From: Darr, Bob (CONTR)
Subject: DOE has posted soil sampling information pertaining to the POE GS10 flume replacement project on the Legacy Management Rocky Flats website
Date: Tuesday, June 25, 2013 10:23:37 AM

The U.S. Department of Energy has posted soil sampling data pertaining to the Point of Evaluation GS10 flume relocation at http://www.lm.doe.gov/default.aspx?id=9835 on the Public Involvement page of the Rocky Flats Legacy Management website.

DOE provided a short briefing on the Point of Evaluation GS10 flume replacement project at the Rocky Flats Stewardship Council (RFSC) meeting on June 3, 2013. The GS10 flume replacement project is described in Contact Record 2013-01, which was approved May 2, 2013 and is posted to the Rocky Flats public website. The Contact Record explains why the flume replacement project is not likely to impede the ongoing surface water and seep monitoring for evaluation of the reportable conditions at GS10. Some RFSC Board members expressed interest in soil/sediment sampling in the GS10 area, which is currently not planned because soil/sediment sampling results obtained during cleanup and closure and the water monitoring results from the ongoing evaluation of this reportable condition do not indicate particular soil/sediment sampling locations that would help inform the evaluation at this time.

The cleanup and closure soil/sediment sampling data is contained in the June 2006 RCRA Facility Investigation-Remedial Investigation/Corrective Measures Study – Feasibility Study Report for the Rocky Flats Environmental Technology Site (RI/FS), which is posted on the Rocky Flats public website. To aid interested stakeholders in locating the relevant data, DOE has posted to the Rocky Flats public website close-up maps showing the soil/sediment sampling locations in the GS10 vicinity and the associated plutonium and americium results. These data are represented in the nature and extent of contamination figures in the RI/FS. A link from the close-up map to the associated RI/FS map is also provided.

If you have any difficulty accessing the figures and documents or have any questions, please contact:

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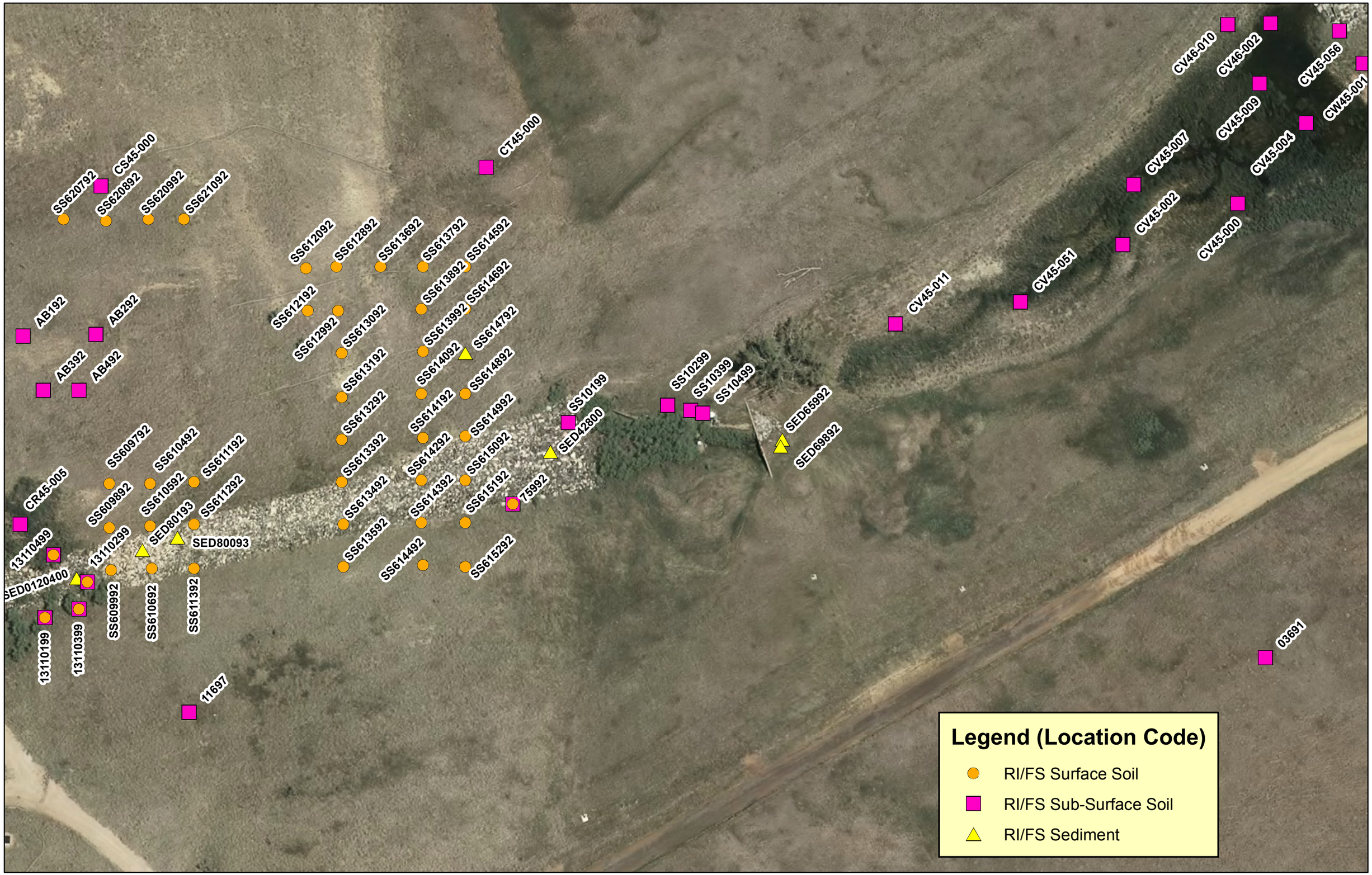
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CV45-056
CW45-001
CV45-009
CV45-004
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03691
Legend (Location Code)
RI/FS Surface Soil
RI/FS Sub-Surface Soil
RI/FS Sediment

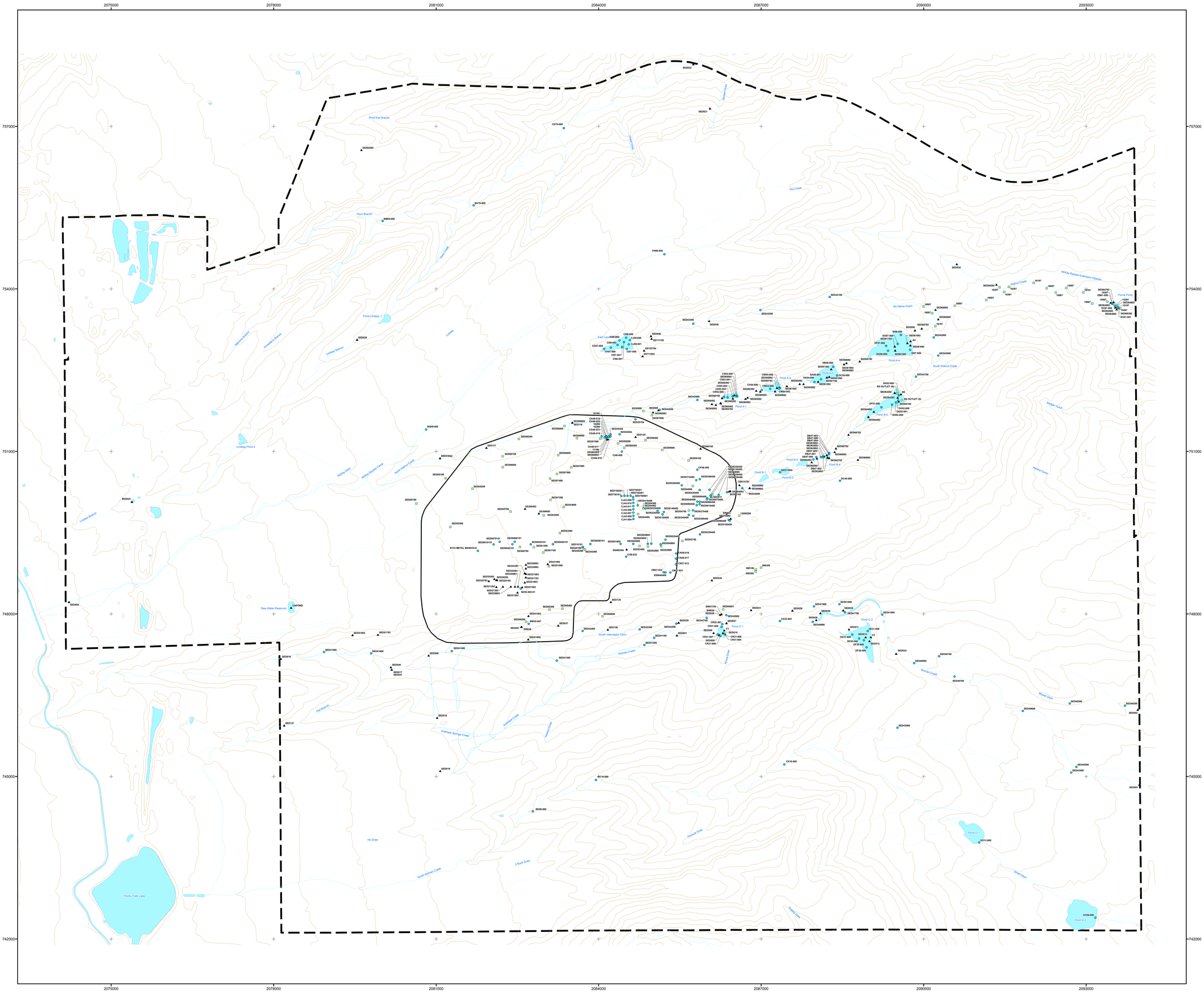

Figure 5.2

Sediment Sampling Locations

KEY

- Sample collected since January 1, 2000
- Sample collected between January 1, 1995 and December 31, 1999
- Sample collected between June 28, 1991 and December 31, 1999

Standard Map Features

- IA OU boundary
- Pond
- Perennial stream
- Intermittent stream
- Ephemeral stream
- Site boundary
- Topographic contour (20-foot)

N
W E
S

0 600 1,200 Feet

Scale 1:7,200

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD 27

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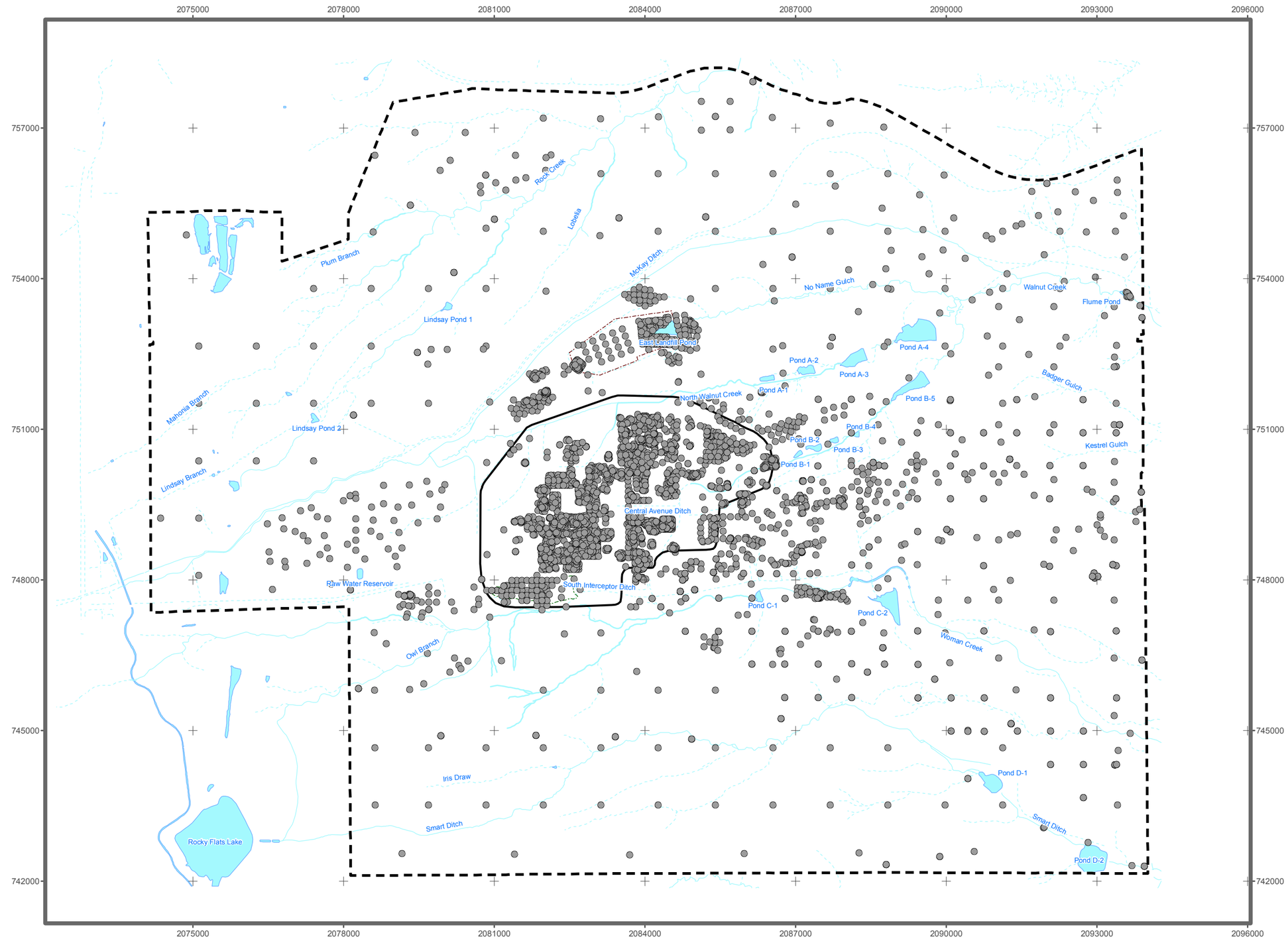

Figure 3.2

Surface Soil Sampling Locations

KEY

- Surface soil sampling location

Total samples: 4,354

Note:
Data presented are the results from soil samples, collected at depths less than 6 inches below the ground surface, from 6/28/91 through 8/22/05.

Standard Map Features

- IA OU boundary
- Original landfill
- Present landfill
- Pond
- Perennial stream
- Intermittent stream
- Ephemeral stream
- Site boundary

N
W E
S

0 1,000 2,000 Feet

Scale 1:24,000

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD 27

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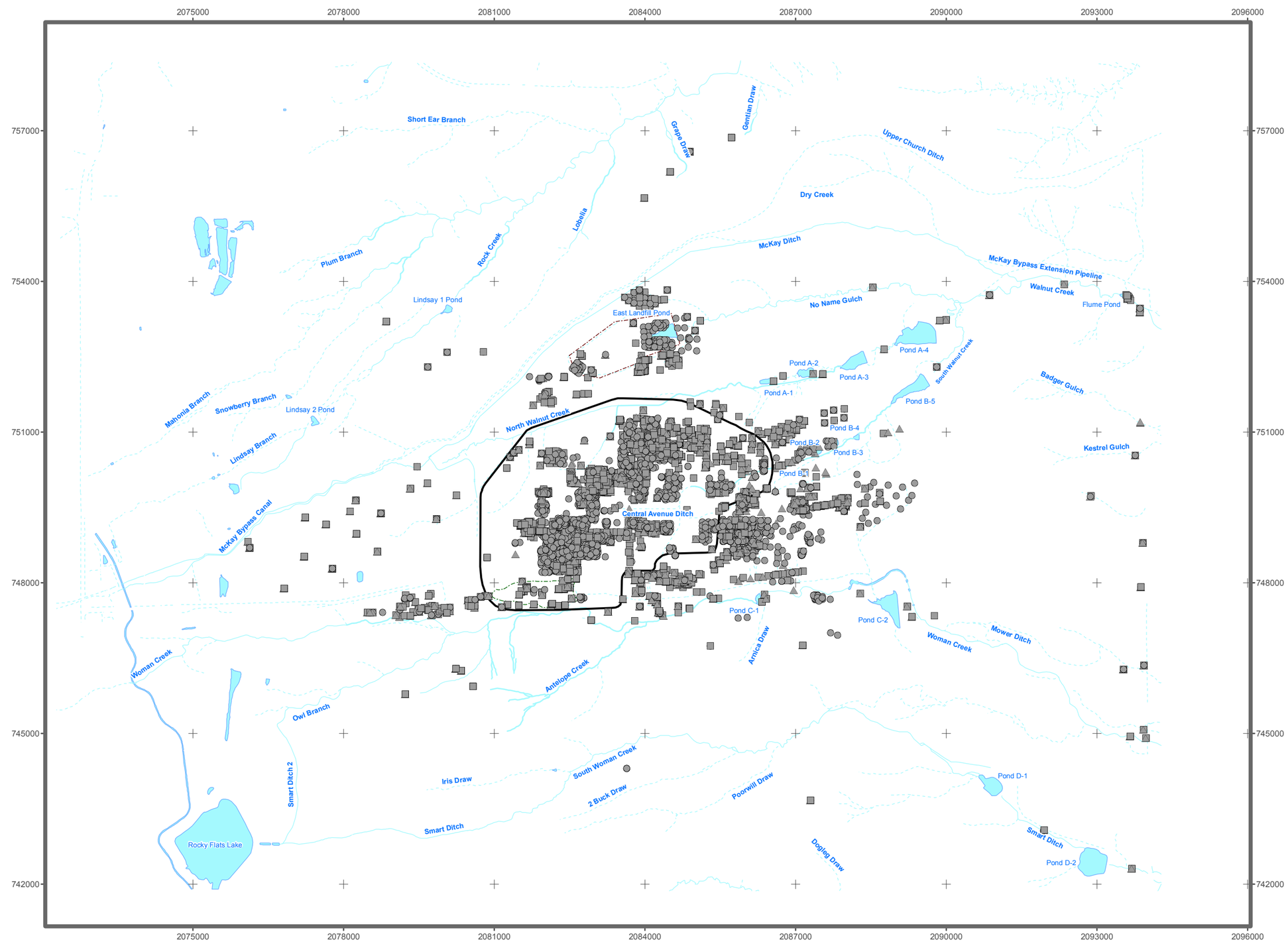

Figure 3.3

Subsurface Soil Sampling Locations (0.5 - 3 ft, 3 - 8 ft, and 8 - 12 ft)

KEY

- Sample collected > 0.5 ft AND < OR = 3 ft
- Sample collected > 3ft AND < OR = 8 ft
- Sample collected > 8 ft AND < OR = 12 ft

Total Samples: 6,750

Note:
Data presented are the results from soil samples, collected at depths greater than 6 inches below the ground surface, from 6/28/91 through 8/22/05.

Standard Map Features

- IA OU boundary
- Original landfill
- Present landfill
- Pond
- Perennial stream
- Intermittent stream
- Ephemeral stream
- Site boundary

N
W E
S

0 1,000 2,000 Feet

Scale 1:24,000

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD 27

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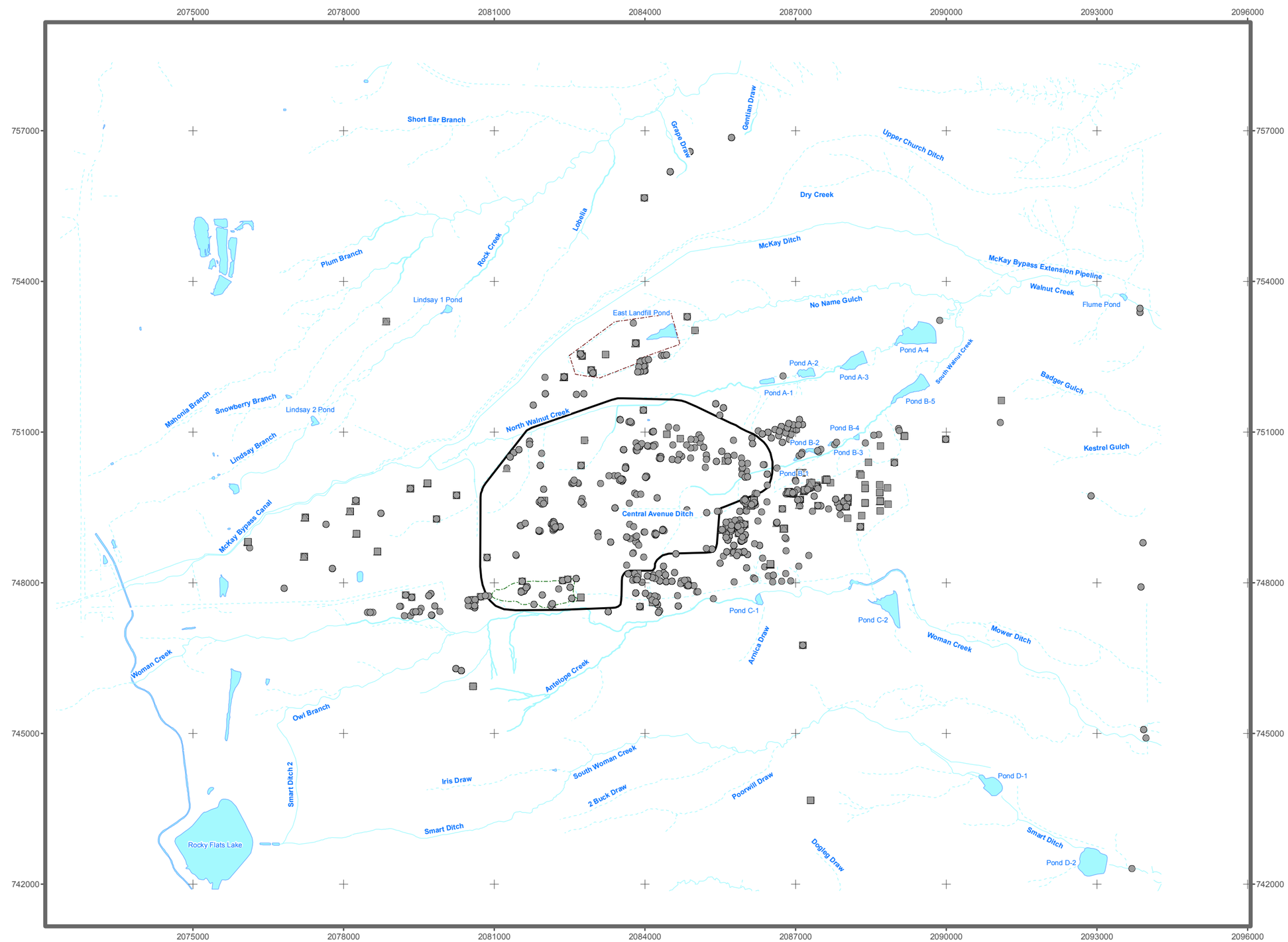

Figure 3.4

Subsurface Soil Sampling Locations (12 - 30 ft, 30 - 50 ft, and >= 50 ft)

KEY

- Sample collected > 12 ft AND < OR = 30 ft
- Sample collected > 30 ft AND < OR = 50 ft
- Sample collected >= 50 ft

Total Samples: 2,128

Note:
Data presented are the results from soil samples, collected at depths greater than 6 inches below the ground surface, from 6/28/91 through 8/22/05.

Standard Map Features

- IA OU boundary
- Original landfill
- Present landfill
- Pond
- Perennial stream
- Intermittent stream
- Ephemeral stream
- Site boundary

N
W E
S

0 1,000 2,000 Feet

Scale 1:24,000

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD 27

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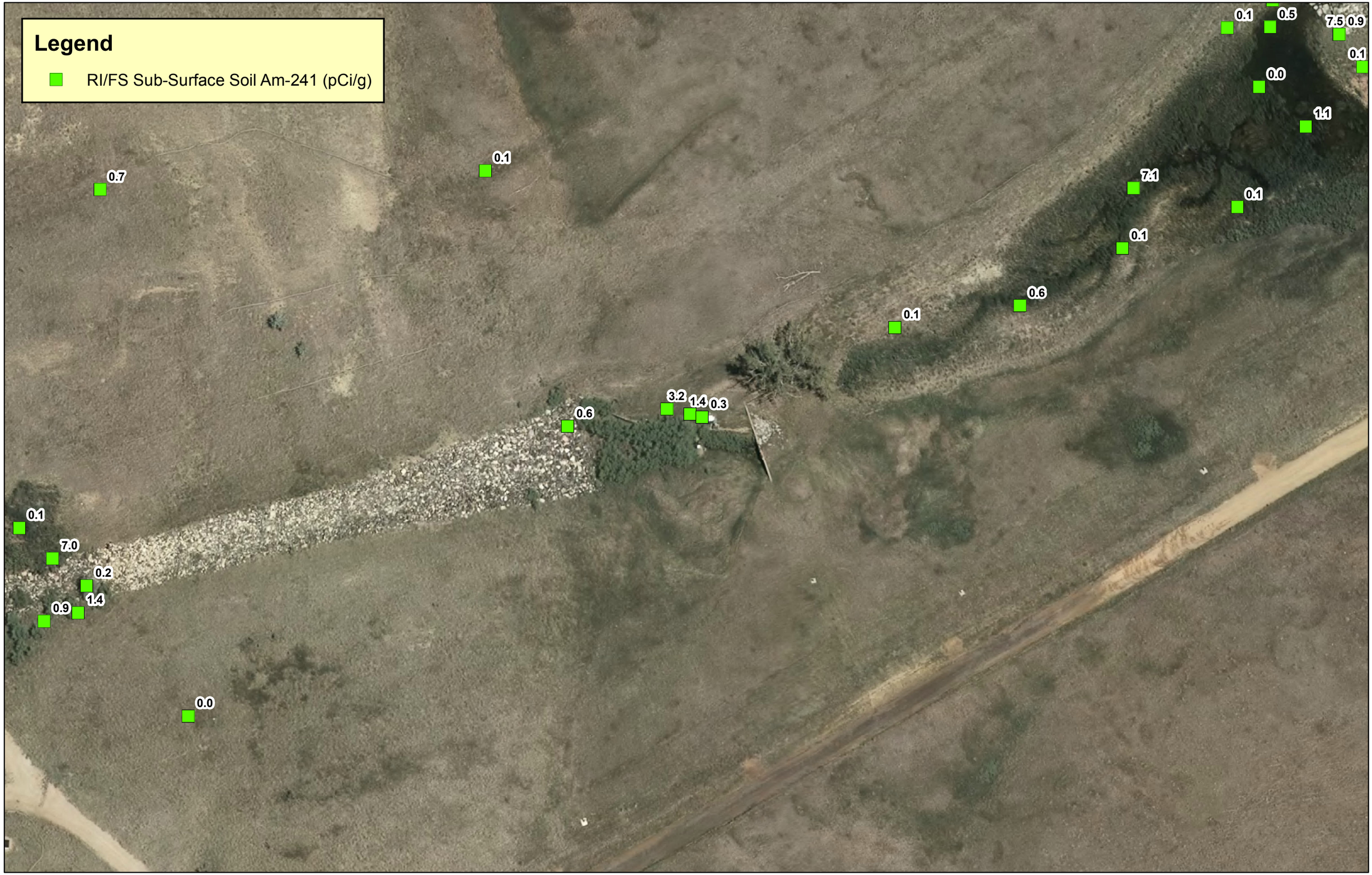
Legend
RI/FS Sub-Surface Soil Am-241 (pCi/g)
0.1
0.5
7.5
0.9
0.1
0.0
1.1
0.7
0.1
7.1
0.1
0.1
0.6
0.1
3.2
1.4
0.3
0.6
0.1
7.0
0.2
1.4
0.9
0.0

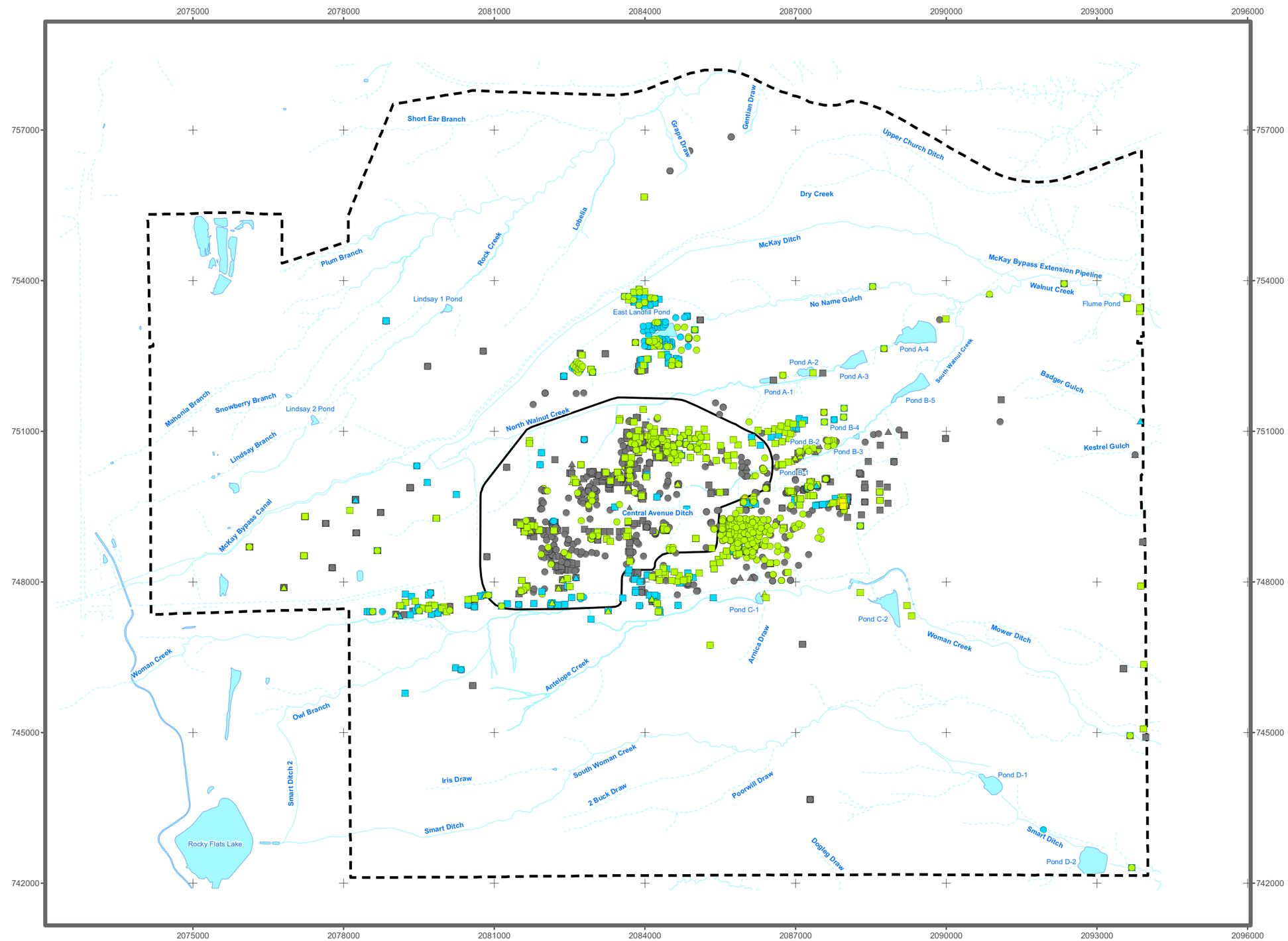

Figure 3.24

Americium-241 Activity in Subsurface Soil (0.5 - 3 ft, 3 - 8 ft, and 8 - 12 ft)

KEY

- S Sample collected > 0.5 ft and <= 3 ft
- □ Sample collected > 3ft and <= 8 ft
- △ Sample collected > 8 ft and <= 12 ft
- S >= WRW PRG
- S > Background M2SD < WRW PRG
- S Detected and <= Background M2SD
- S Not detected

Minimum nondetect reported value = -6.16 pCi/g
Maximum nondetect reported value = 28.3 pCi/g
Background M2SD = 0.01 pCi/g
WRW PRG = 88.4 pCi/g

Notes:
- Data presented are the results from soil samples collected between 6/28/1991 and 8/22/2005.
- See Table 3.17 for additional information.

Standard Map Features

- IA OU boundary
- Pond
- Perennial stream
- Intermittent stream
- Ephemeral stream
- Site boundary

N W E S

0 1,000 2,000 Feet

Scale 1:24,000

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD 27

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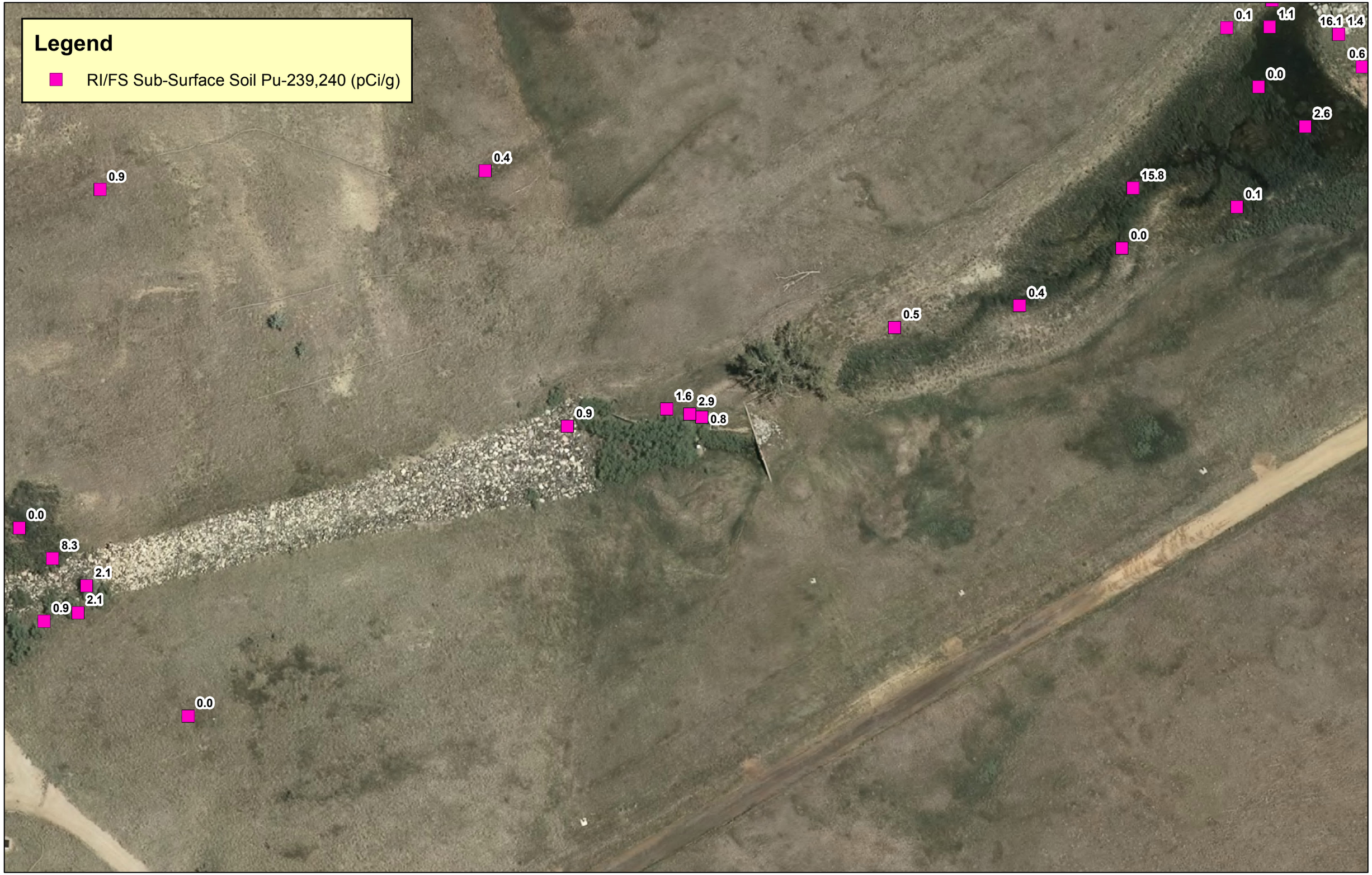
Legend
RI/FS Sub-Surface Soil Pu-239,240 (pCi/g)
0.1
1.1
16.1
1.4
0.6
0.0
2.6
0.4
0.9
15.8
0.1
0.0
0.4
0.5
1.6
2.9
0.9
0.8
0.0
8.3
2.1
2.1
0.9
0.0

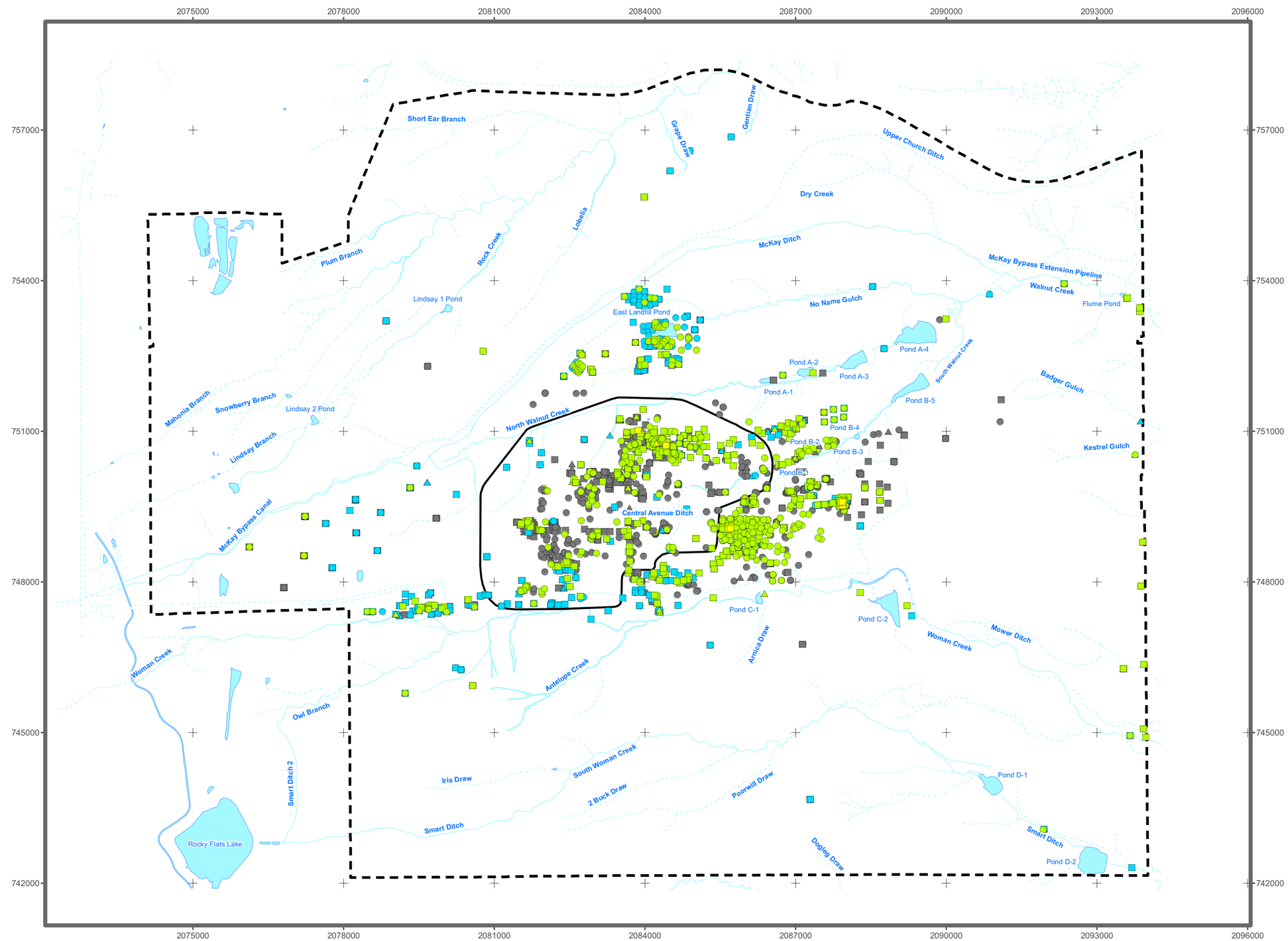

Figure 3.25

Plutonium-239/240 Activity in Subsurface Soil (0.5 - 3 ft, 3 - 8 ft, and 8 - 12 ft)

KEY

- S Sample collected > 0.5 ft and <= 3 ft
- □ Sample collected > 3ft and <= 8 ft
- △ Sample collected > 8 ft and <= 12 ft
- S >= WRW PRG
- S > Background M2SD < WRW PRG
- S Detected and <= Background M2SD
- S Not detected

Minimum nondetect reported value = -0.043 pCi/g
Maximum nondetect reported value = 1.08 pCi/g
Background M2SD = 0.022 pCi/g
WRW PRG = 112 pCi/g

Notes:
- Data presented are the results from soil samples collected between 6/28/1991 and 8/22/2005.
- See Tables 3.17 and 3.19 for additional information.

Standard Map Features

- IA OU boundary
- Pond
- Perennial stream
- Intermittent stream
- Ephemeral stream
- Site boundary

N
W E
S

0 1,000 2,000 Feet

Scale 1:24,000

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD 27

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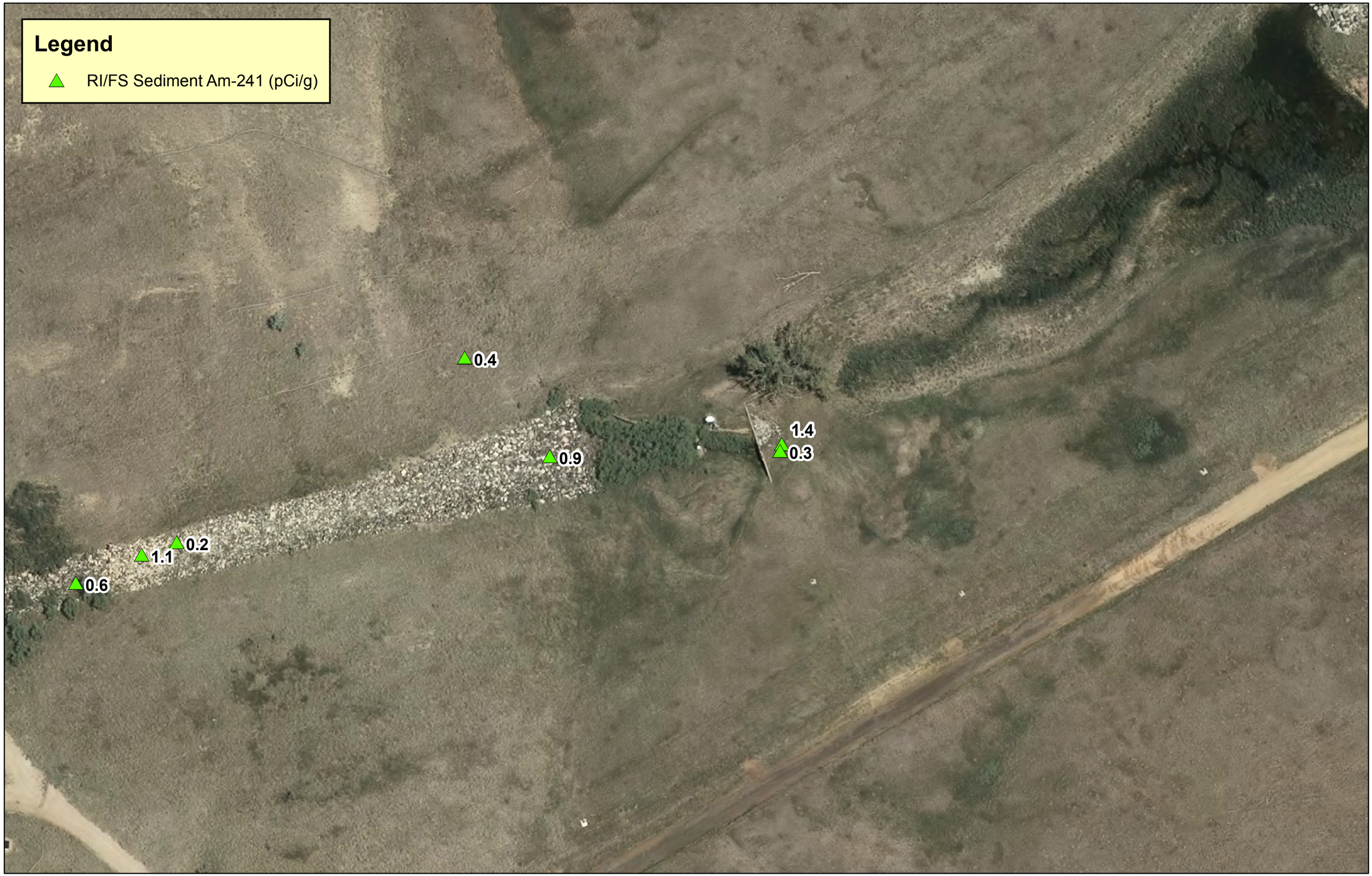
Legend
RI/FS Sediment Am-241 (pCi/g)
0.4
0.9
1.4
0.3
0.2
1.1
0.6

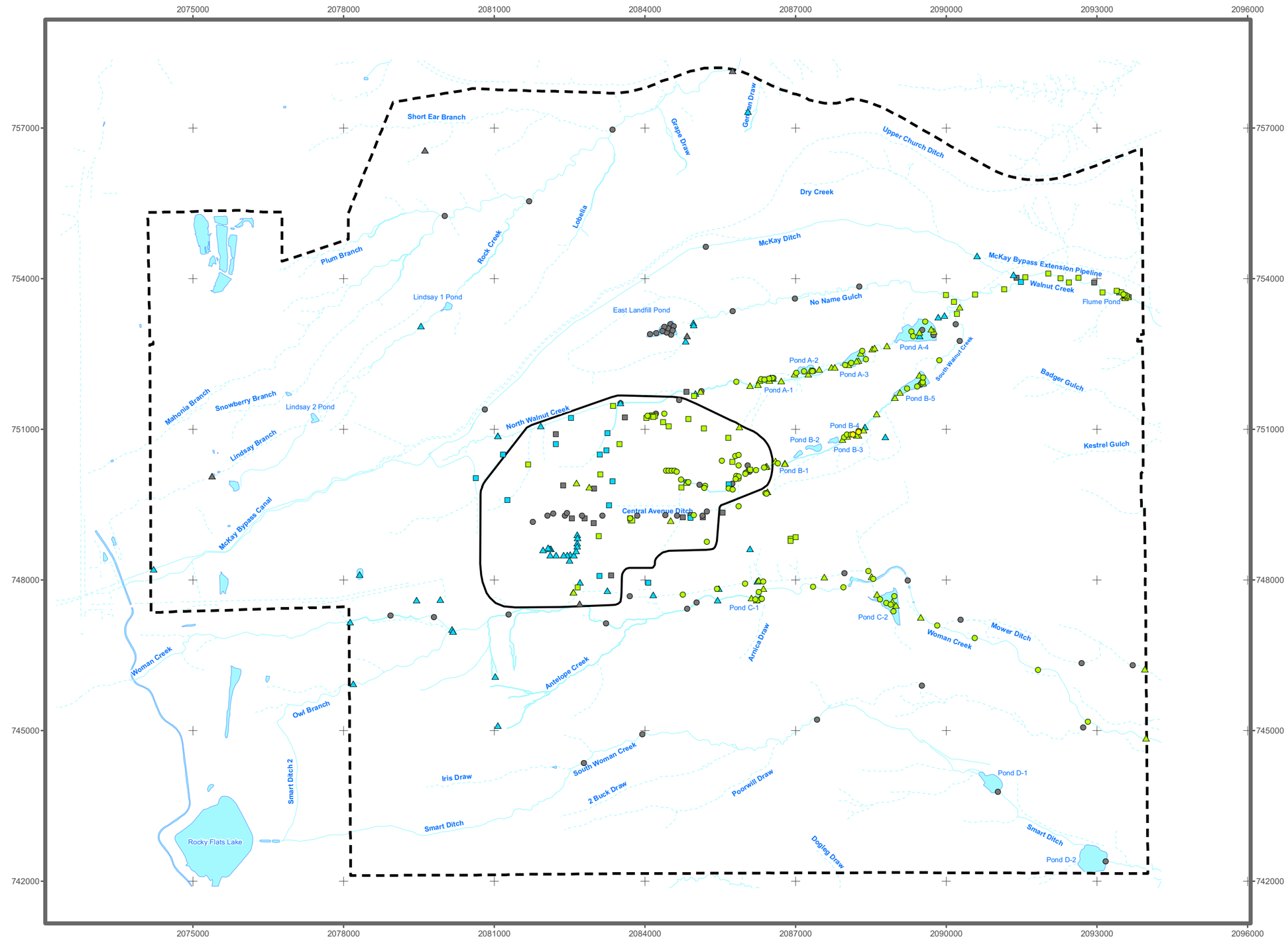

Figure 5.27

Americium-241 Concentrations in Sediment

KEY

- Sample collected since January 1, 2000
- Sample collected between January 1, 1995 and December 31, 1999
- Sample collected between June 28, 1991 and December 31, 1994
- >= 10X WRW PRG
- >= WRW PRG and < 10X WRW PRG
- >= Background M2SD and < WRW PRG
- Detected and < Background M2SD
- Not detected

Minimum nondetect reported value = -3.70E-02 pCi/g
Maximum nondetect reported value = 1.64E-01 pCi/g
Background M2SD = 4.27E-02 pCi/g
WRW PRG = 7.69E+00 pCi/g

Notes:
- Data presented on the figure represent the most recent sediment analyte result for samples collected between 06/28/1991 and 07/31/2005.
- See Table 5.18 for additional information.

Standard Map Features

- IA OU boundary
- Pond
- Perennial stream
- Intermittent stream
- Ephemeral stream
- Site boundary

N
W E
S

0 1,000 2,000 Feet

Scale 1:24,000

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD 27

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Legend
RI/FS Sediment Pu-239,240 (pCi/g)
1.1
0.9
0.3
0.8
0.2
2.0
0.4

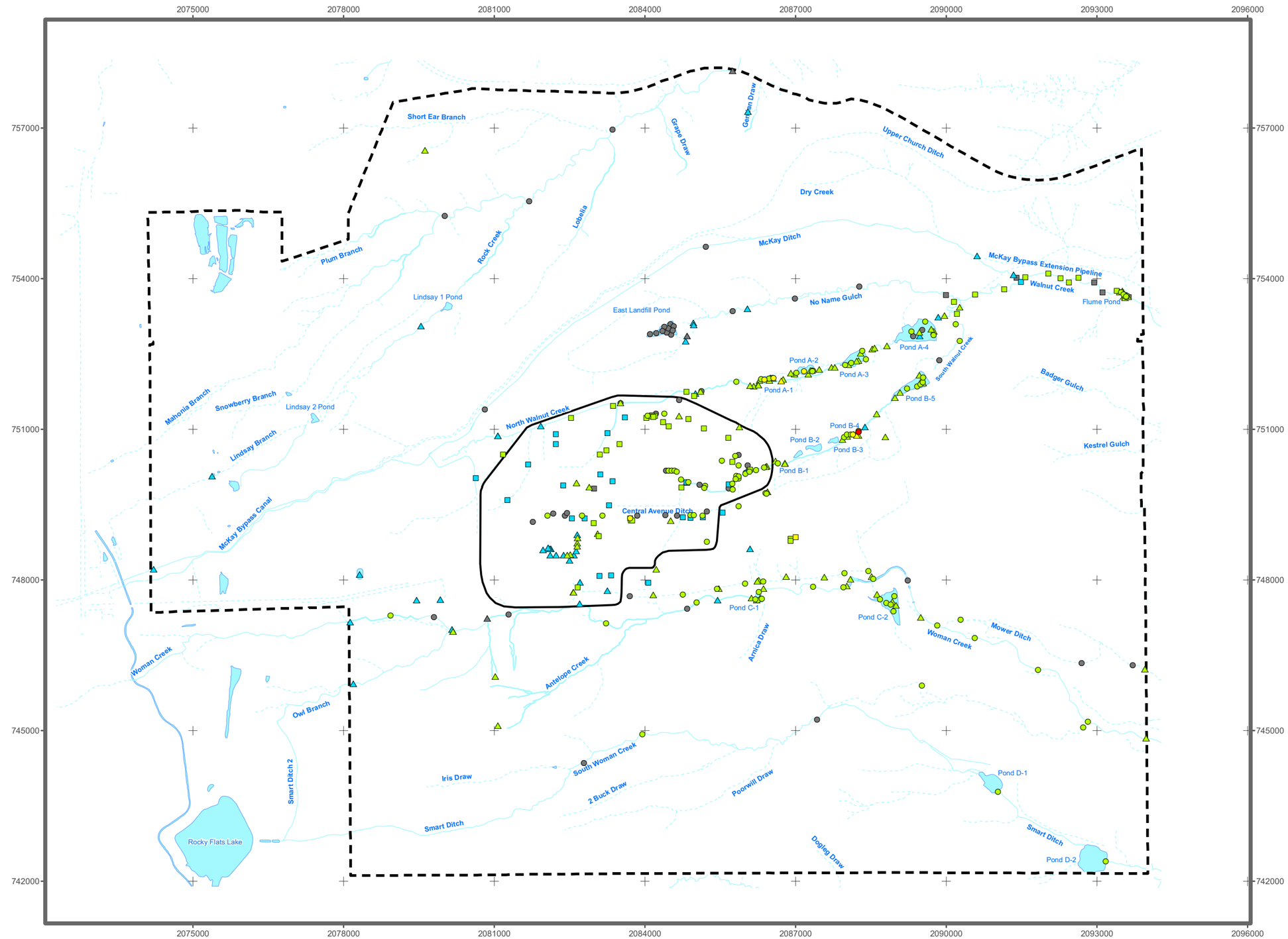

Figure 5.28

Plutonium-239/240 Concentrations in Sediment

KEY

- Sample collected since January 1, 2000
- Sample collected between January 1, 1995 and December 31, 1999
- Sample collected between June 28, 1991 and December 31, 1994
- >= 10X WRW PRG
- >= WRW PRG and < 10X WRW PRG
- >= Background M2SD and < WRW PRG
- Detected and < Background M2SD
- Not detected

Minimum nondetect reported value = -1.60E-02 pCi/g
Maximum nondetect reported value = 1.92E-01 pCi/g
Background M2SD = 5.09E-02 pCi/g
WRW PRG = 9.80E+00 pCi/g

Notes:
- Data presented on the figure represent the most recent sediment analyte result for samples collected between 06/28/1991 and 07/31/2005.
- See Table 5.18 for additional information.

Standard Map Features

- IA OU boundary
- Pond
- Perennial stream
- Intermittent stream
- Ephemeral stream
- Site boundary

N
W E
S

0 1,000 2,000 Feet

Scale 1:24,000

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD 27

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Legend
RI/FS Surface Soil Am-241 (pCi/g)
0.4
0.3
0.4
0.6
0.7
1.2
0.3
0.8
0.6
0.4
0.6
1.5
0.3
1.8
0.3
1.6
1.6
0.3
0.6
0.6
0.3
0.3
0.6
1.4

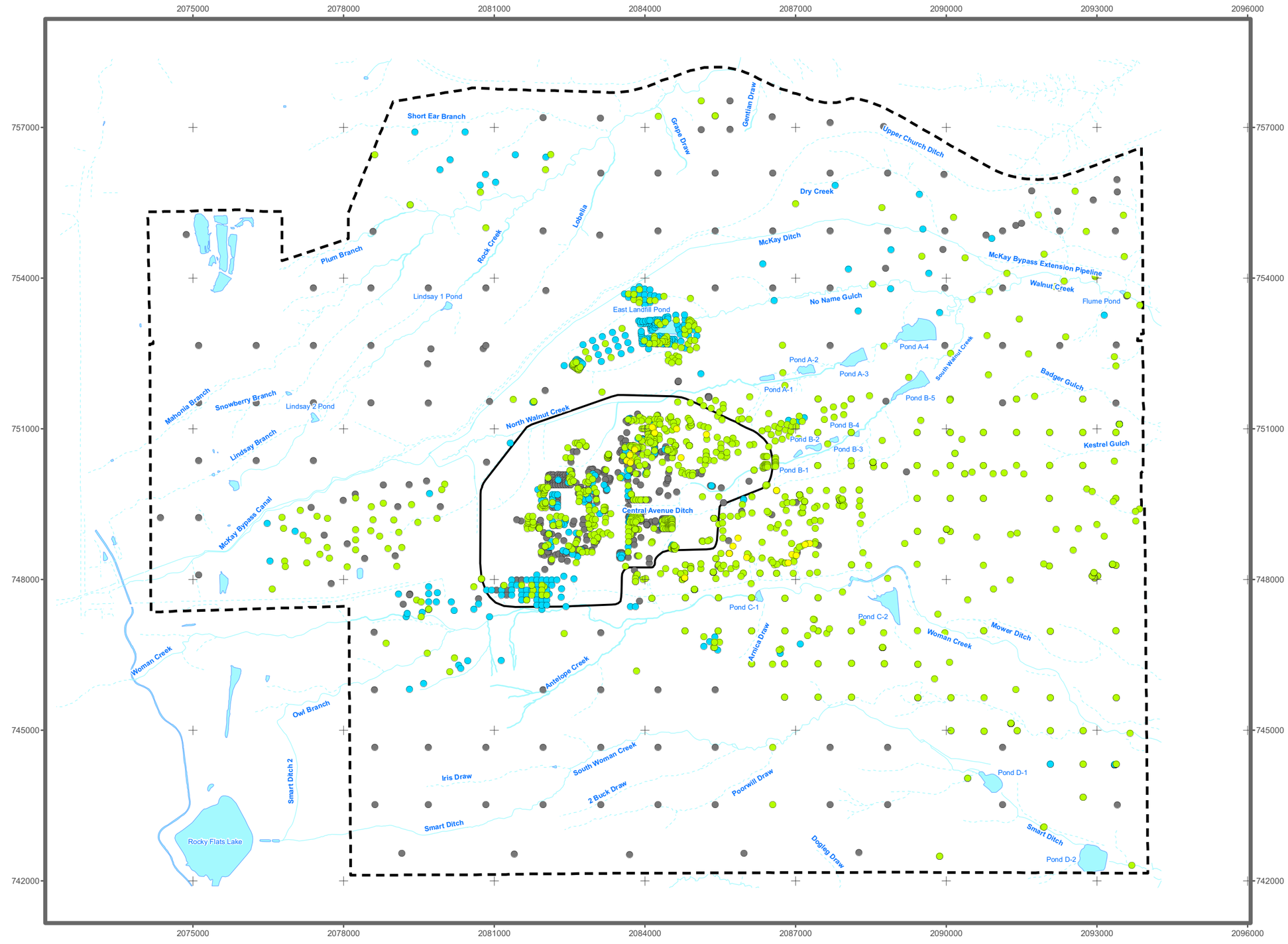

Figure 3.15

Americium-241 Activity in Surface Soil

KEY

- >= WRW PRG
- > Background M2SD and < WRW PRG
- Detected and <= Background M2SD
- Not detected

Minimum nondetect reported value = -0.082 pCi/g
Maximum nondetect reported value = 0.327 pCi/g
Background M2SD = 0.022 pCi/g
WRW PRG = 7.69 pCi/g

Notes:
- Data presented are the results from soil samples collected between 6/28/1991 and 8/22/2005.
- See Tables 3.1 and 3.13 for additional information.

Standard Map Features

- IA OU boundary
- Pond
- Perennial stream
- Intermittent stream
- Ephemeral stream
- Site boundary

N
W E
S

0 1,000 2,000 Feet

Scale 1:24,000

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD 27

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Legend
RI/FS Surface Soil Pu-239,240 (pCi/g)
0.4
0.4
0.4
1.0
0.7
0.1
2.6
1.6
0.6
3.1
0.3
0.1
0.2
0.6
0.4
0.4
3.5
1.5
1.0
2.5
0.4
5.2
0.3
10.4
2.6
0.9
3.8
0.9
0.2
0.4
1.8
2.6
0.7
0.2
0.3
0.6

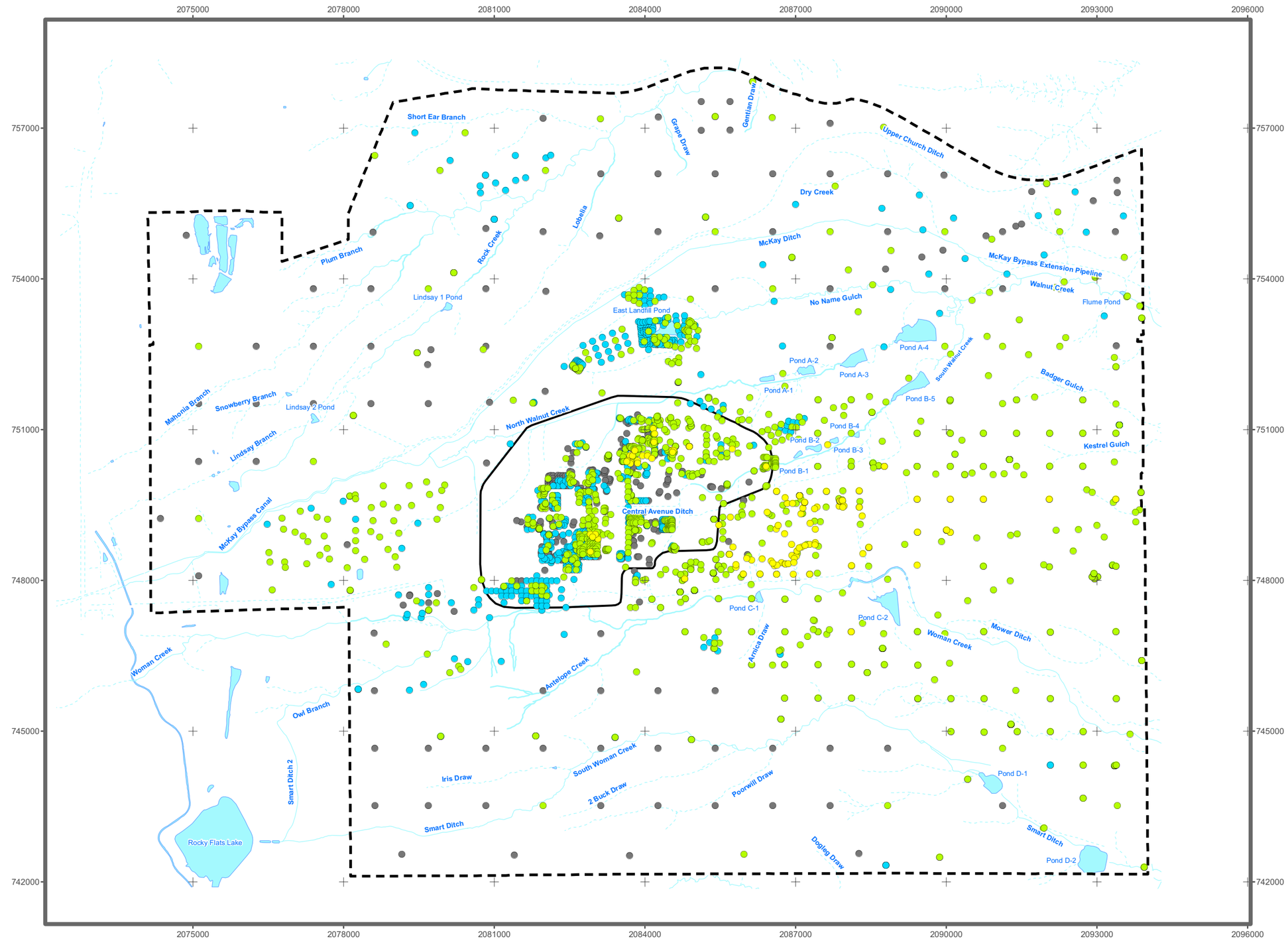

Figure 3.16

Plutonium-239/240 Activity in Surface Soil

KEY

- >= WRW PRG
- > Background M2SD and < WRW PRG
- Detected and <= Background M2SD
- Not detected

Minimum nondetect reported value = -0.078 pCi/g
Maximum nondetect reported value = 0.218 pCi/g
Background M2SD = 0.066 pCi/g
WRW PRG = 9.8 pCi/g

Notes:
- Data presented are the results from soil samples collected between 6/28/1991 and 8/22/2005.
- See Tables 3.1 and 3.13 for additional information.

Standard Map Features

- IA OU boundary
- Pond
- Perennial stream
- Intermittent stream
- Ephemeral stream
- Site boundary

N
W E
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Scale 1:24,000

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD 27

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