

Ballard CSO Topline

**Q1. How often do you have problems with groundwater, such as natural springs or water seeping into your basement or crawl space?**

|         |                        | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|------------------------|-----------|---------|---------------|--------------------|
| Valid   | Never                  | 504       | 64.1    | 65.5          | 65.5               |
|         | 1 - 2 times a year     | 139       | 17.7    | 18.1          | 83.6               |
|         | 3 - 4 times a year     | 54        | 6.9     | 7.0           | 90.6               |
|         | 5 - 6 times a year     | 26        | 3.3     | 3.4           | 94.0               |
|         | 7 or more times a year | 46        | 5.9     | 6.0           | 100.0              |
|         | Total                  | 769       | 97.8    | 100.0         |                    |
| Missing | 0                      | 17        | 2.2     |               |                    |
| Total   |                        | 786       | 100.0   |               |                    |

**Q2. Do you have any problems with surface water on your property?**

|       |                                                              | Responses | Percent of Cases |
|-------|--------------------------------------------------------------|-----------|------------------|
|       |                                                              | N         |                  |
|       | No                                                           | 660       | 85.8%            |
|       | Yes, water flows onto my property from the street            | 7         | 0.9%             |
|       | Yes, water flows onto my property from the alley             | 18        | 2.3%             |
|       | Yes, water flows onto my property from the adjacent property | 35        | 4.6%             |
|       | Yes, Yes, water ponds on my property                         | 45        | 5.9%             |
|       | Other                                                        | 34        | 4.4%             |
| Total |                                                              | 799       | 103.9%           |

Multiple responses allowed; percents may add up to more than 100. N=769

**Q3. Other than the sewer system, do you have any drainage systems on your property?**

|                                                                                                                        | Responses | Percent of Cases |
|------------------------------------------------------------------------------------------------------------------------|-----------|------------------|
|                                                                                                                        | N         |                  |
| No                                                                                                                     | 405       | 54.1%            |
| I don't know                                                                                                           | 103       | 13.8%            |
| Yes, I have a detention pipe (holds stormwater until the rain stops and it can be absorbed)                            | 17        | 2.3%             |
| Yes, have a French drain (trench covered w/ gravel/rock or containing a perforated pipe that channels stormwater away) | 133       | 17.8%            |
| Yes, I have rock pockets (a pocket of loose rocks at or below grade that collects stormwater for it to be absorbed)    | 62        | 8.3%             |
| Yes, I have another type of drainage system                                                                            | 106       | 14.2%            |
| Rain garden                                                                                                            | 45        | 6.0%             |
| Rain barrel                                                                                                            | 11        | 1.5%             |
| Downspouts into garden/yard                                                                                            | 10        | 1.3%             |
| Total                                                                                                                  | 892       | 119.1%           |

Multiple responses allowed; percents may add up to more than 100.  
N=749

**Q4. Are your roof downspouts connected to the sewer system?**

|         |            | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|------------|-----------|---------|---------------|--------------------|
| Valid   | No         | 371       | 47.2    | 48.9          | 48.9               |
|         | Yes        | 242       | 30.8    | 31.9          | 80.8               |
|         | Don't know | 146       | 18.6    | 19.2          | 100.0              |
|         | Total      | 759       | 96.6    | 100.0         |                    |
| Missing | 0          | 23        | 2.9     |               |                    |
|         | System     | 4         | .5      |               |                    |
|         | Total      | 27        | 3.4     |               |                    |
| Total   |            | 786       | 100.0   |               |                    |

**Q5. Are you aware of any natural springs on your property or on your block?**

|         |        | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|--------|-----------|---------|---------------|--------------------|
| Valid   | No     | 698       | 88.8    | 92.7          | 92.7               |
|         | Yes    | 55        | 7.0     | 7.3           | 100.0              |
|         | Total  | 753       | 95.8    | 100.0         |                    |
| Missing | 0      | 29        | 3.7     |               |                    |
|         | System | 4         | .5      |               |                    |
|         | Total  | 33        | 4.2     |               |                    |
| Total   |        | 786       | 100.0   |               |                    |

**Q7. What are two favorite things about your neighborhood or street that you would like to still be there for your children and grandchildren?**

|                                      | Responses | Percent of Cases |
|--------------------------------------|-----------|------------------|
|                                      | N         |                  |
| Community                            | 135       | 22.3%            |
| Older, smaller homes / single-family | 142       | 23.5%            |
| Calm ambiance / quiet                | 53        | 8.8%             |
| Small businesses                     | 18        | 3.0%             |
| Walkability                          | 140       | 23.1%            |
| Safety                               | 27        | 4.5%             |
| Not crowded                          | 15        | 2.5%             |
| Proximity to parks                   | 140       | 23.1%            |
| Landscape / gardens / trees          | 270       | 44.6%            |
| Parking                              | 55        | 9.1%             |
| Traffic control / speed control      | 37        | 6.1%             |
| Bus routes                           | 8         | 1.3%             |
| Clean streets                        | 16        | 2.6%             |
| Street lights                        | 6         | 1.0%             |
| Other                                | 22        | 3.6%             |
| Total                                | 1084      | 179.2%           |

Multiple responses allowed; percents may add up to more than 100.  
N=605

**Q8. What are the two most important improvements you would like to see to your neighborhood?**

|                                          | Responses | Percent of Cases |
|------------------------------------------|-----------|------------------|
|                                          | N         |                  |
| Better roads / sidewalks                 | 71        | 12.8%            |
| Street sweeping                          | 22        | 4.0%             |
| Less congestion                          | 31        | 5.6%             |
| Less multiplexes                         | 52        | 9.4%             |
| More landscaping / gardens               | 159       | 28.8%            |
| More frequent bus services               | 24        | 4.3%             |
| Powerlines moved underground             | 44        | 8.0%             |
| Increased community activities           | 13        | 2.4%             |
| Less use of harsh chemicals / pesticides | 3         | 0.5%             |
| Upgraded infrastructure                  | 82        | 14.8%            |
| Improved traffic / speed control         | 181       | 32.7%            |
| More lighting in alleys / streets        | 35        | 6.3%             |
| Increased safety / security              | 42        | 7.6%             |
| More parking                             | 43        | 7.8%             |
| Better street drainage                   | 42        | 7.6%             |
| Affordable housing                       | 4         | 0.7%             |
| Other                                    | 72        | 13.0%            |
| Total                                    | 920       | 166.4%           |

Multiple responses allowed; percents may add up to more than 100.  
N=553

**Q9. Are there any specific areas in your neighborhood you think would benefit from slower traffic, better visibility for drivers, or shorter pedestrian crossing distances?**

|         |        | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|--------|-----------|---------|---------------|--------------------|
| Valid   | No     | 248       | 31.6    | 39.4          | 39.4               |
|         | Yes    | 381       | 48.5    | 60.6          | 100.0              |
|         | Total  | 629       | 80.0    | 100.0         |                    |
| Missing | 0      | 138       | 17.6    |               |                    |
|         | System | 19        | 2.4     |               |                    |
|         | Total  | 157       | 20.0    |               |                    |
| Total   |        | 786       | 100.0   |               |                    |

**Q10. Knowing what you know now about natural drainage systems, how much do you support a project to construct natural drainage systems in the parking strips in your neighborhood?**

|         |                                              | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|----------------------------------------------|-----------|---------|---------------|--------------------|
| Valid   | Very unsupportive                            | 157       | 20.0    | 20.5          | 20.5               |
|         | Somewhat unsupportive                        | 93        | 11.8    | 12.2          | 32.7               |
|         | Neutral (neither supportive or unsupportive) | 128       | 16.3    | 16.7          | 49.4               |
|         | Somewhat supportive                          | 178       | 22.6    | 23.3          | 72.7               |
|         | Very supportive                              | 209       | 26.6    | 27.3          | 100.0              |
|         | Total                                        | 765       | 97.3    | 100.0         |                    |
| Missing | 0                                            | 17        | 2.2     |               |                    |
|         | System                                       | 4         | .5      |               |                    |
|         | Total                                        | 21        | 2.7     |               |                    |
| Total   |                                              | 786       | 100.0   |               |                    |

**Q11. What aspects of this effort would you like to know more about?**

|                                                                                                                     | Responses |                  |
|---------------------------------------------------------------------------------------------------------------------|-----------|------------------|
|                                                                                                                     | N         | Percent of Cases |
| The sewage overflow problem in Ballard                                                                              | 239       | 40.1%            |
| What natural drainage systems are and how they work                                                                 | 207       | 34.7%            |
| Why natural drainage systems are being considered as a strategy to prevent sewage overflows in Ballard              | 224       | 37.6%            |
| The proposed project timeline and opportunities for public involvement                                              | 259       | 43.5%            |
| The process for deciding where natural drainage systems would be built                                              | 354       | 59.4%            |
| What natural drainage systems would look like                                                                       | 266       | 44.6%            |
| RainWise(a program that offers rebates to property owners for installing a rain garden/cistern on private property) | 188       | 31.5%            |
| Other                                                                                                               | 82        | 13.8%            |
| Total                                                                                                               | 1819      | 305.2%           |

Multiple responses allowed; percents may add up to more than 100. N=596

**Q12. What is the best way to keep you informed about this effort?**

|                                      | Responses | Percent of Cases |
|--------------------------------------|-----------|------------------|
|                                      | N         |                  |
| Direct mail                          | 452       | 61.6%            |
| Community meeting                    | 85        | 11.6%            |
| Email                                | 303       | 41.3%            |
| Website                              | 153       | 20.8%            |
| My Ballard                           | 235       | 32.0%            |
| Ballard News Tribune                 | 97        | 13.2%            |
| Phone                                | 16        | 2.2%             |
| Door hanger                          | 79        | 10.8%            |
| Facebook/Twitter                     | 25        | 3.4%             |
| Project signs placed in neighborhood | 168       | 22.9%            |
| Project representative visit         | 23        | 3.1%             |
| Other                                | 13        | 1.8%             |
| Total                                | 1649      | 224.7%           |

Multiple responses allowed; percents may add up to more than 100. N=734

**Q13. How would you like to be involved**

|                                                                                         | Responses | Percent of Cases |
|-----------------------------------------------------------------------------------------|-----------|------------------|
|                                                                                         | N         |                  |
| Attend community meetings and workshops                                                 | 236       | 68.8%            |
| Host a small gathering of neighbors to discuss project design elements                  | 26        | 7.6%             |
| Request a presentation to your block watch group, neighborhood association, etc.        | 72        | 21.0%            |
| Meet periodically with SPU project representatives to review siting and design concepts | 68        | 19.8%            |
| Other                                                                                   | 52        | 15.2%            |
| Total                                                                                   | 454       | 132.4%           |

Multiple responses allowed; percents may add up to more than 100. N=343

**Q14. Would you like to be included on the project email distribution list?**

|         |        | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|--------|-----------|---------|---------------|--------------------|
| Valid   | No     | 360       | 45.8    | 60.7          | 60.7               |
|         | Yes    | 233       | 29.6    | 39.3          | 100.0              |
|         | Total  | 593       | 75.4    |               |                    |
| Missing | 0      | 186       | 23.7    |               |                    |
|         | System | 7         | .9      |               |                    |
|         | Total  | 193       | 24.6    |               |                    |
| Total   |        | 786       | 100.0   |               |                    |

**Q15. How many years have you lived in your neighborhood?**

|         |                    | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|--------------------|-----------|---------|---------------|--------------------|
| Valid   | Less than 2 years  | 40        | 5.1     | 5.2           | 5.2                |
|         | 2 - 5 years        | 106       | 13.5    | 13.8          | 19.0               |
|         | 6 - 10 years       | 146       | 18.6    | 19.0          | 38.1               |
|         | 11 - 20 years      | 206       | 26.2    | 26.9          | 64.9               |
|         | More than 20 years | 269       | 34.2    | 35.1          | 100.0              |
|         | Total              | 767       | 97.6    | 100.0         |                    |
| Missing | 0                  | 13        | 1.7     |               |                    |
|         | System             | 6         | .8      |               |                    |
|         | Total              | 19        | 2.4     |               |                    |
| Total   |                    | 786       | 100.0   |               |                    |

**Q16. Do you own or rent the place in which you live?**

|         |        | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|--------|-----------|---------|---------------|--------------------|
| Valid   | Own    | 692       | 88.0    | 90.8          | 90.8               |
|         | Rent   | 70        | 8.9     | 9.2           | 100.0              |
|         | Total  | 762       | 96.9    | 100.0         |                    |
| Missing | 0      | 17        | 2.2     |               |                    |
|         | System | 7         | .9      |               |                    |
|         | Total  | 24        | 3.1     |               |                    |
| Total   |        | 786       | 100.0   |               |                    |

**Q17. What is your gender**

|         |        | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|--------|-----------|---------|---------------|--------------------|
| Valid   | Male   | 301       | 38.3    | 52.1          | 52.1               |
|         | Female | 277       | 35.2    | 47.9          | 100.0              |
|         | Total  | 578       | 73.5    | 100.0         |                    |
| Missing | 0      | 29        | 3.7     |               |                    |
|         | System | 179       | 22.8    |               |                    |
|         | Total  | 208       | 26.5    |               |                    |
| Total   |        | 786       | 100.0   |               |                    |

**Q18. Which of the following categories includes your age?**

|         |              | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|--------------|-----------|---------|---------------|--------------------|
| Valid   | 25 to 34     | 50        | 6.4     | 6.6           | 6.6                |
|         | 35 to 44     | 180       | 22.9    | 23.8          | 30.4               |
|         | 45 to 54     | 188       | 23.9    | 24.8          | 55.2               |
|         | 55 to 64     | 169       | 21.5    | 22.3          | 77.5               |
|         | 65 to 74     | 111       | 14.1    | 14.7          | 92.2               |
|         | 75 and older | 59        | 7.5     | 7.8           | 100.0              |
|         | Total        | 757       | 96.3    | 100.0         |                    |
| Missing | 0            | 23        | 2.9     |               |                    |
|         | System       | 6         | .8      |               |                    |
|         | Total        | 29        | 3.7     |               |                    |
| Total   |              | 786       | 100.0   |               |                    |

**Q19. Do you have any children living at home with you?**

|         |        | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|--------|-----------|---------|---------------|--------------------|
| Valid   | No     | 478       | 60.8    | 63.1          | 63.1               |
|         | Yes    | 280       | 35.6    | 36.9          | 100.0              |
|         | Total  | 758       | 96.4    | 100.0         |                    |
| Missing | 0      | 21        | 2.7     |               |                    |
|         | System | 7         | .9      |               |                    |
|         | Total  | 28        | 3.6     |               |                    |
| Total   |        | 786       | 100.0   |               |                    |

**Q20. Are you from a Hispanic, Latino, or Spanish-speaking background?**

|         |        | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|--------|-----------|---------|---------------|--------------------|
| Valid   | No     | 714       | 90.8    | 97.0          | 97.0               |
|         | Yes    | 22        | 2.8     | 3.0           | 100.0              |
|         | Total  | 736       | 93.6    | 100.0         |                    |
| Missing | 0      | 37        | 4.7     |               |                    |
|         | System | 13        | 1.7     |               |                    |
|         | Total  | 50        | 6.4     |               |                    |
| Total   |        | 786       | 100.0   |               |                    |

**Q21. What race would you classify yourself as?**

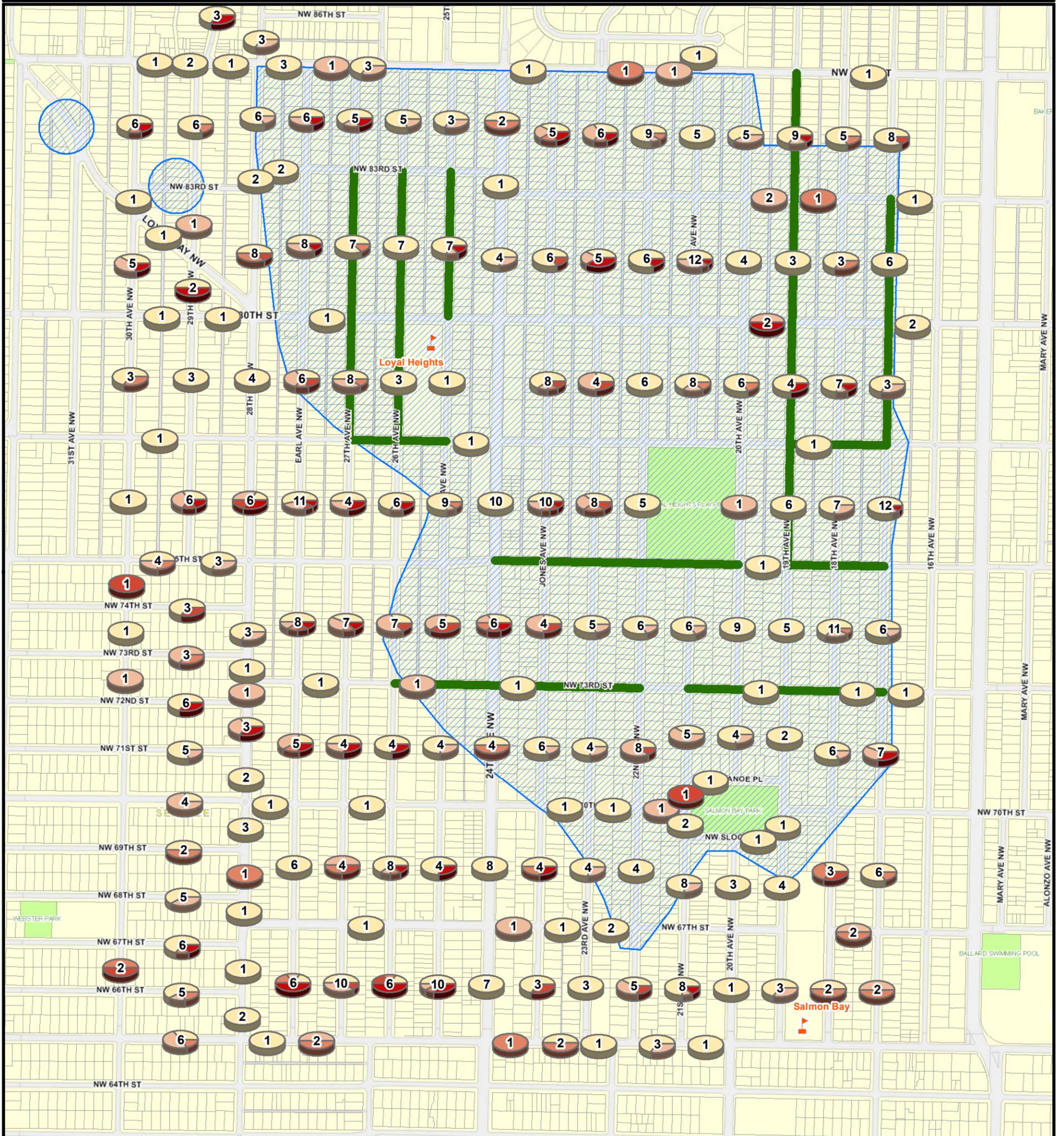
|         |                                  | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|----------------------------------|-----------|---------|---------------|--------------------|
| Valid   | Black / African American         | 5         | .6      | .7            | .7                 |
|         | White / Caucasian                | 669       | 85.1    | 92.0          | 92.7               |
|         | American Indian or Alaska Native | 6         | .8      | .8            | 93.5               |
|         | Asian                            | 16        | 2.0     | 2.2           | 95.7               |
|         | Some other race                  | 4         | .5      | .6            | 96.3               |
|         | Two or more races                | 27        | 3.4     | 3.7           | 100.0              |
|         | Total                            | 727       | 92.5    | 100.0         |                    |
| Missing | 0                                | 45        | 5.7     |               |                    |
|         | System                           | 14        | 1.8     |               |                    |
|         | Total                            | 59        | 7.5     |               |                    |
| Total   |                                  | 786       | 100.0   |               |                    |

**Q22. Which modes of travel do you typically use?**

|                   | Responses | Percent of Cases |
|-------------------|-----------|------------------|
|                   | N         |                  |
| Drive alone       | 645       | 84.9%            |
| Carpool           | 189       | 24.9%            |
| Ride the bus      | 358       | 47.1%            |
| Vanpool           | 10        | 1.3%             |
| Use light rail    | 36        | 4.7%             |
| Use commuter rail | 2         | 0.3%             |
| Bike              | 188       | 24.7%            |
| Walk              | 442       | 58.2%            |
| Other             | 47        | 6.2%             |
| Total             | 1917      | 252.2%           |

Multiple responses allowed; percents may add up to more than 100. N=760

# Survey Results: Frequency of Groundwater Problems

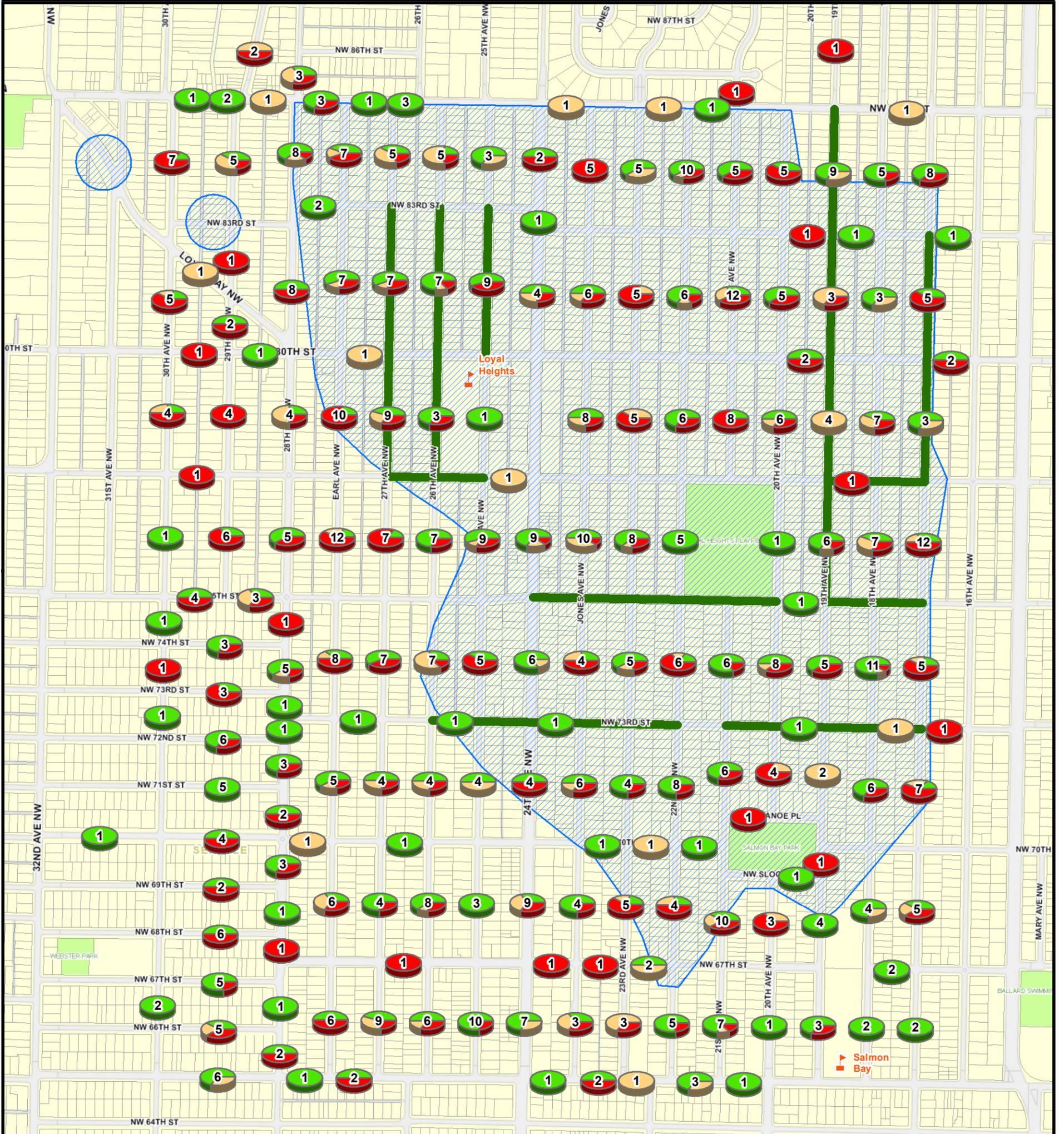


March 20, 2013  
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**Frequency of Groundwater Problems**

|  |                      |  |                          |  |                                       |
|--|----------------------|--|--------------------------|--|---------------------------------------|
|  | never                |  | 5 - 6 times per year     |  | Potential Project Sites               |
|  | 1 - 2 times per year |  | 7 or more times per year |  | Recessional and Advance Outwash Areas |
|  | 3 - 4 times per year |  |                          |  | Schools Public                        |

# Survey Results: Supportive or Unsupportive for Natural Drainage Systems in Parking Strips



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 Coordinate System: State Plane, NAD83-97, WA North Zone  
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Natural Drainage Systems in Parking Strips



- supportive
- neutral
- unsupportive

Potential Project Sites

Recessional and Advance Outwash Areas



Schools Public

