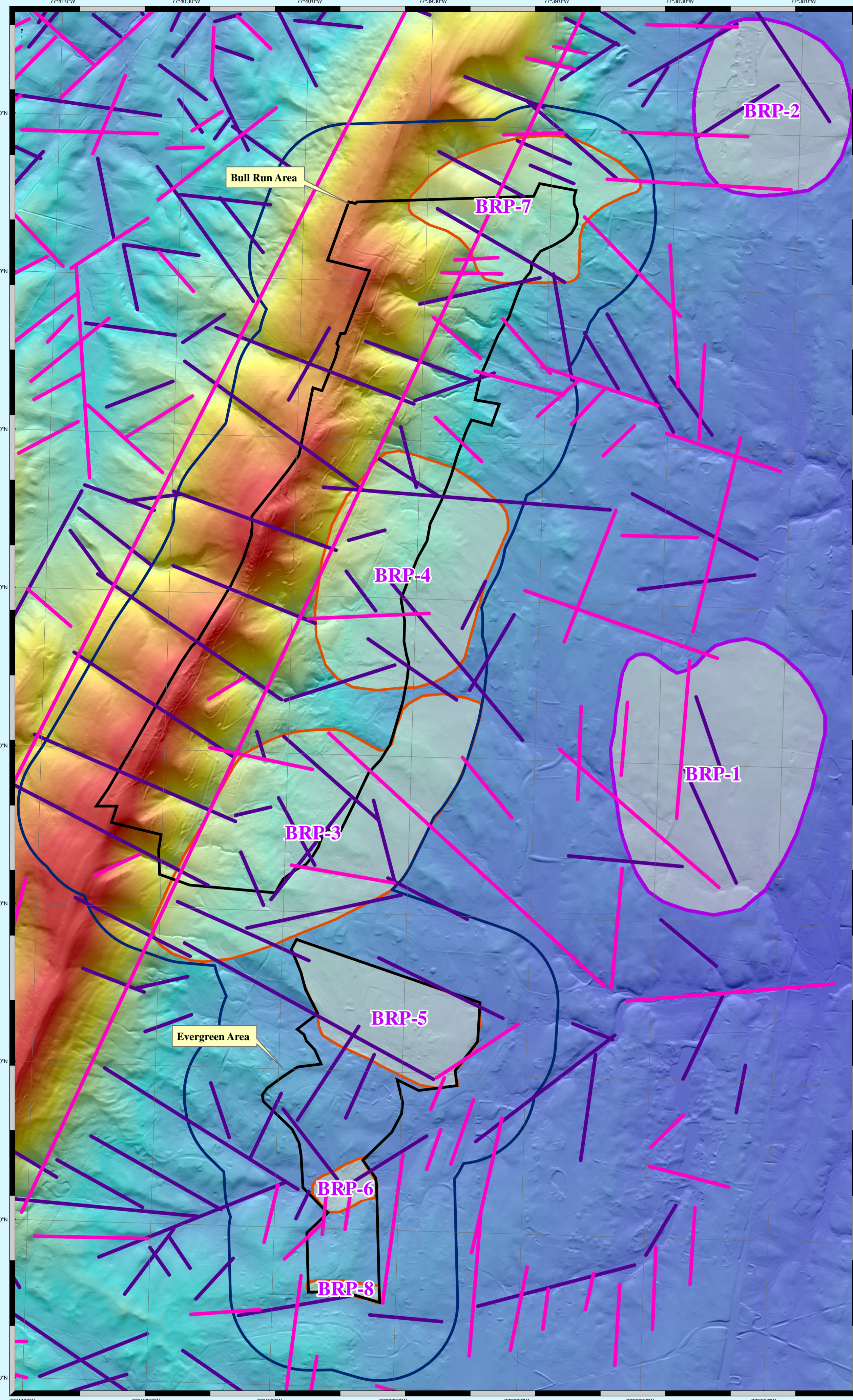
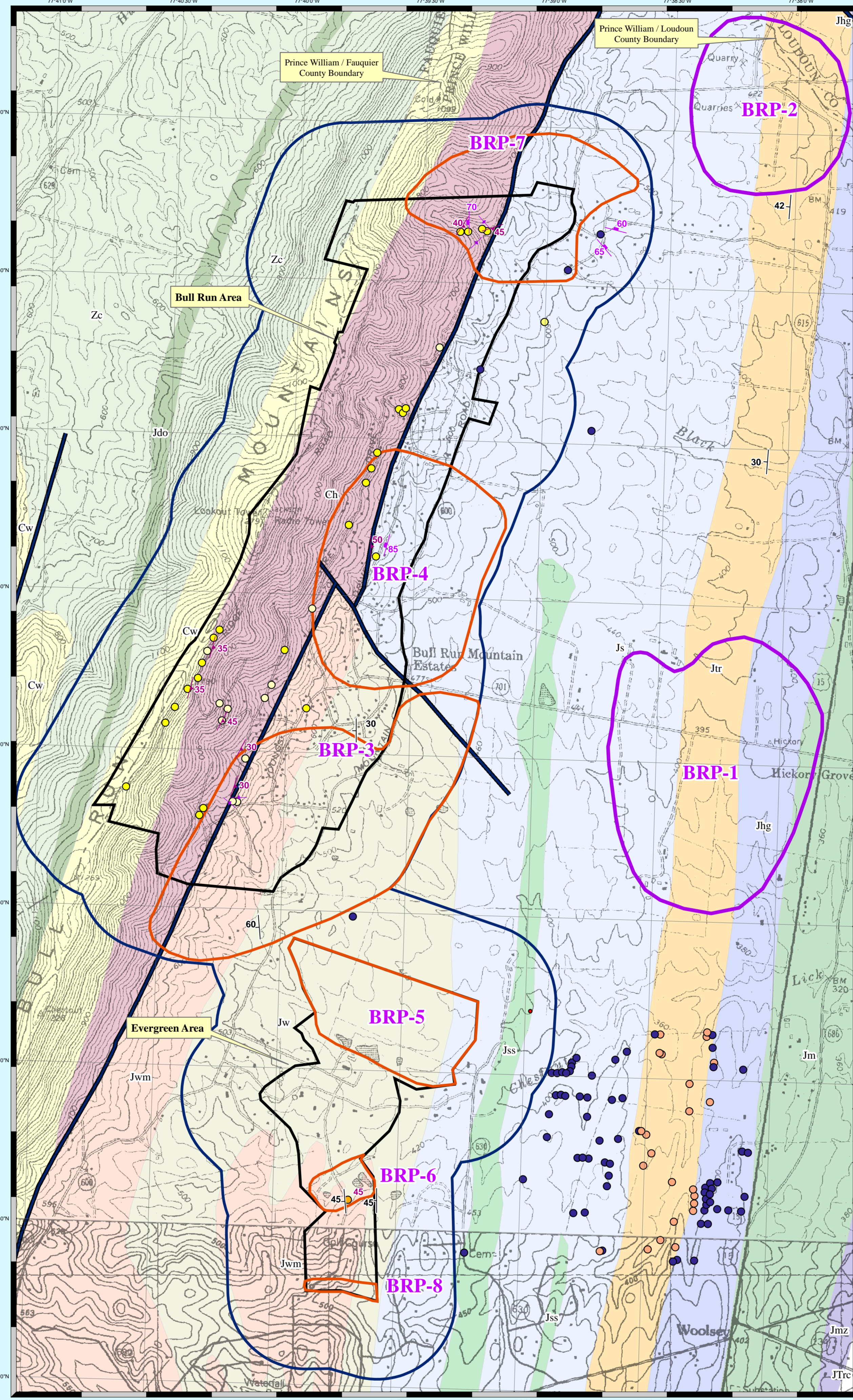


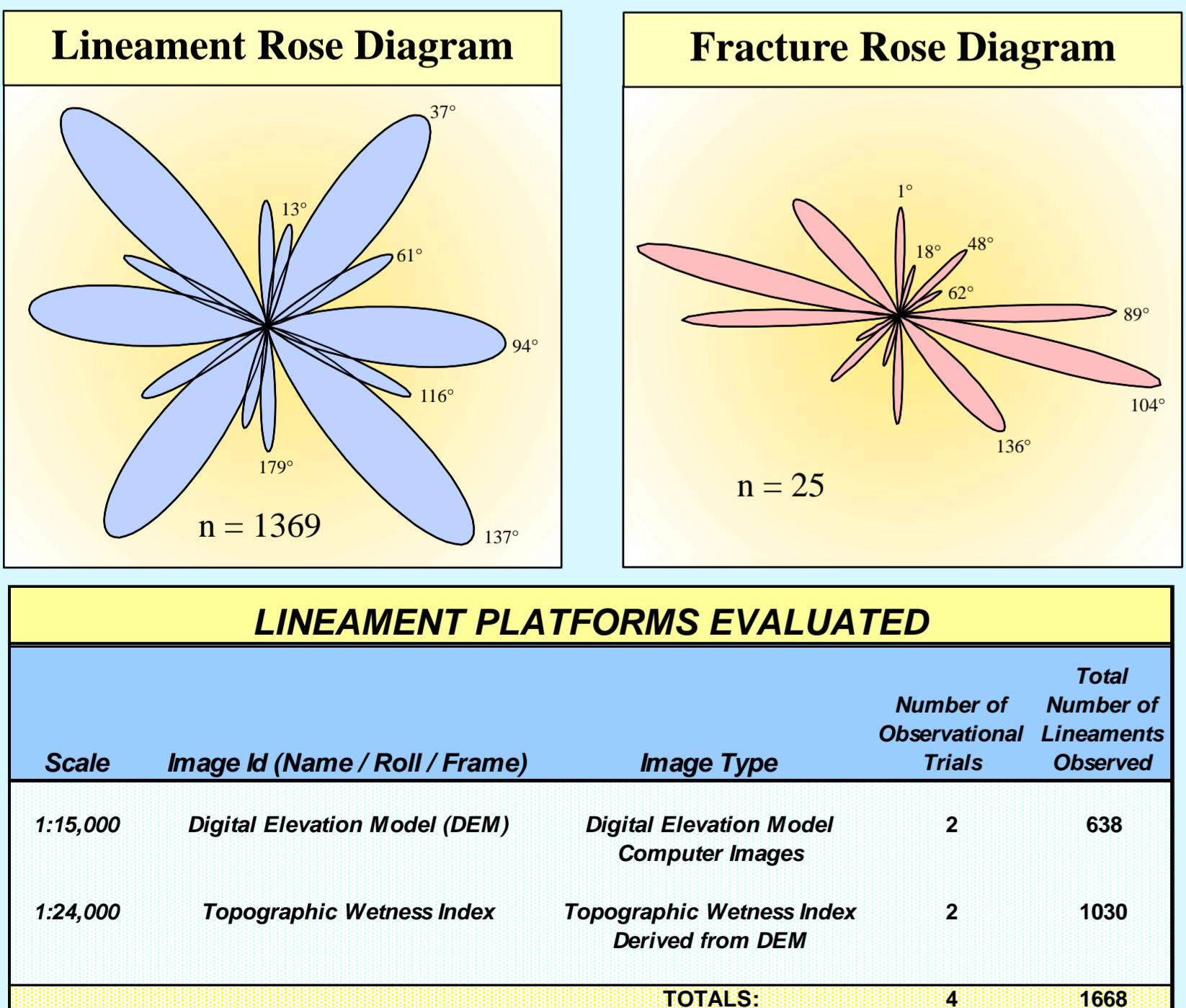
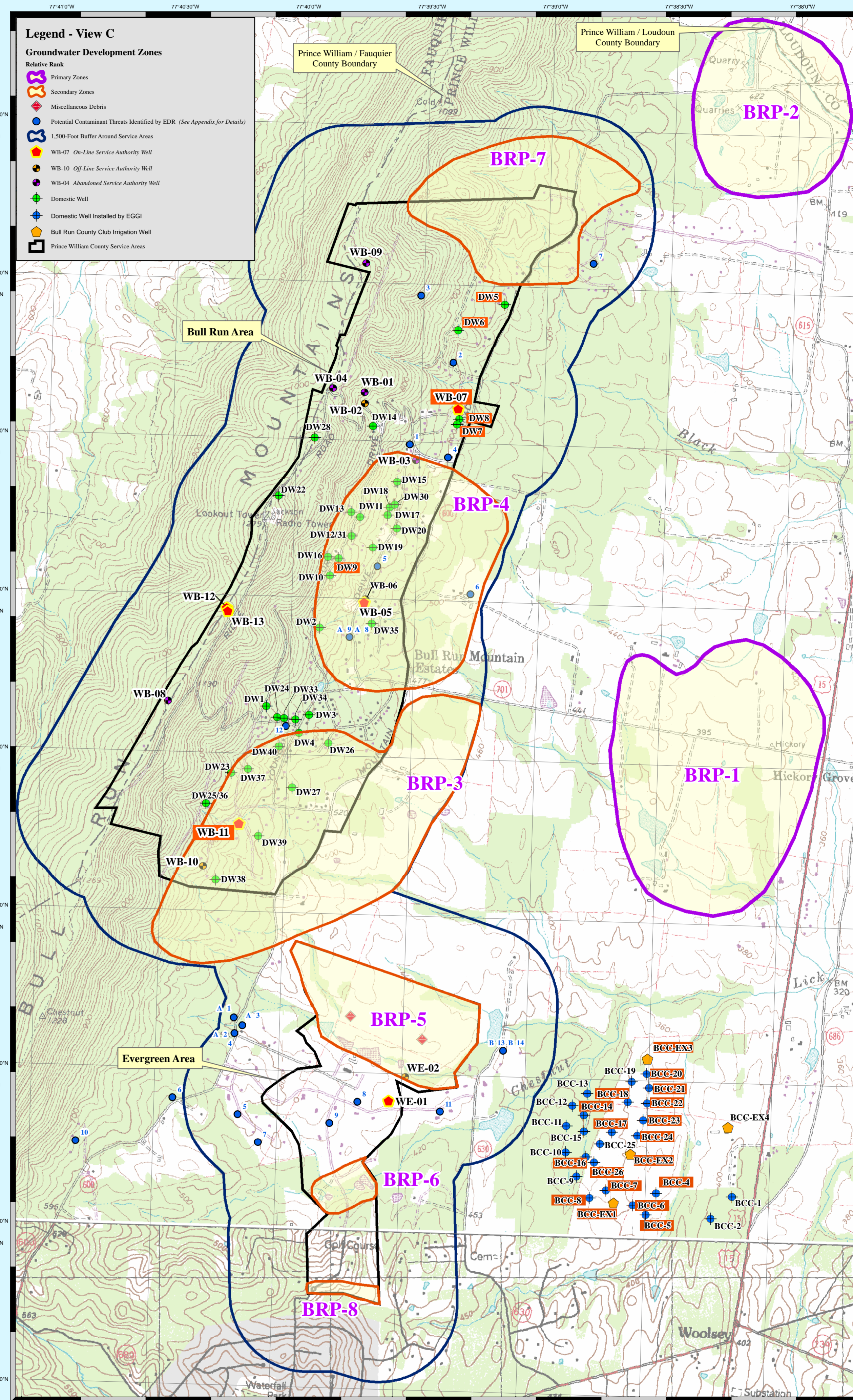
A) Digital Elevation Model (DEM) and Coincident Lineaments



B) Bedrock Geology



C) Topographic Setting, Existing Wells, and Potential Contaminant Threats



**Legend - View A**

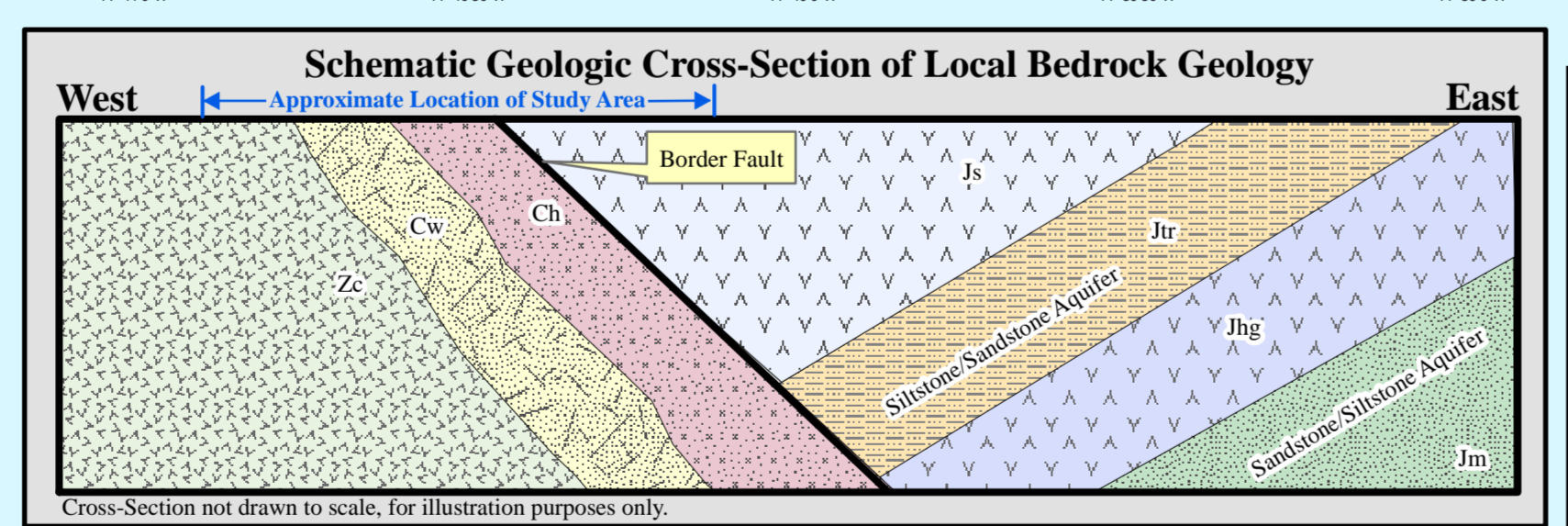
Fracture-Supported Coincident Lineaments  
Observed on multiple scales of imagery AND co-parallel nearby fracture family or bedding trends.

Coincident Lineaments  
Observed on multiple scales of imagery. (trend is posted in degrees east of north)

1,500-Foot Buffer Around Service Areas

Prince William County Service Areas

Groundwater Development Zones  
Relative Rank  
Primary Zones  
Secondary Zones



**Legend - View B**

Prince William County Service Areas

EGGI outcrops - main rock type

- conglomerate
- ball or vein quartz
- sandstone
- basalt
- identified but not evaluated
- quartz schist
- quartzite

Groundwater Development Zones  
Relative Rank

- Primary Zones
- Secondary Zones

Vertical Fracture Strike of Vertical Fracture

Bedrock Fracture family Strike and Dip of Fracture Family

Foliation Strike and Dip of Foliation

Bedding or Layering Strike and Dip of Bedding or Layering

Available Data for Domestic Wells (Data Provided by BCM (1987))

Well Site ID	Casing Depth (feet)	Well Depth (feet)	Yield (gpm)
DW1	51	207	4
DW2	63	253	7
DW3	250	250	6
DW4	195	420	5
DW5	115	155	50
DW6	55	195	40
DW7	50	207	50
DW8	100	235	50+
DW9	126	220	42
DW10	104	120	35
DW11	160	160	25
DW12	106	160	12
DW13	100	200	25
DW14	101	225	10
DW15	237	580	4
DW16	101	300	8
DW17	126	160	12
DW18	150	165	30
DW19	168	275	12
DW20	111	160	12
DW21	101	415	6
DW22	101	207	7
DW23	103	210	7
DW24	100	310	3
DW25	123	340	4
DW26	123	340	4
DW27	115	280	10
DW28	100	400	3
DW29	123	160	30
DW30	106	160	12
DW31	161	250	5
DW32	126	200	5
DW33	104	600	2
DW34	100	310	3
DW35	184	340	4
DW36	87	200	30

Available Well Data for Public Water Supply Wells (Data Provided by PWCSA)

Well Site ID	Casing Depth (feet)	Well Depth (feet)	Yield (gpm)
WB-05	120	805	15-25
WB-07	140	400	71
WB-11	74	315	42
WB-12	121	405	7
WB-13	121	504	36
WE-01	102	715	36
WB-02	N/A	327	26
WB-06	N/A	830	5
WB-10	53	310	30
WE-02	N/A	N/A	N/A
WB-01	50	880	7
WB-03	235	410	6
WB-04	50	482	4
WB-08	110	600	13.5-15
WB-09	163	900	8-12

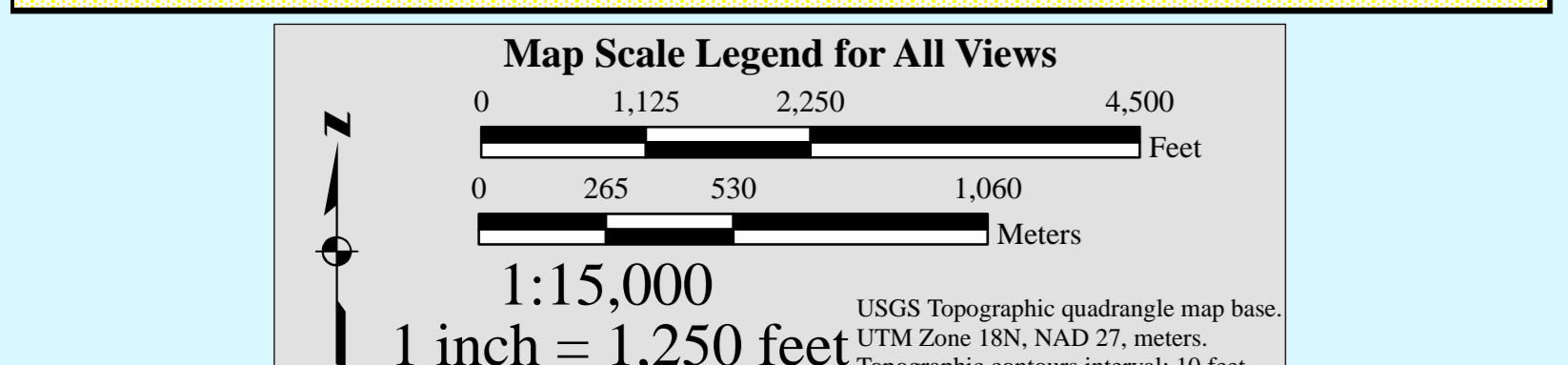
Available Data from EGGI Well Database (from the Bull Run County Club Project Site)

Well Site ID	Casing Depth (feet)	Well Depth (feet)	Yield (gpm)
BCC-1	56	420	17
BCC-2	61	620	7
BCC-4	61	400	85
BCC-5	61	400	96
BCC-6	121	420	67
BCC-7	61	400	90
BCC-8	103	420	70
BCC-9	61	400	5
BCC-10	63	380	5
BCC-11	71	340	16
BCC-12	61	260	15
BCC-13	61	460	15
BCC-14	61	360	69
BCC-15	61	640	6
BCC-16	63	580	63
BCC-17	63	320	65
BCC-18	63	340	80
BCC-19	63	400	30
BCC-20	63	280	115
BCC-21	63	280	82
BCC-22	63	300	140
BCC-23	63	280	158
BCC-24	63	320	85
BCC-25	84	500	20
BCC-26	97	460	109
BCC-EX1	N/A	400	150
BCC-EX2	N/A	400	110
BCC-EX3	N/A	336	110
BCC-EX4	N/A	N/A	N/A

Summary Well Data from EGGI Well Database

Well Site ID	Casing Depth (feet)	Well Depth (feet)	Yield (gpm)
Maximum	121	640	158
Minimum	56	260	5
Average	68	396	67

\* Well yielding 40 gpm or more are highlighted in orange.



**PLATE 1**  
HYDROGEOLOGIC INVESTIGATION RESULTS for  
Bull Run Service Area,  
Prince William County Service Authority, Virginia

**PROPOSED GROUNDWATER DEVELOPMENT ZONES, BEDROCK GEOLOGY, LINEAMENTS, EXISTING WELLS, and POTENTIAL THREATS to GROUNDWATER QUALITY**

Emery & Garrett Groundwater Investigations,  
A Division of GZA

Groundwater Exploration, Development, and Protection

Northeast Mid Atlantic South Atlantic  
February 2019