

RESOLUTION R-5697

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF KIRKLAND DIRECTING STAFF TO TAKE IMMEDIATE AND LONGER-TERM ACTIONS TO MITIGATE WATER PRESSURE REDUCTIONS FOR RESIDENTS AND BUSINESSES IN THE HIGHLANDS NEIGHBORHOOD.

1 WHEREAS, in March 2024, the City of Kirkland, in coordination with the Washington
2 State Department of Transportation, completed a water main replacement project that
3 removed a vault and regional pressure-reducing valve, which had previously created an
4 isolated 510 pressure gradient water zone, and instead connected the Upper Highlands
5 neighborhood to the surrounding 450 water pressure gradient zone; and
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7 WHEREAS, the water pressure gradient zone conversion from 510 to 450 was made
8 by constructing 9 connections with the neighboring 450 zone, creating a secondary feed on
9 the north end of the zone and thereby improving fire flow, improving water quality, providing
10 water supply redundancy, and reducing very high-pressure nodes within the zone while
11 eliminating the 510 hydraulic island; and
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13 WHEREAS, the former 510 zone contained approximately 720 parcels and, prior to
14 zone conversion, there was not adequate fire flow of at least 1,000 gallons per minute serving
15 670 properties (93%) in the Upper Highlands area, while after the conversion, 92% of parcels
16 are now served by hydrants with fire flow of at least 1,000 gallons per minute and only 8% are
17 served by hydrants with fire flow below 1,000 gallons per minute; and
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19 WHEREAS, while the zone conversion resulted in many system improvements, it also
20 lowered residential and business service pressures in the Highlands neighborhood. The
21 pressure reduction was anticipated and consistent with engineering analyses, however, the
22 resulting community impact was greater than anticipated, with households and businesses at
23 the highest elevations experiencing the greatest impacts; and
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25 WHEREAS, in response to a significant number of Upper Highlands residents alerting
26 the City to these impacts, the City explored both near-term and long-term solutions to boost
27 household pressures; and
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29 WHEREAS, the City Council approved \$400,000 from the Water/Sewer fund balance
30 in the 2025-2026 biennial budget to support a pressure mitigation financial assistance program
31 for affected residents; and
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33 WHEREAS, since the implementation of the mitigation program, the City has become
34 aware of additional concerns relating to potential impacts of reduced pressure on residential
35 fire suppression sprinkler systems and on two commercial home-based businesses in the
36 neighborhood with higher water quantity needs and water pressure demands; and
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38 WHEREAS, on October 7, 2025, the Council approved a \$103,000 fiscal note for
39 additional budget to support review of capital improvement project options for the Upper
40 Highlands area on an expedited timeline separate from the strategic planning work currently
41 underway for the 2026 Water System Plan Update; and
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43 WHEREAS, at the October 21, 2025 Study Session, City Council received a staff
44 briefing outlining several alternatives and solutions to increasing neighborhood water pressure
45 while retaining the system benefits of fire flow, water quality, and supply redundancy from the
46 zone conversion; and

47
48 WHEREAS, only two options have been identified that can mitigate the water pressure
49 reductions by the summer of 2026, when water demand is highest and the impacts of lower
50 water pressure are most significant; and
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52 WHEREAS, the first option to connect the Highlands directly to the 545 pressure
53 gradient water zone creates a risk of water line breaks and water system failures and is not
54 recommended, while the second option of the financial assistance program can mitigate the
55 water pressure reduction on each individual residence or business by the summer of 2026 if
56 the program is adapted and expanded.
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58 NOW, THEREFORE, be it resolved by the City Council of the City of Kirkland as
59 follows:
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61 Section 1. The City Manager is hereby authorized and directed to include in the
62 proposed 2025 update to the Capital Improvement Program at least two capital project
63 alternatives for the Upper Highlands to increase water pressure while retaining the system
64 benefits of the 450-pressure zone conversion and to provide budget recommendations to fund
65 the selected projects to the next milestone of engineering design.
66

67 Section 2. The City Manager is hereby authorized and directed to contract with a water
68 system engineering firm to peer review the alternatives analysis of the City's current
69 engineering consultant and review the selected capital projects moving forward to design. As
70 part of the peer review and analysis, if the firm identifies additional feasible concepts, they shall
71 be submitted to the City for consideration.
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73 Section 3. The City Manager is hereby authorized and directed to further adapt,
74 expand, and expedite the existing mitigation program for affected residents in the Highlands
75 neighborhood, including:
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- a. Increasing the assistance thresholds to ensure the program can adequately serve
77 affected residents with pressure boosting needs that differ from the average household.
- b. Expanding program thresholds to purchase and install commercial sized booster
78 pumps for the two home-based businesses in the neighborhood.
- c. Offering a rebate option to support households with converting to drip irrigation systems
81 to conserve water and require less water pressure during peak demand season.
- d. Offering a rebate option to address significant impacts on residential fire suppression
83 sprinkler systems, including testing and potential re-calibration of fire suppression
84 systems, if needed, and evaluate and create a plan to address any additional impacts
85 to such systems after implementing any of the capital project alternatives.
- e. Publicizing the expanded program, expedite rebate approval review, and streamline
87 overall program delivery.
- f. Identifying funding for the expanded financial assistance program as part of the 2025
89 mid-biennial budget update.
- g. Ensuring that the City will accept eligible applications to the mitigation program through
91 December 31, 2026, and that homeowners and businesses residing in an affected
92 property in the Highlands neighborhood as of March 31, 2024, are eligible to apply for
93 the mitigation program for that property.
- h. Evaluating alternatives to the current terms of the program agreement, including
95 evaluating whether the waiver provision can be eliminated or revised, while still meeting
96 the City's legal obligations.

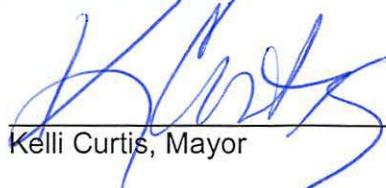
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98 Section 4. The City Manager is hereby authorized and directed to implement a targeted
99 outreach and education campaign for Upper Highlands residents related to water management
100 strategies, particularly during peak demand season when pressures are at their lowest.
101 Examples could include, but would not be limited to:

102 a. Supporting the neighborhood in designating an irrigation schedule to vary the days and
103 times of high water use during peak demand season to ease drops in pressure.
104 b. Provide outreach and educational materials about water-saving strategies to ease
105 drops in pressure, including availability of expanded financial assistance to convert
106 irrigation systems to a drip system and the City's Yard Smart Program.
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108 Section 5. The City Manager is hereby authorized and directed to update the City
109 Council on the progress and status of the actions described in Sections 1 through 4, no later
110 than April 2026.

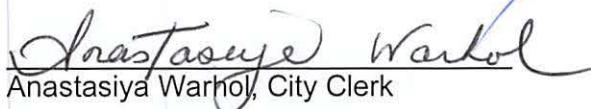
111 Passed by majority vote of the Kirkland City Council in open meeting this 21st day of
112 October, 2025.

113 Signed in authentication thereof this 21st day of October 2025.
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Kelli Curtis, Mayor

Attest:



Anastasiya Warhol, City Clerk