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June 7, 2019

VIA EMAIL: Kelsey.lindquist@slcgov.com

Historic Landmark Commission

SALT LAKE CITY CORPORATION

451 South State Street, Room 326

Salt Lake City, Utah 84111

cc: Holly Mullen, Communications and Engagement Manager ([holly.mullen@slcgov.com](mailto:holly.mullen@slcgov.com))  
Chris Wharton, District 3 council person, [chris.wharton@slcgov.com](mailto:chris.wharton@slcgov.com)

Re: 4<sup>th</sup> Avenue Well's Failure to Comply with Salt Lake Code Requirements – Supplemental Points and Authorities concerning State Water Quality Regulations  
Comment to Historic Land Commission ("HLC") on 4<sup>th</sup> Avenue Pump Applications by the Department of Public Utilities ("DPU") at approximately 200 North Canyon Road, Salt Lake City, Utah (the "Well")<sup>1</sup>. HLC PLNHLC2018-00557 and PLNHLC2018-00558

Sirs and Ms. Lindquist:

This letter supplements my comment to the Historic Land Commission of June 6 regarding how the applicant's (the DPU's) proposed 4<sup>th</sup> Avenue Pump fails to comply with Salt Lake ordinance requirements. In this supplement comment, the failure of the proposal comply with Utah State Safe Drinking Water Act design requirements. I am aware that the June 6<sup>th</sup> hearing has been postponed and that further negotiations may result in a revised design being submitted; however, the following authorities and points will be relevant regardless of any pump house design that is considered by this Commission.

A May 31, 2019 memorandum by Bowen, Collins and Associates (project concept design architects) submitted with application<sup>2</sup> notes that "[t]he intent of Salt Lake City Public Utilities for this project is to construct a safe and reliable culinary water well that is *in compliance with state and local regulations* . . ." (emphasis added). One of the applicable State regulations is Utah Administrative

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<sup>1</sup> Salt Lake City Department of Public Utilities. 2019. Information Website on 4<sup>th</sup> Avenue Well Project (url: <https://www.slc.gov/utilities/fourth-avenue-well-project/>, accessed May 2019).

<sup>2</sup> Bowen, Collins and Associates, May 31, 2019, re: Salt Lake City Planning Commission Assessment Memorandum (hereafter the "Second Bowen Memorandum") in Attachment C to the Commission's Briefing Materials (url: <https://www.slc.gov/boards/historic-landmark-commission-agendas-minutes/> ).

Code R309-540-5, Facility Design and Operation: Pump Stations - Pumping Facilities (effective April 1, 2019),<sup>3</sup> concerning the Utah Division of Water Quality standards for the design and construction of well pumping facilities that connect to public water distribution systems. Subsection 1 of that regulation provides, in part, that:

(1) Location.

(a) The pumping station shall be designed such that:

(i) the proposed site will meet the requirements for sanitary protection of water quality, hydraulics of the system, and protection against interruption of service by *fire, flood or any other hazard*;

(ii) the access to the pump station shall be six inches above the surrounding ground and *the station located at an elevation which is a minimum of three feet above the 100-year flood elevation, or three feet above the highest recorded flood elevation, which ever is higher*, or protected to such elevations;

. . . .

(v) the station is protected to prevent vandalism and entrance by animals or unauthorized persons (*id*, emphasis added).

In my June 4<sup>th</sup> comment to the Commission, I noted that the 100-year flood plain as defined in FEMA's FIRMs map optionally should have been updated to include local information about flooding in City Creek geologic streambed where the Well is proposed to be constructed. Utah Administrative Code R309-540-5(1)(ii) provides under Division of Water Quality regulations, the applicable floodplain elevation must be adjusted and set with respect to historical flood records. No documentation in the Commission's Briefing Material establish what that highest recorded flood elevation at the site is. Your commentator has previously provided substantial evidence on historical floods that have flowed over the proposed 4<sup>th</sup> Ave site.<sup>4</sup> As a result, the minimum applicable floodplain elevation at the proposed Well site is documented and should be adopted by this Commission - at a minimum - at the current grade.

Pursuant to R309-540, either the proposed Well pump house must be built on at least a three-foot platform or it must be surrounded by at least a three foot wall capable of withstanding reasonably anticipated flooding. None of these features appear in the applicant's design.<sup>5</sup> Alternatively, the applicant must provide evidence that the Utah Water Quality Division has granted an exception to this regulation, and this too does not appear in the Commission's record. As noted in my June 4 comment on the applicant's failure to comply with laws and regulations, the design proposed by applicant DPU is largely hypothetical. The width, height and mass of the proposed structure do not represent what the

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<sup>3</sup> url: <https://rules.utah.gov/publicat/code/r309/r309-540.htm>.

<sup>4</sup> Letter by K. Fisher to the SLC DPU dated May 25, 2019, which is Attachment B to Letter by K. Fisher to the HLC dated June 4, 2019 that is part of this Commission's Briefing Materials.

<sup>5</sup> And they should be considered in any future redesign submitted by the applicant.

applicant may be required to build by other laws. Therefore, the Commission should reject and return the application until the applicant provides further documentation regarding compliance with these State requirements that effect width, height and mass of the proposed Well.

A platform or protective wall that is higher than three feet may also be required by R309-540-5. As quoted above, the regulation requires that the applicant establish what is the highest recorded flood elevation. Your commentator suggests that based on my personal observations during the high spring run-off of 1983 that the historical flood levels are between 1 and 2 feet above grade. Thus, the proposed Well may have to be built on top of platform at least 5 feet high or surrounded by a wall that is 5 feet or higher. Alternatively, the applicant must provide evidence that the Utah Division of Water Quality has granted an exception to this requirement. Therefore, the application should be returned with the direction that the applicant must submit information on the historical highest recorded flood elevation before the design is considered.

In this regard, the applicant (the DPU) may be in possession of photographs or other memoranda related to the highest observed flood level at the 4<sup>th</sup> Avenue well site either during the 1983 flood, during the DPU's subsequent 1983 repair of the 4<sup>th</sup> Avenue park and surrounding Spencer Road and North Canyon Road areas, and during prior flooding incidents. This Commission should direct the applicant to search its historical records for such documentary materials and to submit a report to the Commission and its staff as a precondition to consideration of the applicant's proposed Well.

Subsection (1)(v), quoted above, requires that the proposed Well building be secured against entrance by unauthorized persons. As documented in my comment to this Commission of June 4, various memoranda by the applicant admit that it is simply unable to comply with this requirement by the usual means of surrounding the building with security fencing. No such security feature appears in the applicant's proposed design. Therefore, the Commission should reject the application on the condition that the applicant can demonstrate that its design incorporates features that complies with the security requirements of subsection (1)(v).

Additionally, the facilities to be included in the Well are not fully defined due to a fluoridation design requirement (and hence its height, width and mass are not known). The Bowen Second Memorandum dated May 31, 2019 (included in the Commission's Briefing Materials) states that "[i]t should be noted that Salt Lake City Public Utilities is working to obtain an exception from Salt Lake County's fluoridation requirements . . . in an effort to reduce the site's impact to the park" (*id* at 2). The applicant's design drawings included in Attachment "C" to the Commission's Briefing Materials do not include any facilities related to fluoridation. Thus, the applicant's final design may be larger or smaller, as the case may be. The application does not indicate either way how the design might be affected. The application is premature until it is known whether the facility must also provide for fluoridation treatment and might be either larger or smaller to achieve that design requirement.

Finally, to the extent that the Commissions' own standards require compliance with other state laws (either expressly or implicitly so that proposed designs truthfully represent the height, width and mass of a structure), the applicant has made no application to this Commission for a special exception

use permit related to the above State regulatory requirements.<sup>66</sup> The application should be rejected until it provides evidence that it has obtained an exception from the Utah Division of Water Quality with respect to its design and to the above state regulations.

The applicant might cite the Letter of Utah Division of Water Quality Professional Engineer Sam Grenlie dated May 22, 2019,<sup>7</sup> in support of proposition that the Division has approved the applicant's design. The Grenlie letter is evidence that the DPU has consulted with the Division as part of a state level permitting process related to public water treatment facilities. The first page of the Grenlie Letter states that "*This is not Plan Approval for Construction*" (emphasis in original). The Grenlie Letter is not an approval of the concept design as proposed by the applicant to this Commission. The State may require alterations to the design in the future consistent with the above quoted state regulations that would increase the height, width or mass of the proposed pump and chemical treatment building.

This comment and its authorities supplements the arguments in my June 4 letter to this Commission. The complex design and engineering challenges presented by the proposed Well have conflicting constraints. If the applicant submits a design that complies with applicable state water quality laws discussed above, the design will be so massive that it will be plainly incompatible with the historic district zone. If the applicant proposes a design that is small enough to be compatible with the historic district and obtains approval by this Commission, the design will probably not meet state design requirements for public water facilities. Ultimately, these conflicting design objectives are not capable of being resolved and the dilemma weighs in favor of siting the chemical treatment plant elsewhere.

Some of these inconsistencies discussed in this comment are the result of the applicant's ordinary and well-intentioned practice of streamlining application processes. The DPU has made multiple, simultaneous, and parallel applications with respect to the Well to the State Water Quality Division, the Historic Landmark Commission, and Salt Lake County. This matter is an instance where perhaps the less efficient serial method of making multiple applications would be better suited. After a more final concept design, with required exceptions, are approved by the State Water Quality Division and Salt Lake County, then the matter will be ripe for consideration by the Historical Landmark Commission. Presently, the application is premature.

This comment supports my ultimate recommendation to the Commission that the proposed Well should be rejected with the Commission's direction that the applicant should consider moving the Well to May 9 open house Option 2c site<sup>8</sup> in the park at State and Canyon Road in a redesigned anti-terrorist, flood, and earthquake hardened structure. Only a small above-ground pump need be built at the 4<sup>th</sup> Avenue site and a transmission line constructed to a

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<sup>66</sup> The principle of the supremacy of state over local law may preclude such an application.

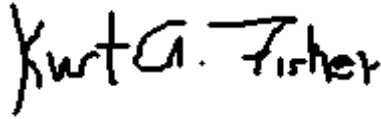
<sup>7</sup> Included in Attachment "C" of the Commission's Briefing Materials.

<sup>8</sup> Memorandum by David E. Hansen, Hansen, Allen and Luce, Inc., to B. Stewart, Salt Lake Department of Public Utilities, re: 4th Avenue Well Assessment (hereafter "HAL Report") (url: [https://docs.wixstatic.com/ugd/80b28b\\_3607f771b2984d63a44ce7a4c3d1c7a9.pdf](https://docs.wixstatic.com/ugd/80b28b_3607f771b2984d63a44ce7a4c3d1c7a9.pdf) ).

separate chemical treatment facility.<sup>9</sup> The DPU's May 9 concept design submitted to this Commission is a danger to the health and safety of the community and to first responders.

Please feel free to contact me with any questions that you may have by the means listed above.

Very Truly Yours

A handwritten signature in black ink that reads "Kurt A. Fisher". The signature is written in a cursive, slightly slanted style.

Kurt A. Fisher

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<sup>9</sup> In this regard there are conflicting opinions in the Commission's record. The April 2019 HAL Report by a DPU consultant indicates that this configuration is technically possible, but difficult to engineer. P.E. Hansen orally repeated those statements to your commentator during the May 9, 2019 DPU Open House concerning the Well, i.e. – a transmission line to a separate treatment facility was possible, but difficult and more expensive. The DPU's chief Professional Engineer McIntire in his August 2018 memorandum opines that this engineering solution is not technically feasible. *Compare* HAL Report and Memorandum by B. McIntire to K. Lindquist, Salt Lake City Planning Department dated August 30, 2018, re: Open House Public Comment Responses (hereafter "August 2018 Comments") (url: [https://docs.wixstatic.com/ugd/80b28b\\_0bc4214b1c61450897cfbd5cc5a0e6ee.pdf](https://docs.wixstatic.com/ugd/80b28b_0bc4214b1c61450897cfbd5cc5a0e6ee.pdf) ).