

Progress Report
Small Systems Committee
Technical Projects

Regional Water Planning
Coordinating Committee Meeting
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Small Water System Projects

A. King County DNRP:

- Compile locations, uses, dates, of “exempt” “water” wells from Ecology well logs
- Refine data for recent wells → GIS coverage correlated to other data (water service)

B. Public Health – Seattle & King County

- Update Group B locations (GPS, parcel-based, $\frac{1}{4}$ $\frac{1}{4}$ section), field check
- Measure water consumption, compile info on PWS creation rates, compliance data

How many wells are we talking?

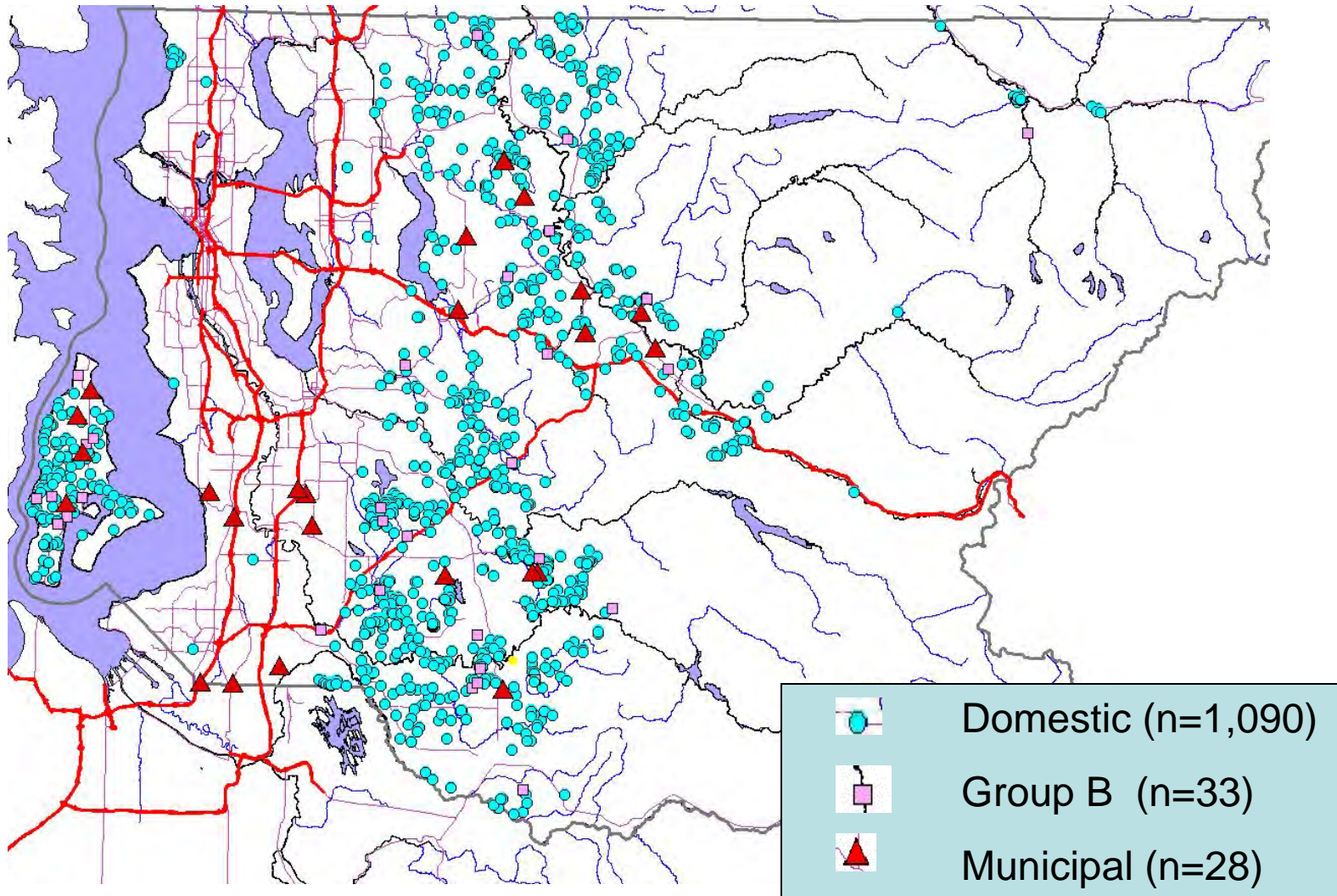
- A. Recent (>1/1/00) water well logs in King County (KC DNRP study): **1,540**
- 11,464 water well logs (back to 1925, most >1974)
 - Other well logs are available for *resource protection* wells or *decommissioning* (abandonment) work: only ~5% of recent logs are *water* wells
- B. Group B systems in King County (PH-S&KC): **1,514**
- Have GPSed 481 Group B wells (32%)
 - 11 systems reporting measured water usage data

Results of DNRP Project (A):

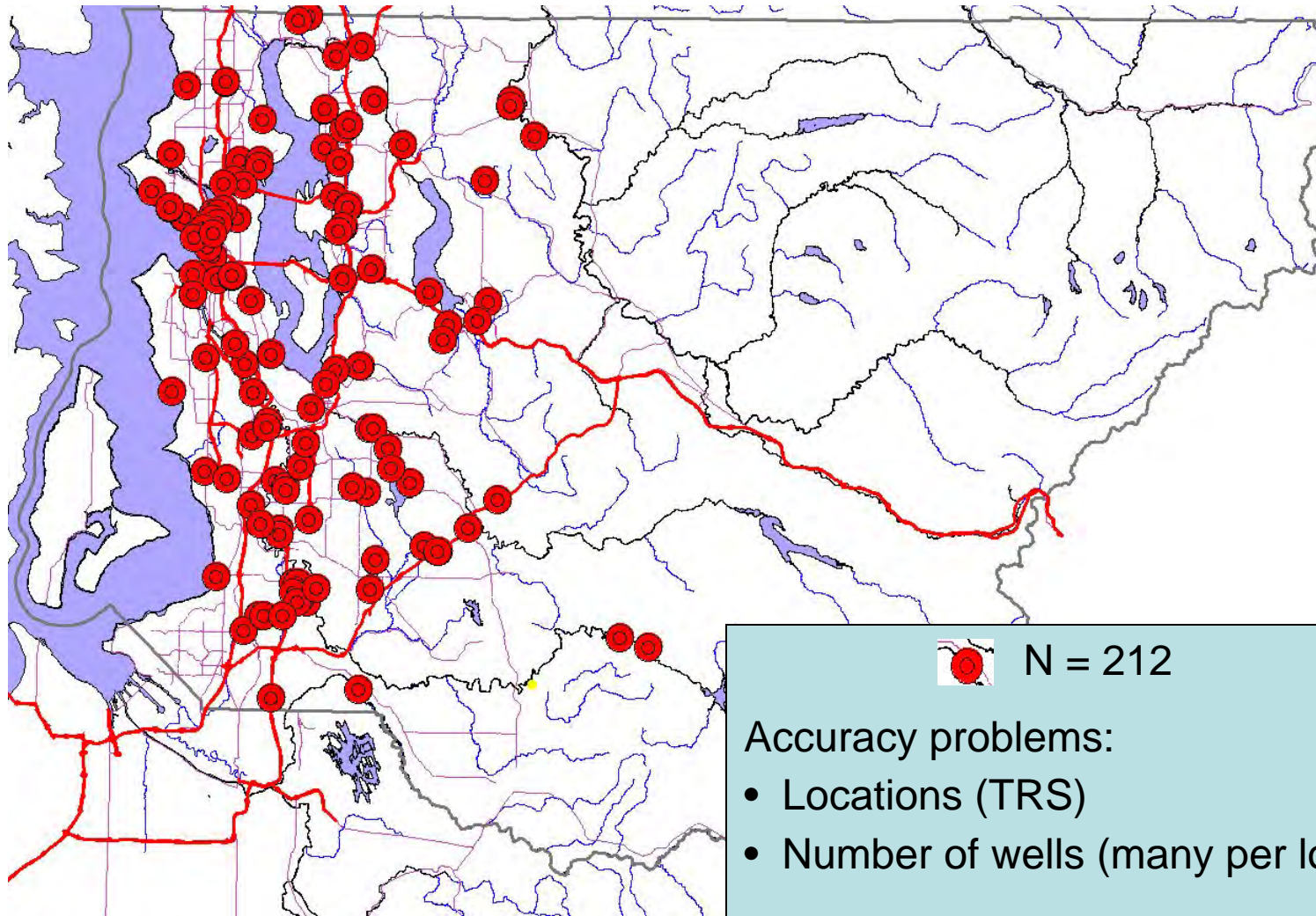
Uses of Recent Water Wells

- Potable Water Supply
 - Domestic **1,090** (70 %)
 - Group B (not well marked) 33 (2 %)
 - Municipal 28 (2 %)
- Other Water Supply
 - Irrigation **153** (10 %)
 - Industrial 5 (0.3 %)
- Dewatering **212** (14 %)
- Other (test, other) 19 (1 %)

Potable wells, King Co, >1/1/00



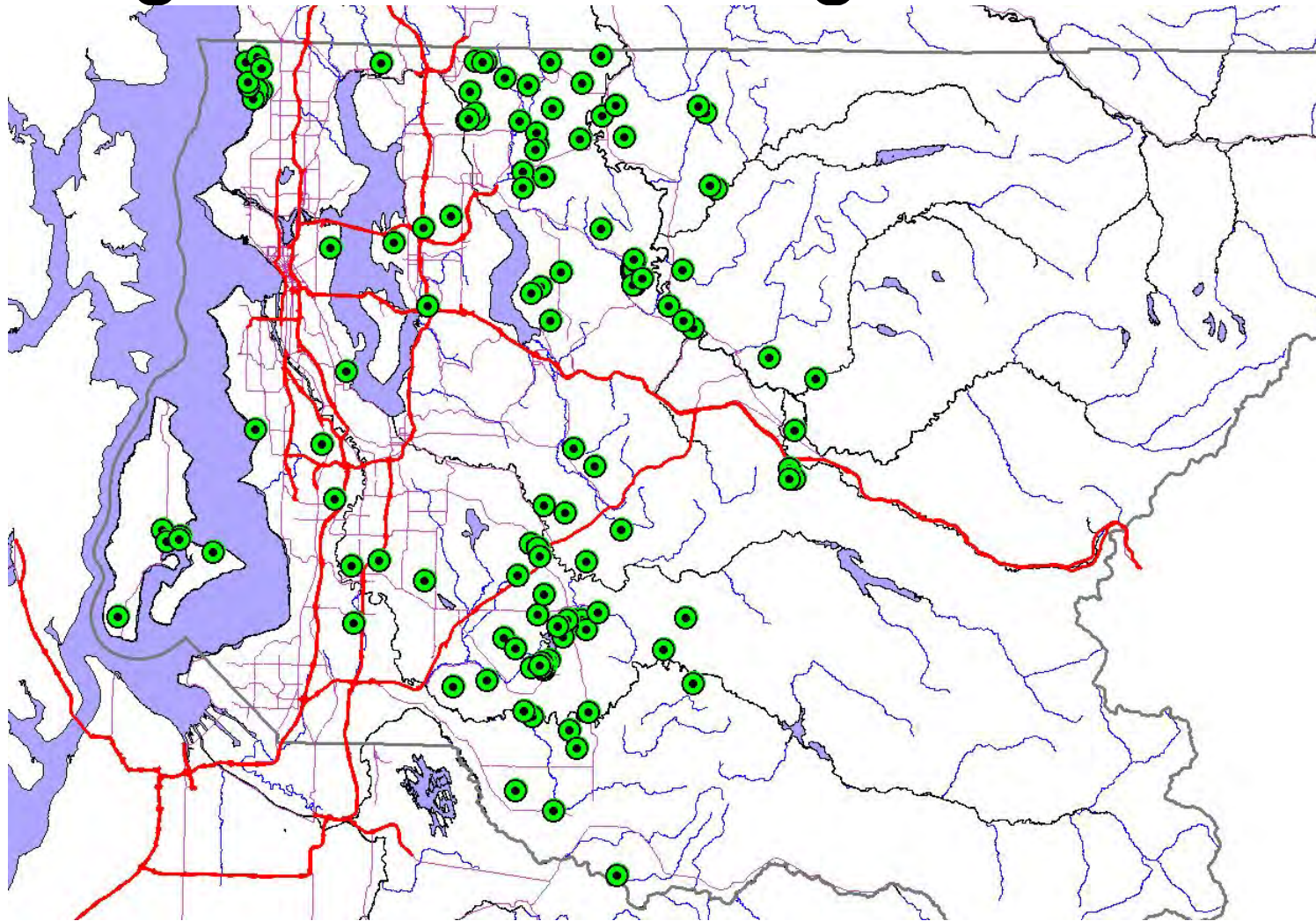
Dewatering wells, King Co, >1/1/00



Dewatering wells

- Do not require water right to remove water because no “beneficial use” of water
- Thought temporary, during construction, but anecdotal long-term use
- Uncertainty of location, owner, parcel
- Often several wells on one log (uncertain of actual total number of wells)
- Problematic to investigate further

Irrigation wells, King Co, >1/1/00



Database Fields for possible analyses

- Location (GIS, based on Parcel ID No.)
 - DNRP enhanced using owner name, address, assessor's database, PH databases (OSS, well service), Notice of Intent
- Dates for well completed, log submitted
- Proposed use of well
- Notice of Intent number
- Depth of well
- Name of well owner

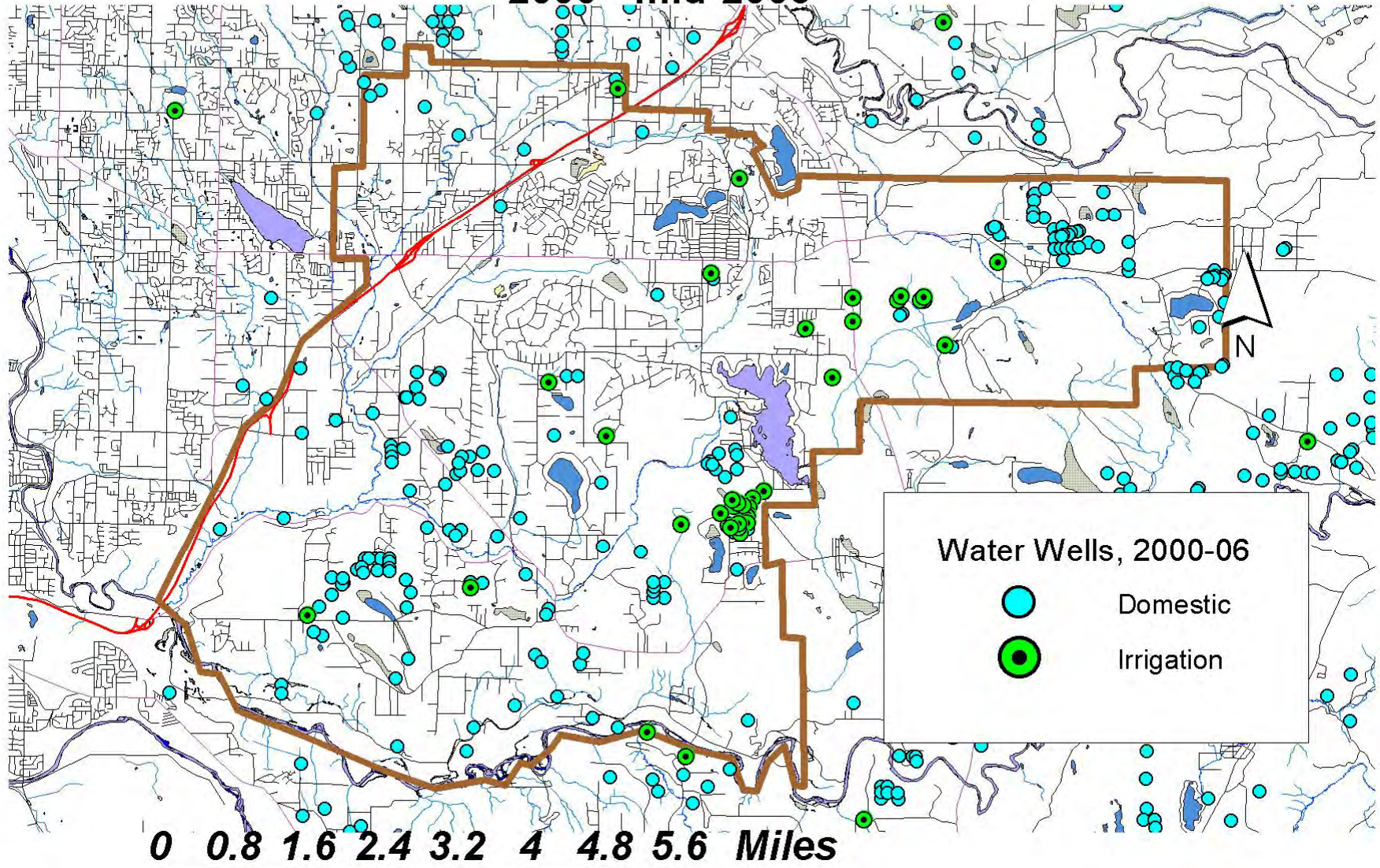
Applications of Well Database

- Show how many wells are within:
 - a purveyor's Water Service Area
 - a buffer from a critical Salmon habitat stream
- Common types of problems
- Timeliness – how soon are well logs submitted? How long from NOI to drilling?
- Geographic clustering
- Frequency of well drilling

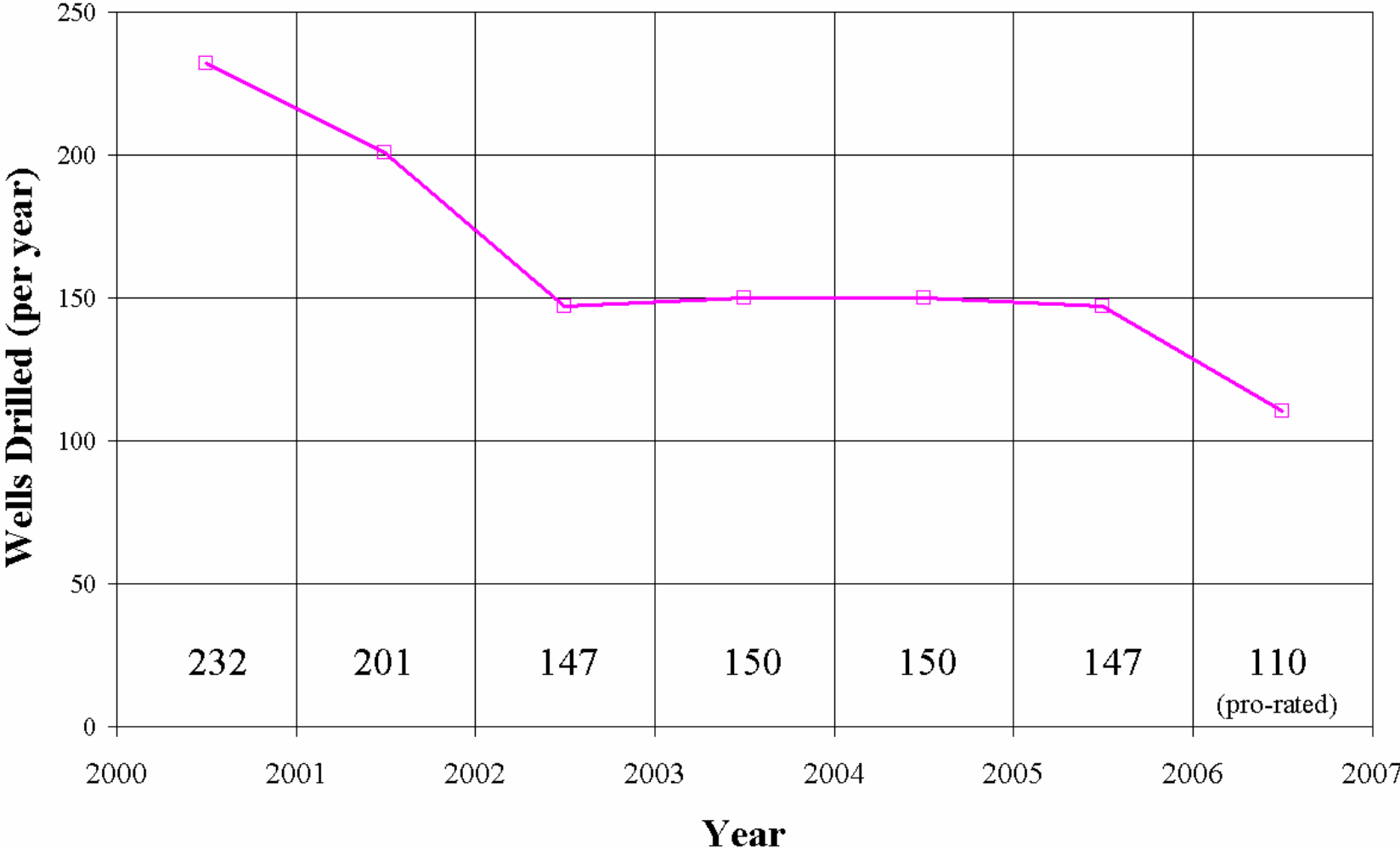
Purveyors possibly impacted?

• Covington WD	168 D	37 Irr
• Cedar R. W&SD	92 D	7 Irr
• KCWD 119	70 D	4 Irr
• Sammamish Plateau	53 D	5 Irr
• Fall City WD	43 D	3 Irr
• Seattle PU	12 D	19 Irr
• Woodinville WD	31 D	15 Irr
• Ames Lake WA	12 D	11 Irr

Domestic and Irrigation Wells Drilled in Covington Service Area 2000 - mid-2006



Domestic wells drilled per year



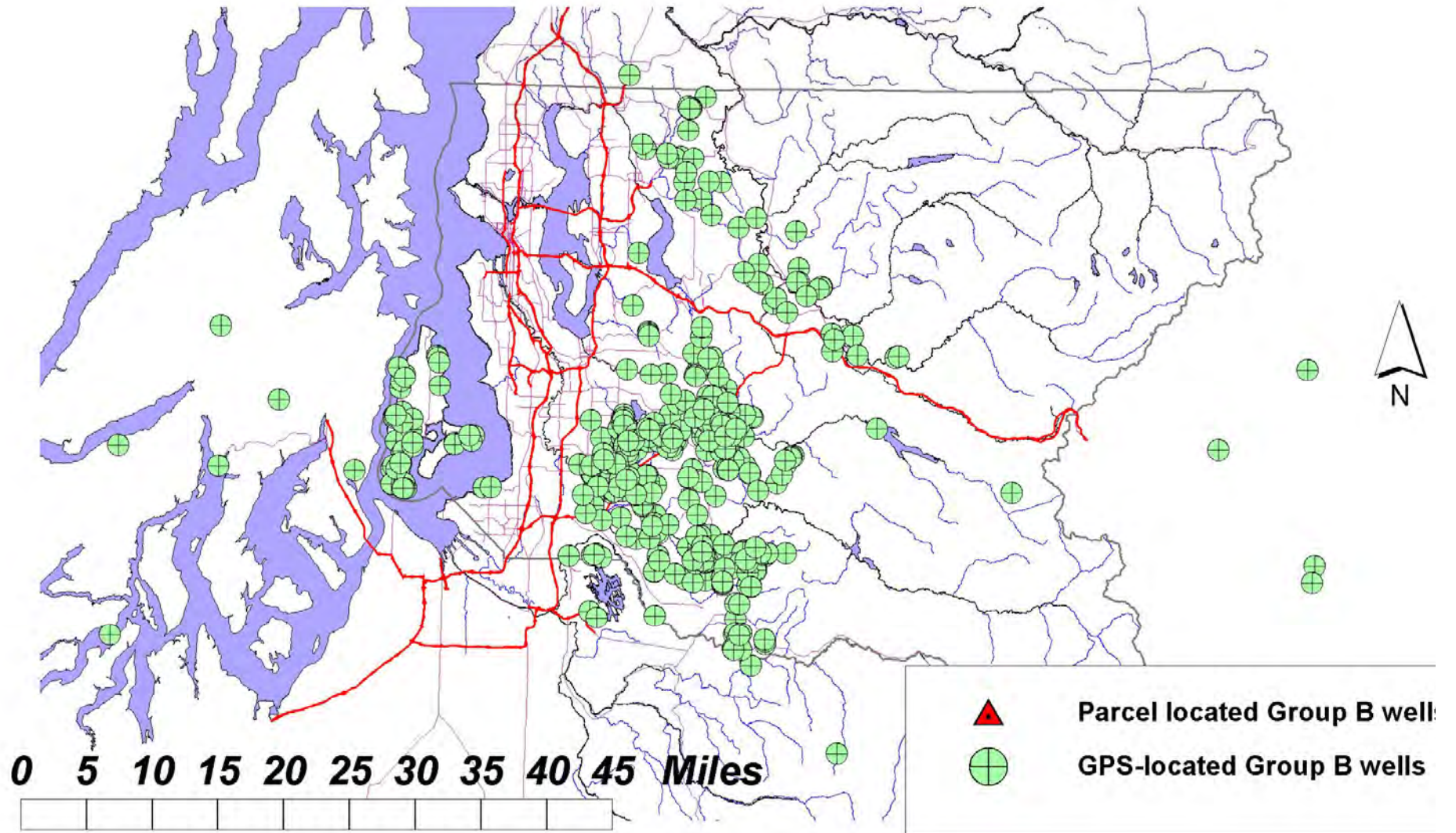
Results of Public Health Project (B):

Public Water Systems in King County

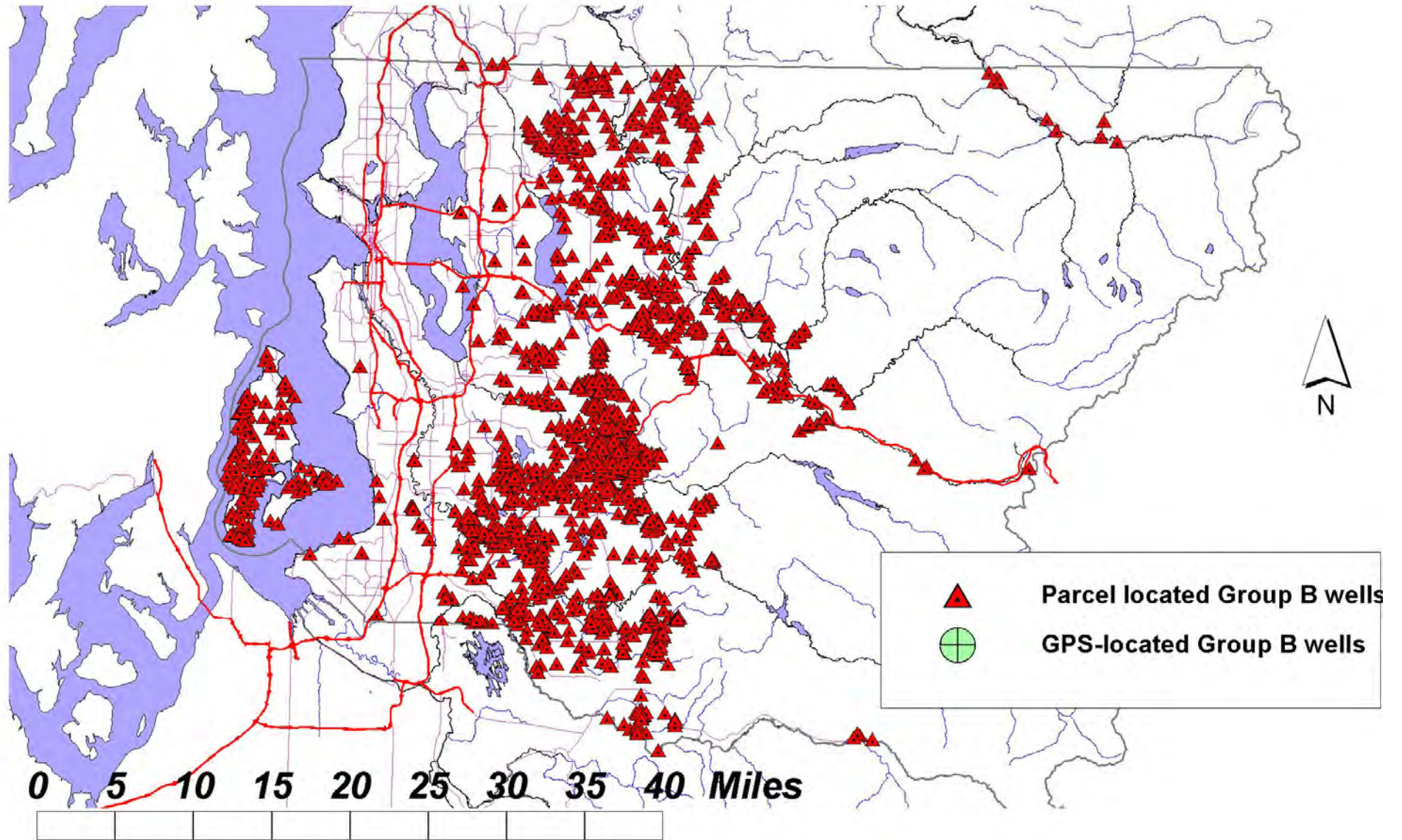
- Group As 222
- Group B Systems

	<u>no</u>	<u>connections</u>
– State-regulated	27	10-14
– PH-S&KC Group Bs	1514	2-9
– Single or no connection	184	0-1
– Pending	99	
– Dead or Inactive systems	4	
– Individual	4	
- Data are still being checked

GPS-located Group B Wells in King County



Parcel-located Group B Wells in King County



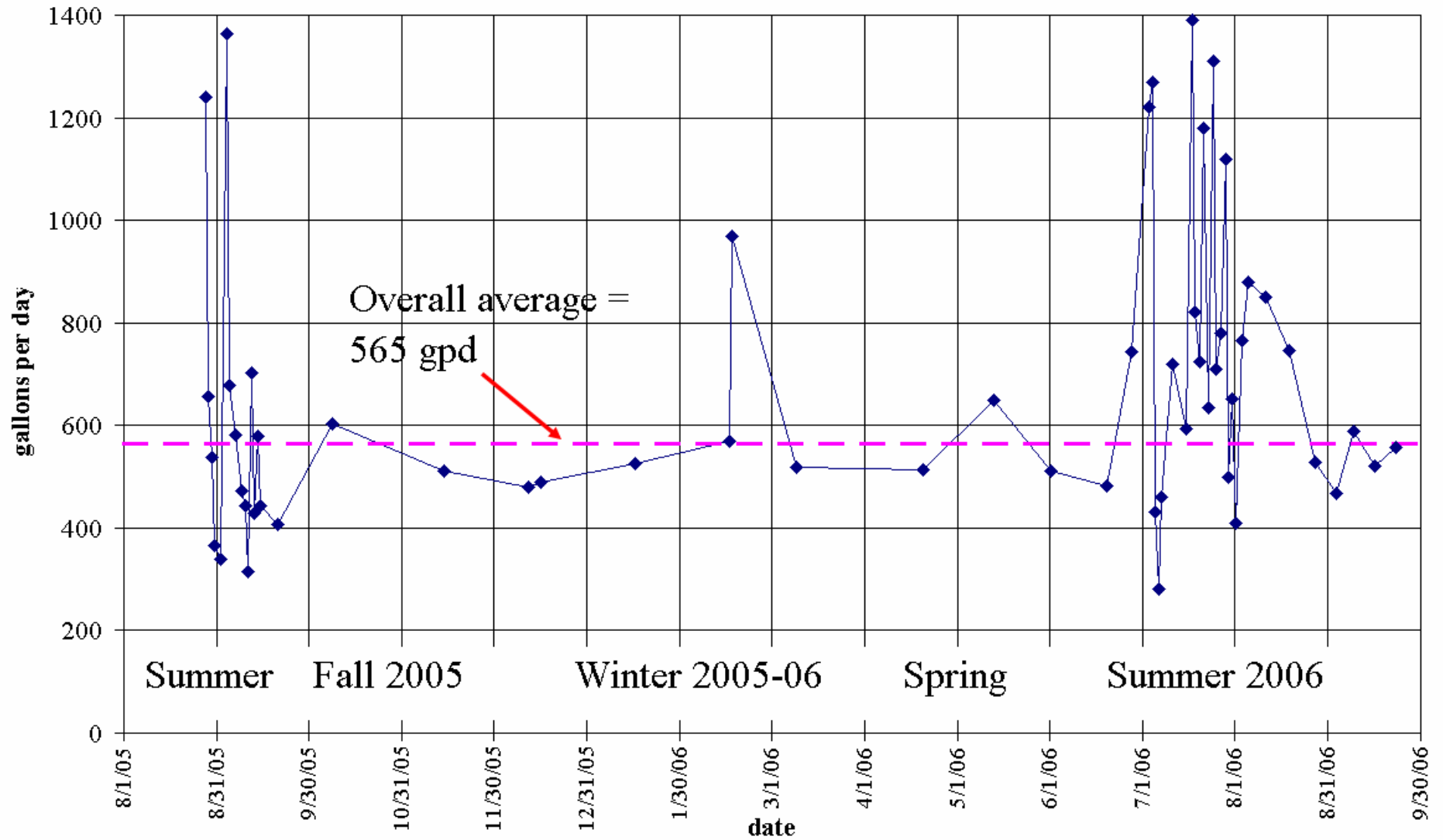
Group B Water Use

- Group B manager reports meter readings
- Participating water systems include:

<u>name</u>	<u>conns</u>	<u>area</u>
– Harkness	3 (1)	Enumclaw
– South Squak Water Assn	3	Issaquah
– Zack Parker	3 (2)	Snoqualmie
– AMR Springs	3	Ravensdale
– Mt. Si Gypsy Comm Well	9 (7)	North Bend
– Lake Walker water system	9	Enumclaw

- Next page: graph of South Squak usage data

South Squak Water System usage

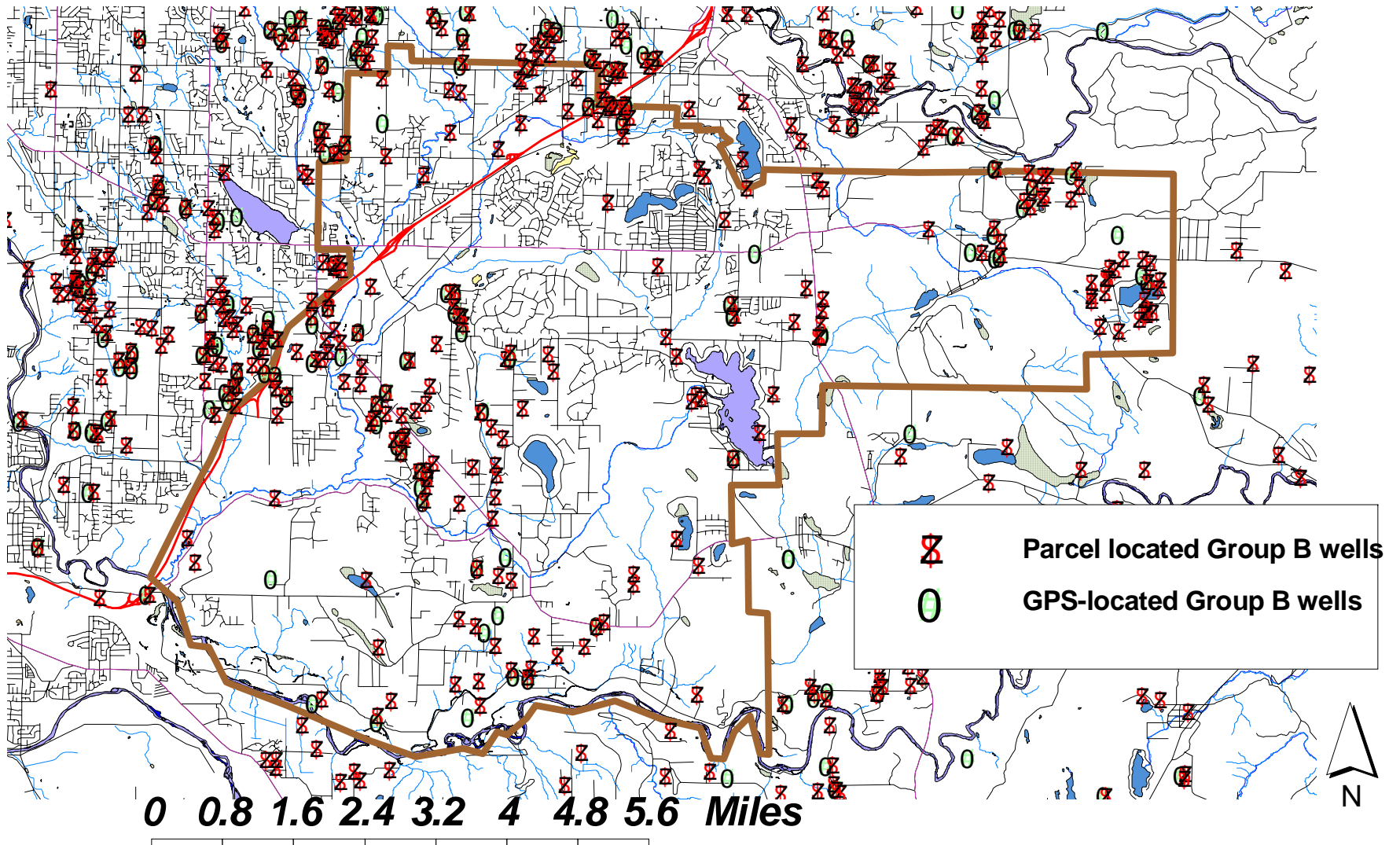


Group B systems within Group A Water Service Areas

- **Cedar River W&S Dist** 251
- **Covington Water Dist** 165
- **Fall City Water Dist** 82
- **Woodinville Water Dist** 66
- **Sammamish Plateau W&S Dist** 58
- **Soos Creek W&S Dist** 56
- **King County WD 111** 55

(7 Group A systems with largest number of Group Bs)

Group B Wells in Covington Service Area



New Group B Systems

(by as-built date)

