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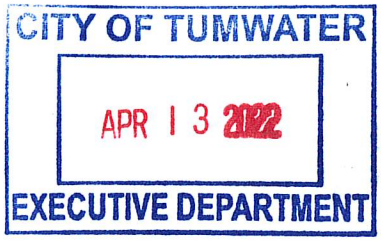

Mr. John Doan
City Administrator

Ms. Karen Kirkpatrick
City Attorney

CITY OF TUMWATER
555 Israel Road SW
Tumwater, WA 98501

Dear Mr. Doan:

This office represents the Hopkins Drainage District No. 2, a special-purpose district organized under what is now Chapter 85.06 RCW ("the District"). The District has maintained a drainage system known as Hopkins Ditch since 1901.

Mat Jackmond, one of the three Commissioners of the Hopkins Drainage District, met recently with Dan Smith, the City's Director of Water Resources, and one of his engineering staff about the flooding problem that a group of neighboring housing developments, comprising 414 Housing Units and 20 Commercial Warehouse Units known as "THE PRESERVE AT TUMWATER PLACE", "TUMWATER COMMERCE PLACE" and "TILLEY CORPORATE CENTER" developments (the "Preserve Developments") have caused in the Hopkins Ditch. The Preserve Developments are situated outside the District's jurisdiction, but nonetheless benefit from the District's maintenance of Hopkins Ditch. Mr. Jackmond met with City staff to try to understand the City's view, but unfortunately, Mr. Smith does not seem to have taken the District's concerns seriously.

The District recently declared an "Emergency or Disaster" due to the increased flow of stormwater in the extreme upland portion of the drainage area maintained by the District. On February 19, 2022, a public Drainage District Commission Meeting was held to address the January Flood event. (See https://hopkinsdrainageditch.us/january-2022-pictures). The pictures on our public website were taken several days after the highest high water of that event, but they do clearly show the immense body of water that consolidated downstream from 414 residences and 20 businesses located within the City of Tumwater. The District's finding that the increased flooding of the District's drainage system is caused by increased impervious surface created by the Preserve Developments, is supported by the attached opinion of hydrologist Joseph T. Brascher.

At the February 19 meeting, the District took several steps and adopted several Resolutions in connection with the increase in flooding in this area. Of interest to the City should be Resolutions HDD2-R2022-0003 through 0007, all of which are attached. These Resolutions are summarized as follows:

- **HDD2-R2022-0003 – Declaration of Emergency or Disaster 2022**

An Emergency or Disaster is declared to be in existence caused by the extreme rain event and flooding of early January 2022 in the upper reaches of the "Hopkins Drainage District # 2 in Thurston County." This Emergency is not limited to the high-water event of January 2022, because of its divergence from the normal flooding events; therefore an unfunded and total re-establishment of the Ditch Channel between Tilley Road and 93rd Ave is required, causing an inability of the Ditch District to mitigate this flooding from occurring in the near future with the current Revenue levels. Due to this Emergency or Disaster, the Commissioners need to find Revenue to solve this Emergency or Disaster.

- **HDD2-R2022-0004 – Determination of Newly formed Lake**

A visual survey of the area upstream of the Ditch District Boundaries found that a "Lake" had formed where there was never a lake this size before. The Commissioners have determined that the outflow of the "Lake" is the predominant cause of the Emergency or Disaster. The Commissioners have determined that the amount of water that comprises the Lake is not the normal amount of water that has been seen in this area in previous floods. By historical geological records and 4 generations of local knowledge, it is obvious that the concentrated runoff from the 414 homes on small lots and 20 businesses is being funneled into large "stormwater holding ponds " that being above the barometric level of the "Lake" have contributed to the extreme amount of additional water creating the "Lake". By historical geological records and 4 generations of local knowledge it is also obvious that the porous sub-surface soils in the area allowed the water funneled to the City of Tumwater engineered "stormwater holding ponds" to be quickly directed to the new "Lake" rather than being contained within the property as designed. That the concentration of 414 homes and 20 businesses that make up the City of Tumwater Housing Development has caused the development of the "Lake" during times of high rainfall. That the additional outflow of this additional influx of stormwater causes an increased and undue burden on the current Ditch District Facilities that requires improvements to the Ditch District Facilities, especially in the area upstream from Tilley Road (WA Highway 121).

- **HDD2-R2022-0005 – Determination of Cause of Emergency or Disaster**

The Commissioners have determined that the cause of the Emergency or Disaster is the additional 414 Housing Units and 20 Commercial Warehouse Units known as "THE PRESERVE AT TUMWATER PLACE", "TUMWATER COMMERCE PLACE" and "TILLEY CORPORATE CENTER" developments within the City limits of Tumwater. Further, it is determined that the

improvements outside of the territorial limits of the district and within the City of Tumwater are receiving a service from the facilities of the Hopkins Drainage Ditch District, and are benefited in that waters from such lands through ditches, drains, or other artificial methods are so cast as to have outlet through the district's facilities. Additionally, it is determined that district's facilities furnish a benefit to the 414 Housing Units and 20 Commercial Warehouse Units in protecting against and furnishing runoff for surface and/or flood waters of this newly developed area within the City of Tumwater. The Ditch District must devise a plan to improve the overall drainage of the ditch from Tilley Road (Hwy 121) to the Lake as it is an additional burden as determined in Resolution 2022-0004 and to mitigate the Emergency or Disaster declared in Resolution No. 2022-0003.

- **HDD2-R2022-0006 – Move forward with remedies of RCW 85.32**

Due to the finding in Resolutions 2022-0003 that an Emergency or Disaster Exists, and pursuant to Resolutions 2022-0004 and 2022-0005 which determined that creation of the "Lake" is the precipitating cause of the Emergency or Disaster. RCW 85.32 provides for creation of a roll of property thus served and benefited by the district's facilities and annual dollar rate levy assessment for continuous benefits furnished such properties. The Commissioners will undertake the process allowed for in 85.32, unless the Commissioners are able to negotiate a solution with the City of Tumwater for the Stormwater Mitigation through the use of moneys from the City of Tumwater Stormwater Fund #411.

- **HDD2-R2022-0007 – Request to City of Tumwater for relief Prior to moving forward with RCW 85.32**

In 2004 the City of Tumwater adopted Resolution No. R2004-012, adopting the Salmon Creek Comprehensive Drainage Basin Plan. By adoption of the "Salmon Creek Comprehensive Drainage Basin Plan Phase II: Alternatives Analysis and Recommendations (2004)" The City of Tumwater acknowledged the facts set forth therein, specifically that:

- "Thurston County residents began localized attempts to address flooding in Salmon Creek Basin in the late 1870s. Flood control efforts, authorized and unauthorized, have continued until present time. These efforts fall into four general categories: 1. Sanctioned, **long-term flood** control projects, such as Hopkins Ditch;
- "Water moves out of the basin primarily through ditches and stream ... The principal surface-water drainages in Salmon Creek Basin include: Salmon Creek/Hopkins Ditch, in the central portion of the basin, which drains southwestward to the Black River "
- "Salmon Creek and Hopkins Ditch are names applied to a continuous set of surface drainages in the south part of the basin, running from the South Union area east of 1-5 to the Black River. "
- "Salmon Creek Basin is naturally prone to flooding because of its geology and flat topography. The Hopkins Ditch system (approximately

nine miles) . .. help reduce the onset and duration of flooding, but cannot eliminate flooding during exceptionally wet years."

- "The Hopkins Ditch District should continue to maintain Hopkins Ditch and assess corresponding rates. The District should assess current service levels and rates and develop strategies to increase maintenance activities.
- "An active ditch district maintains Hopkins Ditch to this day.", and that "Salmon Creek and Hopkins Ditch are the primary, year-round surface water features within Salmon Creek Basin."
- "The recommendations also seek to ensure that any new development is not built in flood-prone areas , or does not worsen flooding problems for existing properties. The plan would allow development on property not vulnerable to flooding to occur in a manner and scale that does not increase flooding of downstream properties. It also recognizes the importance of maintaining Hopkins Ditch"
- "New development can increase flooding problems by placing new structures in harm's way as well as by increasing runoff, reducing evapotranspiration, and concentrating recharge."

The Hopkins Drainage District seeks to negotiate with the City of Tumwater for an allocation from the City Stormwater Fund (set up for the purpose of maintaining stormwater drainage systems for the benefit of City residents) the amount of $360,500.00, for work to be undertaken by the District in 2022 to mitigate the Emergency or Disaster flooding, described in the Drainage District Resolutions 2022-0003 , 2022-0004, and 2022-0005, quoted above, which are caused by the increased stormwater flow from the Preserve Developments within the City limits of Tumwater. We make this offer mainly because we think it is more equitable for the residents of the Preserve Developments to benefit from an established City fund that they (presumably) already pay taxes into *for this very purpose*, thus spreading the burden throughout the entire City, than to focus the burden on them as the benefitted properties, as the District will have to do.

Should the City not agree to allocate the requested $360,500.00 from the City's Stormwater Fund within 30 days of your receipt of this request, the Drainage District will move forward with the special assessment process for properties located outside of District boundaries, as authorized by RCW 85.32.040 *et seq.*, to assess and levy the necessary revenue to deal with the immediate need of the Emergency or Disaster created by the above-described flooding, by assessing an estimated $750.00 for each of the 414 Residential parcels, and $2,500.00 for each of the 20 Commercial parcels for the first year of construction, and then add those parcels to the Tax Rolls of the Drainage District as allowed by RCW 85.32.050 until the costs of the contemplated improvements have been paid in full. They will then be added to the District's tax rolls on a permanent basis as authorized by RCW 85.32.210.

Hopkins Drainage District No. 2 would like to give the City the opportunity to spare the homes and businesses this additional and unplanned Tax burden beginning in 2023. As is clearly spelled out in the City's own Budget Documents, the City has a projected 34% "Excess Funds" in Fund #411 (which is only required to maintain 20% in reserves); that "excess" amounts to $ 2,048,186.00, which is well in excess of the $360,500.00 that the District is prepared to assess in Taxes through the Ch. 85.32 assessment process. These "excess" funds are meant for "rainy day Stormwater" contingencies, which is what we have here.

This offer letter is obviously a public record under the PRA, and will have to be made available to any member of the public, (including, of course, any resident of the Preserve Developments), to answer any questions that may be asked as to why the City did not shelter their Taxpayers from what is essentially *double taxation* (first, to the City of Tumwater Stormwater Fund, and then to the District via special Emergency assessment) for stormwater facilities benefitting their properties. It will be shared with any residents of the Preserve Developments who inquire.

The District's proposed tax levy is clearly authorized under Ch. 85.32 RCW; however, it hardly seems fair that the residents of the Preserve Developments will also continue to pay CIty taxes into the Stormwater Fund, basically for nothing, at the same time they are paying another taxing district that will actually be providing the stormwater-mitigation service. The City of Tumwater clearly has sufficient funds available right now to deal with this and still maintain 32.139% in "Excess Funds" in City Fund #411, well over the 20% minimum.

Please respond no later than close of business on Friday, May 20, 2022, to this letter and request for the following:

- the inclusion of a "Hopkins Ditch" line item in City Fund # 411 of $360,500.00 for 2022 (payable to Thurston County Fund 6350 by July 1, 2022);

- an ongoing inclusion of a "Hopkins Ditch" line item in City Fund # 411 of $36,050.00 (payable to Thurston County Fund 6350 by July 1st each year).

Absent a written agreement between the City of Tumwater and Hopkins Drainage District #2 in Thurston County by May 31, 2022, the Drainage District will begin the hearing process as required by RCW 85.32.040 *et seq*, which will conclude with a special assessment being levied on the individual Preserve Developments properties as described above.

If the City and the District can come to an agreement, we can protect the new Homeowners in the Preserve Developments from a double taxation for stormwater

facilities, and the project can be undertaken this summer (2022), rather than delaying until August of 2024; this may well avoid the negative consequences of another possible "Flood Event" next winter. We hope the City of Tumwater will decide to do what is in the best interest of all affected residents.

Please share this with your legal counsel, and contact me at (253) 720-8730 if you have any questions.

Very Truly Yours,
BRITTON LAW OFFICE, PLLC

David J. Britton

CLEAR CREEK SOLUTIONS, INC.

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Tumwater, WA 98501
360-943-0304
www.clearcreeksolutions.com

DATE: 6 April 2022

TO: Mat Jackmond, Commissioner (Position 2), Hopkins Drainage Ditch District #2

FROM: Joseph T. Brascher, Principal Hydrologist, President/C.E.O.

SUBJECT: Hopkins Drainage Ditch Flooding Issues

Introduction

Clear Creek Solutions Inc. was asked to review the circumstances regarding localized flooding on Hopkins Ditch upstream of Tilley Rd. This letter reflects our understanding based on the information available for the site.

Geology and Soils

The geology and soils of the Salmon Creek Basin consist primarily of outwash soils overlaying defined aquifer layers. The first aquifer layer is approximately 25 to 50 feet below the surface. Because the overlaying soils are all generally well-draining, most of the rainfall infiltrates into the soils where it contributes to the first groundwater aquifer. If enough precipitation occurs during the winter months, this first aquifer fills and begins to express at the surface causing many locations in the basin to flood. Runoff from the basin is conveyed through a series of drainage ditches consolidating into the main drainage of the basin, that being the Hopkins Ditch which empties into the Salmon Creek and on into the Black River.

The Salmon Creek Basin has a flat slope and slowly draining surface water which necessitated earlier residents to cause the establishment of the Hopkins Drainage Ditch District to facilitate drainage of the surface waters out of the basin to Salmon Creek at Jones Road. Due to the slow flowing nature of the Hopkins Ditch area, winter flooding can be caused by seasonal high groundwater. Flooding can also occur due to high rainfall volumes over the course of the winter months. This flooding is typically not caused by a single flood event, and in the 1990s four of the winters had well above average rainfall totals and as a result showed corresponding high groundwater flooding throughout the basin. Previously this same sort of flooding occurred in the early 1970s.

Recently a portion of the basin that contributes to the Hopkins Ditch upstream of the Tilley Road crossing has shown some severe flooding that is not characteristic of the normal historical flooding trends. Flooding that occurred following the 4-inch rainfall event on January 6, 2022, is

likely the most severe flooding that this portion of the basin has experienced on record. This flooding was not accompanied by the usual high groundwater flooding throughout the rest of the basin. In addition, the 4-inch rainfall event is lower than events that occurred in January 2009, November 2006, October 2003, and the November and January events of 1990. Reported flooding in this portion of the watershed was not as severe for these events as it was for the most recent event. This demonstrates a shift in the type and cause of flooding in this area. This shift is likely caused by the construction of 414 new homes in the surrounding areas. The additional impervious area from this construction has increased the overall volume of runoff that occurs from the site. The runoff is then routed to several detention facilities that concentrate the water into a few locations. Due to the soil types in the area, it is likely that these facilities temporarily infiltrate a sizable portion of the runoff, which is then expressed to the surface nearby. Localized flooding is caused by the lack of slope and drainage capacity of the downstream system. It is likely that this will become a chronic flooding issue that will need relief.

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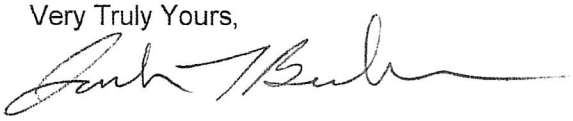
To resolve the flooding issues the downstream channel must be altered. This will include cleaning out the channel and increasing the culvert capacity for up to five downstream culverts. There will need to be a downstream impacts study performed to ensure that upsizing these culverts does not shift the flooding problem downstream.

Very Truly Yours,



Joseph T. Brascher, Principal Hydrologist
President/C.E.O.
Clear Creek Solutions Inc.

CLEAR CREEK SOLUTIONS

Joseph T. Brascher, President/CEO

Hydrology
Stormwater Modeling
Water Resources Planning
Flood Studies
Expert Witness

Professional summary

Mr. Brascher has over 30 years of experience in numerous aspects of hydrologic modeling, stormwater management, and software development. Before co-founding Clear Creek Solutions in 2005, Mr. Brascher worked for the City of Olympia, Thurston County, and AQUA TERRA Consultants in Tumwater, Washington.

He has experience with HSPF, EPA SWMM, and numerous other hydrologic computer models. Mr. Brascher continues to be a recognized leader in the application and use of EPA's HSPF model. Mr. Brascher has also pioneered the integration of the EPA SWMM and EPA HSPF models. These efforts have produced seamlessly integrated continuous simulation models that incorporate the strengths of both models.

Mr. Brascher was the project manager and chief architect for the Western Washington Hydrology Model (WWHM) project for the Washington State Department of Ecology. This project involved the development of a software design tool that is based on EPA's HSPF continuous simulation model but incorporates the Washington State Department of Ecology standards for development in an extremely user friendly interface. Local precipitation and evaporation data are included with the software. WWHM includes a full range of Low Impact Development (LID) modeling tools including bioretention, rain gardens, green roofs, permeable pavement, lateral flow dispersion, planter boxes, grass bioswales, and infiltration basins. The model has become the standard for hydrologic modeling in Washington state.

In California Mr. Brascher has also developed the Bay Area Hydrology Model (BAHM), San Diego Hydrology Model (SDHM), Sacramento Area Hydrology Model (SAHM), South Orange Hydrology Model (SOHM), and the Santa Margarita Region Hydrology Model (SMRHM), all based on the same Windows HSPF software platform to meet hydromodification requirements.

In Oregon Mr. Brascher developed the Tualatin River Urban Stormwater Tool (TRUST) for Clean Water Services in Washington County.

In Texas Mr. Brascher consults with the Edwards Aquifer Authority to model groundwater recharge from nine major river basins into the Edwards Aquifer for water supply in south central Texas.

Mr. Brascher is currently working with HECOREA, Inc., to develop K-LIDM GIS Module and SWMM Linkage Module for the Republic of Korea.

Mr. Brascher has modelled drainage systems impacted by a rise in sea levels and associated Puget Sound high tides to anticipate future climate change impacts.

Education

BS Physics and Computer Science, The Evergreen State College, Olympia, WA, 1988

Representative Assignments

Gleneagle Court Case, Arlington, WA - Provided hydrologic analysis of Gleneagle drainage area flooding of 67th Avenue NE and adjacent private properties in Arlington, WA. Developed a combined HSPF-SWMM computer model of drainage area and quantified extent and frequency of flooding. Analyzed multiple alternative solutions.

Port of Seattle SeaTac Airport Comprehensive Stormwater Management Program – Evaluated proposed stormwater control facilities in the Miller, Walker, and Des Moines Creek watersheds in support of the development of the third runway. Hydrologic models for these three watersheds were calibrated and used to evaluate current and future impacts from urbanization on the water resources of the three watersheds. Stormwater control facilities were designed for maximum performance and minimal impact. Summer low stream flows were computed for current and future conditions and the relative impacts were assessed with proper mitigation proposed. Provided expert witness testimony at public hearings.

Western Washington Hydrology Model Version 2012 (WWHM2012), Washington State Department of Ecology – Principal investigator in the development of WWHM2012 use in sizing stormwater control facilities in Western Washington. WWHM2012 is part of Ecology's Stormwater Management Manual for Western Washington.

Drainage Needs Report, Snohomish County, WA –Updated existing or created new HSPF models for Sunnyside Creek, Martha Creek, North Creek, Lunds Gulch, and Norma Creek and evaluated future land use impacts on flood frequency and flow duration and proposed structural alternatives to solve identified flood problems in the watersheds.

Watershed Modeling Services, King County, WA –Managed the construction and calibration of water quantity and quality models for two topographic basins – the Green-Duwamish and the Lake Washington-Ship Canal watersheds for King County Department of Natural Resources. These models support the two major projects, the Green-Duwamish Water Quality Assessment (GD WQA) and the Sammamish-Washington Analysis and Modeling Program (SWAMP). The primary purpose of the watershed water quality and quantity models is to support the GDWQA and SWAMP teams by simulating at a tributary level, surface and subsurface flow and associated physical, chemical, and biological loads to major receiving waters -- the Green River and Duwamish Estuary for the GDWQA and the major lakes for the SWAMP under a range of land use and infrastructure scenarios. Additionally these models provide a general tool for watershed analysis, management and educational outreach components of SWAMP and GDWQA, King County's ESA-response, aquatic resource protection, stormwater management programs, and ecological and human health risk assessment.

City of Seattle Hydraulic Modeling On-Call Services – Modeled the Densmore-Green Lake drainage system using WWHM3 with XP-SWMM routing to identify stormwater flooding problems and alternative solutions. Instructed SPU staff in the application of WWHM3 for SPU projects.