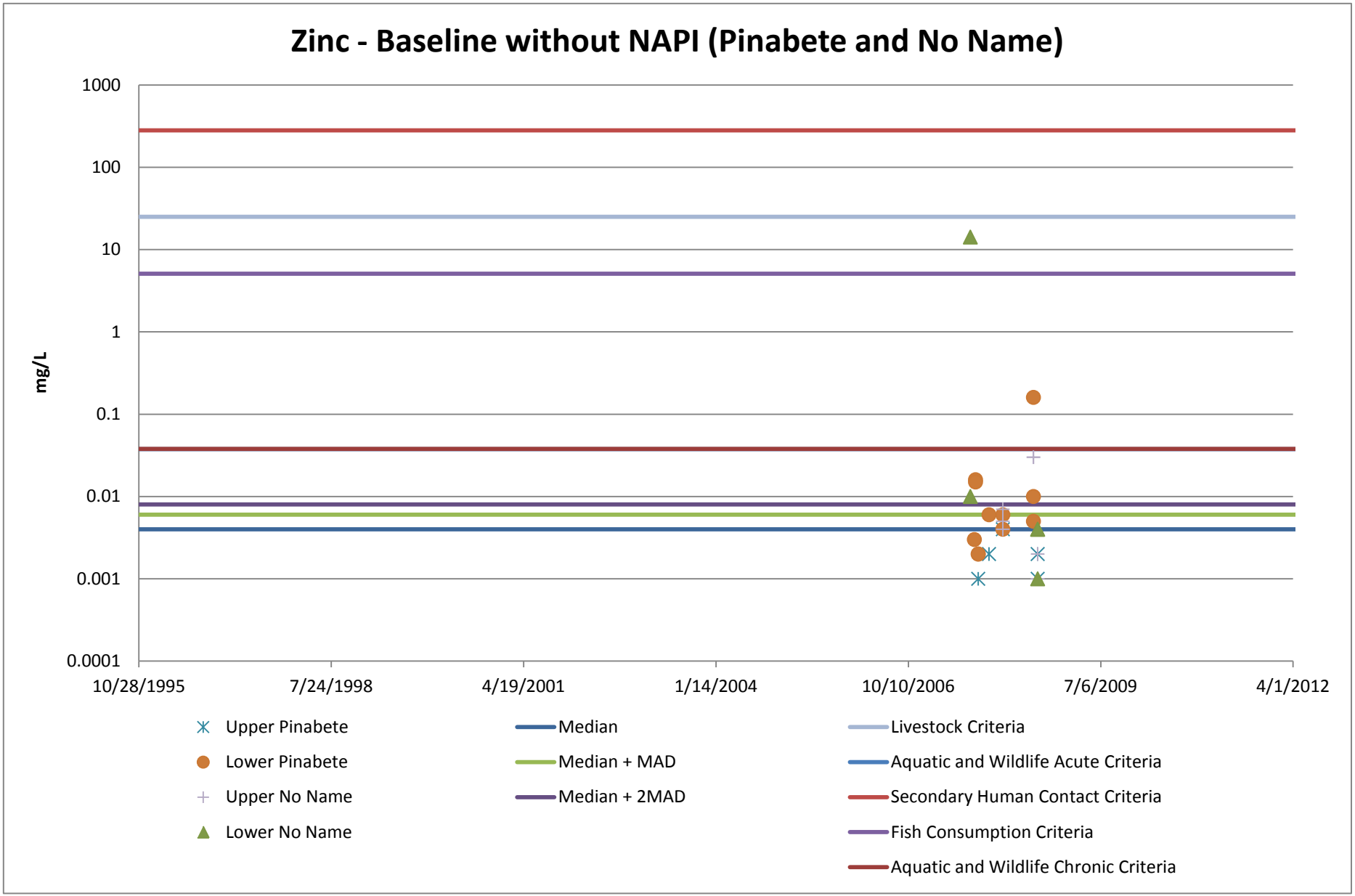

pH - Baseline without NAPI (Pinabete and No Name)
9.5
9
8.5
8
7.5
7
6.5
6
mg/L
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Upper Pinabete
Lower Pinabete
Upper No Name
Lower No Name
Median
Median +/- MAD
Median +/- 2MAD
Criteria

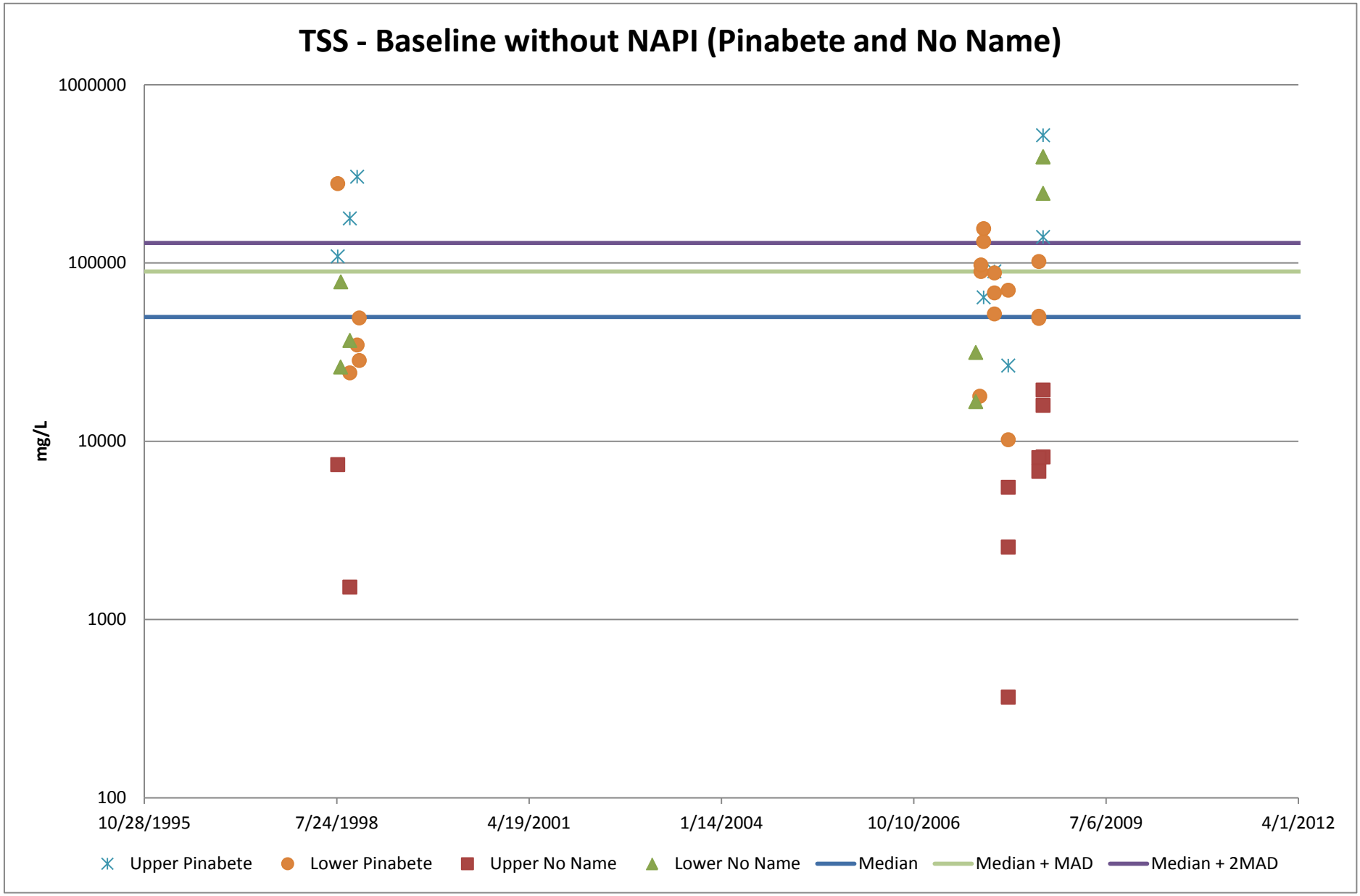

Selenium - Baseline without NAPI (Pinabete and No Name)
mg/L
10
1
0.1
0.01
0.001
0.0001
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Upper Pinabete
Lower Pinabete
Upper No Name
Lower No Name
Median
Median + MAD
Median + 2MAD
Livestock Criteria
Aquatic & Wildlife Acute Criteria
Aquatic & Wildlife Chronic Criteria
Secondary Human Contact Criteria
Fish Consumption Criteria

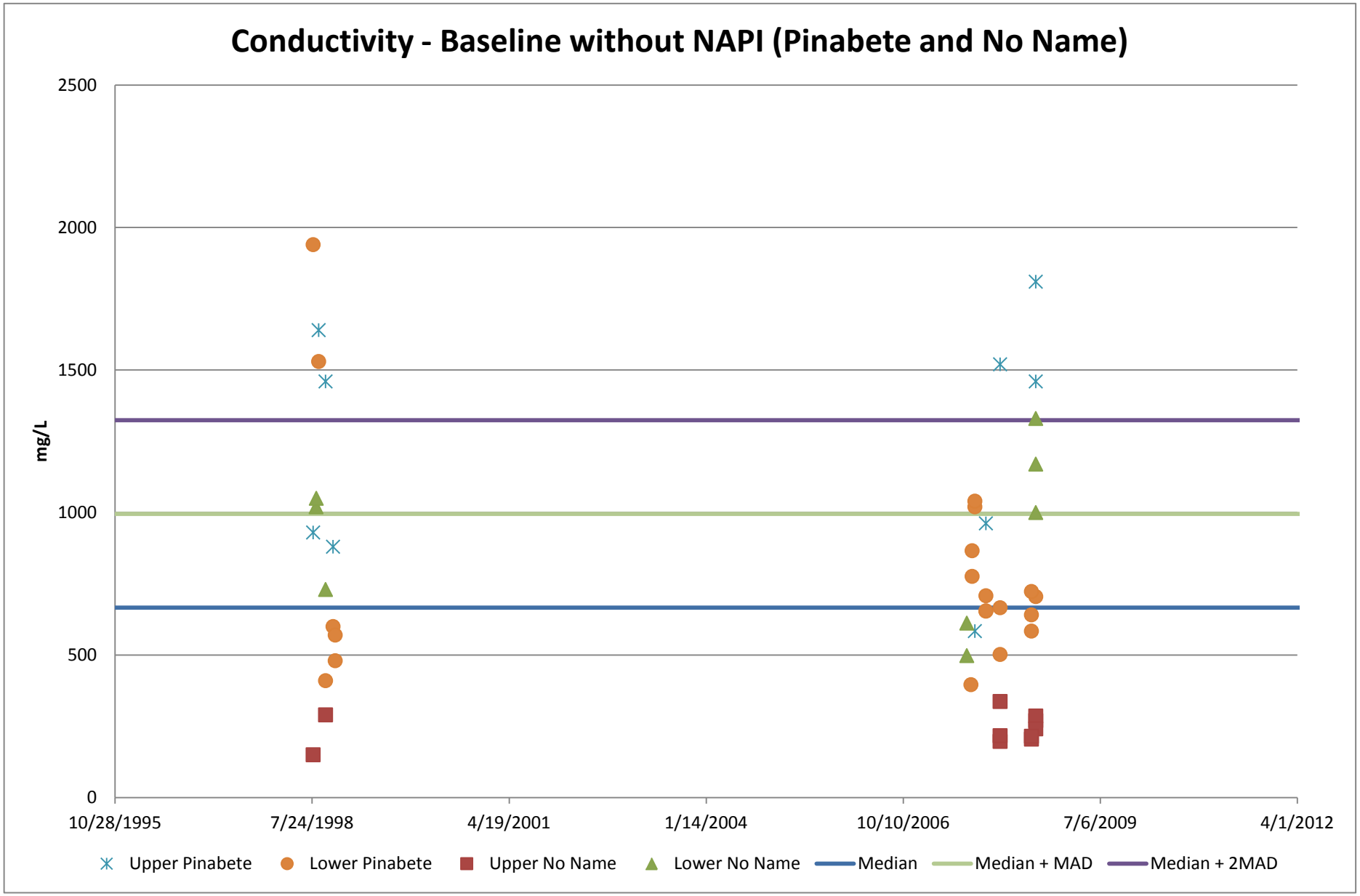

Silver - Baseline without NAPI (Pinabete and No Name)
mg/L
10
1
0.1
0.01
0.001
0.0001
0.00001
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Upper Pinabete
Lower Pinabete
Upper No Name
Lower No Name
Median
Median + MAD
Median + 2MAD
Aquatic & Wildlife Acute Criteria
Secondary Human Contact Criteria
Fish Consumption Criteria

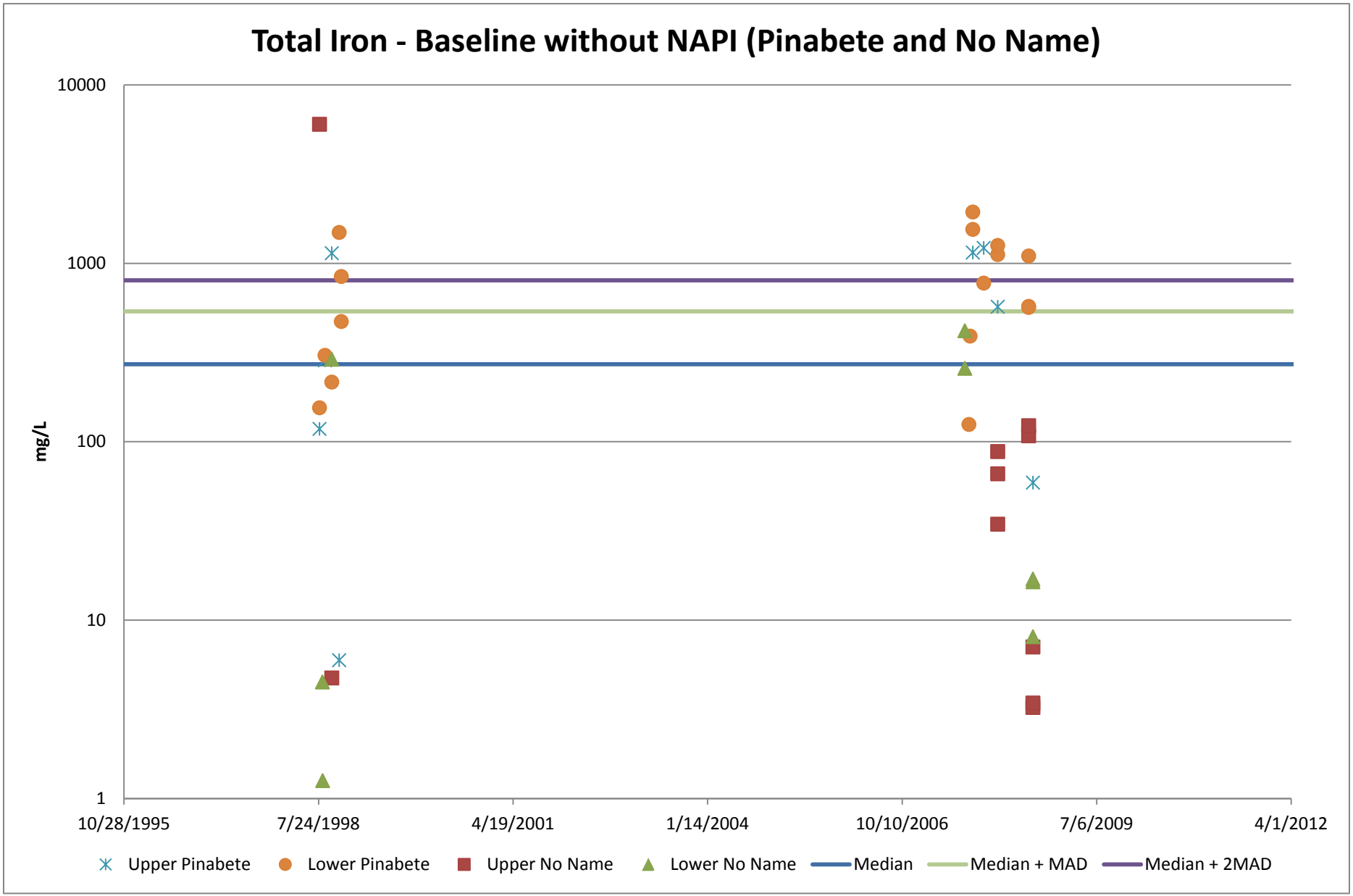

Sulfate - Baseline without NAPI (Pinabete and No Name)
mg/L
1200
1000
800
600
400
200
0
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Upper Pinabete
Lower Pinabete
Upper No Name
Lower No Name
Median
Median + MAD
Median + 2MAD
Livestock Criteria

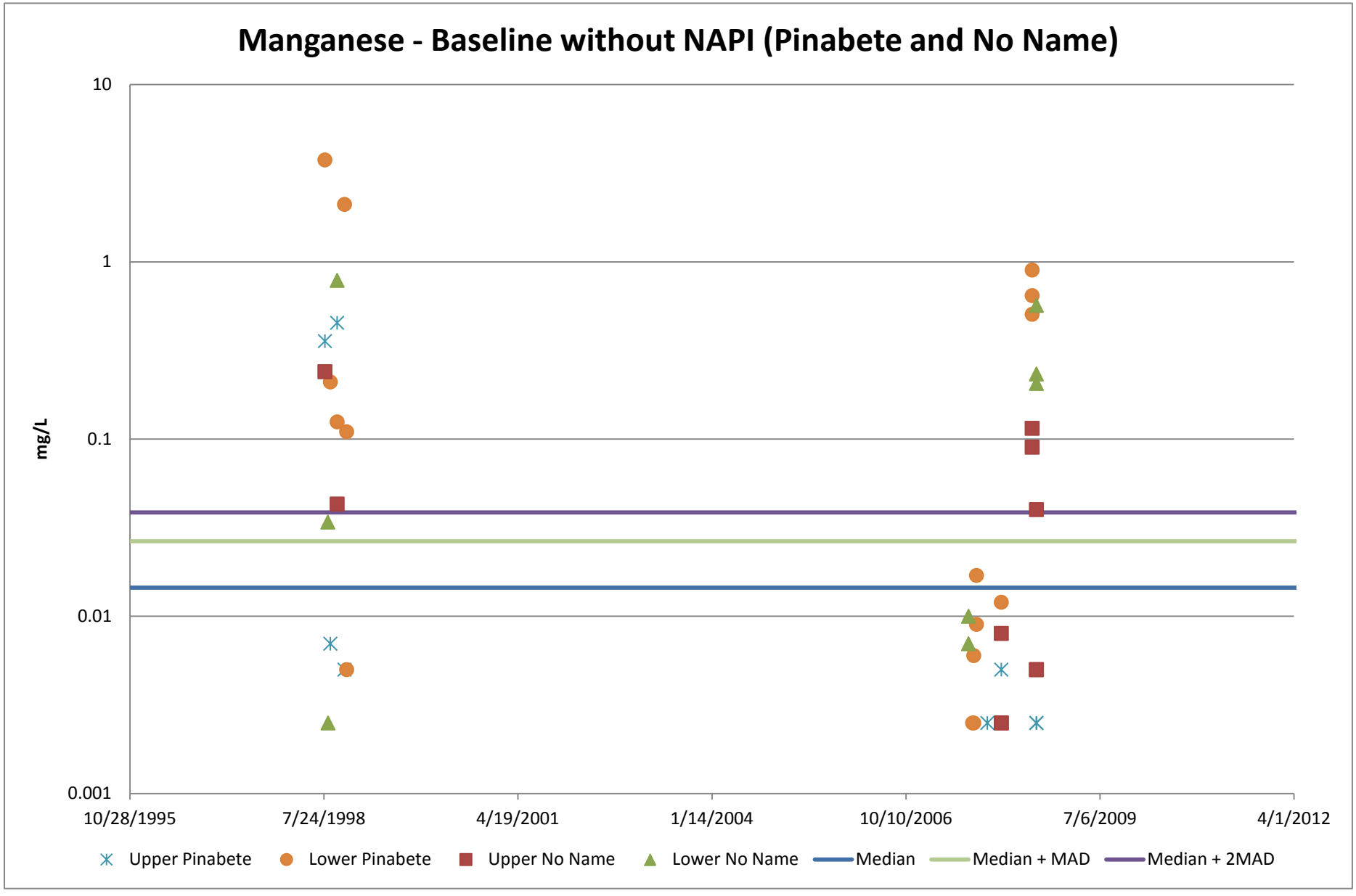

TDS - Baseline without NAPI (Pinabete and No Name)
100000
10000
1000
100
10
1
mg/L
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Upper Pinabete
Lower Pinabete
Upper No Name
Lower No Name
Median
Median + MAD
Median + 2MAD
Livestock Criteria


Zinc - Baseline without NAPI (Pinabete and No Name)
mg/L
1000
100
10
1
0.1
0.01
0.001
0.0001
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Upper Pinabete
Lower Pinabete
Upper No Name
Lower No Name
Median
Median + MAD
Median + 2MAD
Livestock Criteria
Aquatic and Wildlife Acute Criteria
Secondary Human Contact Criteria
Fish Consumption Criteria
Aquatic and Wildlife Chronic Criteria


TSS - Baseline without NAPI (Pinabete and No Name)
1000000
100000
10000
1000
100
mg/L
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Upper Pinabete
Lower Pinabete
Upper No Name
Lower No Name
Median
Median + MAD
Median + 2MAD


Conductivity - Baseline without NAPI (Pinabete and No Name)
mg/L
2500
2000
1500
1000
500
0
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Upper Pinabete
Lower Pinabete
Upper No Name
Lower No Name
Median
Median + MAD
Median + 2MAD


Total Iron - Baseline without NAPI (Pinabete and No Name)
10000
1000
100
10
1
mg/L
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Upper Pinabete
Lower Pinabete
Upper No Name
Lower No Name
Median
Median + MAD
Median + 2MAD


Manganese - Baseline without NAPI (Pinabete and No Name)
mg/L
10
1
0.1
0.01
0.001
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Upper Pinabete
Lower Pinabete
Upper No Name
Lower No Name
Median
Median + MAD
Median + 2MAD