Moore-Love, Karla

From: Scott Fernandez <scottfernandez.pdx@gmail.com>
Sent: Wednesday, April 22, 2015 4:31 PM
To: Moore-Love, Karla; Scott Fernandez
Subject: Scott Fernandez April 23 testimony - LU-14 -249689 Washington Park demolition
Attachments: 4=23=15 Council Testimony April 23, 2015.docx

Hi Karla,

Attached is my testimony for April 23 2 PM Washington Park reservoirs.

Thank you,

Scott

To: Portland City Council
Re: Washington Park Reservoir Demolition LUR Review, April 23, 2015
Submitted by Floy Jones on behalf of Friends of the Reservoirs
2204 SE 59th Ave., Portland, OR 97215

Numerous supporting documents referenced in these comments have been submitted via separate e-mails.

The Friends of the Reservoirs strongly opposes the proposal to demolish Reservoir 3 and Reservoir 4 and the Weir buildings at Washington Park. Demolition is not required by the onerous EPA LT2 regulation nor is it necessary for any other reason. The Water Bureau's Demolition Land Use Review process has not met code regulations including the intended purpose to "ensure that there is opportunity for the community to fully consider alternatives to demolition". The Water Bureau has intentionally defied City Council Resolution 36237 that requires bringing stakeholders together to determine what action to take if a "risk mitigation" reservoir option is not available. Contrary to the Bureau of Development Service's (BDS) staff report, Land Use criteria is not met by this demolition plan. The **Portland Water Bureau's Cascade Design Professionals, Robert Dortignacq, 2010 Historic Structures Report**, which reaffirms that the reservoir structures are for the most part in good condition, was withheld from the Historic Landmark Commission. Landslide and earthquake concerns are overstated. Eliminating Portland's recently upgraded and well-functioning historic open reservoirs will create new and unique cancer-causing public health risks.

> **33.445.330 Demolition of Historic Resources in a Historic District**
> Historic Landmarks in a Historic District are subject to the regulations of Section 33.445.150. Demolition of other historic resources within a Historic District requires demolition review to ensure their historic value is considered. The review period also ensures that there is an opportunity for the community to fully consider alternatives to demolition.

Documentation of reservoir infrastructure and other upgrades including the 2006 Council Resolution and press release submitted via separate e-mail communication. Ratepayers are presently financing the Washington Park reservoir upgrades (that included 2006 opening up of the reservoir sites to the public) completed between 2003 and 2010 (Black & Veatch contract #36297, Natt McDougal # 334785, HDR, and others) – with debt costs increasing over time - The Water Bureau long ago abandoned the better practice of pay-as-you go outlined for Mayor Katz in the Water Bureau's October 3, 2003 reservoir project letter.

EPA LT2 COMPLIANCE

There has been no meaningful public involvement process. The IRP Reservoir Resolution 36237 requires utilizing the city's adopted Principles of Good Public Involvement when taking action related to the open reservoirs- full consideration of alternatives to demolition which include installation of covers, UV "treatment at the outlet", disconnection and building storage elsewhere, and **the community supported option of reapplying for an Oregon Health Authority deferral while working with other communities to reinstate the "risk mitigation" option inexplicably removed from the final LT2 rule**.

The Portland Water Bureau can continue to use both of Washington Parks open reservoirs, Reservoirs 3 and 4, as part of the drinking water system and be in compliance with federal regulations if Portland installs reservoir covers on the already installed grill work.

Prior to construction of the new $120 million Powell Butte II underground tank, Portland had an excess of in-town storage at Mt. Tabor and Washington Park as reported by the PWB to the Oregon Health Authority and the EPA - 50 million gallons of excessive storage - thus the Water Bureau has not been utilizing all of the storage at Washington Park (or at Mt. Tabor) while not being honest with the public about this fact. The issue of unneeded storage was discussed at the March 30, 2015 Historic Landmark Commission meeting where the lead engineer Teresa Elliot confirmed that there would be no storage at Washington Park for fours years as the Water Bureau intends to demolish both of the reservoirs simultaneously. The follow-up question from a

Commisioner, "Why don't you build the storage that is clearly unneeded elsewhere?" The Water Bureau refused to answer, having already avoided affording the community it's right to fully consider alternatives, the Water Bureau refused to answer. Video and audo links provided separately.

RESERVOIR COVERS

In 2002/03 the Water Bureau, absent any public process or regulatory requirement, installed grill work for floating reservoir covers at the Washington Park reservoirs. The Water Bureau also installed a white liner on the upper Washington Park reservoir, which was intended to last 25 years as represented by an onsite PWB engineer at the time. In a February 19, 2003 Power Point to City Council referring to the "Washington Park Solution" of covers, the Water Bureau said that this "eliminated regulatory modification" and that the "historic structures are not affected" , "trees remain in place", and "roads remain open."The cover material (hypalon) intended to attach to the installed grill work was purchased by the Portland Water Bureau but never installed. When the 2004 *Independent Reservoir Panel* did not support "treating or covering" Portland's open reservoirs (the PWB's arguments failed to hold water) and City Council ordered the Water Bureau to terminate covering the Washington Park reservoirs, the Water Bureau attempted to sell the hypalon reservoir covers on eBay. According to the Oregonian's September 21, 2004 article the cost of the covers and hardware was $398,000. " However, at the close of bidding on eBay Thursday, the highest offer for the whole package was a mere $18,000 to an anonymous bidder." It was subsequently revealed that Water Bureau employees were the anonymous bidders. http://www.wwdmag.com/portlands-water-bureau-lists-reservoir-covers-ebay-bids-itself-then-balks

Commissioner Saltzman stopped the sale but the final disposition of those covers has remained hidden. The cover grill work has remained in place at the Washington Park Reservoirs 3 and 4. The estimated cost of replacement of the floating covers would be somewhere in the vicinity of $1 million compared to the Water Bureau's plan for demolition and replacement that could reach $100 million (current estimate $80 million).

While covering the reservoirs was absolutely not supported years ago for many reasons including the fact that a "risk mitigation" option was included in the draft 2003 LT2 regulation, it is still not ideal. This option does meet regulatory requirements and would provide opportunity for the Congressional delegation to work in support of revising the poorly crafted LT2 rule such that "risk mitigation" is again a compliance option. In that the Water Bureau's self-imposed compliance deadline for Washington Park is 2020, the covers might never need be installed if the "risk mitigation" option is restored as has been requested by New York's water department, Rochester's water department and others. Oregon's Congressional delegation members have indicated that they would join forces with Senator Schumer and others to support rule revision if demolition/disconnection projects were placed on hold.

Or

"TREATMENT AT THE OUTLET"

The community has never had opportunity to fully consider the EPA LT2 "treatment at the outlet" compliance option. In 2004 the PWB made no argument to City Council that "treatment at the outlet" would be costly or otherwise difficult to install. Their February 19, 2004 PowerPoint to City Council presented at a Council hearing included "treatment at the outlet" as a viable option. MWH's Reservoir Study Contract 30491, a contract that was amended and extended nine times indicated that **"treatment at the outlet" was a viable option. Montgomery, Watson Harza Open Reservoir Study Tech Memorandum 2.7-Water Quality Evaluation, November 2001.**

Since then the costs of UV "treatment at the outlet" have dramatically declined. **Rochester** New York has two historic open reservoirs set in city parks. Rochester initially planned on building underground storage after learning of the EPA LT2 rule but in response to **strong community opposition** they investigated installing UV radiation bulbs and found that costs had dramatically dropped. Responsive to Senator Chuck Schumer's success in including revision of the EPA LT2 regulation as part of Obama's order to revise "onerous "regulations, Rochester sought and secured a 10-year deferral of reservoir projects until 2022. Rochester's deferral was supported by their Mayor and the Governor of New York supports rule revision.

Rochester is concurrently working in support of revising the EPA rule to avoid wasting money on "treatment at the outlet", a project that will will provide no measurable public health benefit. In

afforded the opportunity to fully consider the alternatives to demolition. The Water Bureau's selected so called "Sounding Board" does not represent broad-based community stakeholders, and does not fit the intent of City Council Reservoir Resolution 36237. **The PWB's "Sounding Board" was not established to "allow the community to fully consider alternatives to demolition", but for the Water Bureau and their army of consultants to focus the conversation about what happens after the demolition.** In 2002 the "What goes on top" process was exponentially lengthier with greater community involvement, but of a similar nature wherein the consultant Joe Glicker (then with MWH Global, now with CH2MHill) told the community the only thing they could talk about is what happens after the degradation of the open reservoir system. The "What goes on Top" committee ultimately challenged the Water Bureau's limiting of the scope of the community discussion.

Only a handful of people were aware of the Water Bureau's "Sounding Board" meetings. Private meetings with selected individuals is not a meaningful public process for meeting the City's adopted Principles of Good Public Involvement.

The Portland Water Bureau and their cozy revolving-door consultants have been trying for decades to force "fun" (as described in 2013 by Water Bureau engineer Stan Vanderberg at a wholesale customer water managers meeting) tank burial projects. In 2004 Water Bureau Administrator Mort Anoushirivani when asked at a public infrastructure meeting why the Water Bureau was spending so much money on revolving-door consultant studies while deferred maintenance (as referenced by a 2004 City Auditor report) was avoided, responded by saying "designing and building is glamorous and maintenance is boring."

The 2002 MWH Global/ PWB Reservoir burial Permitting Strategy document delineates tactics and strategies for thwarting community opposition to burying the reservoirs via manipulation of Land Use laws. **Document submitted separately via e-mail.**

When trying to force unsupported reservoir demolition and covering projects between 2001 and 2004, PWB PR staff including Tim Hall repeatedly told the public that the reservoirs were not historic resources. It was not the Water Bureau that worked to place the reservoirs on the National Register of Historic Places in 2004 but several members of the Friends of the Reservoirs that dedicated the better part of a year toward the effort. Friends of the Reservoirs is a Water Bureau watchdog organization with members representing both sides of the river that formed in response to 2001 line-item budget decisions to cover Washington Park reservoirs and demolish the Mt. Tabor reservoirs.

At a budget presentation in March 2015 the Portland Water Bureau failed to include the historic open reservoirs as Water Bureau assets, let alone as the significant water system assets they have been and remain today. Chet Orloff suggested in his June 2006 letter to Council supporting reservoir upgrades and opening up the reservoirs to the public (better alternative to demolition) that the Water Bureau install permanent exhibit boards that would "thoroughly inform citizens of, and deepen pride in these great assets", wrongly believing that the Water Bureau had abandoned "still born" plans to demolish. I was present at this Council hearing. **Orloff's letter, the 2006 Council Resolution and associated press release were submitted for the record in a separate e-mail.**

The Portland Water Bureau was the only utility in the entire nation that was secretly seated at the table serving on the EPA LT2 Federal Advisory Committee. They brought with them a revolving-door consultant, Joe Glicker, a former PWB engineer, whose associated global engineering firms have profited from the onerous one-size-fits-all regulation that by all accounts will provide no measurable public health benefit to systems like Portland's Bull Run open reservoir water system. A list of some of the contracts awarded to Glicker's associated corporations was provided to the HLC in the Mt. Tabor Disconnect LU case and has been provided City Council in the past.
It was the Water Bureau in isolation and/or in backroom consultation with consultants who set the fast-track schedule for reservoir compliance. There is no deadline in the LT2 rule for reservoir compliance (**See e-mail from EPA Region 10 representative copied below**)

Demolition Criteria: Demolition of the resource has been evaluated against and, on balance, has been found supportive of the goals and policies of the Comprehensive Plan, and any relevant area plans
DEMOLITION DOES NOT MEET COMPREHENSIVE PLAN GOALS

GOAL 1: This goal is best met by installing "covers" or "treating at the outlet" or by an Oregon Health Authority deferral, an EPA waiver or a variance which is allowed by the Safe Drinking Water Act for "treatment techniques" such as the "treat or cover" EPA LT2 requirement- See additional comments above.
Goal not met by demolition
GOAL 2: The land around the reservoirs was opened up to the public in 2006 during daylight hours after extensive upgrades were completed including upgrading and reopening the grand entry staircase. Friends of the Reservoirs participated in the subsequent celebration which took place on the day Randy Leonard announced that his staffer David Shaff would be permanently appointed as Water Bureau director. **2006 Council Resolution, press release and other documentation provided separately.**

The value to the community will be significantly diminished not improved by demolition of the open reservoirs.
Goal not met by demolition
GOAL 3 NEIGHBORHOOD: The PWB specifically avoided opportunity for the public to fully consider options to avoid demolition. **See comments above and documentation provided separately.** It was public opposition to the lack of public process in 2001 that lead to the 2004 *"Independent Reservoir Panel"* which after opportunity to consider all of the options (with much of the significant information provided the panel by the Friends of the Reservoirs), they could not support the Water Bureau's proposed demolition of the Tabor reservoirs and covering Washington Park reservoirs.

Additionally, the WB failed to notify stakeholders of meetings associated with this Washington Park reservoir demolition case, including conferences with the Historic Landmark Commission. In order to make significant participation including research difficult they brought this Demolition LU case forward over the Christmas holiday overlapping the Mt. Tabor LU process. See information above and below.
The Water Bureau failed to provide the Historic Landmark Commission the 2010 70-page Historic Structure Report that documents, as does the referenced MWH nine -year study report, that the reservoirs are in relatively good condition. See documentation and comments above and sent separately.
The Washington Park Reservoirs are significant, unique and irreplaceable community assets.

Goal not meet by demolition.
GOAL 6 TRANSPORTATION: The promenade around the reservoirs was opened up following costly upgrades in 2006 including the upgrade construction of the grand entry staircase, new wrought iron fencing, etc.. **See comments above and documentation 2006 Council Resolution, press release, Chet Orloff letter submitted separately.The significant value of the historic open** reservoirs by far supersedes the minimal night entry restrictions. Goal not met.

GOAL 8 ENVIRONMENT: The onerous EPA LT2 regulation is under review and revision. Landslide risk is overstated. See comments above and documentation submitted separately.
Goal not met by demolition

GOAL 9: CITIZEN INVOLVEMENT **– PUBLIC INVOLVEMENT AVOIDED; COUNCIL ORDINANCE REQUIRING PUBLIC INVOLVEMENT DEFIED** There has been no citizen involvement in the decision-making process as required by the Independent Reservoir Review Panel **Ordinance # 36237** (attached for the record). A meaningful public process would have thoughtfully and publicly considered all EPA compliance options with all community stakeholders seated at the table. All stakeholders would have equal access to all pertinent information without having to deal with the Water Bureau's stonewalling public records requests or having to go to other utilities for factual information as has been the case over and over for decades. The Portland Water Bureau made all significant land use decisions backroom in **defiance of the reservoir City Council Ordinance # 36267** which required bringing community stakeholders together to determine what

recent years the Portland Water Burea has said that they have only done a "back of the napkin" look at treatment at the outlet (documents supplied by the PWB confirm the lack of a comprehensive, independent examination of this option), thus this alternative to demolition has never been fully considered by the community.

Or

BUILDING STORAGE ELSEWHERE

The Water Bureau has not produced a recent alternative site analysis having submitted to BDS an out-of-date 13-year old analysis conducted by Joe Glicker and others with MWH Global. On March 30, 2015 a Historic Landmark Commissioner asked the obvious question of the Portland Water Bureau engineer Teresa Elliott, why would you demolish significant historic resources when it is clear that storage is not needed and digging will destabilize the land. The Water Bureau confirmed that the plan involved eliminating all storage at Washington Park for four years, but refused to respond to the inquiry regarding alternative siting of the unneeded storage.

While the 100-year 1996 flood did not destabilize the historical landslide that has been stable for years, onsite digging will cause problems. Links to both audio and video documentation of Water Bureau statements at the HLC meeting has been submitted for the record separately.

NO SCIENTIFIC BASIS FOR "TREATING OR COVERING"

Just as with demolition there is no scientific or on balance any reason for employing any LT2 compliance option beyond the lowest cost option. Scientific sampling of 7,000 liters from the open reservoir outlets as part of the American Water Works Association Research Foundation # 3021 study confirms, as did Portland's costly, intensive Bull Run EPA LT2 variance application study, the 100% absence of infectious *Cryptosporidium* in Portland's drinking water. Bacteria found in both covered and open reservoirs is treated with chlorine. Portland's bacteria detections are documented in the Oregon Health Authority online water system data **(copy of the recent 36 positives at the covered Nevada tank submitted via separate e-mail)** . Subsequent to the 36 covered tank positives and the Water Bureau's failure to resolve the problem the Water Bureau simply stopped sampling at this site accepting the violation but leaving the public at risk. The public is unable to determine at the OHA site where the Water Bureau is not sampling.

Buried tanks do not prevent contamination as is evident by the break-in and contamination of a WB buried tank – Tabors buried Reservoir 7, where a bottle of Hydrochloric acid and other debris was tossed in after the breach. The public was not notified until limited exposure of the incident by watchdogs. Documentation submitted separately via e-mail.

By all accounts there will be no measurable public health benefit from either "treating or covering" open reservoirs. All EPA documented distribution storage tank public health problems have been with covered storage.

The compliance option with the broadest public support is to secure a deferral of reservoir projects while concurrently working in conjunction with Oregon's Congessional delegation, Senator Schumer and others to ensure reinstatement of the EPA LT2 "risk mitigation" compliance option.

SECURE A DEFERRAL

Friends of the Reservoirs has requested that our new Governor Kate Brown, head of the Oregon Health Authority (OHA), direct that bureau to approve a deferral of projects. If the Portland Water Bureau worked in support of, rather than against community interests, a deferral of projects minimally in line with Rochester's deferral could be approved by OHA. Previously, the Water Bureau failed to submit adequate supportive documentation to back up a deferral request, used a surrogate to send OHA a message that they wanted to pursue burial projects, and the City failed

to lobby OHA to support the deferral request.

LANDSLIDE & EARTHQUAKE RISK OVERSTATED

The community has had no opportunity to comprehensively examine the Water Bureau"s overstated claim with regard to landslide risk. After a public presentation on Mt. Tabor geology in 2012, I spoke with a PSU geologist (and Water Bureau consultant) regarding the plans for the Washington Park reservoirs. He advised that as long as there was no digging at Washington Park there should be no serious threat of landslides based on historical study. PSU landslide analysis confirms little recent movement. **See graph showing dimished slippage, submitted separately.** Note that this information was withheld from BDS and the HLC. At the end of the 2004 *Independent Reservoir Panel* process the Water Bureau knew that they had failed to convince the Panel majority (a panel that excluded every single NA in the city and every single neighborhood coalition) to support their demolition/disconnection plans. In the final week of the long-running panel process an anonymous phone call was made (by a woman subsequently chastized publicly by Mayor Katz) to the Urban League panel member suggesting that the reservoirs were an earthquake threat. Friends of the Reservoirs spent hundreds of hours the following week researching Water Bureau consultant documents, PSU geology maps, Water Bureau documents, geological records and other information that showed that a serious earthquake was expected to cause only minor leaking at the reservoirs. Many of these documents have since been shared with Commissioner Amanda Fritz.
Research confirmed that the Water Bureau's backup source,the Columbia South Shore Well Field would likely be lost or severely damaged due to having been sited in a high liquefaction zone.

The Water Bureau has a well-documented history of overstating risks when intent on pushing costly and often controversial build projects over "boring" maintenance that protects assets and keeps rates low. The Federal Energy Regulatory System that regulated the small hydro plant located at the Mt. Tabor reservoirs (unware for several years that the Water Bureau had taken Reservoir 6 offline since 2010 without notifying them) called out the PWB for overestimating inundation in the event of a catastrophic dam break event (**FERC letter documenting such submitted separately**). The Washington Park reservoirs like the Mt. Tabor reservoirs are very well built as documented in many Water Bureau documents including the 2010 Dortinacq Historic Structures Report thus are unlikely to completely fail even in a strong seismic event. And given the small size of the Washington Park reservoirs the inundation area would be small.

The Water Bureau advised the Historic Landmark Commision on March 30, 2015 that onsite digging could trigger a landslide.

System-wide leaking including the Washington Park reservoirs is limited as has been repeatedly reported by the PWB to their budget committee including when I was a member of that committee. The Washington Park reservoirs have not been leaking anywhere close to the leaking at the newly constructed costly $121 million Powell Butte II tank, which was leaking as a result of massive number (3200) of cracks as reported by KOIN 6 TV investigators in 2014. KOIN's report came after their hard-fought public records requests subsequent to backroom industry discussion of the serious problem with the new tank, http://koin.com/2014/05/20/powell-butte-ii-reservoir-design-contract-balloons/
. The new $121 million Powell Butte II underground tank project was leaking enough to fill an Olympic sized pool every day.
Note that the cozy CH2MHill design contract for that project when last checked was 45% over budget.

The Powell Butte tank Land Use decision acknowledged concerns with flooding of homes associated with a 50 million gallon underground tank, confirming that flooding risk is not eliminated with new *seismically* upgraded underground tank when compared with the subtantively built open reservoirs.

The Portland Water Bureau has not met the requirements for compliance with Chapters 33.445 and 33.846

The Portland Water Bureau has **not** demonstrated that they considered the historic value of Portland's open reservoir resources when making their backroom and unsupported decision to demolish the Washington Park open reservoirs. As stated above the community was never

action to take if the LT2 "risk mitigation" option could not be met. Friends of the Reservoirs was present when this ordinance was negotiated with Commissioner Saltzman in 2004. Mayor Potter was very supportive, insisting on inclusion of all community stakeholders in ANY future decisions/actions impacting the open reservoirs.

The relevant sections of the ordinance include but are not limited to: "BE IT FURTHER RESOLVED, that the City Council directs the Water Bureau to work with Portland Parks and Recreation, the Police Bureau and members of the public representing commercial and residential ratepayers, neighbors and stakeholders, to develop and submit to the appropriate state or federal regulator agency a risk mitigation proposal for the City's open finished drinking water reservoirs after the LT2ESWTR is promulgated in final form using a process consistent with the City's adopted Principles of Good Public Involvement"; and BE IT FURTHER RESOLVED .....utilizing meaningful public process consistent with the City's adopted Principles of Good Public Involvement, in future actions related to the open reservoirs. Inexplicably the EPA removed the "risk mitigation" option that was included in the draft 2003 regulation from the onerous and scientifically unsupported final LT2 rule released in 2006. Community stakeholders (including Friends of the Reservoirs) should have been brought together prior to the Portland Water Bureau's development of any reservoir compliance plan.

Friend of the Reservoirs has devoted tens of thousands of volunteer hours over the last 12 plus years working to protect the significant and well-functioning resources that are Portland's historic open reservoirs. We have worked with a broad base of community stakeholders including many neighborhood associations, neighborhood coalitions, public health organizations, businesses and business coalitions, environmental and social justice organizations - all of whom have written to City Council and/or the Congressional delegation in support of alternatives to the current reservoir plan. Over 30 community organizations have opposed the Water Bureau's burial and covering plans since 2002. At least 22 of these organizations have written to City Council, the Congressional delegation and/or testified in support of alternatives since 2010.

Forty (40) members of the public attended the Water Bureau's first public meeting (2014) related to the Washington Park demolition plans. No information was presented on any of the viable options that would avoid demolition. Overwhelmingly, everyone in attendance at this meeting save one opposed the Water Bureau's demolition plans. By design the Water Bureau has avoided providing opportunity for the community to fully consider alternatives to demolition. Just as in 2002 the Water Bureau wants to limit ratepayer discussion to what happens after the degradation of Portland's significant water system and community assets.
All other meetings were poorly attended as the community was not informed. See comments above.
Goal not met

GOAL 11 PUBLIC UTILITIES
Goal not met- See comments above addressing grill work and Water Bureau plan to go four years without any storage at Washington Park.
BDS and the Portland Water Bureau again incorrectly reports,
In addition, staff notes that the reservoirs are currently restricted from public access due to liability concerns. Significant ratepayer dollars were invested in opening up the Washington Park reservoirs to the public and upgrading the infrastructure (Mt. Tabor reservoirs have always been open to the public). **June 2006 Council Resolution, press release and letter from Historian Chet Orloff supporting the opening up of the reservoir sites to the public and budgeting for infrastructure upgrades submitted separately for the record.** This ocurred after the finalization of the LT2 regulation.

GOAL URBAN DESIGN
Enhance Portland as a livable city, attractive in its setting and dynamic in its urban character by preserving its history and building a substantial legacy of quality private developments and public improvements for future generations
By demolishing Reservoirs 3 and 4 and the Weir building that have served the city for more than 100 years and have been upgraded to provide safe water for another 50 years, the city is failing to preserve Portland's heritage, beauty, civic identity and its economic vitality is greatly diminished.

BDS staff report is incorrect. *Unfortunately, the overwhelming forces of nature have not been kind to these structures and the preservation of these facilities has been an ongoing challenge since*

before their initial completion. It is not nature that has been unkind but the Portland Water Bureau's focus on revolving-door consultant contracts and "fun" and "glamorous" build projects over deferred maintenance that have lead to deterioration. However, the **70-page 2010 Cascade Design Robert Dortignacq Washington Park Historic Structures Report** which the Water Bureau withheld from the HLC and BDS and City Council tells a different story. The Historic Structure report says that for the most part the reservoirs are in good condition which confirms the report from a 9-year MWH Global study of the reservoirs which is referenced in the Dortignacq report.
BDS also incorrectly reports the *continued preservation of the existing historic reservoirs, with the persistent landslide pressures continuing to compromise their structural stability, appears to be unsustainable in the long run.* ***See Table C-1 Open Reservoir Facilities at Mt. Tabor and Washington park Schedule of Proposed Capital Facility Projects by Year*** **which lists project to be completed over a 20 year period to keep the reservoirs safely operating for 50 years. Landslide stability is not noted as an issue in this document resulting from a nine-year study of the reservoirs.** It is unsustainable and bad governance to waste the significant and costly ratepayer investments made over the last 10 years, continually raising water rates and base charges, making Portland unaffordable for the middle class. **See Steve Novick's 2013 deferral request to the Oregon Health Authority submitted separately addressing the skyrocketing of rates.**

The goals of the Comprehensive Plan are not supported by this plan- see additional comments above.

Economic, Sustainability, Urban Design, Public Involvement, Neighborhood, Transportation and Public Health, Utility goals are not met with this demolition plan.

Significant investments in upgrades were made at the Washington Park reservoirs between 2003 and 2010. The significant costs associated with these consultant, design and construction contracts will be borne by the ratepayer over a 25 year period with those costs increasing over time. Many of the upgrades were designed to keep the reservoirs safely operating for 50 additional years. The majority middle class ratepayers cannot afford any further rate increases on top of rate increases that have been staggeringly high since 2004. The Water Bureau plans another 7% increase in water rates to be approved by Council May 2015.

The open reservoirs avoid new and unique public health risks associated with burying Portland's open reservoirs, for example cancer-causing Nitrification, a problem EPA has long scientifically documented with buried storage. EPA acknowledged in their Coliform Rule papers that they failed to address the Nitrification problem when promulgating the LT2 regulation. Radon, from Portland's secondary lower quality source, the Columbia South Shore Well Field, which presently vents through the open reservoirs, will not be able to vent adequately with the elimination of open reservoirs. Radon entering homes via water will permeate homes every time water is used for any purpose. Radon is the second leading cause of lung cancer in the United States.

The historic character of these resources cannot be replaced. The water system, the park, the surrounding neighborhoods and the City will be significantly harmed. On June 21, 2006 Historian, Park Board Member, the former chair of the Tabor "What goes on Top" committee, Chet Orloff ,wrote to Portland City Council praising them for reconsidering their earlier decisions on the open reservoirs. He additionally suggested "greater historical interpretation of the reservoirs with some permanent, on-site exhibit boards mounted adjacent to them, presenting information and images about the history of the reservoirs, the story of our great water system... to "more thoroughly inform citizens and deepen everyone's pride in, these great assets." The Water Bureau ignored Chet Orloff's suggestions, not wanting to promote the historic resources as the significant assets to our water system and city as they have been for over 100 years.

DENY THE PERMIT
City Council must protect Portland's open reservoir water system, Portland's water system pride and heritage and ratepayer's investment, and thus must deny this abominable demolition plan.

MITIGATION: Approval of any alteration to the open reservoirs, including the unconsidered options of installation of the floating covers to the grillwork or installation of UV radiation bulbs, disconnection should include a mitigation plan that requires completion within the next 3 years of

the short-term maintenance projects outlined in the **2010 Robert Dortignacq Washington Park Historic Structures Report** submitted for the record via separate electronic communication. All restoration and maintenance projects recommended in this Historic Structures Report should be mandated by City Council to be completed over a reasonable timeframe to support preservation.

Addendum

1.Documentation that there is no deadline in the LT2 rule for reservoir "treat or cover" compliance
From: Winiecki.Eric@epamail.epa.gov

Sent: Thursday, March 19, 2009 8:41 AM

To: stewartstclair@gmail.com

Subject: Fw: LT2 Rule Non-Compliance Penalties

Ms. Stewart,

Public water systems subject to the LT2 Rule uncovered reservoir requirements must have an approved schedule in place by April 1, 2009 for complying with the Rule. For systems that are not in compliance with the requirement on April 1, EPA can issue an administrative order to noncompliers. If a water system violates an administrative order, EPA can assess penalties up to $37,500 per day of noncompliance. There is no specific deadline for installing reservoir covers... the requirement is to have an approved compliance schedule in place by April 1.

Eric Winiecki

Drinking Water Enforcement Coordinator

EPA Region 10(Note: Highlighting is ours)

April 23, 2015

To: Portland City Council

Washington Park Reservoir Case File- LU-14-249689 DM

Demolition review for Washington Park

From- Testimony of Scott Fernandez M.Sc. Biology/ microbiology, chemistry

Mayor appointed- Portland Utility Review Board 2001-2008

Water Quality Advisory Committee 1995-2000

The historic value of the Washington Park open reservoirs is based on structure and engineering foresight as well as public health benefits of no illnesses for over 100 years.

There is time and scientific basis to save our historic reservoirs and community health; and ask for EPA LT2 waiver as New York City and New Jersey have requested for their open reservoirs. We ask for a community wide discussion when submitting our scientifically supported request for a waiver from EPA LT2 regulation.

Portland Water Bureau comments have been misleading and are corrected below.

Seismic vulnerability–

The seismic safety of open reservoirs was confirmed by the 2004 Open Reservoir Independent Review Panel. The remarkable open reservoir engineering of Ernest Ransome has withstood the seismic test of time for over 100 years without incident. As example-Ransome's two 1890's buildings at Stanford University survived the 1906 San Francisco Peninsula_earthquake without damage; while the university's newer, conventional structures literally crumbled around them. The published analysis of these two buildings by fellow engineer John B. Leonard did much to advance engineering and the safety of building in post-1906 San Francisco and nationwide.

(No Model.)

E. L. RANSOME.

BUILDING CONSTRUCTION.

No. 305,226. Patented Sept. 16, 1884.

FIG. 1.

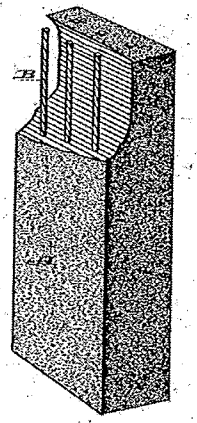


FIG. 2.

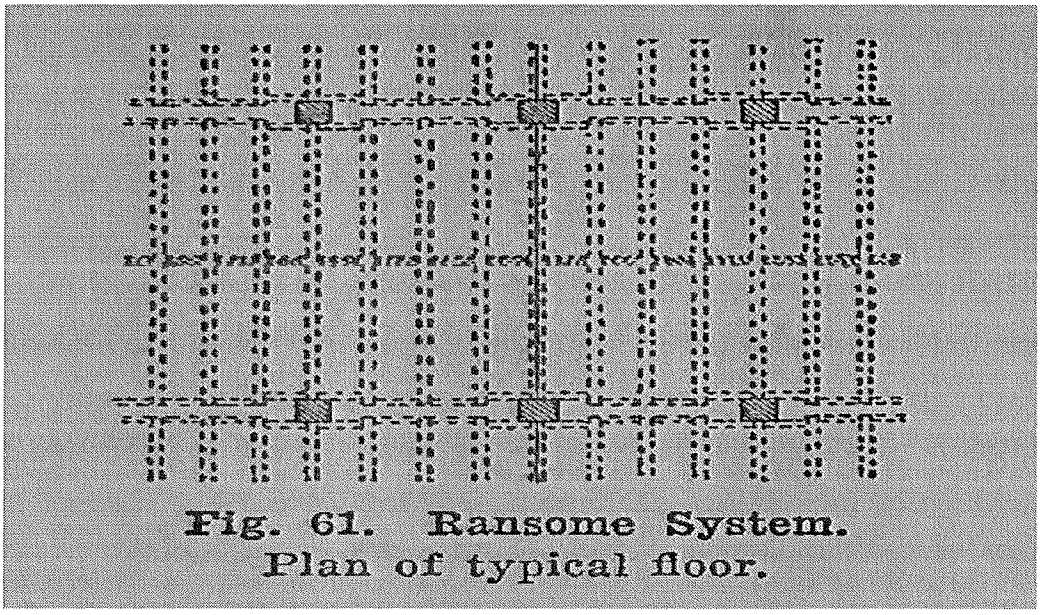
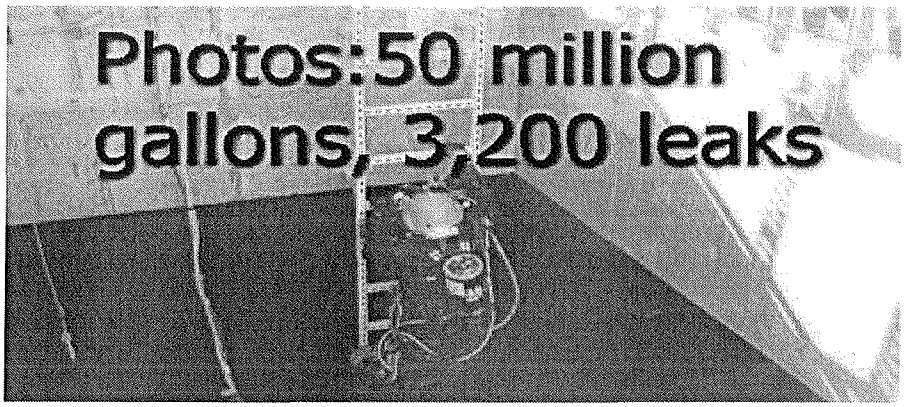


Fig. 61. Ransome System.
Plan of typical floor.

Patented New Engineering Used in Open Reservoir Construction



PWB – First Weeks- Powell Butte Reservoir Engineering and Construction Defects

Aging infrastructure-

City of Portland Auditor's Office- "Portland Water Bureau does not meet industry standards". The Portland Water Bureau has not kept up with maintenance of the reservoirs as acknowledged by City of Portland Auditor reports in 2004, 2011, 2012. The open reservoirs can function for many more decades if maintained properly.

Open Reservoir Public Health and Engineering Assessments

"No waterborne disease outbreak or water quality incident of public significance has ever been recorded in connection with Portland's open reservoirs."

Montgomery Watson Harza. Open Reservoir Study: Phase I Summary Report. City of Portland. January, 2002.

"All features in good condition. ...a detailed maintenance program could extend the useful life of the open reservoirs to the year 2050."

Montgomery Watson Harza. Open Reservoir Study, Draft TM 5.7 Facilities Evaluation, City of Portland. August, 2001.

"All of the open reservoirs are historically significant, and thus are eligible for inclusion in the National Register of Historic Places and for local landmark status."

Open Reservoir Study, Technical Memorandum, Montgomery Watson Harza, 2001. Contracted by Portland Water Bureau (PWB)

"The reservoirs are historically significant as examples of early engineering, and serve as monuments to the social history of the City's growth and development. They provide an early example of a planned landscape, including the views and vistas into and out of the landscape."

Open Reservoir Study, Facilities Evaluation, City of Portland, 2001.

Landslides-

The Washington Park landslide was stabilized in the early years of reservoir construction by first utilizing pumps to draw down the water table; followed by digging tunnels along the slip surface to provide a network of interconnecting gravity drains. Being stabilized for decades, today the lanslide creeps at only a fraction of an inch each year. It is not the catastrophic situation PWB wants us to believe exists. Engineering reports show 14/100 of an inch movement that is diminishing for the last few decades. The underground water mitigation programs have worked as they should, de-watering and impeding movement. The reservoirs have survived rain inundation from Christmas 1964, and more importantly the **100 year** "rain on snow" event lasting for many days in February 1996 all without landslide issue.

Table 1: Historical Slide Movements Since Reservoir Construction

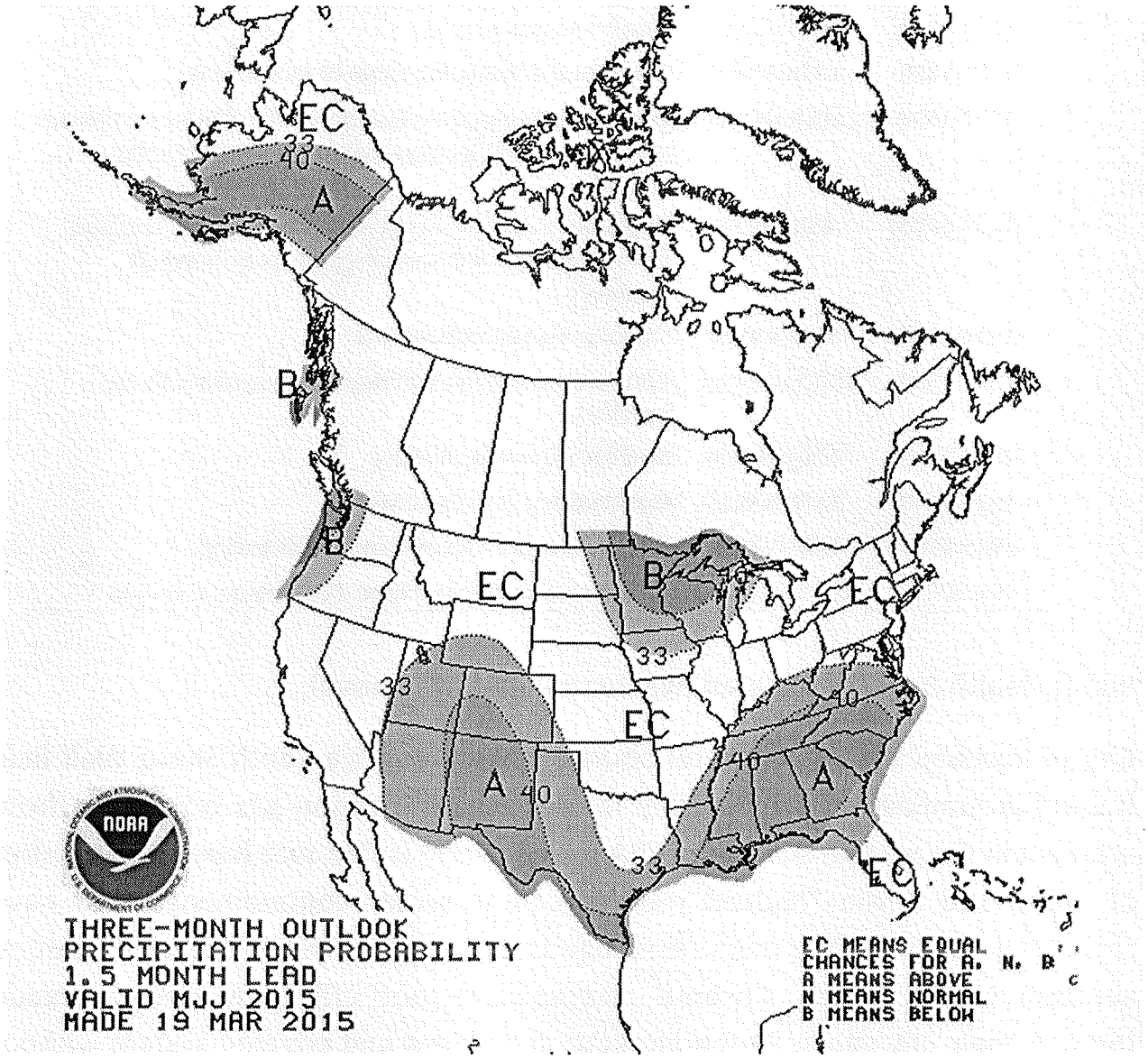
Date	Annual Rate of Movement	Description of Events
1893-1894	Unknown	Reservoirs constructed
1895-1896	15 inch/year	Water Bureau assessing cause of movements
1897-1898	1½ inch/year	Pump dewatering of exploratory shafts reduces movement rate; focuses stabilization techniques on dewatering options
1899-1900	4 inch/year	Exploratory shafts completed; movement rates increase due to stoppage of dewatering pumps; survey grid installed
1901-1904	¼ inch/year	Drainage tunnels constructed
1904-1906	1⅓ inch/year	Movements increase; additional drainage tunnels are installed
1906-1916	½ inch/year	Detailed survey monitoring
1920-1970	½ inch/year	Continued survey monitoring
1975-1986	¼ inch/year	Measurements obtained from 2 EDR casings
1987-2010	0.14 inch/year	Measurements obtained from 7 inclinometer casings

Public Health Benefits of Open Reservoirs- Radon removal

City of Portland secondary water source is the Columbia South Shore Well field (CSSW) groundwater that is highly radioactive with radon gas originating from uranium in the granite substrate. EPA is clear there is **"no safe level of exposure"** of radon and is the **"highest risk for cancer water contaminant"** they have registered. We need the open reservoirs to efficiently remove the gas as natural aeration of the water. Covered reservoirs cannot efficiently remove radon through their tiny vents. Radon gas kept in a closed and covered system without open reservoirs will end up in homes schools and work places; through our showers, toilets and washing machines generating 70% radon into the air leaving an additional 7 radioactive decay particles such as lead, polonium and bismuth.

Climate Change is producing less rain to depend on, moving us to use the CSSW radioactive groundwater as a supplemental source. Bull Run area will be drier (see NOAA) map. We need to retain open reservoirs in our system for historic value

and for public health. Covered reservoirs waste millions of dollars for public health problem that does not exist.



Moore-Love, Karla

From:	Kate & Chris <samsa@pacifier.com>
Sent:	Wednesday, April 22, 2015 4:29 PM
To:	Council Clerk – Testimony; karla.mooore-love@portlandoregon.gov
Subject:	Public Survey--Kirkpatrick Item for the record of Washington Park land use LU-14-249689 currently scheduled as item #414 before City Council tomorrow Thur 4/24 2 pm
Attachments:	2014-12-9 City Survey Results.docx

Dear Karla:

As part of my testimony in the above case, please enter the attached document, and my written testimony below, into the record for the Washington Park open reservoirs land use matter LU-14-249689 currently scheduled as item #414 before City Council tomorrow, Thursday 4/24 at 2 pm.

Please also be so kind as to send me a written receipt that this submission has been entered into the record.

Thank you!

STATEMENT OF KATHERIN KIRKPATRICK:

Dear Mayor and City Council:

Please let the record show that the majority of respondents to the City's public 12/9/2014 survey, results attached to this e-mail, opposed decommissioning of the open reservoirs.

Please also let the record show that City of Portland did not write the survey so as to allow survey respondents an option for maintaining the reservoirs in their current use; yet despite this omission the majority of public commenters went to the trouble of specifically requesting that the reservoirs be kept functioning and on line as the City's drinking water storage utilities, specifically citing their open aeration function as contributing to Portland's high water quality and providing public health protections from contaminants such as radon.

Thank you,

Katherin Kirkpatrick
1319 SE 53rd Avenue
Portland, OR 97215
(503) 232-8663
samsa@pacifier.com

Survey Results: Mt Tabor Reservoirs	Total Items: 966

Thank you for taking the time to learn about the Mt Tabor Reservoirs. Your comments will inform how we determine the future of these valuable assets. **Please submit your comments by Monday, December 1, 10:00 AM.**

I use the park		
weekly	379	39.2%
daily	227	23.5%
monthly	227	23.5%
infrequently	120	12.4%
	13	1.3%
Total	**966**	

After reviewing the concepts on the previous page, I prefer Concept		
#1 Fill the reservoirs and maintain them	742	76.8%
#4 Other	133	13.8%
#3 Implement a design that reflects the Gustafson Plan	62	6.4%
#2 Leave the reservoirs empty and maintain them	15	1.6%
	14	1.4%
Total	**966**	

If you selected #4 Other, please describe.
Keep the reservoirs connected and active. The entire reason for doing this is invalid and thoughtless. There is no common sense capitulating to a Federal law that should not apply, and "fixing something that doesn't need fixing".
Portland has some of the best drinking water in the country. This is owed both to our water source, the Bull Run Watershed, and our open air reservoirs. Open air reservoirs allow for oxygenation, natural sunlight disinfection, and harmlessly venting toxic and carcinogenic gases. Burying those reservoirs, or containing them, does not necessarily reduce the risk for contamination. It eliminates the natural water processes that sunlight and air provide, and underground tanks open up other risks that would have to be treated chemically. The concern over cryptosporidium seems blown out of proportion, given that our city has a historically clean track record regarding cryptosporidium; Portland's open reservoirs have never had a serious outbreak of microbial or chemical health illness since they were built over 100 years ago. Portland's open air reservoirs efficiently remove toxic and carcinogenic chemicals. Covered reservoirs cannot, and require strong chemicals such as radon, chloroform and other disinfection chemicals. In addition, the pools of water are an attractive and central focal feature at the park, they are part of what make Mt Tabor beautiful. Draining those reservoirs would change the aesthetic significantly, from pleasant to depressing. The Gustafson plan is visually pleasing, but not worth it at the cost of the quality of our drinking water, or the tax increases/city spending/ongoing maintenance costs it would take to implement it. We can preserve our drinking water, or we can waste water.
Although my NUMBER ONE option would be to not comply with this federal mandate and be a

trailblazer for this issue that we should not even be debating!
and disconnect them in a way that they can easily be reconnected at a future date.
As much as the Gatson Plan is seductive, it's not affordable. Fill the reservoir and maintain them.
As the State of New Your did, you should request a waiver from the government. This is the wisest, safest and most cost-effective plan. The open reservoirs have served us well and unlike New York, there is no reason our reservoirs need covering. In fact, doing so would significantly increase the risk of radon exposure all over Portland as well as introduce many more contaminants that are not present in our current open reservoir system.
Build medium- or high-density subsidized low-income residential housing
Completely in a reversable condition.
Continue to ask for a way or so that we don't cover the reservoirs - don't take the water out.
continue to find a variance or delay or loophole or something to keep the reservoirs connected and in use as they currently are
Continue to use the reservoirs, as Portland has for over 100 years. Don't disconnect them at all. Don't mix our water with Willamette and Columbia Rivers water. Don't store our water underground. Stop repairing the faulty new tank and just go back to using the amazing system we've relied on and benefitted from.
Continue to utilize the existing reservoirs as they are for drinking water distribution. Follow the example of other communities who have elected to defer action on the 'treat-or-cover' rules until the EPA's LT2 rule revision is issued. This would preserve scarce city funds for projects that are actually far more pressing such as ensuring seismic safety in Portland Public Schools.
Could they still be a water feature, just not for potable water? There is something calming about having these urban "ponds" floating above the city skyline beyond, not to mention preserving the natural history of one of Portland's most cherished parks.
Decomission the reservoirs and allow nature to take its place. Refill with soil, plant trees, etc.
Decommission the Powell Butte and Kelly Butte Reservoirs and maintain Mt Tabor's reservoirs for municipal water storage.
Delay process to disconnect
DO NOT decomission the reservoirs - they are vital to our clean water supply. INVESTIGATE the deals the city has made with contractors and why. Let the people speak and have a say in where their water comes from and how it is maintained.
Do not decommission the reservoirs. Revoke municipal resolutions resolving to decommission & setting the decommissioning deadline. Challenge the OHA for its unauthorized insertion of anti-open reservoir language into Oregon Administrative Rules against the Legislature's intent. And, if necessary, challenge the EPA to prove that reservoir coverage/decommissioning is necessary.
Do NOT decommission the reservoirs. Maintain their functionality and use them as reservoirs!
Do not decommission these reservoirs!
Do not degrade our pristine water by disconnecting the reservoirs. Leave them as they are.
Do NOT disconnect the drinking water from the reservoirs. Fill them and maintain them as originally intended.
Do not disconnect the reservoirs in the first place!! 1) Please revoke the municipal resolution by which they voluntarily imposed the rush reservoir decommissioning schedule on themselves. 2) Please follow the advice of the Reed Smith legal opinion, and make the EPA prove in court that LT2 is justified. 3) Please challenge the Oregon Health Authority for putting anti-open-reservoir provisions in Oregon's water rules without the permission (and against the expressed intent) of the Oregon Legislature.

Do not disconnect the reservoirs in the first place!! 1) Please revoke the municipal resolution by which they voluntarily imposed the rush reservoir decommissioning schedule on themselves. 2) Please follow the advice of the Reed Smith legal opinion, and make the EPA prove in court that LT2 is justified. 3) Please challenge the Oregon Health Authority for putting anti-open-reservoir provisions in Oregon's water rules without the permission (and against the expressed intent) of the Oregon Legislature.
DO NOT DISCONNECT the reservoirs. Period.
Do not disconnect the reservoirs. Do not spend all that money until the EPA has reviewed the LT2 regulation. The review should be complete very soon. It is foolish to go ahead with this plan and have to undo it. Penny wise and pound foolish. Listen to the people of Portland who do not believe it is necessary to make a mess of Mt Tabor Park, environmentally or historically. Stop spending money that we don't have! Wait until the LT2 rule is reviewed by EPA before proceeding any further with this costly and unnecessary disconnection of the open reservoirs. Open reservoirs serve a double purpose of using sunlight to disinfect the water and open air to dissipate radionuclides.
DO NOT DISCONNECT THE RESERVOIRS!
Do not disconnect the reservoirs. The structure of our water system and therefore our water quality is being degraded by companies who put profit before serrvice and work relentlessly to manipulate government for their own gain.
DO NOT DISCONNECT the reservoirs.
Do not disconnect them at all and let us continue to drink the lovely water. Ask the Governor to request a waiver. Do not support the dishonesty happening withing the water bureau.
Do Not Disconnect them in the first place!
Do NOT disconnect them please. The system works, and has already been mishandled too much. Stand up for Our Health & clean water. Friends of Reservoirs' info is correct & should be heeded. Thanks!
Do NOT disconnect them. Leave our water system alone please. This whole thing has been an unnecessary waste of money & resources. Friends of Reservoirs is correct on all points. Thanks.
Do NOT to disconnect the reservoirs, you are spending money to combat a problem we don't have, and challenge the FDA to prove it's necessary
Don't change anything
Don't decommission the reservoirs. Keep open air reservoirs (not covered, not under ground)—they are the safest for our health. File for an EPA Waiver, as NY did. You haven't even tried. Look into the health problems caused by closed and underground water systems. There is data. Research it.
Don't disconnect
Don't disconnect the reservoirs
Don't disconnect them. Come up with a plan to use science and waivers to challenge federal imposition. Together we can do this! Stand with us, we are the ones who live here!
Don't disconnect! But if you do, then I vote for #1 Fill the reservoirs and maintain them forever and use them for drinking water again when the EPA changes the mis-applied-to-Portland "LT2" rule.
Don't Disconnect!! Number 1 and 4.
Don't disconnect!!!
Don't disconnect!!!
Don't disconnect.
Don't disconnect. Get the waiver like New York!
Don't disconnect. Leave them as they are right now, providing fresh water to Portland. Infrequently because I've moved. I love this park even though I no longer live near it.
don't mess with the reservoirs. Keep water I them and minimum maintenance as you have for years.

Don't mess with them. They are open reservoirs and communities have used them for centuries. The fact that a person pissing in it caused upset is RIDICULOUS. Open reservoirs get bird stuff,etc...the water if filtered for GOD sake. We need to cut the crap and stop the culture of fear NOW. We can't afford this crap. No one can afford this.
Don't need air gap under reservoirs.
Exception = Reservoir 1 future
Fight to keep reservoirs filled with water and open for health reasons.
Fill in the reservoir and use the land for park and recreation, such as a skatepark or dogpark. Water should be accessible if filled as this will no longer be our drinking water.
Fill them back up and keep them as is. Stop spending our money to pay for your leaking tank on Powell butte!! We don't need covered reservoirs. We have the best water anywhere, stop messing with it. Restore bull run!!
Fill thre reservoirs and maintain them and keep them connected so they can supply water at a future rate.
Fill with water like they used to be and maintain is what I mean by choosing option one.
http://www.cityofrochester.gov/reservoirs/ If the City of Rochester NY can devise a plan to keep their uncovered reservoirs, why can't Portland follow their successful example?
I am a Montavillian and daily user of the Mt Tabor park. Before I bought my home in 2006, I had rented in SE Hawthorne/Belmont since 1992. Mt Tabor has always been a stable, beautiful part of this city. The water in the reservoirs are a big part of the environment of the park, integral to it's beauty. It's je ne sais quoi, if you will. The water is gorgeous and calming to look at. So, while I don't think the reservoirs need to be filled to the brim, I do think some water should be in them and we should maintain the current aesthetic. Additionally, if we have enough water to flush because of some ridiculous teenager, then we have enough water to show visually as part of the aesthetic even if not functionally part of the drinking system any longer.
I believe these reservoirs are a valid source of back up water supply in draught conditions. They should have the capability to be put on line in the event of need.
I don't want the reservoirs to be decommissioned
I don't want the reservoirs to be decommissioned.
I like the Gustafson Plan, but it seems overly complex and expensive. Perhaps a scaled-back version of the Gustafson Plan would work.
I live in N. Portland, and I consider Mt. Tabor Park and the Mt. Tabor Reservoirs an historic and aesthetic legacy that is as much mine and my family's as people in the neighborhood. I believe the reservoirs should be cared for, and that means filling the reservoirs with water and keeping them properly maintained.
I prefer that the existing reervoirs are used. There is precedent for this, and the reservoir replacement would treat a problem that Portland water does not have. There would be more health issues due to the materials used to construct the new reservoirs, and the water system would not benefit from the disinfecting effect of sunlight.
I prefer the concept of doing absolutely everything possible to delay action until 2016 when the EPA ruling is secured. Absolutely everything. I am a self-employed commercial and residential real estate investor. In my business decisions I find it is better to spend some money up front in order to save a lot of money later. Even if the reservoirs are kept filled and maintained, the cost of building the closed system which may not be needed is not in the best financial interest of the tax paying citizens of Portland. Investing a fraction of this cost into fighting for a delay would be worthwhile.
I think each reservoir should have it's own personality.They could be disconnected from the drinking water system AND remain as water bodies. One (perhaps the south one) should become a 'eco-pool'- swimming in the middle, grey water processing biome along the edge. Another could be a full on 'muscle

beach' swimming pool- sand terraces, deep water, everything the usual pools are not, but anyone that has enjoyed quarry or lake swimming understands. The third might be a reflecting pool, wading, cooling in the hot weather. Using the existing concrete shells, add waterproofing membranes to avoid tragic water loss, and go for it! We should be the city that shows the rest of the country how to manage our precious water for everyone's enjoyment and health.
I think it is better to keep them filled than empty them. I like the Gustafson Plan a lot, but I think there are other parks in other neighborhoods that need water features and better design more. And the money should be spent on those.
i thought there had also been a concept of covering the reservoirs but maintaining a small pond on top of the covers, which i expect would cost much less than plan 1. i would support that concept too. i am unclear on why the water quality has to be maintained in plan 1 if the reservoirs will no longer be used as a source of drinking water. that seems like an unnecessary expense.
I took a hike at the park on thanksgiving and seeing the sun set over the reservoir was so iconic of mt tabor. Why in the world would anyone want them trashed and who could possibly think that that would enhance the park? Follow the money is what I say, and only someone who would make money on such a public works project would say that the reservoirs should be filled with anything but water. And the disconnection is something else that I do not support. Our water is fine, exceptional in fact, and this is just another example of making money off of the backs of portlanders who are seriously against this whole deal.
I want the reservoirs NOT to be disconnected. I want you to leave our healthy water system as it is...maintained in open reservoirs as it as been without any problems for 100 years. I want you NOT to rip apart our park nor cut down any trees or endanger any wildlife who call our park their home. I want you NOT to burden ratepayers with anymore increases in water rates to fund this unnecessary disconnect project. I want you to work with the EPA to allow Portland to avoid compliance just as Rochester, NY did. I do NOT want the reservoirs drained...and I do NOT want a skatepark or an amphitheater in their place.
I want the reservoirs to stay functional.
I would like the reservoirs to remain as is, providing us with water to drink. It has not been proven in court that closed water is safer than open air water. Open air water breeds fewer contaminants such as e coli. It will cost much less to maintain these reservoirs than to build new ones. It is not right that the Oregon Health Authority make this ruling to close the reservoirs without permission from the Oregon legislature.
I would like water in them - either drinking water or not.
I would love to see all of the reservoirs used as is, with less taxpayer money wasted on Paranoia. However since that's obviously not on the table, I would love to see at least one reservoir turned into a wetland so that nature can maintain it naturally.
I would love to see the city fill in the large reservoir on SE 60th and use the space for playing fields/open grassy areas, then use the middle reservoir as a pond/water feature similar to the pond at Laurelhurst. If that's not possible, I prefer the Gustafson Plan, but it seems cost prohibitive.
I'd actually prefer to continue using the reservoirs for drinking water. I believe that the natural UV that sunlight provides is an important part of purifying our water.
I'd like them to remain AS-IS please. As my drinking water.
If a major park's investment is to happen, then a re-purposing of the structures is a good idea. The upper and middle ones could be left filled, but the lower one we have a real opportunity for an international quality park focal point. How about an outdoor water sculpture garden?
If they can no longer used as a water source.
In addition to filling and maintaining the reservoirs please do not disconnect them from our water supply. I request that you revoke the municipal resolution to rush the reservoir decommissioning schedule. Further, the advice of the Reed Smith legal opinion should be followed: make the EPA prove in court

that LT2 is justified. Finally, please challenge the Oregon Health Authority for putting anti-open-reservoir provisions in Oregon's water rules without the permission (and against the expressed intent) of the Oregon Legislature.
Including fountains or Reservoir 6. Maintain historic structures.
Infrequently but love it. I would like them to look just as they do today.
It seems insane to not use and maintain these reservoirs when research indicates that sunlight helps keep water clean.
It's not broken, leave it in tacked in case of an emergency.
Keep the reservoirs as they are. Do not disconnect them. Use them as part of our water system.
Keep the reservoirs as they are. With good clean potable water. Save the underwater tanks for a community bunker to save us from the perils of terrorism.
Keep the reservoirs connected to our drinking water.
Keep the reservoirs exactly as they are, a treasured storage system that has worked beautifully for 100 years. If you mean fill the reservoirs with water from the Bull Run and maintain them in #1, I choose that.
Keep the reservoirs full and useful especially for a period of 2 years to be sure the wasteful new system is functional and provides us with continued excellent quality water. Keep this system funtional.
Keep the reservoirs functional.
Keep the reservoirs functioning as is.
Keep the reservoirs maintained and functional.
Keep them connected and full of Bull Run water. This is a valuable resource and we need to keep it useable by using it! I don't want to shower with radon.
Keep them connected and in use, continuing to provide good quality water to citizens.
Keep them functioning as they have for all these years. If you have to, pay any fine the EPA may impose. Or better yet, ignore the EPA regulations like you ignore federal law concerning use of drugs.
Keep them on line as our water source.
keep using them
Leave as is, don't disconnect
Leave it connected to the drinking water.
Leave our water alone.
Leave reservoirs alone = no disconnect
Leave reservoirs as they are using water as drinking water.
Leave the park alone! It's fines as is
Leave the park alone.
Leave the reservoirs alone. Maintain water system as it exists.
Leave the reservoirs as is and fully functional.
Leave the reservoirs as they are.
Leave the reservoirs as they are, add more security cameras, and don't bow to current threats. The best thing that can be done is to leave the reservoirs for the next generations to enjoy.
Leave the reservoirs as they are, part of the system that deliver Bull Run water to me.
Leave the reservoirs as they are.
Leave the reservoirs connected and maintain them full. This is our homeland security here. Nothing to

play with.
leave the reservoirs connected, filled and maintained.
leave the reservoirs connected, filled and maintained.
Leave the reservoirs connected and as they are.
Leave the reservoirs connected to the Bull Run System so as to circulate fresh water as needed. Allow people to swim in the reservoirs. Introduce plants, fish, and wildlife to the reservoirs.
Leave the reservoirs functional as reservoirs! Portland is the only city in America where we can take a walk past our drinking water and see where it's coming from. It's a wonderful system, the water stays clean through aeration and sunlight, and it's part of what Mt. Tabor Park is. Please leave it!
Leave the resevoirs as is!!! Why fix something that works as beautifully as this monument of a water system does!?
Leave the resovoirs filled, connedted and maintained!!!
Leave the system fully functional… It has huge historical relevance. I am this water.. We all are, if you turn on a tap in Portland… You can separate yourself from the water as much as you like, but this clean, pure system? You are part of it.. Bull Run is part of you, it's water is in you.. We own the rights to this clean pure system, much like the Native American of the Columbia basin own the falls at Celilo.. This federal mandate stands between us, and our right to clean safe drinking water. Leave it connected and functional
Leave them as the are. DO NOT DISCONNECT THEM.
Leave them as they are. As they have been for a 100 years. They have searved us well. For a very long time. No need to spend millions to fill the pockets of the mayors neighbor.
Leave them as they were. I used to use the park almost daily. I haven't gone since the summer as the drained and vandalized 2 lower reservoirs are horribly depressing.
Leave them be. Stand up to the Feds! It ain't broke, why fix it!?!
Leave them connected! Apply for a deferral! Delay your self-imposed work timeline!
Leave them filled, connected and fully functional.
Leave them on line. They are a great reasource and there's no good reason to take them off line.
Let skaters turn part of one into a skatepark, let artists turn part of one into a free art are. Keep one filled with water and maintain for wildlife, use part of another as a place for tiny houses for houseless people, self operated like dignity village
Maintain as is. Keep water in and keep the fountain on. It is a historic site. It should be protected and its history should be taught with some kinds of signage.
Maintain connection/fight decommision. At worst use water in reservoir for gray-water purposes such as watering lawns in park.
Maintain reservoirs current role as part of City water supply.
Maintain the reservoirs fully functional, with water in them. In other words, no change.
Maintain water I'm reservoirs
Make a swim place for people to swim and one for the birds
Multi purpose playing fields where Reservoir 6 is.
My top choice would be to retain the reservoirs as they are and continue to use them. If the open reservoirs do have to be disconnected, I think that reservoir 5 could be turned into an amphitheater, and perhaps one or both of the remaining reservoirs could be turned into swimming ponds for the warm weather.
Not all need to stay full. It may be interesting to put an athletic field of stadium in one and leave others

full. These meetings don't get the opinion of most of the population. The people here are a small group but passionate.
Not interested in fear mongering or turning funds to private corporation.
Number 1 and 2. Number 1 is my second choice. Number 2 in my first choice, and PLEASE FIND A DEFERRAL.
Number 1 and 4, number 1 is less preferred, 2nd only to not disconnecting at all. Number 4, don't disconnect.
Number 1 and 4. Could the reservoirs remain filled and maintained while implementing emergency hook ups to the system? Not disconnected? I understand federal regulations to have covered reservoirs but don't believe all of the potentially adverse health effects of the new reeservoirs are known. if we're willing to look at a 40 million dollar project that is mainly cosmetic, we should also look at the cost to develop emergency hook-ups to the system.
Number 1 and 4. Don't change the manner in which they are currently used. Keep providing drinking water! We are Portland--NOT the EPA.
Number 1 and 4. Don't disconnect!
Number 1 and 4. Hybrid concept -- keep reservoir 1 and 5 filled and turn reservoir 6 into public garden or sports field.
Number 1 and 4. Leave them alone. No contracts to corporation to cover the reservoirs. Nature treats water well.
Number 1 and 4. Let's leave the reservoirs alone - sunlight treats water better than covering it with cement. No contracts to cover a gorgeous area.
Number 1 and 4. Make sure reconnection remains possible.
Number 1 and 4. Number 1 Maintain them, most cost effective honoring the historic listing Number 2 means deterioration, destruction Number 3 is too much $$, bad design. Number 4. Any other option would cost more than option #1 and be a complicated public process lasting faorever. Keep number 1 and permanent financing to restore, maintain, preserve historic structures.
Number 1 and 4. Number 1 is my second choice. Number 4 is my first choice. Keep them functional as they have.
Number 1 and 4. Preserve our entire park and reservoirs as they are officially historic.
Number 1 and 4. Leave it ALONE!!!
Number 1 and Number 4 Gambrusia Fish to help clean the reservoirs and keep down the cost of maintenance cleaning.
Number 1 is less preferred, maintain a option to reconnect to drinking water. Number 4, don't disconnect!
Our reservoir system is not broken and I see this whole project to "cover" or build new underground systems as unsustainable and a means to give away our tax payer dollars to crony contractors. Leave them as is and maintain them as the city has done for decades.
Our Water already meets & surpasses the Federal Government is "mandating." If the Federal standards are actually only going to put things "unknown" into OUR WATER & potentially contaminate what is already working + INCREASE OUR RATES... Fight for OUR WATER - it's what we are made of and the more naturally processed the better.
Part of the appeal of the park is the water element. How stupid would it be to remove that aspect of the park?
Please do not disconnect the reservoirs. If you must make this, in my opinion, unnecessary and unfortunate choice I would opt for #1 as this seems the least damaging to the current system/ecosystem of Mount Tabor.

Please get a waiver for EPA's LT2 ruling and leave the reservoirs as they are.
Please keep our drinking water in the open air reservoirs. It is the healthier, less expensive, and most ethical option.
Please keep the reservoirs as part of our drinking water system. This is what the people of Portland want.
Please keep the reservoirs filled. They are so beautiful and unique. Best yet, keep them on line.
Please leave our reservoirs intact and functiong as is.
Preferably connected.
Process cancelled by Dan Satzman 2003 mid-term - not completed due to Parks.
Review the plan and appeal the decision to decommission the reservoirs. There is a substantial number of citizens who believe there has been no push-back from City Hall and the water bureau over the unfunded mandate to cover reservoirs, ostensibly to protect the public from Cryptosporidium, which has never been a problem for our water supply. The rush to comply with the ill-advised mandate has raised suspicion of corrupt dealings by revolving-door actors in the civic and business sectors. The company that was awarded the work has a poor record for quality and ties to current officials.
Sell the property and turn it into a homeless shelter or build low income housing. I really could care you have already destroyed our drinking water. So go to hell..
The City of Portland should be asking EPA for an Open Reservoir Waiver like New York and New Jersey are currently negotiating! Why is this option not on the table?
The empty reservoir seems the perfect place for a fountain similar to the one at Seattle Center
The Gustafson Plan is spendy and both plans that include leaving water in the reservoirs don't put that water to any use. Why not convert one or more of the reservoirs into a rain catchment system that would at least provide water for the Mt. Tabor community gardens? Rain will be falling into them anyway, so why not use it? Portland currently has four very dry months each summer (very different than when I was growing up here!) and who knows what additional climate change will bring! A large rain catchment system could do much to maintain both our gardens, and if necessary, provide water for trees & shrubs on Mt. Tabor.
The native wildlife depend on the reservoirs, including waterfowl and bats. If they were drained, these animals,especially the bats, would no longer have the food and water they depend upon. So, while I agree with no longer using the reservoirs for human drinking water, I think they should be maintained for the wildlife. My idea is to make them more shallow, in order to use less water. So, my idea is close to #1, but with less water.
The options don't include a compelling locally developed new technology called he Puralytics LilyPads, which float and clean water simultaneously. The round or hex shaped floating pads use a sunlight activated nanotechnology, and are being deployed in Corvallis, have been proposed for the I205 bridge run off, and are funded under a Business Oregon grant. This option is significantly less expensive, deters birds from landing, and treats any contaminant continuously using only sunlight activation. It was voted in the water industry as the "most innovative and disruptive new water technology", and was developed in Oregon by Beaverton startup Puralytics. http://www.puralytics.com/html/lilypad.php
The reservoirs should be left as they are now, fully functional.
There is no reason not to use the existing reservoirs
There is no reason to touch the reservoirs other than to maintain the corrupt water bureau. Leave them alone
There's little evidence to support the idea that open reservoirs are less safe than covered ones. City government is being wasteful by disconnecting them and replacing them. Not all of us are fooled!
These should be left and used as designed!
though I would prefer no disconnect.

To avoid future liability from substandard water, the city should continue to use the open reservoirs as reservoirs, as they intend to do in New York, for example. Eventually problems with contractors will be exposed, and the new tank has so many problems it could be used for an expose in Rolling Stone.		
turn it into a skate park		
Turn Mt Tabor's reservoirs into the world's best skate park and velodrome track. Roller derby events would be cool, too.		
Turn one of the reservoirs into an AstroTurf field. Turn the other into a semi-covered velodrome.		
Turn reservoir 6 into a multiuse playing field (soccer, baseball) . Turn the reservoir above it into a children's boat pond but retain the look of the reservoir. Keep reservoir #1 filled or create a swimming recreational space there.		
Turn the reservoir into a public outdoor, pool!		
turn them into recreaTION areas for skaters, bladers, bmx'ers...or do that with res 6 and fill & maintain the others. there was no previous page on which to read the descriptions of the options...just saying...might want to make that more accessible.		
Unhappy that we cannot maintain our open air water reservoirs. Perhaps leave one as a water feature. The Gustafson Plan seems like a lot of funding for little redesign. I think we need to reevaluate options of what to do, these options aren't desirable at all.		
Wait for a waiver. Post plan changes.		
Water will become an ever more important resource do not squander the riches we have.		
Wave garden - please visit website below fore more info. ww.facebook.com/wavegardenpdx		
Whatever is least disruptive to the beauty of the park...preserve and plant trees.		
Whatever the cheapest option is for the time being, until we have better parks in East Portland. Portland needs more and better parks for its most disadvantaged residents more than it needs decorative reservoirs.		
Your options aren't understandable. Fill them with what? Dirt? drinking water? Air? disconnect them and fill them with bike lanes, speed bumps and safety crossings. And street cars. Lots of street cars. Oh, and a light rail connection. What ever costs the most. It's not the City's money after all.		
Total	**189**	

What else would you like to share with us?
The proposed plan fails to review or implement previous submissions on water monitoring for health and safety. Reasonable options were ignored in the review. The report also fails to consider fully landscape and historical legacy of the reservoirs themselves, as part of our local heritage. It would alter social patterns of use dramatically to not maintain the reservoirs full and complete, including the restoration of fountains.
Covering the reservoirs deprives the water of sunshine and air which keep the water safe and drinkable.
I will comment that I want the reservoirs not just filled and maintained but also functioning in the manner they were designed. Don't disconnect them.
Our well-designed reservoirs have functioned superbly for over a hundred years. Sunlight on them & in the upper Bull Run system have long proved to be the perfect means of keeping pure the water we all use & depend upon. The EPA is virtually certain (in view of the above paragraph) to adopt a practical standard in place of the discredited current one. In the meantime, maintaining the local status quo will NOT produce any negative results...
The server cut me off as I was providing personal identification information... Which will be provided on THIS survey form. Sorry about the complication... Thanks for your attenton....
#1!!!!!!!!!

$40 million to fill the reservoirs with fancy parklike features is not a good use of city funds given that many streets in our community have unimproved roads, no sidewalks or other deficiencies. It is not a good use of our public dollars to spend such a great amount of money. On the other hand, leaving them empty will look ugly. Drain them and create a public input process using an inclusive process, partnering with Multnomah County to apply the Equity and Empowerment Lens, to determine alternative uses for the empty reservoirs.
*Explain why Portland can't delay until after the EPA's 2016 ruling. *Answer community questions about no bid contracts.
-water suppy use is part of historic aspect -presence of water is critical part of use of park and ambience of park. -water is soothing Waht is the cost estimate to reconnect if the current plan goes forward?
1) Given the city's well-intended and wise effort to prepare for a 9.0 earthquake, it's thoroughly hypocritical to propose any options other than keeping the reservoirs open and functional. 2) The Commissioners (and the Mayor and the Governor) have not successfully defended their claims that all options for keeping the reservoirs open have been exhausted. 3) The Commissioners behavior in this matter has been nothing short of disgraceful. Intentionally fleeing the summer meeting before taking questions from the public was shockingly disrespectful. Censoring public testimony at City Hall recently was unjustifiable. Fish's silence on matters of PWB cronyism at the last meeting spoke louder than any defense he could (and should) have offered. The Commissioners have deservedly lost the public's trust. They are no longer fit to govern.
7 generations of our families have enjoyed the beauty and simplicity of our functioning Mt. Tabor Reservoir system. It is a marvel of good engineering and healthier than the alternative the city has forced down the throats of its citizens with lies and dishonest representations of the law. Yes I am a trained scientist and have reviewed the science and the budget. It is widely perceived by study of the history of the Mt Tabor Reservoirs that this proposed dismantling of them is due to corruption in City Government - and has never reflected a genuine interest in the will of the people you supposedly represent. The EPA rule is not backed by peer reviewed science and does not justify the debt being created. Many other communities have applied for and received waivers which you have refused to attempt. Hales, Fish and Fritz to the extent that you have cooperated, shut out meaningful community input and clung to false excuses for the project are perceived by multigenerational neighborhood residents such as our family as criminal violaters of the public trust. I would guess that you have no real idea of the deeply held value of the park and the waters to those who have shared in its generosities for generations. We grieve every day at the violence being imposed upon us. We hope that you will see the light and stop the destruction. In the mean time please respect the integrity of our beautiful system and do not create irreversible damage.
A thousand people could pee in the damn reservoir and it would still be perfectly safe. This is not a priority, in fact it's not even an issue. It's a distracting made-up crisis where once again, the public can be distracted into spending their valuable "spare time" on preventing stupidity rather than using that time to deal with real issues.
Actually, I think Portland should fight to keep them operational. But I suppose it is too late for that. So 2nd choice: Gustafson plan.
Again -- The structure of our water system and therefore our water quality is being degraded by companies who put profit before serrvice and work relentlessly to manipulate government for their own gain. We need to stop rewarding greed, aggression and dishonesty in both business and government --- start treating these qualities as mental illness and curbing those who are driven by them.
Although I understand the desire to create jobs, I do not want those jobs to come from unnecessary, environmentally damaging, and expensive projects. We have had safe water from Bull Run with nature doing a lot of the work of safely "cleaning" the water with sun and air for over a hundred years. I do not think Portland's elected officials have done enough to get a variance from the federal requirements as has Rochester, NY, for example. Moreover, the historical and aesthetic considerations should be given weight also. Our society looks at dollars as the main consideration and eschews other values such as aesthetics. Thank you for reading this comment.

An attractive destination park would go a long way toward integrating close-in northeast/southeast with East Portland.
And allow them to be easily reconnected if the opportunity arises in the future.
Another option would be to fill the reservoirs, cover them, and maintain a reflection pool on top of the cover. That would meet the EPA mandate to cover open reservoirs but also satisfy neighborhood residents' requests to maintain the beauty of the park.
Anything else would be a huge waste of money.
Appeal to the highest authorities available in order to defer the covering of Portland's reservoirs and avoid spending hundreds of millions of taxpayer dollars on a project that will most likely soon be proven to be unnecessary.
As a historical feature of the Mt.Tabor neighborhood, I believe we should invest in maintaining the scenic feature of the reservoirs.
As a PWB rate payer I also hereby make the following demands: 1) The City should submit an actual scientific response to the Oregon Health Authority along the lines of what was presented by Friends of the Reservoirs: www.friendsofreservoirs.org/resources/OHADeferalJune2013.pdf 2) Some kind of *honest* 3rd party investigation of the involvement of former PWB director Joe Glicker (now CH2M Hill) and Rhodes Trussell (of MWH at the time) in the EPA LT2 rule making process, including the National Academies' report on radon in drinking water, and the resulting no-bid reservoir construction contracts with the City. Huge conflict of interest!
As a stakeholder in the Mt. Tabor area (I am a homeowner on 60th, just down the street from the reservoirs themselves), I would of course prefer that the reservoirs not be disconnected at all--the scientific and economic arguments for keeping our open reservoirs far outweigh the EPA's one-size-fits-all legalisms--but if 'twere done, it should be done with the minimum amount of discontinuity with the past, and a maximum of reversibility, should the city ever come back to its senses and want to reconnect our pure water supply.
As a tax payer, I am appalled at the way the city council has handled this whole thing! The impropriety of paying Joe Glicker as a consultant knowing full well he works for the company that received the no bid contract is beyond obvious conflict of interest....even a child could see that!! Our water is very important to us, and there is no solid evidence that it should be covered. Water needs light and oxygen, and as is obvious from the Powell Butte reservoir, that covering it is not the answer! It's a lot of short-sighted political posturing,and we the citizens of the Tabor neighborhood DO NOT WANT our gravity-fed, sunlight-sterilized water messed with for a short term profit!! Do the right thing!!! Save our beautiful reservoir!!!!
At the recent public meeting I learned that cracks in the new underground reservoirs put the water supply at risk for radon contamination. If this is true it is an additional and compelling reason for Portland to fight for the current open and safe reservoirs.
Before I broke my leg, I was active on the foot patrol. I miss it! I love the park!
Bonding for boondoggles has a life span. Eventually, this practice will hit its end.
Calle me or give me a phone number to call you.
Can we PLEASE stop trying to fix what isn't broken? This has become virulent on the national level, but needn't be on ours. Let us maintain our foresightedness and clearheadedness here in Portland, Oregon. Especially with our water, which is more valuable than any other commodity.
Chemical and biological agents have z natural enemies, heat and light! None of these reservoirs are to deep to offset the effects of day light. In fact 8 hours of day light can kill 90% the germs in water.
City hall lies and sucks.....

Clean up the corruption in the water burue! Randy Leonard's legacy of selling out the health, safety, revenue and well-being of Portland water continues with Nick Fish. The city council, mayor and department heads will all be taken down by this scandal. Looking forward to seeing Nick Fish, thrown under the buss with Joe Dicker. Your career is over. Prosecute Randy Leonard for his role in this corruption. If the mayor and council continue this criminal corruption you will all be exposed for the corrupt Naked sell-outs you have become. Do the rite thing. End it. Blame Nick and throw out the rotten Fish. Someone Has an opportunity to be a political hero and cement a real legacy by turning this mess around the one who steps into that roll will have much clout with the citizenry.
Close Bull Run to the public and do not allow it to be coded "institutional" Pull GE out of Bull Run. Expose the spin Joe Glicker used in the EPA Open Reservoir Manual.. he implied all the horrific unexposed incidents that DID happen in closed systems "could" "may be" happen in Open Reservoirs. After speaking with a Water Expert within the industry, I was educated. Europe has had OPEN Reservoirs for 1000's of years, we have one of the best Open Reservoir Systems in the nation and we know it... It has now been compromised by GREED and justified by a FEAR Campaign to extort from its citizens of Millions of dollars to line the pockets of such companies as CH2M Hill, GE and now Mayor Hales, Senior VP of another Giant conglomerate master. And to boot, Gail Shibley who controlled the Oregon Health Department and who the EPA when challenged over the LT2 Rule deferred decision power to, is now Mayor Hales Chief of Staff. And the permits given by the county to the city by the city attorney to include a boogas EMERGENCY on fish runs that are washed out every year because of the winter run off during spawning season. These coverups and lies are getting exposed.
Closing the reservoirs was hugely expensive and completely unnecessary. Everyone on city counsel should resign for the good of Portland and its tax payers. The Water Bureau continues to rip off the rate payer both with storage tanks we never needed and that ridiculously overpriced office building. I don't know how the water bureau and city council sleep at night, they are so incompetent and such poor managers of city business and tax payer money.
Commissioners are not the ones who gets to decide what to do with our City's water. Citizens get to decide. Commissioners Fritz and Fish: stop blocking the process of what the people want.
Concerns about safety in the water do not seem to be scientifically sound. Let's not decide to drain them based on fear and a misinformed public. I used to jog around the lower reservoir weekly when I lived closer.
Conditions will always change. Some traditions, however are worth keeping and maintaining. The PDX City Council is WAY off about what to do w/our reservoirs. Destroy the charm / destroy the history / destroy the city.
Consider new ideas for resevoir 1 --maybe redo as an attraction water feature and surrounding habitat for birds/bird watching. Other idea = PP&R aquatic classes
Contrary to the opinion of the friends of the reservoirs this selection does not indicate that I oppose the disconnection of water system. They have had their heads in the sand since day one and will never be satisfied. Leaving water in the reservoirs will preserve the present aesthetics at a very reasonable cost.
Could cost of keeping reservoirs filled be reduced by filling reservoirs 2/3 with stone/clear gravel?
Cut No trees! unaccepatable! plant more trees of course. but cut no trees. this is not a radical idea. use them as public owned swimming pools
Disconnecting the reservoirs in Mt Tabor and Washington Parks is unnecessary and a waste of ratepayer money. Please work on submitting a waiver to LT2 instead of proceeding with reservoir disconnection activities.
Disgraceful that the City Council and Water Bureau are planning to degrade our water system at great expense to our health and pocket books. You should all be fired.
Do a better job of listening to the people
Do not chop the trees down
Do not disconnect from drinking water supply.

DO NOT DISCONNECT the reservoirs.
Do NOT disconnect them. Leave our water system alone please. This whole thing has been an unnecessary waste of money & resources. Friends of Reservoirs is correct on all points. Thanks.
Do NOT dismantle the pipe connections from the reservoirs which would make it IMPOSSIBLE to reconnect the reservoirs once someone with an ounce of sense decides it was never necessary in the first place!
Do not do not do not cover the reservoirs. It is expensive , senseless , and can be avoided.
Do not implement any plan that comingles our quality water with inferior tasting or quality of water. Minor and gradual improvements could be made over time to create an atractive visitor attraction and experience.
Do not sell the people short. Think long term. Be smart.
Do not under any circumstances develop on Mt. Tabor! This should be a non issue. No more over developing of this city.
Don't close down the reservoirs
Don't develop Mt tabor. The water is great, don't try to fix what ain't broke.
Don't disconnect the reservoirs! Practice good stewardship of this invaluable resource and park!
Don't let corrupt special interests control municipal government...you are spineless if you do. A case in point follows... What about the whole issue of letting developers rape neighborhoods with their cookie-cutter 2500 sf houses...Amanda Fritz has to go!? I spoke to her person in charge of development, and that woman was so obeisant to developer interests, that I would not be surprised if there is a scandal brewing, because she is bought and paid for by the developer lobbyists. She actually said that they wouldn't knowing violate city ordinances, and that they have the best interests of neighborhoods in mind. What ignorant crap! Steve Keller Woodstock Neighborhood Association friends with Robert McCullough, Eastmoreland Neighborhood Association
Don't make the park a construction zone.
Don't mess with them. They are open reservoirs and communities have used them for centuries. The fact that a person pissing in it caused upset is RIDICULOUS. Open reservoirs get bird stuff,etc...the water if filtered for GOD sake. We need to cut the crap and stop the culture of fear NOW. We can't afford this crap. No one can afford this.
Don't privatize our water!
don't privatize the water/// it's for everyone, not only the wealthy!!
Don't waste our tax dollars making some crony contractor rich.
Draining or using the water in the reservoirs needs to be based upon scientific testing and not media hype. I know the water is tested weekly and double tested if total levels require it. The city doesn't issue boil orders based on anything less than scientific testing. Why drain the reservoir for anything less?
EPA was influenced by fear & corporate greed after 9/11. Unbias science and nature are th ebest guidelines to follow.
Extremely disappointed in the lack of transparency in the process leading up to the current water management plan.
Extremely disappointed in the City's handling of this issue, especially when the City could have applied professional, extended efforts to obtain a variance, and thus maintain the park's crown-jewel reservoirs. In fact, it would be far less expensive to establish a fenced buffer zone and additional security than to undergo deconstruction and establishment of another reservoir elsewhere. Shame on you for handling this issue in the back room, with "loaded" facilitation and favored contractors. PS: I have lived in Mt. Tabor for 25 years and bought here because of the park.
Family has lived in Mt. Tabor for 63 years. Strongly want reservoirs still filled and maintained. Can use

grey water when you drain reservoirs.

Fight this Portland. New York beat it, why can't we?

First, and foremost the Friends of the Reservoirs oppose the Portland Water Bureau's plans to disconnect the Mt. Tabor reservoirs from Portland's drinking water system. The onerous and currently under review Long-term2 Enhanced Surface Water regulation (LT2), the pretext for the disconnection, is primarily a surface water regulation in which an open reservoir provision was inserted requiring that systems with open reservoirs either "treat or cover" the reservoirs to address Cryptosporidium and other non-existent contaminants. The Enviornmental Protection Agency (EPA) has indicated that completion of their LT2 review and revision will take place in 2016. There is no deadline in the LT2 regulation for compliance with the reservoir requirements, mandates without a scientific basis, included without the EPA having conducted any scientific research or collected any national scientific reservoir data to support the requirements. The LT2 regulation was promulgated responsive to a 1993 incident in Milwaukee, WI wherein human and cow sewage present in Milwaukee's unprotected watershed backflowed into their drinking water system through a costly state-of-the-art filtration plant. The LT2 rule has been widely and substantively criticized as it was based on a sampling methodology that fails to distinguish between the majority harmless Cryptosporidium species and the few that are infectious to humans. The reservoir requirement was inserted into the rule without the Safe Drinking Water Act prerequisite use of the best science available. The Portland Water Bureau was the single utility seated at the table in Washington DC crafting this, by all accounts, poorly crafted EPA LT2 regulation. The PWB brought with them (under contract) a cozy consultant whose associated global engineering firms would profit from a regulation that focused on build projects as opposed to more effective watershed protection or mitigation efforts. The plan to disconnect the Mt. Tabor reservoirs from Portland's water system by December 2015 was proposed in isolation by the Portland Water Bureau. The Portland Water Bureau (PWB) in defiance of the 2004 Reservoir Panel Council ordinance # 36267 crafted this fast-track and excessively costly reservoir burial and disconnect plan without any stakeholder involvement. While it is unclear why this reservoir disconnection compliance plan could not be accomplished without all of the cutting and plugging, and the removal and replacement of pipes as proposed by the Portland Water Bureau, other alternative compliance options exist. Contrary to statements by the Bureau of Development Services, Portland Water Bureau documents secured through public records requests confirm that the Portland Water Bureau did not conduct an analysis of the "treatment at the outlet" alternative. The Bureau has admitted that they did no more than a "back of a napkin"examination of this option. Installation of two 24" ultraviolet light bulbs is the alternative compliance option that will be utilized at Rochester's historic open reservoirs in 2022, if the EPA fails to reinstate the "risk mitigation" alternative as part of their review and revision of the LT2 rule. Rochester has two large historic (1876) open reservoirs similarly set in city parks. In light of New York's Senator Schumer's 2011 success in getting the EPA to agree to review the LT2 regulation and in light of community support for retaining their historic open reservoirs as a part of their drinking water system, in 2011 Rochester sought and subsequently secured a ten-year deferral of all LT2 reservoir compliance work including project pre design. For more information on Rochester's compliance plan contact Michael Bushart, P.E. Senior Engineer/ Water Design, (585) 428-7567. Mr. Bushart can put you in touch with recently retired engineer Len Schantz who was the lead engineer involved in developing Rochester's reservoir compliance plans. Responsive to continual community pressure from a broad-based group of stakeholders including environmental, public health, business and neighborhood organizations, Portland made two perfunctory requests of the Oregon Health Authority to approve a deferral of the PWB's reservoir compliance plan. The City failed to back up their requests with the appropriate level of documentation nor did they engage in necessary next step lobbying to assure the success of the requests. See the Friends of the Reservoirs reply to OHA's 2013 denial (posted below) for more information on the basis for a deferral. In 2012 Portland community stakeholders advocated that the City Council change its open reservoir compliance option to installation of hypalon-like or floating reservoir covers (Hypalon-like cover grills had been installed prior to any mandate, and remain in place at the Washington Park historic reservoirs). While the community would likely not accept reservoir covers as a long-term solution, hypalon-like covers would meet the current LT2 requirements, and provide opportunity for Oregon's Congressional delegation to advocate alongside the New York delegation for reinstatement of the "risk mitigation" option inexplicably removed from the draft EPA LT2 rule. At least one member of Oregon's

Congressional delegation has said that he is willing to work in support of reinstatement of the "risk mitigation" compliance option, but is unwilling to lobby for such without the support of Portland City Council. REQUESTS for CONDITIONS and MITIGATION MEASURES The Friends of the Reservoir supports the Mt. Tabor Neighborhood Association request for conditions and mitigation, however, alternative compliance options should be further investigated including whether the cutting, plugging and replacement of pipes is necessary. The Historic Landmark's Commission should further explore alternative compliance options such as hypalon-like floating covers and Rochester's 2022 plan to install two 24" UV bulbs should EPA fail to reinstate the "risk mitigation" option. Further, Friends of the Reservoirs specifically requests that the Historic Landmark Commission minimally require as mitigation that the city undertake completion of the recommendations as delineated in the Dortinagnacq 2009 Mount Tabor Reservoirs Historic Structures Report Tabular Summary setting as a priority work projects from the Tabular Summary that are recommended to be completed before others (See the memo titled “High Priority Project List” which is included in the Appendix). As the report states: "These more immediate work projects were identified either due to urgency, or because the task is both needed and is a readily achievable work item." The Commission should require that priority work be completed in the next two years given that 5 years have already passed since this report was published. As the Mt. Tabor Neighborhood asserts "this project is insufficiently funded to mitigate Approval Criteria failures." The Water Bureau selected a compliance plan that replaces the Mt. Tabor open reservoirs with underground tanks at Powell Butte and Kelly Butte. The same PWB consultant who was at the table crafting the Federal LT2 rule was awarded the Powell Butte tank design contract (CH2M Hill) and his former engineering firm (MWH Global) was awarded the Kelly Butte tank design contract. This same consultant, then with MWH Global, lead (under what became a 9-year PWB/MWH Global contract), the Powell Butte Land Use process. Thus over a half million dollars has been spent on "mandated" mitigation construction of a $500,000 Powell Butte park caretaker house now occupied by a Water Bureau employee. Significant dollar amounts were spent on other Powell Butte park amenities. While water demand has declined for 27 years there was no need to construct a 50 million gallon Powell Butte tank except for the Portland Water Bureau's having chosen a LT2 compliance plan that replaced the fully functional and recently upgraded Mt. Tabor reservoirs with tanks on Powell Butte and Kelly Butte. Similar if not greater mitigation funding must be required for the nationally recognized Mt. Tabor historic site, given that the impact is more significant. The cost of the Powell Butte LT2 tank project has been excessive and the result problematic on many fronts. Upon completion, the tank was found to be of such poor design that 3200 cracks were causing massive leakage on a daily basis. The cost of this project was estimated in December 2013 to be over $120 million but has likely escalated given the need to address the significant cracking. This cost is much higher than the cost of larger tanks built elsewhere such as Seattle's 60 million gallon Maple Leaf tank that was built for around $55 million. We agree that "damage to the Mt. Tabor historic sites is far greater than the cost of pipe capping, and the funding should not be so arbitrarily scarce. The resources protected at Mt. Tabor are not being appropriately cared for. Preservation work/mitigation funding can and should be commensurate with the site impact", not just with the budget of this one little slice of the PWB's chosen compliance plan. FRIENDS OF THE RESERVOIRS RESPONSE TO OHA DEFERRAL DENIAL Mr. David Leland June 21, 2013 Oregon Health Authority, Drinking Water Program P.O. Box 14450 Portland, Oregon, 97293 Sent via e-mail Dear Mr. Leland, This letter responds to the Oregon Health Authority's rejection of the City of Portland's request to defer "onerous" LT2 open reservoir projects at Mt. Tabor and Washington Park, projects that by all accounts will provide no measurable public health benefit. We ask that the OHA and the City of Portland go back to the drawing board and work together to approve a lengthy deferral. In denying Portland's first request for deferral of LT2 open reservoir projects, OHA provided no basis other than to state that EPA required steady project progress, barring construction delays. Rochester's deferral of all LT2 reservoir projects including preplanning, related to their two historic open reservoirs set in City parks, until at least 2022, demonstrates that EPA is not requiring continued steady, project progress. There is no deadline in the LT2 rule itself for completing LT2 reservoir projects. A thorough review of OHA's second denial and internal communications finds no legitimate or scientific basis for denial. We have concerns that this may have been a political decision. OHA internal communications indicate what we know to be the case, that there remains opportunity for OHA and the City of Portland to work out a rational deferral plan. A broad-based coalition of organizations support a lengthy deferral, one that allows Portland to benefit, alongside Rochester, NYC and others, from the LT2 rule revision, set for

2016. (Please see coalition letter to OHA November 19, 2012, updated December 10, 2012) Director Bruce Goldberg's April 28, 2013 e-mail communication to Dave Leland suggests that there could be options that could be put in place beyond full-scale changes to assure water safety,"willing to consider other suggestion city might have to assure water safety etc." Though Dave Leland is quick to dismiss this suggestion, he does state in his reply to Goldberg " The City is of course (is) free to try to continue the discussion later with us if they choose, like anyone else." OHA/ PORTLAND FAILURE TO COMMUNICATE A review of the process makes clear that there was a complete failure to communicate in any meaningful, substantive way with the City of Portland while evaluating the City's deferral request. OHA and the City of Portland must work together in support of a rational outcome, an extension of the time line. This failure to communicate stands in stark contrast with the cooperative nature of the agreement which allows Rochester a 10-year deferral of plans to "treat" at the outlet of their two historic open reservoirs set in City parks. ROCHESTER AND PORTLAND COMPARISON OHA stated that Portland and Rochester water systems are not similar water systems. Indeed, most water systems have differences from other water systems. However, differences are not a basis for denial. OHA states that Rochester has a filtration plant and suggests that Rochester is deferring it's LT2 open reservoir projects (treatment at the outlet of the open reservoirs) in order to pay off the filtration plant. Rochester's filtration plant is a source water filtration plant, not a post reservoir treatment plant. Rochester has only minimally sampled the water exiting their filtration plant, so to use OHA logic, we do not know if this filtration plant is protective of public health. We do know that all public health problems have occurred in systems where a filtration plant was in place. More to the point, documents obtained from officials in Rochester state that they are deferring open reservoir projects (Cryptosporidium treatment at the outlet of their open reservoirs) for a number of reasons including revision of the "onerous" LT2 rule (see Rochester documents provided OHA in November 2012). Unlike Rochester, Portland ratepayers will be paying off $40 million in open reservoir upgrade projects until approximately 2030, $23 million of which are associated with a 2007-2011 Slayden Corporation construction contract # 37524, one of four recent open reservoir upgrade contracts. A consulting firm, Montgomery Watson Harza Global, was hired by the Portland Water Bureau and studied the open reservoirs under a 9-year contract. One of their tasks was to list projects (see pp. C1-5 in this link) that would maintain the safe function of the reservoirs until 2050. The majority of these projects were completed under four contracts. (These documents were secured through public records requests.) Good governance says that these investments should be protected, particularly given that sound scientific study confirms that Portland's open reservoirs already meet the goal of the LT2 rule, which is intended to reduce the level of disease in the community from Cryptosporidium, Giardia and virus. And like all open reservoirs, Portland's open reservoirs have never been the source of any disease. OHA OMITS CRITICAL FACT, IGNORES LOW-COST OPTIONS OHA maintains that a legitimate OHA reason for denial of deferral of LT2 Cryptosporidium reservoir projects is that Rochester treats at the outlet for bacteria and Portland does not. OHA fails to acknowledge that the chlorination facilities located at Portland's open reservoir sites are capable of treating at the outlet for bacteria if this were everdeemed advisable or nececessary (See PWB communication with OHA and MWH 9-year study documents). Both Rochester and Portland have chlorination facilities located on site, next to historic open reservoirs. Rochester uses free chlorine and Portland chloraminates it's drinking water. The chlorination facilities in Portland are currently used only to provide a "boost" of chlorine when necessary. OHA has been advised by the Portland Water Bureau that Portland could use these chlorination facilities to retreat for bacteria. (See public records- PWB communication with OHA, and MWH global 9-year reservoir study documents.) 1. Why did OHA omit the fact that Portland could retreat for bacteria if adding more chlorine beyond "boosting" is deemed a Rochester advantage? 2. Does OHA recommend that Portland retreat for bacteria beyond adding a "boost" of chlorine when necessary? What would be the measurable public health benefit or scientifically documented reduction in risk from adding more chlorine or re-treating the water? We look forward to OHA's prompt response to each of these questions and others that follow. As OHA is aware, bacteria commonly occurs in buried infrastructure, buried tanks and buried distribution piping (see information below). BIRD WIRES OHA is seemingly suggesting that Rochester's having installed bird wires is a public health advantage, while offering no scientific evidence to support this. The PWB could install bird wires. The PWB's 9-year reservoir study (MWH Contract # 30491, Volume 4 Facilities Evaluation) recommended installation of bird wires around the year 2018. The recommendation to delay installation until 2018 is indication that MWH Global had no immediate public health concerns. The same study indicated that there had never

been any public health problems associated with open reservoirs. The City's 2004 Independent Reservoir Panel that cost ratpayers more than $500,000, recommended installation of bird wires. The PWB ignored this recommendation while proceeding to spend $40 million on open reservoir upgrade projects. Either the PWB has been negligent in their failure to install bird wires or they did not believe birds to be a public health risk. Does OHA believe that the Water Bureau has been negligent or incompetent in failing to install bird wires? Does OHA believe the Portland Water Bureau should install bird wires and, if not, why did OHA reference Rochester's bird wires if OHA does not believe that they are beneficial? CONTAMINATION IN COVERED AND OPEN RESERVOIRS OHA suggests that open reservoirs are subject to recontamination and that any bacteria is a threat to public health. As is well documented in literature, locally and around the nation, both open and covered storage facilities are subject to recontamination, including bacteria contamination. Most importantly, only covered storage facilities have been demonstrated to be the source of any public health problems, deaths and illnesses. EPA's Total Coliform Rule white paper, Finished Water Storage Facilities, documents instances of covered storage public health problems as does the EPA LT2 rule itself. (See Gideon, Mo. Salmonella outbreak.) In Portland, contamination of a buried tank occurred on May 27, 2012. This 2012 break-in of Reservoir 7 involved vandals breaching the buried tank and throwing into it a bottle of hydrochloric acid and other items. (PWB Incident Reports were secured through public records requests.)The PWB failed to inform the public of this contamination. The PWB withheld this information from Oregon Health Authority for a month. BACTERIA IN UNDERGROUND INFRASTRUCTURE Bacteria is detected throughout Portland's distribution system including at the buried Powell Butte tank and at other locations such as the October 2012 E-coli detected in Sellwood at 9th and Ochoco (underground infrastructure). The Portland Water Bureau reports that they spent significant public resources preparing for a massive boil water alert responsive to the October 2012 Sellwood bacteria detect. Though a boil water alert was averted, OHA communications with the PWB (secured through PWB public records requests) raises questions about what appears to be a disparity in OHA's handling of E-coli detects when they occur in underground infrastructure, including the detect at the Sellwood site. (See Carrie Gentry e-mail to Yone Akagi which advised in advance of the repeat sample results, that even if the repeat sample returned positive for E-coli or Coliform OHA would consider invalidating if other sample sites were negative). The city of Tigard issued a boil water alert in 2012 as a result of an E-coli detect in their distribution system (in underground infrastructure). There is no regulatory requirement to cover open reservoirs to address bacteria. Such a requirement would be irrational. Covered reservoirs are subject to recontamination and bacteria (Coliform and E-coli) detects but are problematic in other ways. For example, nitrification is documented as a risk in the LT2 rule itself and in EPA white papers associated with the recent revision of the Total Coliform rule. (See LT2 1997 study of New Jersey reservoirs and EPA Total Coliform Rule Nitrification white papers) The appropriate response to bacteria detects including the non-infectious bacteria at the Washington Park reservoir is for the utility to determine the source of the problem and take corrective action such as improved basic system maintenance. LOW PUBLIC HEALTH RISK We knowof no scientific evidence that demonstrates a difference in public health risk between covered reservoirs and open reservoirs. The LT2 open reservoir "treat or cover" requirement is not based on any national sampling data. EPA failed to conduct even one single national round of sampling at open and/or at covered storage facilities. At the April 2012 EPA public meeting related to the requirement to review and revise the onerous LT2 rule, Tacoma's engineer Chris McMeen in describing their reservoir covering program did not identify any LT2 Cryptosporidium, Giardia or virus problems with their open reservoirs. Instead he concluded his presentation by stating that the public health risk to their open reservoirs was low, it was the same public health risk as with their covered storage, and that there were no differences in public health risk. OHA advised that Kari Salis listened in on at least part of this meeting. Even if she missed McMeen's conclusion, she heard no scientific evidence which described a measurable difference in public health risk between covered and open reservoirs. EPA's engineer, LT2 lead Stig Regli, could offer no review of any scientific evidence that supports the reservoir requirement or a difference in public health risk. To our knowledge none exits. The official LT2 record (reviewed by the City of Portland and community stakeholders such as Friends of the Reservoirs) contains no more than a handful of documents that mention the words "open reservoirs" (there are approximately700 documents in the record) and no national sampling data on open reservoirs exists. The LT2 record contains but a single 1997 study of non-engineered, lake-like open reservoirs in New Jersey conducted by Mark LeChevalier, William Norton, and Thomas Atherholt. Their published report (AWWA Journal

volume 89, issue 9), Protozoa in Open Reservoirs, did not support a LT2 "treat or cover" requirement for open reservoirs because the public health risk was described as low. Rather, the researchers concluded by referencing the well-known risks associated with covered storage, "nitrification" (a serious problem common to systems using covered storage and chloramination),"degradation of water", and "problems with covers themselves". The researchers also stressed the importance of developing improved Cryptosporidium sampling methods, methods that accurately assess the viability and infectivity of Cryptosporidium oocysts, another of the significant LT2 issues that remains problematic today. OHA is aware that the City of Eugene is currently having problems with contamination of a covered reservoir. The Seattle Times reported (July 17, 2009, Major do-over for two Seattle reservoirs) problems with MWH Global reservoir burial projects, contamination of newly constructed buried tanks due to leakage related to cover design. MWH Global is the same global engineering corporation that was involved in crafting the LT2 rule and is currently profiting from implementation of the LT2 rule. ECONOMICS The arguments made by the City of Portland (February 4, 2013) and the coalition of organizations supporting a delay in the schedule and retention of the functionality of Portland's open reservoirs (November, 2012) should be re-examined. Since these communications in April 2013 the Water Bureau has taken on a significant amount of new debt. (See $253,635,000 Water System Revenue and Refunding Bond, 2013 Series, http://www.portlandoregon.gov/bfs/article/445929) Portland's LT2 compliance costs are approximately 90% higher than those being deferred in Rochester. Additionally, Portland just spent $40 million on open reservoir upgrades. Among the nation's 50 largest cities Portland's water bills are the 8th highest according to a 2012 annual survey report by the Americn Water Intelligence. Portland ratepayers pay higher water bills than Phoenix, a city in the desert. DISCOUNTING SCIENTIFIC STUDY OHA supports the expenditure of ratepayer dollars on participation in scientific research but discounts sound scientific peer-reviewed research when that research (AwwaRF 3021) does not support spending hundreds of millions on controversial reservoir projects for no measurable public health benefit. It will take Rochester approximately 10 years to collect the statistically significant sampling data the Portland has collected to date at its open reservoirs (7000 liters AwwaRF 3021) and at our source water (over 10,000 liters). Rochester confirmed to us in May 2013 that they are sampling only 50 liters per month at their open reservoirs. Rochester, unlike Portland, has not participated in any scientific research at their reservoirs, nor have they collected any disease surveillance data that would support a deferral. The AwwaRF 3021 researchers concluded that Portland already meets the goal of the rule which is to reduce the level of disease in the community from Cryptosporidium, Giardia and virus. This was based on statistically significant sampling at the outlets of Portland's open reservoirs. EPA LT2 REGULATORY REVIEW, REVISION, NEW RESERVOIR SCIENCE We believe that the LT2 revision process will result in alternatives for the open reservoirs. Responsive to Obama's Executive Order 13563 that agencies revise and repeal onerous regulations on March 18, 2011 NYC submitted substantive, detailed comments (see pp. 1-10) including very specific objections to LT2 open reservoir requirements (pp. 8-10). When EPA ignored NYC's request to include revision of the LT2 as part of this review process Senator Schumer, Mayor Bloomberg, and NY's entire Congrssional delegation intervened. EPA agreed to review the regulation both as part of standard review process, but more significantly, under Obama's Executive Order mandating revision or repeal of onerous regulations. Contrary to OHA's assertion, that there is no new evidence, New York submitted more than 167 pages of new scientific data and research. Portland submitted the AwwaRF 3021 scientific peer-reviewed study and information on Portland's massive 7000 liters of sampling data plus disease surveillance data (source water variance). Rochester will be submitting new data. In light of the fact that EPA's LT2 "treat or cover" requirement was based on ZERO scientific data and no scientific research that supported a "treat or cover" requirement, the "onerous" requirement must be revised to be in compliance with Obama's Executive Order and to restore some level of trust in government. EPA is required to evaluate alternatives. We remain concerned about the clear conflicts of interest related to engineering firm's involvement in both crafting the EPA LT2 regulation and profiting from implementation of the regulation. CONCLUSION For the many reasons stated above and in previous communications, Portland stakeholders request that OHA immediately engage in a cooperative effort with the City of Portland to approve a well-deserved lengthy deferral of onerous LT2 reservoir projects. Sincerely, Floy Jones for Friends of the Reservoirs Cc Mayor Hales and Portland City Council Representative Earl Blumenauer Senator Merkley Interested Parties

For the love of our children, save the reservoirs! Find a message. You have the opportunity to be our

heros.
Force the use ase designed.
Foremost, this is a park where reservoirs happen to be located. Don't distrub the park. In other words, keep things as they are.
go to bat for us against the epa as our elected officials. This is crony capitalism to disconnect.
Grew up on Harrison CT. It's my park!
I also like the Gustafson Plan but without secured funding I chose #1 as my preferred concept.
I am a long time resident & voter, living in this neighborhood near the reservoirs.
I am a resident of Mt. Tabor. I would like to know what the costs were for maintaining the current reservoirs. I chose the first option because: A. It will keep the Park unaltered. B. The costs to maintain them I assume will be the same (or less?) than the current costs to maintain them. C. As much as the Gustafson Plan would be beautiful, I think the cost is more than I (or any taxpayer) would want the city to put into it. Also, because of the heavy use of the park and its location, I'm concerned there would be vandalism and mischief with the new design, and costs to repair/maintain would be high.
I am a S.E. portland resident and feel strongly that we need to have a number of clean open water sources around the city for reasons of human and animal habitat needs as an accessible cache of water in times of drought. I also enjoy the beauty and tranquility of open water.
I am absolutely furious that your commissioners continue to ignore the enormous opposition to the closing of our reservoirs as our drinking water source, and the enormous wasting of money for a massively leaking underground tank, all because you never had the necessary backbone to demand a delay till 2016 to see if the EPA changes its rules. Don't claim otherwise, because I'm sick of your lies. Amanda at least should be sticking up for the public on this one, but alas, she's got her eyes closed too.
I am committed to public stewardship of our water. I am willing to contribute additional taxes should funding become an issue. The slide towards privatization of our water is unacceptable, dangerous. Fill and maintain the reservoirs! Thank you!
I am concerned about the ongoing efforts by the Parks and Water Bureaus to degrade and dismantle Mt Tabor Park piece by piece. The nursery, the long block,the trees that are being cut. All due to a fabricated/avoidable mandate. What is your agenda and why are to determined to destroy this irreplaceable jewel?
I am concerned that there may be even a remote possibility that our city water infrastructure is considered and/or acted upon as a commodity for sale, for lease, etc. --directly, indirectly, or part of a larger proposal).
I am deeply disturbed by the construction of the underground reservoirs at Powell Butte. The construction has not only destroyed the area, but apparently due to shoddy workmanship, are riddled with problems with an ever increasing price tag. Please protect our water. It should be a matter of public control, not private profit.
I am in support of keeping our very effective hundred year old water system unchanged.
I am not certain if the closure is definitely mandated. Is it?
I am not part of the group who issued the question sheet for the commissioners, but I really want detailed credible answers from our entire City Council. Thanks to RNW and the Commissioners for working to respond to the majoirty of the people at the meeting. Nick you shouldn't have left Amanda to answer all of the questions! Nick never looked back at the people-Amanda did.
I am opposed to closing the reservoirs, and believe the city should do everything it can to keep them open.
I am strongly against the plan of getting the city's water from the Willamette. We have some of the best tasting municipal drinking water in the country, all supplied by the Bull Run reservoir. The idea that we will spend hundreds of millions of taxpayer dollars to build an filtration plant to clean & treat the river

water is wasteful. Especially since it will never stand up to the quality and flavor of the Bull Run.
I am vey afraid this water project will degrade the park and you will run out of money When the time comes to repair your construction activity. The park will need new landscaping. Please don't ruin the East Side's best park.
I and all I love want you to keep the reservoires connected!!! We feel very strongly about this. And Amanda, I want to send heart felt love and peace to you at the passing of your beloved! May you find healing, and may you find ways to communicate with him across the dimensions.
I attended the public meeting on November 18. Commissioner Fish promised that he would answer the list of questions posed to him. We did not hear when he plans on giving the public the answers. Please post this information or send me a direct email letting us know when to expect his response.
I attended the Reservoir Meeting at Warner Pacific College on November 18. I had received an email from PPR announcing the meeting. It was the worst meeting that I have ever attended. I was one of a handful of people of the hundreds there that who don't favor open reservoirs. I understand that the reservoirs will be taken offline and that it is very important to come up with a plan for the future. I am very concerned about what that will look like. As soon as the meeting started the rabble took over with their own agenda and pointed attacks at Commissioners Fritz and Fish. There was a lot of shouting and constant interruptions - Payback for the last meeting as it was explained to me. The agenda was thrown out. There was a brief overview and questions. After that I left because I doubted there would be anything productive to follow. I'm not interested in attacks on the commissioners or pushing an effort to keep the reservoirs on line. I appreciate the efforts that Amanda Fritz has made in the past to try to get waivers to keep the working reservoirs. I understand the importance of coming with a concept and funding it. I understand the difficulties that Resolutions Northwest Facilitation Services had with the unruly crowd, but I think that throwing out the agenda was a mistake. The meeting didn't meet my expectations and it left me very concerned about the future of the project. There is a another meeting scheduled for December 10. Will that be a conversation as promised in the ads or a repeat of the one that I attended? I would like a response to my concerns. Thanks, Kathy Schuman
I believe our bull run water is slowly being privatized, and disconnect of the reservoirs is an early step, although I understand it is hard sometimes to see this bigger picture which unfolds over decades. It is important that the water belongs to the people - not Nestle or whomever, who then sells it back to us. I believe much of the whole water restructuring is happening because of lucrative engineering and construction contracts - certainly not because our current, amazing, gravity-fed, low-maintenance system wasn't working. It continues to work quite well. I believe our leaders lacked the political will to question the contracts and fight to save the reservoirs. Please keep them full and maintained - we are going to need them when/if the new Powell tanks fail.
I believe that maintaining the existing reservoirs and keeping them filled with water will allow the park to retain the most historical character. While I would support the Gastafson plan as a secondary option or perhaps as part of another park improvement in the future. The #1 option is really a modest cost to preserve the beauty of the water filled reservoirs and allow the public to safely continue use of the park.
I believe these resevoirs could make Mt Tabor Park even better. I would have preferred to leave them as uncovered water resevoirs, but now I look forward to them making the park even better. It would well be worth the money.
I disagree with the council's spending on the powell butte storage and its extremem over costing. Poor management and design.
I do a fast walk of about 3.5 mi. from my home to, up, down, and around Mt. Tabor Park almost on a daily basis. I use my car for weekly grocery shopping and other reasons, when it's too far to walk. I also take the bus a lot for trips to and from downtown. I think that by far the best option is: maintaining (on a minimal basis) all of the Mt. Tabor reservoirs and keeping some water in them (non-drinkable, except in the case of emergencies, when drinking water is in short supply). Thank you for making this whole process much more transparent!
I do not believe it is in the best interests of Portlanders to disconnect the reservoirs.

I do not support covering the reservoirs and consider the act an extreme waste of money and evidence of likely government corruption.
I do not support covering the reservoirs and consider the act an extreme waste of money and evidence of likely government corruption.
I do not want the city to dig any underground tanks in Mt Tabor Park, Nor cut any trees.
I don't believe the reservoirs should be put out of service.
I don't know much about the Gustafson Plan but I like the idea of keeping the reservoirs filled but increasing the value to wildlife by adding plantings. Concept 1 is acceptable to me as well. Any concept that does not include leaving water in the reservoirs is not acceptable to me. Thank you for the opportunity to comment.
I don't support disconnection of the open reservoirs. Portland has a great water supply now. I have lived in towns with poor quality drinking water and I do not look forward to diminishing water quality (which I believe will be the result of the new plan) and an increase in my water costs as a result.
I don't understand why some of the disconnect can not be done with pipes BEFORE they enter the park. It seems too disruptive to have to cut down trees & disconnect in the park, rather than doing it right at the entry.
I don't understand why we have to discontinue the use of our reservoirs as a water source, because that water should undergo a filtration process anyway, so it wouldn't be unsafe to drink. Since Portland is so rainy it seems as though collecting rainwater in a reservoir would be the most ecologically sound way of obtaining drinking water. My stance is that I'd like to see the least amount of change possible, so even if there is no way to continue using the reservoirs as a water source, I'd still like to keep the reservoirs looking the way they do now. That's why I chose concept #1
I enjoy Mt Tabor Park for hiking and cycling. The reservoirs are a huge part of the scenery, functionality and history of Portland. Water is a natural element and needs to be treated as naturally as possible, while still protecting our health. The system is working fine, no need to fix it.
I feel strongly the reservoirs should remain connected and functional. Barring that, maintaining them as water reservoirs would keep the character and quality of Mt. Tabor park.
I feel that just filling them in or leaving them dry would definitely take away from the beauty of that great park. Incorporating into some sort of feature accessible to the public with some water of at least one filled would really celebrate the good water and nature of the PNW.
I feel that our city hasn't done nearly enough to keep this wonderful resourse! I know the public line is that the reservours had to be removed because of a federal mandate, but I also saw now real push back on the federal "mandate". Also, I understand that New York was able to get a waiver. Is this project about public health or big dollar contracts? I used to have some faith in my local government, but after watching the way this issue has gone I have almost no confidence.
I feel that the covering of Portland's reservoirs, and the creation of new underground reservoirs is only helping big construction companies make a lot of money. It is unnecessary and will create a situation that causes the city to pour chemicals as treatment into our water. I am opposed to this, I do not want chemicals in my children's drinking water.
I found this article in the SE Examiner last year quite interesting. http://southeastexaminer.com/2013/07/open-air-reservoirs-and-your-health/ I would rather have my drinking water exposed to sunlight and allow the water to diffuse unwanted gasses than to cover them and have to deal with those gasses in other ways.
I grew up on Mt. Tabor, and cherish every inch of the mountain. At age 4, my preschool class climbed the mountain on the east side from Ascension church to the playground to observe Mt. St. Helens erupting. At 10, we moved over the mountain from 76th and Alder to 60th and Salmon, and I discovered the reservoirs. My mom and I walked around those reservoirs rain and shine, carrying on in conversation as we exercised and admired the beauty of our park. At 15, I used the second and third reservoirs as my photoscape as I learned photography in school, and especially loved this setting in black and white.

Then at 19, the reservoirs played an integral part in my 75 lb weight loss which led me into an empowered early adult life. Mt. Tabor park has over the past 17 years been a park I've introduced to my children, as my parents did me, and I'd be so sad to see the reservoirs and their unique piece of Mt. Tabor's beauty disappear. Please take my story into consideration and keep the reservoirs for what they were intended for!
I have lived in SE Portland for almost 20 years and have enjoyed Mt. Tabor Park all the while. I now live in the Mt. Tabor neighborhood, drawn in large part because of the park, which I think is one of the crown jewels of our park system. Of course the reservoirs are collectively one of the primary features of the park. If they cannot continue to function as they have for the water bureau, let's keep them for the other fine qualities they grace the park with.
I have lived near Mt.Tabor reservoirs all my life. When I was younger strolled around them many times. What a beautiful walk seeing the wildlife and many nice people to chat with. They have been there over one hundred years. Please fill and maintain them. Thanks! Betty Puckett
I have owned a home on the edge of Mt. Tabor Park for 25 years, use the park frequently and revere it. The reservoirs are an integral and icon part of the park and should be treated as such.
I have stayed informed about this issue and I see any other choice besides #1 as a massive waste of money and public resources with negligible or detrimental impact on our water safety
I highly value water that is as untreated as possible while still being safe to use.
I hike Tabor almost every day with my dog and it's the most magical part of my day. I meet wonderful people. I also play tennis weekly in the summer and am so thankful for those courts. I am also very thankful that our drinking water from the resoirvior is so pure and that I don't have to worry about what's in it. I recently moved her from CA and it wasn't pure like our water is here from the Tabor reservoirs.
I hope that the City will do everything in its power to let common sense prevail and not fix what isn't broken. Gravity-fed open reservoirs are sustainable and healthy, as well as beautiful.
I hope that we can wait to disconnect, at least until a decision is made by the EPA
I hope you will fight to maintain the system as it is now. If that fight is last then fill the reservoir and maintain them. the other options are awful. I volunteer with the foot patrol and in the Friends of Mt. Tabor visitor's center.
I imagine that there could be more moderate park improvements than Option 3, and that they would be worth exploring, but I also hear that a group of people who want to fight the federal mandate at any cost aren't really letting that conversation happen. I think it's more important to maintain water in Reservior 5 & 6 than Reservior 1. I'd be interested in seeing the smaller reservior turned into a skate area for skateboarders or bmx biking--I don't actually do those things, but I work with youth in SE who do, and I certainly see people skateboarding down Mt. Tabor.
I live right next to the park and loved and walked Mt. Tabor for 50 years. 1. I do not want the reservoirs disconnected. 2. I am concerned about Portland's water quality if the reservoirs are disconnected. 3. The reservoirs must remain as a water feature, must remain reservoirs. 4. The neglect of the reservoirs must quit and be maintained to the historical character of this site. 5. No disconnection should be considered until after the EPA ruling on above ground reservoirs.
I live up here and use the park on a daily basis. The only other thing I think could be nice is another playground or childrens water feature (splash pad or fountain) on the west side of the park.
I loathe both the PWB and city council over this single issue. I have some choice words but will keep them to myself. :-/
I love Mt. Tabor and the reservoirs are a great part of the park. It's a shame that we need to use chloramine in the water supply.
I love Mt. Tabor. I walk in the park everyday. One of the highlights of my walk is to look at the reservoirs and admire their beauty. Please, please keep them filled and maintain them. It would be such a shame to have them empty. It is such fun to watch the birds in the water.

I love the Mt. Tabor reservoirs. I enjoy taking a walk through the park with my dogs and I enjoy the view!
I love the open water reservoirs. They add so much beauty to the city. Please keep them open, filled, and maintained. Thank you!
I Love this City, Thank You all for everything you do! I am so grateful to be a part of a community that asks and listens to each other when making important decisions. I am also extremely grateful for water with no fluoride!
I love water shimmering in those iconic open reservoirs more than words can say. Please re-fill them so we can all breath exultantly.
I neither see the current system as broken nor in need of replacement. I see the current system as having an immense amount of embodied energy and being an adequate if not better performer then it's apparently imminent, flawed, and terribly expensive and ill-vetted replacement. I highly value Mount Tabor Park and it's mingling of historical functional structure and natural beauty. I am vehemently against what clearly appears to be a conflict of interest among decision-makers and contractor winners. I praise, support, and vote for politicians in position to alter courses that are headed for disaster, even if it means putting their jobs at risk or questioning a bad legal directive. And especially if it is for the better good of the people. No human should be on payroll as an advisor to a city who gives monumental closed-door, no-bid contracts to a firm with that The same person on their payroll. I hope to continue to enjoy the park, it's historic infrastructure, and it's glorious natural beauty for decades to come. And let Portland's water system continue to be a gleaming example of how it used to be and how it could assuredly continue under proper, lically supported management. One is only a pawn if they choose to be. Signed, and concerned.
I prefer an option that allows for possible future reconnection.
I really like having water in the reservoirs
I run a preschool at the edge of Mt. Tabor. It's an example of how this effects our youth. We are currently studying the Bull Run Reservoir water system.
I strongly feel that their functionality should NOT be destroyed. If/when allowed &/or needed again, we should be able to bring them back on line, without another huge expense.
I strongly oppose the reservoir disconnect. Our current system of open reservoirs fed by Bull Run is among the safest, tastiest, most sustainable, and least costly in the country. Furthermore, the historic and natural beauty of the open reservoirs are enjoyed by many area homeowners and residents daily. It would be irresponsible, unethical, and in direct contrast to public opinion to disconnect these reservoirs.
I support a reverse in the roll-over and give up mentality. We should abandon the leaky, potentially harmful boondoggled underground Powell Butte tank in favor of keeping our recently updated open reservoirs in service and providing clean, safe water to our majestic City of Roses.
I think if we're not going to use them for drinking water, the next best use would be as giant swimming pools. Or, possibly irrigation for planting areas directly below the reservoirs.
I think itsludicrous to waste money on a fearmongered agenda that is unnecessary and will diminish our landmarks that serve as an indentity and heritage of Portland
I think more time should be spent on asking the public what to do with the park. Open it back up to the public with better options/input to ideas.
I think that because the reservoirs are a National Historic Landmark, they should remain as they were originally intended - as a functioning part of the water source for the city. There has not been any research that shows that they do not function adequately, and we can follow NYC's model to challenge the LT2 ruling. We are throwing good money after bad by trying to take the open reservoirs off-line and implementing new, expensive and an unvetted underground reservoir concept.
I think that the council made a great mistake by not taking a much stronger stand against closing the reservoirs. Moreover, public perception is that the city ignores all but the most influential citizens.
I think they are beautiful and historically important as they are. The price shown to maintain them each

year seems reasonable. They will also be left in place and could be reconnected once there is more data showing open air is just as heathy or better than closed or as back up.
I think they should be left uncovered, filled, and maintained
i use the park 2-3x/week and have done so for the past 16 years. my son also participated in the summer nature day camps there for 7 years. i strongly believe that digging up the reservoirs would destroy the beauty of mt tabor, which is a historic monument.
I visit the reservoirs 3-4x/week so didn't know how to answer the first question. While I like option 3, I doubt Portlanders want to pay for that, so I am satisfied in keeping them aesthetically as is. It is important to keep the water clean and at a high level; they look so low now. There should be as little disruption in the disconnect process (i.e. cutting the pipes) to prevent massive disruption to the flora and neighborhood and as little costs as possible. Also, to allow for a reconnect if the LT2 rules fever change!
I vote and am vocal in the community.
I walk Mt. Tabor daily and have always loved the reservoirs, the views, the trails. It would be a very sad day indeed to destroy the integrity of the park by changing the beauty of these reservoirs and the surrounding trees.
I want our water to stay in the Mt. Tabor reservoirs, uncovered.
I want the city commissioners to allow Portland citizens to talk at the December 10, 2014 who don't support the Friends of the Reservoirs & didn't like their usurping the November 18, 2014 meeting. All the people creating the chaos at that meeting deserved to be escorted out of the McGuire Auditorium. The Friends of the Reservoirs list of questions they wanted City Commissioners Nick Fish & Amanda Fritz to answer are not related to the subject. They are based on conspiracy theories & not documented facts. I have done my own personal research on Portland's history about covering/burying the reservoirs that I would like to share with the public. My research is based on documented facts only, which I have in my possession. I would like to be the last person to speak at the December 10, 2014 meeting & not be interrupted by Friends of the Reservoirs or their supporters.
I want to keep the reservoirs as they've always been
I was born in Portland and have lived here all my life. My children have all been born here. I have used Mount Tabor park on my life for recreation. My children have used Mount Tabor park in my daughter's college is Warner Pacific College on the slopes of Mount Tabor. I want the reservoir filled and maintained as it has been all these years of my life and before I was born. It is very important to me as a person born and raised in Portland that Mount Tabor reserve or be maintained.
I went to Franklin High School in the 60's and spent a lot of time on Mt Tabor and really enjoyed the area. Please don't change it. It is a wonderful place for a nice spring walk in the park.
I wish that the city would fight harder for a waiver of the EPA's LTZ rule!
I wish we could just keep EVERYTHING as is!
I wonder why there is a continuous assault on our water supply. Every time we vote you down one measure another is put forth. Who do you owe? What kind of deal was made. Cover them, fluoride them, now decommission a working system? Please do the honorable thing and resign, or better yet resign and blow the whistle. There are traitorous, greedy people in your midst.
I would like to see one of the reservoirs turned into a swimming pool.
I would like you to pursue a deferral through 2016. Just based on the complications of introducing more radon into our homes should be enough. We'll stand behind you if you'll take a stand. PS. You have typo below in the transportation questions. I think you mean "Mode" not more.
I would love to see an elaborate water fountain somewhere on the top of Mt. Tabor for the purpose of providing perching birds a place to drink and bathe.
I would love to see Option #3, implement the Gustafson Plan, but only if the anticipated $40 million costs were funded through special one-time funding that would not impact the general budget and would not take away funding from other essential services. Thank you for the opportunity to comment

I would love to see the city take a more moderate approach in reaction to people urinating in the reservoirs on occasion. The expense incurred seems overblown in proportion to the actual risk.
I would rather see space created/shared that is more readily accessible to more people, more focus on creating community spaces, improving amenities at the many small parks.
I would still like to see the reservoirs in use as they have been for so long! this is a tragedy!
I'd be okay with turning the reservoir into a giant skatepark!!! But seriously, an ever-increasing demand for a precious resource may be supplemented by the reservoir in the future. Who knows?!
I'd rather them not be disconnected at all. Thank you.
I'm pretty frustrated that the plan to bury the reservoirs seems to benefit only the corporation that gets the contract and the politicians that support them, but has absolutely no benefit to the tax paying public.
I'm pretty sure the open reservoirs are unsanitary, given the flocks of birds that I regularly see in them. As far as I'm concerned, the sooner we change the system, the better.
I'm proud of the reservoirs at Mt. Tabor. I appreciate their beauty as well as their functionality. Let's keep them as is.
I'm proud of the reservoirs at Mt. Tabor. I appreciate their beauty as well as their functionality. Let's keep them as is.
I'm still angry at the city of Portland and its elected officials on their decision not to protest the LT2 regulation and seek a waiver until the EPA conducts a final review and ruling in 2016. I know that is outside the purview of this survey, but I want to be clear that I have been 100% opposed to the process that the city of Portland, the water bureau, and by association, Portland Parks and Recreation have chosen to undertake by not unifying with elected City Council leadership and state and federal elected officials to consider alternatives to this current course of action.
I'm terribly disappointed that the Water Bureau is gong against the wishes of the citizens of Portland, and that city council and Jeff Merkley won't apply for an extension to avoid this needless project. But it always comes down to money. A few people stand to gain while the citizens are left with the bill. Shame on you!
I'm tired of my tax money being sucked west of I-205 for the already nice neighborhoods.
I'm very disappointed that the city went w/a corrupt company like CHM2Hill w/the Powell Butte project. Portland should fight the EPA LT2 all the way1 Portland Water Bureau is corrupt - Glicker goes for water commission to being lobbyist for CHM2Hill. I'm also concerned about radon in our drinking and gen'l water supply from covered reservoirs.
I'm very happy with our current system of using the Mt. Tabor reservoirs and I strongly oppose any changes.
I've lived here for 35 years. I am a property and business owner. I vote in every election. I will vote against any City Commissioner who helps destroy these reservoirs.
I've lived in Portland all my life and remember my very first visit to Mt. Tabor park at the age of 7, I am now 44 years old. I remember what it felt like to see that beautiful park and how cool it was to see all that water and having it explained to us that that is the same water that came out of our taps. With the reservoirs changing to underground tanks, that conversation will change for future children visiting the park, but keeping the reservoirs full will enable children to grasp the concept of where their drinking water comes from, how much of it we need/use, and give them a visual representation. Not to mention, I think they are beautiful just as they are and don't see a great benefit in investing lots of money to remake them into some modern design. Those of us that love Portland, love it the way it's always been - we don't need to have this new, shiny, soulless Portland continually shoved down our throats by outsiders who have no connection to our past.
I've used the park for decades. The reservoirs are such an important part of the sense of space and tranquility, I can't imagine the park without them. From the descriptions, either option #1 or option #3 would preserve those elements. Mt. Tabor Park is like the love child of the Olmsted brothers and William

Mulholland. It's absolutely irreplaceable. Don't suck it dry!
If cities as large as Denver and NYC received waivers from the EPA, how is it possible that PDX was denied. I want you to try again. There is no reason to spend billions of tax payer dollars on a process that we don't need and will wind up reversing 1-2 years later.
if current plan is really and truly not possible (how/when/why is that decided), then #1
if its not broken, no need to fix or divert it. NOT all laws are good laws, nor do they apply in all cases. variances are possible. especially in this case. Get corruption out of our water. it tastes bad. please look into Glicker, and no bid no cap contracts. that's not good governance.
If plan does continue, do not disconnect. Leave potable water available in case of emergency. Does not need to supply whole city as would be used only in an emergency
If the funding isn't available for #3, strongly prefer #1. Water is an essential aspect of this park and its historic value.
If the reservoirs were drained, then we have to look at the options for repurposing their space. Obviously, leaving them as huge, empty concrete basins is an eyesore. The Gustafson Plan, proposes building a pedestrian entrance on 60th Ave and a water amusement park that will bring hundreds of new users to the park every day. Montgomery Watson Harza estimated that maintenance for what goes on top, and the costs of cleaning and maintaining the buried tanks will be equivalent to current maintenance of the open reservoir. Adding 3 waterfalls, a wading water table, a water garden, a new pedestrian entrance and path and maintaining them as proposed will obviously make those estimated costs much greater. But most importantly, I don't want my beautiful, calm natural park to become a crowded water park "feature". Please maintain it as a serene place to walk, rest, and enjoy wildlife and nature. Please do not bastardize it by turning it into a skate park, an ice skating rink, or a waterpark. There are so many other options for this type of entertainment in our city, but fewer enticing natural urban areas on the East Side.
If these reservoirs are taken offline then where is my water going to come from. What about the issue of radon gas possible with closed subterrainean tanks.
if they must be disconnected so it in such a way that they can be reconnected should Powell Butte reservoir prove unsuitable.
If you chose not to keep them flowing with water like how it was when myself,my parents,and my grandparents grew up here I will be deeply saddened but suggest temporary ice rink in the winter and roller rink in the summer
In #1, by "fill" you DO mean fill them with Bull Run water, right? That is my choice. Empty reserviors could be "filled in" with dirt, you know. Please re-read all of the fields of this questionnaire, spell check didn't notice you said "more" instead of "mode" of transport, it is a little thing but a lot of people are reading this and relying on your ability to pay attention to all the little things. Your final editor should have been a human being. By the way, I am not upset at the possibility of drinking water which has urine from mammals or bird droppings in it. The reserviors are quite large. I work in SW Portland four days a week. I look forward to getting to drink delicious Bull Run water on those days.
In the first place, I totally disagree with disconnecting the open reservoirs from the city's drinking water supply system. But if they must be turned off, please maintain their appearance and that of the adjacent park lands.
It appears that there is no way around the disconnect. Too bad City Hall could not assist. Leave the reservoirs as is with water and maintain them. Maintain the beauty and integrity of the Park and the reservoirs.
It is ridiculous that the City paid security guards to watch the reservoirs to see if a plane/person/terrorist/bird would poison our water.
It is unfortunate the EPA requires covered reservoirs and Portland could not stay allied with New York, whom I understand are still questioning the need for covering reservoirs. It is also unfortunate the design and implementation of the covered reservoirs on Kelly Butte has resulted in leaking reservoirs; indicative

of either poor workmanship and contract administration oversight, or inferior material design. Trust with the public has eroded with the water house, the rose city house at the waterfront, failure to direct existing funds to the road maintenance need at the time of need. Filling the reservoirs and leaving the connections available for future use as reservoirs is important. I realize this comes with a cost as well.
It seems as though there is significant redevelopment of the Portland water systems being tied to this effort that I do not understand. If the mandate is to cover the reservoirs, why is that option not being offered here? The future of fresh water access is very much being played out today, and what I see here is a lot of political wrangling and short term gain occurring at the cost to taxpayers today, and water access for Portlanders tomorrow. Please help me to understand!
It would be a tragedy to lose the open water reservoirs—they make the park unique and the water connects us more closely with nature, and isn't that what urban parks are here for?
it would be a tragedy to not use these incredible reservoirs!
It's not broken, so don't fix it. And definitely don't fix it by giving that much money to a private company to make us a worse system.
Keep private industry out of our water supply. Stop making backroom deals with Nestle or anyone else that wants to make money off of Portland residents and their water. The Water Bureau is bad enough.
Keep the historical landmark status. Shut the value but don't disconnect. Don't rethink - keep the existing look. Like the fountains fight for the people on the waiver.
Keep the Mt. Tabor Reservoirs as is, filled with Bull Run Water, maintain the equipment -- check the pumps and values, drain and clean the cement walls annually, above all keep those security cameras monitored. In a perfect world, Parks Foundations would be able to budget funds to install water features in each of the reservoirs, new electrical panels, and heavy duty pumps to rotate the water from one reservoir to the next. Why? To keep open water free from mosquitos and algae.
Keep the reservoirs open!
Keeping open air reservoirs no longer makes sense. Quaint but no longer secure. Keep it for the community, with water. Maybe consider a kickstarter investment in community aquaculture.
Leave it connected, and functional
Leave the open reservoirs. Clean and maintain the enclosed reservoir. It's not a goddamn bird that caused the E. Coli. Stop the corruption in City Hall! Stop the out of control spending!
Leave the reservoirs alone.
Leave the reservoirs alone. They work just fine.
Leave the reservoirs connected filled and maintained.
Leave the resevoirs connected filled and maintained.
Leave them be and let them house our drinking water like always please.
Let's fry for a waiver to LTZ! Please address how the city will address the health issues associated with removing the reservoirs from service.
Let's not cap it or sell it. It's a unique City resource that should be kept that way.
Let's think about the big picture, which is our future. 100 years from now and the livability for our children, in a changing global world (ie water shortages) -- Bull Run has water for us. I still believe that the EPA does not realize the true value of our system and that it does not need to be compromised on value -- money, water quality, human health, preserving the ecosystem. Save our reservoirs/fully functioning.
Look deeply into CH2MHill - don't grant contracts w/o open bids and transparent RFP projects Decisions made about our water system for drinking should be completely up the people. Focus on delaying to 2016
Maintain flexibility for potential future use as reservoirs. Maintaing historical structures is very very

important.
Maintain historical features
Maintain the potential reconnection to our drinking water so at a future date they can be reconnected. I strongly disagree with the options we are now forced to choose from. I am also deeply concerned about the contract process of issuing no RFP and hiring a untrustworthy company with questionable judgement when dealing with water resources (that has paid fines to the EPA) to manage our precious water system. The trust has been broken in the community.
Make it habitat for migrating birds.
Maybe, open them for community canoeing or something. Thanks! :D
More research on possible problems with covered reservoirs specifically radon and other ill health possibilities.
Mt Tabor is a nearly-magical place. A dormant volcano where people gather to play, work out, and make a statement. Flaming Lips videos have been filmed there. Adult soapbox derbies go flying down it every year. Naked bike riders gather there. Keep the magic alive by embracing the park's, and Portland's, quirky culture. Thank you.
Mt Tabor is a priceless, historic landmark in our city. Every effort must be made to preserve and enhance the park. Selling off land for development should never be an option. Closing the nursery should only happen if that land will be transformed for recreation. The city has been snowed into covering these reservoirs in the first place. The entire perceived threat is ridiculous.
Mt Tabor is sacred to me -- please keep it as beautiful and wonderful as it is.
mt. tabor is a beautiful park and should be left as it is. the resivoirs are part of Portland history and should be left as is. I feel that there are people that have monetary reasons to cap the resivoirs and it is just a money game.
Mt. Tabor is one of the best places in Portland and the water adds such calm and peace to the park. Taking out the water would take out so much of the parks spirit. Please keep the reservoirs on Tabor, they are a beautiful Portland legacy. Thank you
Mt. Tabor Park and walking through, up, and around it, is a daily joy. There is history in the parks including the reservoirs filled with drinking water (and soon filled with water for artistic and soul value). What a wonderful park in the midst of Portland to bring one back to nature, history, and health (both mind and body). Let's keep it that way.
Never, ever sell our water infrastructure to private industry.
Once it is gone, it is gone!
Open water creates a relaxing calm.
Oppose the EPA mandate, persue a waiver, don't disconnect the reservoirs.
Option #3 is creative and a great solution. Thank you for pursuing this despite rabid protests.
Our open reservoirs have served us well for over 100 years. Sunlight is the best disinfectent that nature ever created. Work to get an EPA Open Reservoir Waiver like New York and New Jersey are currently negotiating with EPA. Our water supply and our reservoirs are worth fighting for.
Our open reservoirs system has worked wonderfully for as long as they have been built. The natural system of sun and air has kept our water pure and healthy. It is really not necessary to dismantle this system. Please keep our open reservoirs the way they are and let Nature do its job, instead of spending loads of money on constructing a new system that is not even up to par as our current system. Let's spend that money on other things that our City needs, like more funding for the arts, please. Thanks!
Our open reservoirs work. Please leave them as they are. Save us money. Save our safe water.
Our water is a precious resource that brings us health and helps make Portland one of the most livable cities anywhere. Let's keep it that way!

Our water is precious. Please do not endanger it by implementing a design that reflects the Gustafson Plan.
Our water is some of the best in the nation and we need to preserve and protect the land in the Bull Run Watershed.
PDX can reapply for exemption.
People use this park as part of their mental, physical, emotional, and spiritual practices and therapies. To make any extreme change to this park will be at the detriment of many, at a very deep and personal level. Have respect for our community, and leave this oasis as is. Thank you!
Persue a waiver to the LT2 rule ferociously. Defend our water. Address the issue of Joe Glicker and his corporation.
Place some value on the history and aesthetics of the city, not just short term money interests.
Plan #3 would be feasible with private funding but the property taxes and needs for road/systems maintenance and safety improvements need to take precedence.
Plase leave our reservoirs intact & functioning as is.
Please allow the public to participate more in these decisions. Thank you for this survey.
Please attempt another opt out of the covered reservoirs requirements. Open air is fine for Portland. Thank you.
Please avoid privatizing Portland's water supply & department.
Please be respectful of the natural beauty of Mt Tabor. It is the best natural treasure we have in Portland.
Please choose option 1
Please do not allow a small group of people stop the valuable public park enhancements that we now have an opportunity to implement! The majority of the community has been trying for years to implement design improvements that maintain the historic treasures of the Mt Tabor Reservoirs and also allow for improved park use and access. There have been design competitions and public involvement approvals in the past that have stalled again and again. Now is the time to approve funding that is desperately needed to maintain and restore the historic features of Mt Tabor Reservoirs YET find funding that will go further in creating improvements to public use and access that were previously impossible while the reservoirs were being utilized as our water resource/utility.
please do not disconnect the reservoirs! they work and are an important part of our amazing water infrastructure!
Please do not drain the reservoirs without having a plan for the park. This situation needs to be viewed as an *opportunity* to make the park better. (And as much as I like the Gustafson Plan, surely there is a creative solution to re-imagining the reservoirs at a fraction of the cost!)
Please do NOT drain the resevoirs and leave them empty. It would be a terrible eyesore and attract vandals.
Please do not get in bed with private industry!
Please do not privatize our water!
Please do not privatize!
PLEASE do not sell our water supply out to a private corporation! This is a terrible idea.
Please don't cover the reservoirs. It is the type of descision that people will grow to regret. Tabor is an incredible space, and the reservoirs serve the city well. Why change a system that isn't broken?
Please don't destroy what works!
Please don't privatize our water system. Please keep up our beautiful reservoirs.
Please fight for the EPA waiver. Don't force the ratepayers to spend millions of dollars fixing a good

water system that works well AND provides such a beautiful and historic part of our heritage.
Please fix the roads before making new park features.
please include ALL of Portland, not just the Mt. Tabor neighborhood
Please keep our historic open reservoirs functioning for the health of all Portlanders!
Please keep the reservoirs filled with water. There is no doubt they look better filled. Keeping them filled is the only way to maintain their historic landmark designation. In addition, NOT disconnecting them guarantees three vital things: That Mt. Tabor park will not be permanently altered and/or temporarily disrupted, costing the least of all options. That the reservoirs can be used as an emergency water system in case of an earthquake or natural disaster, or a failure in the new system (isn't it already cracking?). That the possibility of reservoirs returning to normal use if the federal mandate changes or the city wins a deferral. If we installed a fool proof system to simply shut off the reservoirs rather than removing pipes and trees, it would cost the least amount of money, disrupt the least amount of people, alter the historical structures in the least way possible, and ensure a backup emergency system and make it the easiest to put back online, as the people who own the land have fervently expressed. Logically, it just is the best option.
Please keep the reservoirs filled. They are so beautiful and unique. Best yet, keep them on line.
Please keep the reservoirs filled with water! This park is an oasis in a city that is quickly losing private green spaces and where other public green spaces (such as the Tabor Long Blocks/former nursery site) are at grave risk from unfettered development. The filled reservoirs provide a much-needed place for citizens to engage in quiet reflection and birds to stop for water. Don't pave them over--we need this open space!
Please keep the reservoirs functional.
Please keep the water features in some fashion.
Please keep this beloved park as it is. Thank you.
Please leave the reservoirs connected, filled and maintained. We must fight crony capitalism and corruption in our local politics with no bid contracts to CH2M hill. This is our greatest resource as a community. It must be held and cherished.
Please leave the reservoirs full of natural water!
Please listen to the people's response. We want our reservoirs intact.
Please maintain our pristine water reservoir system.
Please maintain the character and functionality of our Mt Tabor Park.
Please maintain the historic structures as well.
Please make sure that the water to replenish them is NOT a budget item every year. Make sure that the mioney is available NO MATTER WHAT happens with the budget process.
Please make sure this park remains a free resource to the hundreds on daily users. It's an important community recreation resource.
Please PLEASE do not do option #2. It would turn a lovely functional reservoir into an eyesore. I am a property owner in the neighborhood.
please please do the right thing. a lot of people are counting on you. we are watching. thank you!
Please preserve our resivours and maintain them...
Please remember that My Tabor Park has a historic designation and to honor that distinction, water must remain in the reservoirs.
Please see the official comments written by Stephanie Stewart and submitted by the MTNA on behalf of the entire neighborhood for details on what should happen with our city's wonderful Mt. Tabor park. These comments were unanimously supported by the MTNA at our last neighborhood meeting. The

Olmsted Brother's wonderful Mt. Tabor design should not be tarnished by the Portland Water Bureau's current plan.

Please, please PLEASE, do not let whoever is trying to force this disconnect these reservoirs. We will not allow it to happen. We will stand by you with our lives if you have the courage to stand up to this rude corporate imposition, because there are many of us who know what is really going on and that this is about so much more than a few reservoirs being disconnected. So if you don't stand up for us and stop this, hopefully we don't have to risk our lives stopping them, but we will. So our children can have clean, healthy, affordable water. Thank you.

Portland has long been an innovator and been bold in coming up with unique solutions to global issues. I think the reservoirs should be retained and continued to be managed in this very Portland tradition!

Portland has some of the best drinking water in the country. This is owed both to our water source, the Bull Run Watershed, and our open air reservoirs. Open air reservoirs allow for oxygenation, natural sunlight disinfection, and harmlessly venting toxic and carcinogenic gases. Burying those reservoirs, or containing them, does not necessarily reduce the risk for contamination. It eliminates the natural water processes that sunlight and air provide, and underground tanks open up other risks that would have to be treated chemically. The concern over cryptosporidium seems blown out of proportion, given that our city has a historically clean track record regarding cryptosporidium; Portland's open reservoirs have never had a serious outbreak of microbial or chemical health illness since they were built over 100 years ago. Portland's open air reservoirs efficiently remove toxic and carcinogenic chemicals. Covered reservoirs cannot, and require strong chemicals such as radon, chloroform and other disinfection chemicals. In addition, the pools of water are an attractive and central focal feature at the park, they are part of what make Mt Tabor beautiful. Draining those reservoirs would change the aesthetic significantly, from pleasant to depressing. The Gustafson plan is visually pleasing, but not worth it at the cost of the quality of our drinking water, or the tax increases/city spending/ongoing maintenance costs it would take to implement it. We can preserve our drinking water, or we can waste water. If the reservoirs were drained, then we have to look at the options for repurposing their space. Obviously, leaving them as huge, empty concrete basins is an eyesore. The Gustafson Plan, proposes building a pedestrian entrance on 60th Ave and a water amusement park that will bring hundreds of new users to the park every day. With only one bus line that runs past (71), and very limited parking, how will all these new users access the park? Montgomery Watson Harza estimated that maintenance for what goes on top, and the costs of cleaning and maintaining the buried tanks will be equivalent to current maintenance of the open reservoir. Adding 3 waterfalls, a wading water table, a water garden, a new pedestrian entrance and path and maintaining them as proposed will obviously make those estimated costs much greater. But most importantly, I don't want my beautiful, calm natural park to become a crowded water park "feature". Please maintain it as a serene place to walk, rest, and enjoy wildlife and nature. Please do not bastardize it by turning it into a skate park, an ice skating rink, or a waterpark. There are so many other options for this type of entertainment in our city, but fewer enticing natural urban areas on the East Side.

Portland has some of the best drinking water in the country. Please don't sacrifice it for short-sighted and profit-driven corporate interests.

Portland has some of the cleanest drinking water in the world. The reservoirs are in good working order and the system does not need to be fixed or changed at all. I would prefer that they do nothing and the city apply for an exemption to a flawed federal law. Mt. Tabor park is also an important bird refuge and everything should be done to preserve it as a quiet sanctuary for this purpose, in addition to preserving these well engineered drinking water reservoirs that purify our water with exposure to sunlight every day.

Portland is my home. One of the reasons I am so proud to say that is because of our water sources and how hard our people work to protect them. I am a very intimate relationship with the water in this area. I am an avid kayaker, kayak instructor & outdoor educator and I want to see our local government care for this environment (which includes it's people) as much as they would care for their own bodies, minds and loved ones. Please know that there are far more people who care about this than people who don't.

Portland will stand with you when you stand up to the federal mandate to cover/disconnect. Buy us more time! Wait for the EPA decision! Thank you for using Resolutions NW facilitation. They should facilitate

every public meeting.
Portland's open air reservoirs are a source of local pride and I would be deeply saddened to see Mt. Tabor's lost.
Post rule to prevent skate boarders from "bombing" down the closed roads. I've had too many close calls. Enforce the darn Off Leash Laws!!!!!
Preferable leave them connected to our water source.
Present the science. Get the waiver.
Priorities: Community Health. Simple and natural always beats over technical and corporate. No one lining pockets.
Promote more disc golf courses, and increase land use in areas where inter urban areas have succumbed to homeless patron 'camping'.
Q: What would it cost to creconnect the reservoirs?
Quit wasting taxpayer money on pork-barrel schemes to benefit city hall cronies.
really like the connection with the water shown in the gustafson plan. would like to implement more social gathering; cafe (possible at the building at the very top with a cantilevered deck with a view of downtown), larger performance space, singletrack mountain bike/running/hiking trails, removal of invasives and replanting entire park, learning center.
Regulations are for the good of public health. When a regulation actually conflicts with public health, it should be an unenforceable regulation. We elect our City Council members to advocate FOR US. Nobody WANTS these reservoirs discontinued, including the City Council! Stand up for common sense! Stand up for public health! Stand up for not wasting money pointlessly! Stand up for Portland!
reservoirs are on the historical register, I don't know why there is even a question about keeping them the way they are!
Resolutions NW did an excellent job facilitating this meeting. I would also like to suggest that the city appoint someone (perhaps a volunteer) to communicate regularly with the public regarding this issue. I think that people are angry about what they perceive as a lack of transparency regarding the process of the water bureau. Perhaps if we had more information about how Water Bureau decisions are made people would be less combative.
Revoke the municipal resolution and self imposed rush. Please also follow the advice of the Reed Smith legal opinion, and make the EPA prove in court the LT2 is justified. Also please challenge the Oregon Health Authority for putting anti-open-reservoir provisions in Oregon's water rules without the permission of (and against the expressed intent of) the Oregon Legislature. Let Portland's water system continue to be a gleaming example of how it used to be and how it could assuredly continue under proper, locally supported management.
Since I selected concept 2, I would like to see in the winter months when the temperature is cold to fill half of reservoir 6 with six inches of water to ice skate, similar to the Westmorland casting pond.
since our new failing leaky underground water reservoir is not gravity fed, when disaster happens we probably won't be getting water. so please maintain the function of the current open reservoir just in case. We like to have water in our neighborhood.
Since the decision to disconnect the park has shown signs of neglect class of security etc. Thieves move graffitti and people sleeping and camping there. Mt. Tabor is a city that is sure, and Mt. tabor shouldn't be dismantled or disconnected beacuse it's no longer our drinking water.
Som eof the walk ways around the reservoirs need repair. Saw about "selling' personalized pavers like at Pioneer Square and at the playground at Mt. Labor park? So many people love the Park and would also love to help preserve it and having oned name on a paved would be a win win.
Some amount of water should remain in the reservoirs.....please keep the illusion that the reservoirs continue to be what their historic designation said.

Some positive thinking in retaining the open reservoirs in existence. They are we degrading the Park, spending millions of dollars for an unnecessary procedure?!
Spending millions of dollars burying our water infrastructure is counterproductive, will lead to poor water quality (no sunlight, radon), and is a MASSIVE WASTE OF MONEY. The city council and state and federal representatives and senators should together be actively appealing the bogus cryptosporidium concern about out water. It doesn't make sense to spend huge amounts of money to fix a problem that doesn't exist. Take a cue from New York on this issue.
Stop paying money out to Joe Glicker and CH2MHill for things we don't need, and pursue a waiver on the behalf of our water and our health.
Sunlight is a powerful disinfectant. Enclosing the entire system and adding chemicals is a horrible idea. Portland water used to taste great, varying with the seasons. It has gotten progressively worse and the city's plans will surely further ruin Portland and its water. The city should take every step to fight the removal of the reservoirs - it seems awfully convenient to claim the EPA wants them covered when the city had already tried to cover them. City officials need to listen to the people, especially long-term residents.
Surely there is a hero somewhere down at City Hall who will help us save our historic, functioning, sustainable reservoirs.
Thank you for asking for community input.
Thank you for considering community input in this decision! Mt. Tabor is a spectacular park and a true jewel in our beautiful city.
Thank you for listening to us Amanda Fritz and Nick Fish. Please act in our behalf accordingly to our wishes. I don't wish to see the reservoirs disconnected in the first place. I would like to see Resolutions NW continue to facilitate meeting with citizens and city council, excellent job! Thank you for bringing them here. Considering there's a ruling about this resolution up far debate in federal court. Please seek and implement a delay in diconnection. I don't understood the haste, please seek to give us all more time.
Thank you for the mediation grouip--they liasoned extremely tactfully between the irrate protesters and the uncomfortable taciturn commissioners. Very appreciated.
Thank you very much for being great stewards of our lovely parks and green spaces!!!
Thank you! Mt Tabor is a big reason that I chose this location to live!! Thank you for doing your best to continue to maintain the reservoirs as they were originally intended to be!!
Thank you. This is such a great opportunity to showcase Portland and one if it's truly great assets. Let's keep the Rose city the jewel of the Pacific Northwest.
Thanks for the big water bills. Also the * for the required field indicator doesn't tell responders which field is required. Also why is this still up if the deadline was Dec 1?
Thanks for considering the public's input!
Thanks for having poll and for dealing with such a difficult issue! I am glad to get our water into closed systems!
That means leaving them as they are, full of delicious Bull Run water, safe from radon, ecoli, salmonella, and cryptosporidium. Stand up to EPA, and ask for whatever we need to hold off until 2016 when their safety can be properly reviewed. As elected officials, you work FOR THE PUBLIC that elected you, and we want the reservoirs connected and in good condition. STOP doing business with CH2MHill. Abandon spending more unnecessary money building anything else we do not need, investigate the related corruption within the OHA, and FIGHT for keeping our water clean, safe and publicly owned. It's the right thing to do.
That whenever any form of government becomes destructive of these ends, it's the right of the people to alter or to abolish it and to institute new Governement!
The calm water feature of the reservoirs provides a therapeutic space in the park for our community.

Time spent near trees and water - these important elements of the natural world - have been proven through studies (ACS Journal) to have a significant effect on the brain resulting in increased levels of happiness and reduced blood pressure. Throughout each week, I need it, you need it, they need it, we all need it.
The City could use the waterbag technology to use the reservoirs and protect the water. The bags would be connected to the in and out pipes, and the water would not be open to the air in the reservoir. The bags could be covered with water to maintain the look of the reservoirs. http://en.wikipedia.org/wiki/Flexible_barge
The City is doing a poor job on this project. A lot of us, active with Mt Tabor, are just discovering this survey. We pay a lot in taxes and expect a higher level of integrity from Portland.
The city must show the public true transparency in the bidding and awarding of such major public outlays. My family water/sewer bill has quadrupled in the last 15 years. I was more than willing to pay for the big pipe to cut pollution. I am not willing to sacrifice water quality and waste perfectly working water infrastructure in order to line the pockets of contractors and revolving-door bureaucrats.
The City of Portland's reservoir system needs to remain as it is, as it was originally designed to function. Our water quality is more than suitable, and the contaminants that would be introduced by the additional requirements of contained water bring multiple health and economic disadvantages. Many of us have chosen to live here because of the open source Bull Run water as it is. We face a much greater threat from old bridges and schools -- I hope the City would place all emphasis on bridges and schools and leave our water as it is, please. The historic nature of this gravity fed system design is highly functional and deserves to be protected. Lay this issue aside for now, please. In time, I believe it shall become clear that covering the reservoirs would have been an unnecessary folly.
The city should not cater to the demands of people. Who don't want the city to comply with the SDWA of 1974, as amended 1996. Let's stop having meetings at their insistance since the USEPA isn't going to change any part of the 172ESWTR until after 12/31/2016. They won't have their 3rd meeting on the LT2ESWTR until the end of 2015. (I asked the USEPA myself.) USEPA's review of LT2ESWTR will end by 12/31/2016.
The city should push back the disconnection of the reservoirs and investigate claims of corruption in the awarding of contracts and rule making. Former employees of the PWB has unduly influenced the process and, without merit, cost the city hundreds of millions of dollars.
The city's acquiescence to this unnecessary federal overreach has been about the most un-Portland approach to a public policy issue I have ever observed. Now, living with the legacy of its own refusal to stand up for what is right, the least Portland can do is preserve the reservoirs in their historic context.
The community at large DOES NOT support disconnection of Portland's open reservoirs, and I am part of that community. These facilities are a treasure and MUST be maintained--that's what we pay you for.
The community DOES NOT support disconnection of Portland's open reservoirs.
The current system is not broken nor in need of replacement. I see the current system as having an immense amount of embodied energy and being an adequate if not better performer then it's apparently imminent, flawed, and terribly expensive and ill-vetted replacement. I highly value Mount Tabor Park and it's mingling of historical functional structure and natural beauty. I am vehemently against what clearly appears to be a conflict of interest among decision-makers and contractor winners. I praise, support, and vote for politicians in position to alter courses that are headed for disaster, even if it means putting their jobs at risk or questioning a bad legal directive. Porltand should not be paying consultants who are also executives of the corporations receiving all our monumental sized, closed-door, no-bid, no-cap contracts. The EPA is going to change it's LT2 Rule in July 2016. Why bullishly push forward with this project? Follow the money…... Our City Commissioners have a chance to be our hero's - to stand up for the good of the Commnowealth rather than be pawns of corporate cronyism. Please be our heroes!! Be brave!!! I truly hope to continue to enjoy the park, it's historic infrastructure, and it's glorious natural beauty for decades to come. And I hope to drink healthy, wonderful water from our pristine, unique Bull Run Watershed. I hope our children may do the same as well…..

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The element of water is critical to the unique sense of place of Mt. Tabor Park.
The filled reservoirs are the way to go. They add beauty and peace to the park. We need to be around nature and water. We also had an idea of turning one of them, maybe the small one at the south side of the park, into an outdoor winter skating rink. It could be quite a tourist attraction and money maker. Maybe just for December and January. Of course skaters would have to hike in and maybe that would limit the number of visitors.
The Gustafson plan is a giant expensive folly that would cost millions and forever change the nature of the park. Why do that? Keeping water in the reservoirs is absolutely the least expensive plan and one that is least disruptive to the character of the park. The park is deeply loved as it is, and is on the Register of Historic Places as it is. Keeping some water in the reservoirs, periodically cleaning the basins, and maintaining the sidewalks, is the frugal win-win solution that maintains our connection to this piece of our history and maintains our connection to our deeply loved viewscapes and parkland.
The Gustafson Plan is wonderful, and I wish the funds were easily available. However, for the present please at least keep the reservoirs full and maintained. Since coming to Portland 15 years ago, Mt. Tabor and it's reservoirs have been one of my favorite places. Though I now live on the west side, I still make frequent trips to Mt. Tabor. Whenever I go there I always see families enjoying the ambience and views over the water of the reservoirs. It is really one of this city's treasures.
The impact of having open water, in a historic setting is important to maintain.
The lack of respect for the public and disregard for public input is disturbing. The current city council is held in very low regard with the general public, which is a shame. Respect has to be earned. If I were your teacher I would give you a IID- Only because of Amanda, otherwise, y'all would be getting an F. And it's "mode" of transportation, not "more." Super LAME!
The last thing I think should be done is to leave them empty. Water is something that renews people and makes them happy; empty concrete will make likely decrease use or encourage uses you don't want. Please consider having water there no matter what. Thank you!
The most valuable feature of my neighborhood is the peace and beauty provided by the reservoirs during my 2x or 3x weekly walk up Mt. Tabor.
The Olmstead family developed the parks with the water feature in mind. The history integrity of the reservoirs must be maintained.
The people of Portland LOVES Mt. Tabor & the Reservoirs. Preserve them. Thanks.
The recreational redesign is a great idea, but the cost is prohibitive. I'd rather have usable water for a fraction of that price.
The reservoir water can be used to emergencies and fires. Please do not add a bunch of chemicals to our water.
The reservoirs are not only beautiful, they are functional and make perfect sense. Closed water is contaminated water. If oxygen cannot get to the water supply, it will stagnate. Please do the intelligent

thing and stop spending millions and millions of dollars on archaic technology that merely lines pockets of the few and takes from the good citizens of Portland who are scrambling to pay their land taxes and keep their homes, I might add, pay their rather Huge water bills.
The reservoirs are a historic landmark. If we can reconnect, what would the reconnect cost?
The reservoirs are a treasure. I run around them daily and picnic with my family near them in the warm months. I can't imagine Mt. Tabor without them. It would be ruined.
The reservoirs are great piece of functional history. I like to bring out of town guests up to the park and talk about how the city's history.
The reservoirs are one of the unique and beautiful aspects of the park. My first preference would be to continue to use them for the water supply. Given this is not a possibility, enhancing them would be great. My only concern with the Gustafson plan is that it may make detract from the natural beauty. It's hard to tell off drawings. Thank you for asking out opinion!
The Reservoirs are part of Portland's history and have been officially recognized as such. I urge the City of Portland to maintain their water and fountains.
The reservoirs bring me and my family so much joy and peace. They also bring us such amazing, clean, healthy water! Please keep them open, connected, and functioning! Thank you!
The reservoirs in this park make it one of Portland's most beautiful, and the water is perfectly safe and clean. It would be a real bummer to see the beauty and utility of great drinking water be cut off and shut down because of a one-size-fits-all government mandate.
The reservoirs should be filled and remain open and not covered. I believe that that it is important to utilize the great resources that we have already in existence here in Portland.
The reservoirs should not be disconnected. 2 adjacent valves, without the "required" 10' air gap in each of the connecting lines, would be sufficient to "disconnect" from the water source. The construction of the covered storage at Powell Butte, a major waste of our money, should be sufficient for the EPA edict. What does that make the system, 95% compliant? The EPA is not requiring the cities of Milwaukee WI. or Chicago, IL. to cover Lake Michigan, the source and reservoir for about 10 million people. Portland has not pushed back hard enough to preserve the water supply system that has proven to be successful for almost 100 years. This has been a major boondoggle. Don't mess it up further.
The reservoirs were functioning perfectly. Leave them alone and wait for the federal government to alter it's ruling in 2015/16. Our wter system is unique and well thought out and precious to its residents.
The risk for problems with our water causing illness will increase substantially now with our water being stored in tanks!
The science says that our water quality will be threatened by changing to underground tanks. Who would want that? Water is so basic to life! And there is still time to make sure that we maintain the current reservoir system and prevent disconnection.
The Tabor reservoirs are a Portland landmark. Please keep them.
The true wishes of the community are to keep the reservoirs intact, as they are.
The water in the reservoirs supports the enviorment and butterflies.
There are clearly questions about who is profiting from this deal - and it ain't the taxpayer!!!!!!! If NYC doesn't have to close their reservoir, why do we?
There are no details on the Gustafson Plan available anywhere on your website.
There is nothing wrong with our water system. Please stop being corporate pawns and preserve and use our open reservoirs. The LT2 rule is up for revision and we need to put our efforts there - not in underproven industrial systems that many argue, will degrade our water quality.
There is nothing wrong with the way the reservoirs have been used as a city water supply. They should be maintained and not drained. It is absurd to allow whatever shadowy forces that wish to drain the reservoirs do just that. There is no public benefit to draining them only private financial gain.

Furthermore, covering the reservoirs is not an acceptable measure as that would allow radon and some harmful water treatment chemicals that would otherwise evaporate to remain in our DRINKING WATER.
There must be more options if other cities have received variances and don't have to disconnect their reservoirs.
There was no obvious way to see more detail on the Gustafson Plan.
These Mt Tabor reservoirs are historic and have been used without problems for over 100 years. The Powell Butte reservoirs are nothing but problems thus far. Anyone with a TV can see the loss of water in the southwest, it makes the most sense to hold on to whatever water storage we have. There is no argument to removing this historic and needed water storage.. James Parsons
these options do not include estimated or ball park estimates for some plans, so seems costly, aka boondoggle. low cost options are appropriate when so many portlanders are in hardship due to government and banker systemic economic jiggering/bailout/debt/ruined lives and families and home residences. lowest cost safe option , long term, low maintenance is common sense. wbc
These reservoirs a true city treasure and their historic significance should be respected. If anything I would love to see the Olmstead design for the park finished as originally intended. Also, in the event of a severe earthquake the reservoirs might serve as a critical backup water supply.
These reservoirs belong as functioning members of our drinking water system, and Portland City Council should be embarrassed by what they've allowed to happen.
These reservoirs do not need to be disconnected. If the will of the people is ignored and they are disconnected, they must be done in a way where they could be reconnected in the future.
They are really not real options. Since #3 will never be paid for. # 2 means ultimately destroying the resevoirs. There's only one option--#1.
They're beautiful, they work, it's an historic part of our community. Why mess with it?
Think win win....not just accomplishing one objective.
This is a great opportunity to invest in one of Portland's best parks. Let's seize the moment and make Mt. tabor the crown jewel of the city parks system for the twenty first century.
This is important~ This is what the people want, clean water!
This is the most important issue - I've ever seen raised here & I can't believe as a City with our WATER THAT IS WORKING SO WELL our leaders are laying down and saying there is nothing we can do. SHAME ON YOU. HOLD OUT...don't potentially ruin our HOLY WATER & spend OUR MONEY. Also the Contractor who can do this job tends to go over budget I hear...like more over budget than original estimates...follow the $ - this seems just criminal on so many levels. YOU HAVE NOT RIGHT TO VIOLATE the most important H2O I put in my body and my son's body everyday. Native Portland / Oregonian - Heidi Nelson
This meeting was poorly planned. You should have know this would happen.
This meeting was very stressful. "Passion" doesn't require rudeness. I wish there could be more civility, though it did improve. I feel strongly that we should continue to use the reservoirs for our drinking water.
This park is a part of what makes Portland such an amazing place. The construction will do colossal damage to the area, in which past and future generations have been lucky enough to experience. This would be a step in the wrong direction for such an amazing city which prides itself on being "green". Let's not conform like the rest of the nation. Let us keep pursuing environmental friendly practices.
This process was poor on public engagement and lacks guiding principles and accountability to public preference, public interest, and fiscal prudence.
This project seems like cronyism. Is anything in this site incorrect, and if so what?: http://whoisjoeglicker.wordpress.com/
Until we know for sure that we have to cover the reservoirs we shouldn't implement any multi-million dollar plans to switch things around. As a homeowner that lives a mile or so from Mt. Tabor this park is

very important to me and so is the cost & quality of my water. I'm very concerned how the costs of these EXPENSIVE plans would be passed along to us homeowners.
Very disappointed.
Water is a basic human right and should never be privatized!
We are fortunate to have direct access to very clean and fresh water, we have simple systems in place which are effective and should be maintained. Visitors to mt tabor enjoy and are respectful of reservoirs, and are proud to see their drinking water.
We are planning to leave Portland as we can not live in a city that will not provide clean affordable water.
We are very distressed that Portland is not fighting to preserve this asset. The reservoirs and water has served this city for decades helping it thrive. It is disgraceful to do otherwise.
We have the most amazing water. Please leave it alone and allow us to drink it. Thank you!
We love our park and our water system - please preserve.
We love our water pure and keep it the way it is.
We need more time! Delay the disconnect! Water is sacred. It's our life. The reservoir is ideal! Give us more time!
We need to pursue a waiver until the fed gov't sues us and or a public vote can happen.
We still need that LT2 waiver.
We would like more advocacy to fight for a deferral from the EPA. Stupid decisions by Bureaucrats infuriate us.
What a mess. Why wasn't a waiver obtained? >>> Corruption, is the answer.
What about open water swimming? Charge and maintain. Then, if they change their minds, we can have our reservoirs open again.
What are ways the city gov. of Portland can override the statefed regulations that got to the place of disconnecting the reservoirs?
Whatever happens long term, robust bicycle access needs to be constructed so Mount Tabor is not overrun with automobiles and is accessible for ALL residents, from whatever direction. A north-South path past the eastern side, or above, the lowest reservoir could be built connecting Harrison with Salmon, Yamhill and Belmost just east of the retirement facility to connect up to 62nd that will become a greenway to the 60th street MAX station. This could be coupled with multi-use-path improvements around the perimeter of the park on the south and north-east side to connection up disparate neighborhoods in an overall active transportation network.
While studying this issue, I have learned open reservoirs are healthy because of oxygenation and sunlight. I think that decommissioning the reservoirs would be a big mistake in case we choose to put them to use in future years.
Why are we wasting millions of dollars on this project. Fight the EPA mandate as other cities have.
Why are you wasting taxpayer money to combat a problem that Portland DOES NOT HAVE!!! I'd like to see you challenge the OHA for its unauthorized insertion of anti-open reservoir language into Oregon Administrative Rules against the Legislature's intent, and challenge the EPA to prove that reservoir coverage/decommissioning is necessary. This looks suspiciously like cronyism to me. I'm not a fan.
Why can't the reservoirs be used for pretreatment storage? Why does the water have to be drained to the sewer system?
Why give into fear and spend taxpayer money to change a system that has worked just fine for years..... thousands of little kids have thrown things in there, people have peed in there and wildlife peed and even died it there. Nothing to drastic ever happens the.community still thrives and grows!
You could make it easier to find details about the three options you listed above. I was able to track

down information, but #1 in particular is unclear as to whether you mean to 'fill the reservoirs' with dirt or with water - and if with water, would that still be connected to the drinking water distribution system.		
You did not say what you wish to fil the reservoirs with in option 1. I am assuming that you mean fil them with WATER vs. SOIL. I wish for you to fill them with WATER as they are now! This is about preserving the control of a life giving substance in the hands of the people where it can be viewed used and enjoyed. I do not wish to have water from tanks under ground pumped with chemicals. Cleaning methods should be as natural as possible and use as few chemicals as possible. If the monied powers have bought this system so much that the will of the people who live in an area and use the resources is not longer the deciding factor in how to use resources, then leave the water there at least, for us to enjoy the view at least. You should also tell us what Gustafsons's plan is before making it an option.		
You mention the Gustafson Plan but don't provide a link to it. You say it's on the "previous page" but what happens if I just got a link to this page, how am I supposed to know what the previous page is? If you're going to use the web for feedback, design your survey so the information needed to complete it is easy to reach.		
You need to be more frugal with taxpayer money, and smarter in your decision making process. You don't seem to do independent research, but rather rely on those who have something to gain by convincing you we need to upgrade, when we don't.		
Total	**411**	
Please tell us about yourself!		
I am age		
35-44	287	29.7%
45-59	285	29.5%
60-79	189	19.6%
25-34	154	15.9%
	24	2.5%
16-24	17	1.8%
80 & over	9	0.9%
15 & under	1	0.1%
Total	**966**	
I am		
female	527	54.6%
male	410	42.4%
	29	3.0%
Total	**966**	
Regarding residence, I		
own	655	67.8%
rent	272	28.2%
	39	4.0%
Total	**966**	
I identify as:		

(please check all that apply)		
Latino		
No	939	97.2%
Yes	27	2.8%
Total	**966**	
African American/Black		
No	956	99.0%
Yes	10	1.0%
Total	**966**	
Asian/SE Asian		
No	943	97.6%
Yes	23	2.4%
Total	**966**	
Pacific Islander		
No	960	99.4%
Yes	6	0.6%
Total	**966**	
Native American/Alaska Native		
No	944	97.7%
Yes	22	2.3%
Total	**966**	
Caucasian/White		
Yes	770	79.7%
No	196	20.3%
Total	**966**	
Other		
No	891	92.2%
Yes	75	7.8%
Total	**966**	
My most frequently used more of transportation is:		
car	526	54.5%
bike	163	16.9%
foot	161	16.7%
bus	66	6.8%
	50	5.2%

Total	**966**	
Name		
	302	31.3%
Jack Wells	2	0.2%
Ansula Press	2	0.2%
Charles Rooney	2	0.2%
Dan Berger	2	0.2%
Ellen Simmons	2	0.2%
john	1	0.1%
julie	2	0.2%
Katherine	2	0.2%
Kathryn Notson	2	0.2%
Maggie Zadikov	2	0.2%
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Tia Zilberstein	2	0.2%
Wayne Dietz	2	0.2%
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Alan Mekel	1	0.1%
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Alisha Sullivan	1	0.1%
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Allison Wibby	1	0.1%
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Doug Kelso	1	0.1%
Dr Theodora Tsongas	1	0.1%
Dr. Bantu Press	1	0.1%
Drew Drew	1	0.1%
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Frederick M Slade	1	0.1%

Gary Willis	1	0.1%
Gene Zilberstein	1	0.1%
Gilman Vital	1	0.1%
Glenda Chaite	1	0.1%
Greg Snider	1	0.1%
Gregg	1	0.1%
Gregory Press	1	0.1%
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Hiram Asmuth	1	0.1%
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Kevin Woodruff	1	0.1%
Kim Lakin	1	0.1%
Kimberly Kaminski	1	0.1%
Kirk deFord	1	0.1%
Kristen A Curry	1	0.1%
Kristin	1	0.1%
Kristin Rosling	1	0.1%
Kundalini R Bennett	1	0.1%
Kurt Marion	1	0.1%
Kyle McTeague	1	0.1%
L Buch	1	0.1%
Larry Clark	1	0.1%
Larry Duckwall	1	0.1%
Larry Dudewall	1	0.1%
Larry Venaska	1	0.1%
Laura Bender	1	0.1%
Laura Bright	1	0.1%
Laura Mason	1	0.1%
Laurel Crissman	1	0.1%
Lauren	1	0.1%
Lauren Moreno	1	0.1%
Laurie	1	0.1%
Laurie Sonnenfeld	1	0.1%
Lee Kurtz	1	0.1%
Leslie Chester	1	0.1%
Leslie Rose	1	0.1%
Lia Nagase	1	0.1%
Linda Sheeley	1	0.1%
Lindsay Tallon	1	0.1%
Lisa	1	0.1%
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Lisa Degrace	1	0.1%

Lisa Olivas	1	0.1%
Lisa Taylor	1	0.1%
Liz McCann	1	0.1%
lloyd Lemmermann	1	0.1%
Lora Britt	1	0.1%
Loretta Callahan	1	0.1%
Louisa	1	0.1%
Louise Gray	1	0.1%
Luke Dolkas	1	0.1%
Lurelle Robbins	1	0.1%
Lynn Feinstein	1	0.1%
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Lynne Halvorson	1	0.1%
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MacKenzie Stout	1	0.1%
Maia. Godet	1	0.1%
Mandy L. Kruger	1	0.1%
Mara Cogswell	1	0.1%
Marc LaPine	1	0.1%
Mariah Jochai	1	0.1%
Mario HAro	1	0.1%
Marisa Kula Mercer	1	0.1%
Marisha Auerbach	1	0.1%
Marjorie Kinney	1	0.1%
Mark	1	0.1%
Mark Colman	1	0.1%
Mark Owen	1	0.1%
Mark Williams	1	0.1%
Martha	1	0.1%
Martha Mitchell	1	0.1%
Martrese White	1	0.1%
Mary Ann Schwab, Community Advocate	1	0.1%
Mary Kinwick	1	0.1%
Mary McAteer	1	0.1%
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MaryJo Andersen	1	0.1%

MAtt Butler	1	0.1%
Matt Gordon	1	0.1%
McKenzie Leedom	1	0.1%
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Meera Hays	1	0.1%
Megan Gibb	1	0.1%
Megan Whisnand	1	0.1%
Melissa Gordon-Magnus	1	0.1%
Melissa Pancurak	1	0.1%
Melissa Robertson	1	0.1%
Melissa Sanborn	1	0.1%
Melnaie Rios	1	0.1%
Meredith Hachemeister	1	0.1%
Michael	1	0.1%
Michael Molinaro	1	0.1%
Michael R Vogt	1	0.1%
Michael Snyder	1	0.1%
Michael SPATZEK	1	0.1%
Michele Gila	1	0.1%
Michele Glazer	1	0.1%
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Midge Pierce	1	0.1%
Mike	1	0.1%
Mindy Fitch	1	0.1%
Miriam Berman	1	0.1%
Mollie Stratton	1	0.1%
Naga Nataka	1	0.1%
Nancy Coscione	1	0.1%
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Natalie Whelan	1	0.1%
Natasha Stoudt	1	0.1%
Nathan Baker	1	0.1%
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Nicholas Miner	1	0.1%

Nicholas Travers	1	0.1%
Nora Harbison	1	0.1%
norma j weiss	1	0.1%
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Paige	1	0.1%
pam hickman	1	0.1%
Pamela Boyd	1	0.1%
patra Conley	1	0.1%
Patricia Dair	1	0.1%
Patricia Lackaff	1	0.1%
Patricia No	1	0.1%
Patrick	1	0.1%
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Paul "Pat" Eck	1	0.1%
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Paulette Meyer	1	0.1%
Phyllis Weih	1	0.1%
Piera Greathouse-Cox	1	0.1%
Rachel Mullin	1	0.1%
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Reya Tobias	1	0.1%
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Roberta Richards	1	0.1%

Robin A Jackson	1	0.1%
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Robin Rosenberg	1	0.1%
Robyn Pierce	1	0.1%
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Rosalie Parish	1	0.1%
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Russ Taylor	1	0.1%
Ruth Lin	1	0.1%
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Ruthie Macha Petty	1	0.1%
RX Casanova	1	0.1%
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Samuel Whisnand	1	0.1%
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Sarah DeVita-McBride	1	0.1%
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Scott Luckenbaugh	1	0.1%
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Sean Connolly	1	0.1%
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Sharie Andrews	1	0.1%
sharon callison	1	0.1%

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Sharon K Bettis	1	0.1%
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Sheelagh Oliveria	1	0.1%
Shell Stenger	1	0.1%
Sierra Munro-Davalos	1	0.1%
Signe Larson	1	0.1%
SJ MIller	1	0.1%
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Stacey Ludlow	1	0.1%
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Stephanie Bridges	1	0.1%
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Steve Nassar	1	0.1%
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Sunny Fitzpatrick	1	0.1%
Surajel Eisenfield	1	0.1%
Susan Carter Anderson	1	0.1%
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Susannah Weaver	1	0.1%
Susie Snyder	1	0.1%
Suzanne McCarthy	1	0.1%
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Suzy Hoile	1	0.1%
Sylvia Allen	1	0.1%
Taggart Siegel	1	0.1%
Talina Wilson	1	0.1%
Tana Cahill	1	0.1%
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Tara west	1	0.1%
Terri Shofner	1	0.1%
Terry Dublsinki-Milton	1	0.1%
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Theo	1	0.1%
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Thia Bankey	1	0.1%
Thomas Lange	1	0.1%
Tim Mitchell	1	0.1%
Tina Frost	1	0.1%
Tobin Tanner	1	0.1%
Todd D. Miller	1	0.1%
Todd Janeczek	1	0.1%
Tom Meyers	1	0.1%
Tomi Blessinger	1	0.1%
Tony Cole	1	0.1%
Tony Fuentes	1	0.1%
Tony Lash	1	0.1%
Treothe Bullock	1	0.1%
Tristan Codrescu	1	0.1%
Tye north	1	0.1%
Tyler Fuqua	1	0.1%
Ursala Garbrecht	1	0.1%
Valerie Hunter	1	0.1%
Victoria Oglesbee	1	0.1%
Vincent Stoffer	1	0.1%
Viola Rose	1	0.1%
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Wendy wiles	1	0.1%
Whitney walker	1	0.1%
Wiley Barnett	1	0.1%
William Green	1	0.1%
William Henderson	1	0.1%
William Risser	1	0.1%
William Ulmer	1	0.1%
Wisteria Loeffler	1	0.1%

Wrenna	1	0.1%
Zack	1	0.1%
Zipporah Lomax	1	0.1%
Total	**965**	
Address		
	402	41.6%
1615 se 58th av	4	0.4%
3415 SE 9th Ave	3	0.3%
1109 se 72nd ave	2	0.2%
1625 SE 40th Ave	2	0.2%
1825 SE Mountain View Dr	2	0.2%
2034 SE 41st Ave.	2	0.2%
2224 NE Everett St	2	0.2%
2501 SE Madison St.	2	0.2%
2516 ne 86th ave	2	0.2%
3735 SE Yamhill St	2	0.2%
3740 SE Washington	2	0.2%
4233 SE 182nd Ave. #228	2	0.2%
4914 NE 57th Ave	2	0.2%
5107 SE Madison St	2	0.2%
5533 NE 30th Ave.	2	0.2%
5627 SE Pardee Street	2	0.2%
6027 SE Main St	2	0.2%
637 SE 68th Ave	2	0.2%
7016 SE MALL ST	2	0.2%
7330 SE Harney st	2	0.2%
8047 SE Clay Street	2	0.2%
914 N Emerson	2	0.2%
18504 N.E. Davis St.	1	0.1%
1938 nw 45th ave	1	0.1%
964 ne 90th ave	1	0.1%
Se 54th	1	0.1%
0407 SW Nevada Street	1	0.1%
0841 SW Gaines St	1	0.1%
1016 SE 12th Avenue	1	0.1%
1025 SE 73rd	1	0.1%
1030 SE 69th Ave	1	0.1%
1033 SE Franklin Street	1	0.1%

104 SE Gilham Avenue	1	0.1%
1041 NE 109th Ave	1	0.1%
105 NE 73rd Ave	1	0.1%
1050 SE 73rd	1	0.1%
10851 SE Garrett Dr.	1	0.1%
1117 se 30th	1	0.1%
112 NE 45th Ave.	1	0.1%
1127 S.E Lambert Street	1	0.1%
11329 se salmon	1	0.1%
1134 SE 33rd Ave	1	0.1%
11349 NE Glisan St	1	0.1%
11502 se washington	1	0.1%
11502 SE Washington Street	1	0.1%
11540 NE Klickitat St	1	0.1%
1176 SE 87th Ave	1	0.1%
119 NE 45th Ave.	1	0.1%
12016th se 88th ave.	1	0.1%
12145 SE Brookside Dr.	1	0.1%
1215 SE 73rd ave	1	0.1%
1215 SE Cora	1	0.1%
1221 se 80th ave	1	0.1%
1222 SE 73rd Avenue	1	0.1%
1237 SE RHINE ST	1	0.1%
1240 S E 73rd Av	1	0.1%
12814 SE Market St	1	0.1%
1287 farrview ct	1	0.1%
12th	1	0.1%
1306 SE 20th Ave	1	0.1%
1309 SE 43rd Ave	1	0.1%
131 NE MLK Jr. Blvd.	1	0.1%
132 NE 57th Ave.	1	0.1%
1331 Se 76th Ave	1	0.1%
1333 NE 47th Ave	1	0.1%
134 ne 83rd ave	1	0.1%
134 se 24th ave	1	0.1%
13719 NW 16th Avenue	1	0.1%
1400 SE 60th Ave	1	0.1%
1401 NE Roselawn St	1	0.1%

14014 clubway	1	0.1%
1410 SE Harrison	1	0.1%
1411 NE 16th Ave., Apt. 221	1	0.1%
1415 SE 52	1	0.1%
1415 SE Martins Street	1	0.1%
1417 SE 34th ave	1	0.1%
1425 SE 80th Av	1	0.1%
1518 ne 73rd ave	1	0.1%
1527 ne hancock st.	1	0.1%
1535 se 29th st #6	1	0.1%
1535 SE 60th Ave	1	0.1%
1547 NE 75th	1	0.1%
15478 SW Foster Lane #283	1	0.1%
160 ne Bryant at	1	0.1%
1602 SE 80th ace	1	0.1%
16075 NW Telshire Dr	1	0.1%
1611 SE 60th ave	1	0.1%
1616 N Terry Street	1	0.1%
1619 NE 27th Ave	1	0.1%
1625 NE Bryant St.	1	0.1%
165 NW 97th Ave	1	0.1%
1665 SE Holly	1	0.1%
1705 SE 57th	1	0.1%
1723 SE Marion St	1	0.1%
1724 SE 55th ave	1	0.1%
1728 NE HIghland	1	0.1%
1735 SE Sherrett St	1	0.1%
1741 SE Linn St. Unit A	1	0.1%
1767 SE Maple	1	0.1%
180 SW 85th Ave	1	0.1%
1803 S.E. 57th. Ave.	1	0.1%
1808 SE 35th Place	1	0.1%
1811 se mountain view dr	1	0.1%
1815 NE 46th ave.	1	0.1%
1815 SE 77th ave	1	0.1%
1816 SE 54th Ave.	1	0.1%
1820 se 44th ace	1	0.1%
1821 ne 65	1	0.1%

1832 SE HAZEL ST	1	0.1%
1837 SE 51st Avenue	1	0.1%
1849 se 36th ave	1	0.1%
1904 SE Hemlock Ave	1	0.1%
1905 ne going st	1	0.1%
1907 SE 48th Ave	1	0.1%
1913 SE 56th Ave	1	0.1%
1915 SE Alder St.	1	0.1%
1927 NE 66th Ave	1	0.1%
1933 NE60th	1	0.1%
194 N Hayden Bay Dr	1	0.1%
1955 SW Fifth Avenue Apt 724 B	1	0.1%
1991 n Jantzen	1	0.1%
2000 ne 42nd ave #113	1	0.1%
2001 Silver Springs Road	1	0.1%
2008 SE 174th	1	0.1%
2015 NW 21st Ave.	1	0.1%
2020 se bush street	1	0.1%
2023 SE Taylor ST	1	0.1%
2033 SE 59th Avenue	1	0.1%
2058 SE Elliott	1	0.1%
2106 NE Flanders	1	0.1%
2115 ne Rosa Parks away	1	0.1%
2115 Se 46th ave	1	0.1%
2123 SE 31st Ave	1	0.1%
2126 N Blandena St	1	0.1%
213 n mason	1	0.1%
2131 SE 32nd Pl	1	0.1%
2131 SE 54th	1	0.1%
2131 Se 54th ave	1	0.1%
2133 se Tibbetts	1	0.1%
2135 NE 134th Place	1	0.1%
220 NE Bridgton Rd.	1	0.1%
2207 SE 37th Ave	1	0.1%
2214 N. Emerson St	1	0.1%
2214 SE 52nd Avenue	1	0.1%
22153 SW Bushong Ter	1	0.1%
2216 SE 58th Ave	1	0.1%

2225 SE 59th ave	1	0.1%
223 SE 62nd Ave	1	0.1%
2250 SE 44TH AVE	1	0.1%
2250 SE 44th Ave.	1	0.1%
2251 SE Caruthers St	1	0.1%
2259 N Dekum St.	1	0.1%
2309 NE Brazee	1	0.1%
2311 SE 58th Avenue	1	0.1%
2315 SE 60th Ave	1	0.1%
2319 SE Taylor St.	1	0.1%
2342 NE 14th Ave	1	0.1%
2345 SE 58th AVENUE	1	0.1%
2346 SE Woodward St	1	0.1%
2354 NE 54th Avenue	1	0.1%
2360 SE 55th Ave	1	0.1%
2360 SE 58th Ave	1	0.1%
239 SE 49th Avenue	1	0.1%
2419 SE 16th Avenue	1	0.1%
2424 se 49th Ave #3	1	0.1%
2441 SE 76th Ave	1	0.1%
2445 S.E. 71st.	1	0.1%
24645 SE Brevi Lane	1	0.1%
24645 SE Brevi Ln	1	0.1%
2504 se 49th ave	1	0.1%
2506 SE 70th Ave	1	0.1%
2516 SE 52 Ave	1	0.1%
2522 SE 35th Ave	1	0.1%
2523 SE 28th ave.	1	0.1%
2525 nunyabusiness st.	1	0.1%
2529 SE 81st St.	1	0.1%
2536 SE Morrison #4	1	0.1%
255 SW Harrison St. #14H	1	0.1%
2603 SE 61st Ave.	1	0.1%
2606 SE 64th Ave.	1	0.1%
2612 SE 70th	1	0.1%
2612 SE Taylor	1	0.1%
2615 SE 35 Ave	1	0.1%
2624 SE Pine St	1	0.1%

2637 N. Winchell St.	1	0.1%
2653 SE 62nd Ave.	1	0.1%
267 N Ivy St	1	0.1%
2704 SE Taylor St.	1	0.1%
2717 SE 26th Ave #6	1	0.1%
2731 SE 70th Ave	1	0.1%
2734 S.E. 60th Ave.,	1	0.1%
2755 SE 75th Ave	1	0.1%
28 SE 78th Avenue	1	0.1%
2820 SE 20th Ave	1	0.1%
2823 SE 87th Ave	1	0.1%
2833 SE 33rd Place	1	0.1%
2834 se Clinton st	1	0.1%
2905 NE 38th	1	0.1%
2905 NE 38th Ave.	1	0.1%
2910 NE Jarrett Street	1	0.1%
2916 NE 48th Ave	1	0.1%
2920 ne 24th ave	1	0.1%
2933 SE clinton Street	1	0.1%
2937 NE 22	1	0.1%
2938 se 111	1	0.1%
2939 SE Francis St	1	0.1%
2939 SE Francis St.	1	0.1%
3 Monroe	1	0.1%
3005 SE 78th Ave.	1	0.1%
3006 SE Lincoln St.	1	0.1%
3006 SE Lincoln street	1	0.1%
301 SW Lincoln St. #1201	1	0.1%
3016 N Holland St	1	0.1%
3034 se 20th ave	1	0.1%
3036 SE Sherman St	1	0.1%
304 SE 45th Ave	1	0.1%
3040 SE olsen st	1	0.1%
3045 NE 9th Avenue	1	0.1%
3125 SE yamhill	1	0.1%
3126 NE 18th ave	1	0.1%
3134 SE 22nd Ave	1	0.1%
3134 SE 57th Ave.	1	0.1%

3135 N. Willamette Blvd	1	0.1%
3144 SE Belmont St	1	0.1%
3144 SE Belmont St.	1	0.1%
32 SE 30th Pl	1	0.1%
322 NE 73rd Ave	1	0.1%
330 SE 52nd Ave.	1	0.1%
3303 SE Clinton St	1	0.1%
3309 SE Gladstone	1	0.1%
3309 SE Gladstone St.	1	0.1%
3311 SE Caruthers St.	1	0.1%
3314 NE 61st Ave	1	0.1%
3322 SE Yamhill	1	0.1%
3327 NE Oregon St	1	0.1%
338 NE 78th ave	1	0.1%
3439 NE Sandy Blvd #184	1	0.1%
344 NE 76th Ave	1	0.1%
3508 NE Simpson St.	1	0.1%
3530 se hawthorne blvd	1	0.1%
3601 SW Kanan Dr	1	0.1%
3601 SW Kanan Drive	1	0.1%
3608 SE 73rd Avenue	1	0.1%
3624 SE 13th Ave.	1	0.1%
3651 se washington st	1	0.1%
3707 SE Clinton	1	0.1%
3746 se yamhill st	1	0.1%
3746 se yamhill st.	1	0.1%
3755 SE Grant Ct	1	0.1%
3804 N Haight Ave	1	0.1%
3813 se 67th	1	0.1%
3828 SE 51st Ave	1	0.1%
3836 SE 49th Ave.	1	0.1%
3840 SE Ivon St.	1	0.1%
3910 S.E. Dora Ct.	1	0.1%
3933 SE 28th Place	1	0.1%
3933 SE 29th Ave	1	0.1%
3935 SE Clinton st	1	0.1%
3945 NE Stanton ST	1	0.1%
3952 SE Oak St.	1	0.1%

3969 ne Rodney ave	1	0.1%
4007 NE 99th Ave	1	0.1%
4007 SE Taylor St	1	0.1%
401 N. Blandena	1	0.1%
4015 SE Taylor st	1	0.1%
4025 SE Kelly St.	1	0.1%
4026 SE Belmont St.	1	0.1%
4032 SE Crystal Springs Blvd	1	0.1%
404 NE. 56	1	0.1%
4045 SE Tibbetts Street	1	0.1%
4054 NE 13th Ave	1	0.1%
4058 NE 12th Ave	1	0.1%
4117 SE 80 th Avenue	1	0.1%
412 NE Hazelfern	1	0.1%
4120 SE Madison St	1	0.1%
4120 se Morrison st	1	0.1%
4122 NE 79th Avenue	1	0.1%
4135 SE 63rd ace	1	0.1%
416 N Beech St	1	0.1%
42 SE 62nd Ave.	1	0.1%
4211 N Mississippi Ave	1	0.1%
4222 NE 11th Ave.	1	0.1%
4223 SE 40th Apt b	1	0.1%
4245 SE Morrison St	1	0.1%
43 NE 86th Ave	1	0.1%
4305 SE 64 Ave	1	0.1%
4306 SE Reedway St.	1	0.1%
4311 SE 37th Ave #10	1	0.1%
4315 N Gantenbein Ave	1	0.1%
4324 NE 17	1	0.1%
4331 se yamhill ace	1	0.1%
4334 SE 35th ave	1	0.1%
4335 NE Sumner St	1	0.1%
4335 SE Belmont	1	0.1%
437 SE 67th Ave	1	0.1%
4418 SE Harrison St	1	0.1%
4420 NE 96th Ave	1	0.1%
4420 se belmont st	1	0.1%

4423 SW Hamilton Terrace	1	0.1%
4424 NE Alberta Court	1	0.1%
4520 SE Brooklyn st	1	0.1%
4526 NE 78th Ave.	1	0.1%
4534 ne Alberta court	1	0.1%
459 be hazelfern pl	1	0.1%
4602 SE Rex Dr.	1	0.1%
4606 NE 26th Ave.	1	0.1%
4606 SE Taylor St.	1	0.1%
4635 SE 64th	1	0.1%
4635 SE 64th Avenue	1	0.1%
4709 SE 64th Ave	1	0.1%
4709 SE 86th Ave	1	0.1%
4725 SE Yamhill St.	1	0.1%
4726 SE Salmon	1	0.1%
4726 se salmon st	1	0.1%
4733 n kerby ave	1	0.1%
4806 SE 48th ave	1	0.1%
4807 SE Salmon St	1	0.1%
4816 SE 50th Ave.	1	0.1%
4819 ne cleveland	1	0.1%
4820 SE 36th pl	1	0.1%
4826 NE 14th Place	1	0.1%
4826 SE lincoln st	1	0.1%
4829 se 63rd ave	1	0.1%
4833 SE Salmon	1	0.1%
4834 SE Lincoln St.	1	0.1%
4849 NE 12th ave.	1	0.1%
4900 SE Division st	1	0.1%
4904 ne 10 ave	1	0.1%
4904 SE 64th Ave	1	0.1%
4925 E Burnside St	1	0.1%
4984 sw oleson rd #6	1	0.1%
4993 SE 30th Ave #100	1	0.1%
5021 NE 27th Avenue	1	0.1%
5029 SE Gladstone St	1	0.1%
5100B NE Prescott St.	1	0.1%
5107 SE Madison street	1	0.1%

5122 se hawthorne blvd	1	0.1%
5134 NE 26th Ave	1	0.1%
5211 E Burnside St #5	1	0.1%
5227 SE 70th	1	0.1%
5229 NE Holman	1	0.1%
5230 se 49th	1	0.1%
5232 SE Madison St	1	0.1%
5236 ne 34th ave	1	0.1%
526 SE 45th Ave.	1	0.1%
530 NE Royal Court	1	0.1%
5314 SE Bybee Blvd	1	0.1%
533 NE Holiday #203	1	0.1%
5336 SE 68th Ave	1	0.1%
535 SE 68th Ave	1	0.1%
536 SE 55th Avenue	1	0.1%
537 SE 78th Ave	1	0.1%
54 SE 74th Ave.	1	0.1%
5403 se Hawthorne blvd	1	0.1%
5406 SE 45th Ave	1	0.1%
5420 SW Idaho St	1	0.1%
5435 SE Flavel Dr	1	0.1%
5435 SE Flavel Dr.	1	0.1%
544 se 58th ave	1	0.1%
5465 NE Mallory Ave.	1	0.1%
5480 NE Sandycrest Terrace	1	0.1%
550 SW Bond Ave. # 802	1	0.1%
5520 SE Schiller	1	0.1%
5528 SE 86th Ave	1	0.1%
5533 NE 17th ave	1	0.1%
5539 E BURNSIDE ST STE A	1	0.1%
5556 N. Wilbur Ave	1	0.1%
5616 SE Hawthorne	1	0.1%
5616 se hawthorne blvd	1	0.1%
5620 NE Alberta St.	1	0.1%
5625 SE Gladstone St Apt 1	1	0.1%
5732 SE Yamhill St.	1	0.1%
5803 SE 83rd Avenue	1	0.1%
5816 S.E. Lincoln St.	1	0.1%

5825 NE 17th Ave. Unit B	1	0.1%
5839 SE Stark St. Apt. 26	1	0.1%
5839 SE Stark, #8	1	0.1%
5840 NE 18th Ave	1	0.1%
5850 SE Taylor St.	1	0.1%
5904 SE Knight ST.	1	0.1%
5906 ne 18th ave	1	0.1%
5925 SE Lincoln St	1	0.1%
6009 NE Flanders St	1	0.1%
6034 SE Stephens Street	1	0.1%
605 SE 38th Avenue	1	0.1%
6103 SE. Clinton St.	1	0.1%
611 SE 54th	1	0.1%
6110 SE Main	1	0.1%
6111 East Burnside	1	0.1%
6126 NE 31st Ave.	1	0.1%
6126 SE Lincoln Street	1	0.1%
6126 SE Main St	1	0.1%
6136 SE Sherman	1	0.1%
614 NE 60th	1	0.1%
6147 SE Stephens St	1	0.1%
6203 SE Clitnon	1	0.1%
6209 ne 7th ave	1	0.1%
6211 SE Harrison St	1	0.1%
622 SE 60th Ave unit A	1	0.1%
6222 SE Lincoln St	1	0.1%
6224 SE Main St.	1	0.1%
6224 SE Stephens	1	0.1%
6225 N Albina	1	0.1%
6231 SE Harrison St	1	0.1%
6233 S.E. Stephens St	1	0.1%
624 SE 36th Ave	1	0.1%
624 SE 68th Ave	1	0.1%
6240 NE 22nd Ave	1	0.1%
6245 SE Harrison Street	1	0.1%
625 SW Jackson St.	1	0.1%
629 se franklin st	1	0.1%
6307 NE 8th	1	0.1%

6309 SE Grant st.	1	0.1%
633 SE 81st Ave	1	0.1%
6332 SE Windsor Ct.	1	0.1%
6335 SE Stephens St.	1	0.1%
6345 SE Harrison St.	1	0.1%
6345 SE harrison street	1	0.1%
636 N Skidmore St.	1	0.1%
636 SE 60th Ave	1	0.1%
6405 NE Alberta St	1	0.1%
6420 NE 42nd Ave.	1	0.1%
6430 N. Willamette blvd	1	0.1%
6435 e burnside st	1	0.1%
6435 SE Ivon St.	1	0.1%
6446 NE 22nd Avenue	1	0.1%
6446 SE Division St.	1	0.1%
6451 SE Morrison Ct	1	0.1%
6455 SW Nyberg Ln F101	1	0.1%
6565 SE Scott Drive	1	0.1%
6639 SE YAMHILL CT	1	0.1%
6716 n albina	1	0.1%
6805 se clinton st	1	0.1%
6825 SE Pine Ct	1	0.1%
6908 SE Ash st	1	0.1%
6915 SE 92nd Ave	1	0.1%
6928 se 122nd dr.	1	0.1%
6935 N GReenwich ave	1	0.1%
6944 SE Yamhill St	1	0.1%
7038 SE Clinton Street	1	0.1%
704 S.E. 38th Ave	1	0.1%
7040 N Lancaster Ave	1	0.1%
705 NE 125th Ave	1	0.1%
7050 SE Yamhill	1	0.1%
706 SE 60th Ave.	1	0.1%
706 SE 60th Avenue	1	0.1%
707 SE 48th	1	0.1%
707 SE 72rd Ave	1	0.1%
7074 SE Division	1	0.1%
7101 SE Harrison Street	1	0.1%

7106 SE GRANT ST	1	0.1%
7110 Sw 32nd ave	1	0.1%
7129 SW 2nd	1	0.1%
7132 SE Lexington	1	0.1%
7135 SE Gladstone	1	0.1%
7214 SE Taylor St	1	0.1%
7215 se salmon street	1	0.1%
7217 SE Main St.	1	0.1%
7231 SE Mill St.	1	0.1%
7233 SE Alder St	1	0.1%
7235 se madison st	1	0.1%
7245 ne prescott #2	1	0.1%
730 SE 72nd ave	1	0.1%
7306 SE Main Street	1	0.1%
7324 SE Madison St	1	0.1%
7324 SE YAMHILL ST	1	0.1%
7345 SW 29th Ave	1	0.1%
739 SE 60TH AVE	1	0.1%
7404 SE Clay Street	1	0.1%
7404 SE Washington	1	0.1%
7404 SE Washington St	1	0.1%
7525 NE Irving St.	1	0.1%
7527 sw LaView Dr	1	0.1%
7605 SE Knight St	1	0.1%
7644 SE Taggart Ct.	1	0.1%
7657 SE Market	1	0.1%
7705 SE Market St.	1	0.1%
7731 SE Yamhill St.	1	0.1%
7736 SE Clay st.	1	0.1%
7805 SE Hawthorne Blvd.	1	0.1%
7814 SE Morrison	1	0.1%
7814 se morrison st.	1	0.1%
7834 SE Lincoln St.	1	0.1%
7835 N Burrage Ave	1	0.1%
7903 SE Salmon ST.	1	0.1%
7927 SE Hawthorne Boulevard	1	0.1%
8014 S.E. Morrison St.	1	0.1%
8024 N Syracuse Street	1	0.1%

8036 NE Oregon st	1	0.1%
805 SE 74th	1	0.1%
807 SE 65th Ave	1	0.1%
807 SE 68th Ave	1	0.1%
8103 SE Taylor St	1	0.1%
8107 N Van Houten ave	1	0.1%
8129 se 74th ave	1	0.1%
822 NE Hancock ST	1	0.1%
824 SE 69th Ave	1	0.1%
824 SE 73rd Ave	1	0.1%
828 SE Ash St	1	0.1%
8316 N Lombard st #444	1	0.1%
8330 NE Pacific St. #1202	1	0.1%
8501 SE Yamhill St	1	0.1%
8504 SE Market St	1	0.1%
8538 N. Syracuse St.	1	0.1%
8616 SE Washington St	1	0.1%
8641 NE Pacific st	1	0.1%
8828 Se Pine St	1	0.1%
8837 se rhone st	1	0.1%
8925 ne Edison street	1	0.1%
9026 N Syracuse St	1	0.1%
910 NW NAITO PKWY APT I18	1	0.1%
910 se 42nd #370	1	0.1%
9101 E Burnside	1	0.1%
919 se 48th	1	0.1%
920 SE 67 th	1	0.1%
922 se franklin st	1	0.1%
9231 N Trumbull Ave	1	0.1%
930 SE 69th	1	0.1%
949 North Prescott Street	1	0.1%
972135735 ne 61	1	0.1%
Alsdorf	1	0.1%
Blakeslee	1	0.1%
Brazelton	1	0.1%
Clark	1	0.1%
Cody-Wald	1	0.1%
Inner NE Portland	1	0.1%

Jones	1	0.1%
P. O. Box 86731	1	0.1%
PO Box 29109	1	0.1%
PO Box 33142	1	0.1%
PO Box 51083	1	0.1%
POBOX 80090	1	0.1%
Redmon	1	0.1%
SE 58th Ave.	1	0.1%
SE 60th AVE	1	0.1%
se hawthorne	1	0.1%
SE Ivon St	1	0.1%
Summers Park	1	0.1%
Wheeler	1	0.1%
Total	**966**	
City/State		
	396	41.2%
Portland	258	26.8%
portland, OR	151	15.7%
Portland OR	48	5.0%
Portland, Oregon	20	2.1%
Portland/OR	17	1.8%
OR	14	1.5%
Portland Oregon	9	0.9%
portland/Oregon	1	0.1%
portland. OR	4	0.4%
Oregon	3	0.3%
Gresham, OR	2	0.2%
Pdx	2	0.2%
Portland OR	2	0.2%
Portland / Oregon	2	0.2%
Camas Wa.	1	0.1%
portland/OR	1	0.1%
Arlington, wa	1	0.1%
Beaverton	1	0.1%
Beaverton?, OR	1	0.1%
Eagle Creek	1	0.1%
Eagle Creek, OR	1	0.1%
Eugene	1	0.1%

Eugene OR	1	0.1%
Haiku	1	0.1%
Lake Oswego	1	0.1%
Maywood Park	1	0.1%
Milwaukie	1	0.1%
Oak Grove, Oregon	1	0.1%
PDX,	1	0.1%
pdx, OR	1	0.1%
pdx/or	1	0.1%
PDX~ or	1	0.1%
Portland , or	1	0.1%
Portland / OR	1	0.1%
Portland, OR	1	0.1%
Portland, Oregon	1	0.1%
Portland, I'D	1	0.1%
Portland,OR	1	0.1%
Portland. OR	1	0.1%
Portland/Or.	1	0.1%
porttland, oregon	1	0.1%
Sherwood / OR	1	0.1%
Troutdale, Oregon	1	0.1%
Tualatin	1	0.1%
Vancouver, WA	1	0.1%
West linn	1	0.1%
Total	**961**	

Zip		
	323	33.4%
97215	195	20.2%
97214	69	7.1%
97206	65	6.7%
97202	51	5.3%
97211	37	3.8%
97213	29	3.0%
97217	23	2.4%
97212	16	1.7%
97218	14	1.4%
97232	13	1.3%
97216	12	1.2%

97220	12	1.2%
97266	9	0.9%
97203	8	0.8%
97201	6	0.6%
OR	6	0.6%
97219	5	0.5%
97227	5	0.5%
97230	5	0.5%
97239	4	0.4%
97210	3	0.3%
97221	3	0.3%
97222	3	0.3%
97225	3	0.3%
97236	3	0.3%
Oregon	3	0.3%
97022	2	0.2%
97030	2	0.2%
97127	2	0.2%
97206	1	0.1%
97215	1	0.1%
07217	1	0.1%
097211	1	0.1%
96206	1	0.1%
97006	1	0.1%
97035	1	0.1%
97060	1	0.1%
97062	1	0.1%
97068	1	0.1%
97078-2689	1	0.1%
97140	1	0.1%
97205	1	0.1%
97206-1135	1	0.1%
97206-5336	1	0.1%
97209	1	0.1%
972093741	1	0.1%
97211-4604	1	0.1%
97213-2621	1	0.1%
97214-3203	1	0.1%

972143143	1	0.1%
972152937	1	0.1%
972154032	1	0.1%
97216-3840	1	0.1%
97233	1	0.1%
97286	1	0.1%
97403	1	0.1%
97405	1	0.1%
97408	1	0.1%
97520	1	0.1%
97809	1	0.1%
98223	1	0.1%
98607	1	0.1%
98685	1	0.1%
OR 97215	1	0.1%
Total	**966**	
Email		
	480	49.7%
marlen91@comcast.net	2	0.2%
meckel.traver@gmail.com	2	0.2%
meyer4842@comcast.net	2	0.2%
Paisleyartmachine@gmail.com	2	0.2%
paradigmshift@lovebeing.org	2	0.2%
Stanhoffman@mindspring.com	2	0.2%
ashford3150@gmail.com	1	0.1%
riversandroses@msn.com	1	0.1%
503-285-9419	1	0.1%
503-901-3618	1	0.1%
6yanga3@copper.net	1	0.1%
9215	1	0.1%
97215	1	0.1%
97220	1	0.1%
acadiabaird@gmail.com	1	0.1%
achadden@gmail.com	1	0.1%
acjaggard@gmail.com	1	0.1%
Aeminer@mac.com	1	0.1%
Agiedwoyn@yahoo.com	1	0.1%
albert@albertideation.com	1	0.1%

alexandra.jackiw@gmail.com	1	0.1%
alexcross3@msn.com	1	0.1%
alissakg@comcast.net	1	0.1%
Amatic@pdx.edu	1	0.1%
amberlinblessinger@gmail.com	1	0.1%
amhtw2003@yahoo.com	1	0.1%
Amiliscious@gmail.com	1	0.1%
amybakerma@yahoo.com	1	0.1%
Amylydiahall@gmail.com	1	0.1%
amyolene@gmail.com	1	0.1%
amyzing42@hotmail.com	1	0.1%
andrewtaylorwilkins@gmail.com	1	0.1%
angedetour@gmail.com	1	0.1%
anna@annafritz.com	1	0.1%
annelisekelly@gmail.com	1	0.1%
ansula@gmail.com	1	0.1%
anthony.m.fost@gmail.com	1	0.1%
aqua_lovr@yahoo.com	1	0.1%
attunementmovement@gmail.com	1	0.1%
Awakeningmeridian@gmail.com	1	0.1%
bbblues23@yahoo.com	1	0.1%
bcaplener@gmail.com	1	0.1%
ben.waisanen@mac.com	1	0.1%
ben_rasche@hotmail.com	1	0.1%
benndavenport@gmail.com	1	0.1%
betsysalter@comcast.net	1	0.1%
betsyzucker@gmail.com	1	0.1%
Bioplasticsoregon@gmail.com	1	0.1%
bjammin@aracnet.com	1	0.1%
Blondnahalf07@yahoo.com	1	0.1%
bobi_blue@yahoo.com	1	0.1%
bonitajdavis@mn.com	1	0.1%
bootsnbolts@gmail.com	1	0.1%
bowyerjo@aol.com	1	0.1%
brad@bradyazzolino.com	1	0.1%
bradley.mosher@gmail.com	1	0.1%
brandy.lentz@pcc.edu	1	0.1%
brazel.amanda@gmail.com	1	0.1%

brendapurvis@gmail.com	1	0.1%
brettlifenectar@gmail.com	1	0.1%
brianamitchell@gmail.com	1	0.1%
brianlmaher@yahoo.com	1	0.1%
brittany@webbrandagency.com	1	0.1%
brookmthompson@gmail.com	1	0.1%
Bryansebok@gmail.com	1	0.1%
budgarrison@ymail.com	1	0.1%
caglanbaler@gmail.com	1	0.1%
cait.irvine@gmail.com	1	0.1%
caldwelldavids@gmail.com	1	0.1%
carnation_54@hotmail.com	1	0.1%
carol.lane@excite.com	1	0.1%
carolesnews2@gmail.com	1	0.1%
carrielacina@gmail.com	1	0.1%
carrimunn@gmail.com	1	0.1%
carson@carsonlattimore.com	1	0.1%
certifiedpet@gmail.com	1	0.1%
Charliecoko@gmail.com	1	0.1%
chdorr@comcast.net	1	0.1%
Chhotiwala@gmail.com	1	0.1%
chris.shaffer@gmail.com	1	0.1%
christybrownnow@gmail.com	1	0.1%
cicombe@gmail.com	1	0.1%
Clairevoyant@gmail.com	1	0.1%
ColleenWelch@gmail.com	1	0.1%
conlon@pdx.edu	1	0.1%
coracoronel@gmail.com	1	0.1%
corrigan@easystreet.net	1	0.1%
courtney@scottwork.com	1	0.1%
courtney765@comcast.net	1	0.1%
cpypdx@gmail.com	1	0.1%
cqflores@gmail.com	1	0.1%
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craigopfer@yahoo.com	1	0.1%
crees1080@gmail.com	1	0.1%
cskpdx@aol.com	1	0.1%
cyndiro@gmail.com	1	0.1%

dabopen@gmail.com	1	0.1%
dallas_deluca@yahoo.com	1	0.1%
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dan@dc-creativelabs.com	1	0.1%
Dana.d.lmt@gmail.com	1	0.1%
danaawear@gmail.com	1	0.1%
dancingcreatress@gmail.com	1	0.1%
danielparkermusic@yahoo.com	1	0.1%
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davidafd@ymail.com	1	0.1%
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dj	1	0.1%
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drdan42@gmail.com	1	0.1%
drewhormann@gmail.com	1	0.1%
drift.mavyn@gmail.com	1	0.1%
droberts5949@msn.com	1	0.1%
dshultz52@gmail.com	1	0.1%

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Duchessoflevity@gmail.com	1	0.1%
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e33maschwab@gmail.com	1	0.1%
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greenbunnygoods@gmail.com	1	0.1%
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harriet.beauchamp@gmail.com	1	0.1%
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helgafuller@gmail.com	1	0.1%
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hlbryan@mac.com	1	0.1%
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pol@netstruct.com	1	0.1%
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quickcard@gmail.com	1	0.1%
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robertncrider@gmail.com	1	0.1%
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sarajeck@gmail.com	1	0.1%
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slvrnmph@gmail.com	1	0.1%
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Starfishlaughter@yahoo.com	1	0.1%
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suzanne@fatcathatsandsacks.com	1	0.1%
sweepingit@yahoo.com	1	0.1%
swerber@comcast.net	1	0.1%
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taggart@collectiveeye.org	1	0.1%
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z962873@hotmail.com	1	0.1%
ziegstar@gmail.com	1	0.1%
zipporahnaomi@gmail.com	1	0.1%
Total	**966**	
Phone		
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503-238-5217	2	0.2%
503-772-0453	2	0.2%
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leobender@gmail.com	1	0.1%
Total	**966**	

Moore-Love, Karla

From: Adam, Hillary
Sent: Wednesday, April 22, 2015 2:26 PM
To: Moore-Love, Karla
Subject: FW: LU 14-249689 Objection
Attachments: Reservoir Demolition Objection.docx

Karla,

Attached are comments for tomorrow's hearing for LU 14-249689 DM.

Hillary Adam
Bureau of Development Services
p: 503.823.3581

-----Original Message-----
From: Jeffrey Boly [mailto:jeff@jeffandlinda.org]
Sent: Wednesday, April 22, 2015 1:45 PM
To: Adam, Hillary
Subject: LU 14-249689 Objection

Dear Ms. Adams,

I am attaching a copy of the letter I sent to you dated March 19, 20115.
I want to make clear to the Council that I continue to object to the proposal and my reasons for objecting.

Sincerely,

Jeffrey E. Boly

March 19, 2015

Hillary Adam
Land Use Services
Bureau of Development Services
1900 SW 4th Avenue
Suite #5000
Portland, OR 97201

Re: LU 14-249689 DM (PC# 14-139549)
Demolition Review for Washington Park Reservoirs #3 and #4 and the Weir Building

Dear Ms. Adam:

I was on the Board of the Arlington Heights Neighborhood Association from 1998 until one year ago and for most of that time I was its president. In that capacity I believe I was more involved with the Reservoir preservation effort than anyone else on the west side. I assisted Cascade Anderson Geller in the preparation of the Washington Park Reservoirs application for historic monument status.

In my opinion the city will be unable to carry the burden of proof on the easiest approval criterial available, namely that **"Denial of a demolition permit would effectively deprive the owner of all reasonable economic use of the site."** Portland Planning and Zoning Code 33.846.080 C. 1. Demonstrating effective deprivation of all reasonable economic use of a site is a very high bar. The city cannot even come close to clearing it.

The city apparently and erroneously assumed the following as facts: 1) that the LT2 mandate regarding drinking water now and forever precludes reservoirs 3 and 4 from serving as storage for all water of any type; 2) that Congress will never repeal nor modify LT2; 3) that it need not consider an impending category 9 earthquake, where the outcome is unknown and therefore renders destruction of existing backup resources recklessly irresponsible, because either reservoir 3 or 4 or both may survive that earthquake; and 4) that there are alternatives to the demolition proposal, which are vastly less expensive, but easily implemented and are therefore more economically feasible than the proposal.

LT2 is political action based on questionable science. If after a category 9 earthquake either reservoir 3 or 4 or both were the only ones functioning, is there any question that Congress would prefer to have the emergency option of repealing LT2 to that of rebuilding another tank, and that this reasonably foreseeable possibility gives these resources economic utility?

The primary false assumption is that the only way to supply LT2 compliant water to the west side is by building a tank that is within the footprint of the current reservoir #3 and then constructing a new aesthetic amenity above it. There are two obvious alternatives that would cost tens of millions less and yet function as well as the proposal.

The first alternative is to simply take advantage of the #3 reservoir grillage that was installed in 2004. All that would be needed is to purchase a new cover. Since the city committed to this alternative over ten years ago as compliant with LT2, it can hardly argue now that installing a floating cover over reservoir #3 is not a "reasonable economic use of the site."

The second alternative is to use the same strategy on the west side that was implemented on the east side. On the east side the city appropriated a mountain many miles from the existing Mt. Tabor outdoor reservoirs to contain LT2 compliant water. On the west side there is a soccer field only a few hundred feet to the south of reservoir #4, which could be excavated for the new underground tank with the soccer field rebuilt on top.

This alternative is not only tens of millions less expensive than the proposal, but far easier to implement and spares the Historic Monuments. Obviously, the viable opportunity to continue only aesthetic use of the existing reservoirs and so avoid the extreme cost of replicating their historic and artistic value destroys the city's contention that demolition of the reservoirs is an economic necessity.

Some interested parties have the impression that the city is committed to rebuilding a replica of at least the existing reservoir 3 on top of the new tank. If that obligation is supposed to be in the proposal its actual text is to the contrary.

To be meaningful a commitment to restore must include detailed architectural plans, engineering studies, and a budget with guaranteed financing. Otherwise, the city is offering a substitute for the preservation benefits assured in Chapter 33.846, which like the reservoirs themselves are set in stone, in exchange for the vague promise of "a below-ground reservoir with a tiered reflecting pool in the same location and approximate footprint as the existing Reservoir 3 and a reflecting pool and stormwater swale in the location as the existing Reservoir 4 but with a reduced footprint."

Significantly the proposal seeks "to remove three contributing resources (Reservoirs 3 and 4 and the Weir Building) from the Washington Park Reservoirs Historic District." It makes no proposal for modification of the existing structures, but rather calls for their removal, that is demolition.

In conclusion the city has not and cannot demonstrate compliance with Planning and Zoning Code 33.846.080 C. 1. Moreover, the city does not even offer to attempt to replicate the protected artistic and historic features of these treasures. The proposal is facially flawed.

Sincerely,

Jeffrey E. Boly
2879 SW Champlain Drive
Portland, OR 97205-5833
Home 503-223-4781; Mobile 503-381-6492
jeff@jeffandlinda.org

Parsons, Susan

From: Parsons, Susan
Sent: Wednesday, April 22, 2015 1:36 PM
To: 'floy jones'
Subject: FW: #414 Washington Park testimony
Attachments: Washington Park reservoirs 3 and 4 demolition LUR; [User Approved] DEMOLITION REVIEW WASHINGTON PARK RES. APRIL 23, 2015; FW: HSR - Wash Park #9 LU 14-249689 DM – Demolition Review for Washington Park Reservoirs; FW: HSR - Wash Park #8 LU 14-249689 DM – Demolition Review for Washington Park Reservoirs; FW: HSR- Wash Park #7 LU 14-249689 DM – Demolition Review for Washington Park Reservoirs; FW: HSR - Wash Park #6 LU 14-249689 DM – Demolition Review for Washington Park Reservoirs; FW: HSR - Wash Park #5 LU 14-249689 DM – Demolition Review for Washington Park Reservoirs; FW: HSR - Wash Park #4 LU 14-249689 DM – Demolition Review for Washington Park Reservoirs; FW: HSR - Wash Park 3 LU 14-249689 DM – Demolition Review for Washington Park Reservoirs; FW: HSR Wash Park #2- LU 14-24968M – Demolition Review for Washington Park Reservoirs; FW: Historic Structure Report Wash. Pk #1

Hello Floy,
Your testimony was forwarded to the Commissioners offices this morning.
Kind Regards,
Sue

Susan Parsons
Assistant Council Clerk
City of Portland
susan.parsons@portlandoregon.gov
503.823.4085

From: Parsons, Susan
Sent: Wednesday, April 22, 2015 8:54 AM
To: Beaumont, Kathryn; Crail, Tim; Grumm, Matt; Moore-Love, Karla; Nebel, Erika; Rees, Linly; Robinson, Matthew; Schmanski, Sonia; Adam, Hillary
Subject: #414 Washington Park testimony

Susan Parsons
Assistant Council Clerk
City of Portland
susan.parsons@portlandoregon.gov
503.823.4085

Parsons, Susan

From: floy jones <floy21@msn.com>
Sent: Tuesday, April 21, 2015 8:52 PM
To: Council Clerk – Testimony; Moore-Love, Karla
Subject: FW: Historic Structure Report Wash. Pk #1
Attachments: 1944_001.pdf

To: City Council
The Washington Park Demolition Review April 23, 2015
Submitted for the record is the Portland Water Bureau's 2010 Historic Structure Report
From: Floy Jones

The Historic Structures Report will be submitted in nine e-mails in that the document was secured via public records request and the Portland Water Bureau refused to send the document as a whole document in order to make sharing the public document more difficult.
This report contradicts the Water Bureau's self-serving portrayal of the condition of the reservoirs.

Attached is part 1.

WASHINGTON PARK RESERVOIRS
HISTORIC STRUCTURES REPORT
Reservoir Nos. 3 and 4

City of Portland Water Bureau

December 2010

CASCADE DESIGN
PROFESSIONALS, INC.

THE OFFICE OF ROBERT DORTIGNACQ, AIA

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APPENDICES

LIST OF FIGURES

EXECUTIVE SUMMARY

The Washington Park Reservoirs structures and buildings are nationally significant as part of an early design for a city's open water system. The system is historically significant for its initial construction and subsequent additions involving monumental civic undertakings, for the exemplification of early concrete engineering construction technology, and for its architectural design. As recognition of their historic importance, the buildings, structures, and site were nominated to the National Register of Historic Places as the Washington Park Reservoirs Historic District on January 15, 2004. Generally, those features within the district boundary that date from the initial construction in 1894 through construction and additions dating to 1951 are considered historic contributing.

This report focuses on the historic and architectural nature of the facilities, as defined in the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings. While the treatment Standards are designed to be applied to all historic resource types included in the National Register of Historic Places – buildings, sites, structures, districts, and objects – the Guidelines apply to buildings and site amenities, such as stairs, walkways, etc., only.

As stated in the Secretary of the Interior's Standards, "Work that must be done to meet accessibility requirements, health and safety requirements, or retrofitting to improve energy efficiency is usually not part of the overall process of protecting historic buildings; rather, this work is assessed for its potential impact on the historic building." The Water Bureau interprets "health and safety requirements" to include compliance with the Environmental Protection Agency (EPA) new drinking water rule, issued in January 2006, under the Safe Drinking Water Act called the Long Term 2 Enhanced Surface Water Treatment Rule, (LT2). The Water Bureau's responsibility to the public and to comply with Federal laws for drinking water and structural/seismic safety may override aesthetic concerns expressed herein.

Concerns such as facility security, ability to perform after a natural or man-made disaster, maintenance concerns or vulnerability to operational failure are beyond the scope of this report.

From a historic perspective, the historic resources in the Washington Park Reservoirs Historic District are, for the most part, in good condition. The structures and buildings were carefully designed and were built for durability and low maintenance. Those considerations have allowed the structures to age gracefully. The facilities are used on a day to day basis. Very few original construction components have been lost or removed. There have been some minor modifications to the facilities to allow continued safe and environmentally responsible operation. In many cases, these alterations, such as new electronic measuring or pipe controls, supplement the historic resources instead of replacing them. Most of the significant prior deterioration, which included the decorative concrete finishes on the two gate houses and structural damage at the pump house, has been repaired previously. Some components have recently been renovated, such as site stairs and reservoir basin and wall repairs. Other components, such as roofing and paving, may now be in serviceable condition but are noted to be replaced shortly. Still other features may be advised to be replaced for restoration purposes.

The Portland Water Bureau contracted with Cascade Design Professionals, Inc. and Robert Dortignacq, historic architect, in early 2010 to develop a Reservoirs Historic Structures Report (RHSR), in order to provide expert advice on the condition, maintenance, rehabilitation and preservation of the historic features within the Washington Park Reservoirs Historic District.

The work on this RHSR included a review of existing historic research and documentation of the features, review of prior alterations, visual observations to physically determine the condition of the resources, assessment of the findings, and development of recommendations for preservation. Recommendations for preservations could change with respect to cost, schedule, and/or scope depending on implementation of Reservoirs Program for LT2. A Tabular Summary (included at the end of this section) was developed and includes preservation recommendations that are noted sufficiently to define the overall scope of the project, uncover significant unknowns, and provide a basis for establishing a construction planning budget. They are not defined to a construction bid level in nature, but rather are intended to provide a comprehensive, overall condition assessment of the historic features, and to provide a strategy for their continued preservation. Specific repair methods and development of rehabilitation construction documents were not part of this project scope.

The history and significance of the district and its context have been well-researched and documented, and therefore, that information is not repeated in this report. Instead a condensed statement of history and significance is provided for the user's reference. In addition, a Construction and Materials Reference Guide discussing the type of deterioration and typical remedial treatment for the different materials used in the district has been specifically developed, and is included in the appendix. A brief bibliography is also included for further reference. As the sole owner and operator of the facilities, the Portland Water Bureau has an extensive library documenting the initial construction, prior projects, and maintenance, as well as photographs.

The Reservoirs Historic Structures Report (RHSR) includes the analysis of historic resources as identified in the Washington Park Reservoirs Historic District National Register nomination. The buildings, structures, and objects included in this analysis are those noted as "contributing" according to the historic district National Register nomination. A total of eleven (11) historic resources were reviewed; five (5) contributing buildings, four (4) contributing structures (each reservoir and its dam), and two (2) objects (fountains).

Reservoir 3

Gatehouse 3
36 Weir Building
Site (Reservoir Structure and Dam, Site Wall [Parapet Wall] Assembly, Stairway, Walkways)

Reservoir 4

Gatehouse 4
Pump House 1
Generator Building
Fountain Structures

Site (Reservoir Structure and Dam, Site Wall [Parapet Wall] Assembly, Walkways, Stairways, Valve Tunnels)

Several historic resources that were not included in the 2004 nomination are also discussed: the access stairways between the reservoirs, related tunnels, access and connecting drives, stairs and paths, and the site improvement remains of the former caretaker's cottage.

This report discusses the components of these resources, e.g., the doors, windows, and structure, by similar construction groupings for ease of identity and recommendations. The Historic District boundary, including structures and other features, is shown on the Site Plan in Figure 1 in the Introduction.

A Technical Memorandum was issued in the performance of this work. Technical Memorandum No.1 (TM1) presented a review of background information, results of site visits and staff interviews, and an assessment of the condition of each reservoir component and bulleted recommendations for the preservation treatment of the various reservoir components. TM1 has been edited into this Final Report, along with the cost estimate and Tabular Summary.

In conjunction with preparation of the Technical Memorandum and Final Report, progress meetings were held with stakeholders and the neighborhood association. A 'Conditions Workshop' was held with Portland Water Bureau staff and stakeholders to review report findings, recommendations, and alternatives. The Condition Analysis and Recommendations are organized by reservoir, then by subcomponent to facilitate use of the report. The report is provided in a loose leaf binder and in electronic format to further allow ease of use and periodic updating of preservation projects.

The Tabular Summary below is a condensed version of the main report following its organization. It contains an abbreviated version of the observations and recommendations, as well as a prioritization, cost estimate, and mechanic skill level judgment. The Summary uses abbreviations to facilitate sorting according to Structure and Component. The Structure (first column) is identified by its affiliated Reservoir, such as "GH3" for Gatehouse at Reservoir 3. The Component (second column) for each structure is further abbreviated by using letters from the component, such as "CONC" for concrete walls, floor and roof. The third and fourth columns briefly describes the work and recommended treatment. For some recommendations there may be alternative, but equally acceptable solutions. Those are labeled as sub items, e.g.: A.1, A.2. A detailed explanation of the observations and recommendations is found in the main body of the RHSR. The fifth column notes the assigned priority, Short (less than 5years), Long (5-10 years), or Maintenance level. The sixth column notes the estimated cost for the anticipated work including ten percent contingency. The seventh and final column assigns a construction skill (practitioner) level for each recommendation that ranges from 'A', an historic preservation specialist, to 'C', a qualified contractor or PWB staff.

Please Note: As work is completed on these facilities, appropriate documentation should be provided.

Structure	Component	Observation	Recommendation	S	L	M	Cost	Contractor Skill Level [2]
RESERVOIR 3 GATEHOUSE 3								
GH3	CONC	Wall surface spalling; deteriorated and exposed reinforcing; some hairline cracks	Option A.1: Clean concrete exterior; test for water absorption; install cementitious patching, apply breathable sealer; retain below waterline wall as is	X			$35,000	A
GH3	CONC	Roof drain prone to clogging; some leakage	Option A.2: Install new interior drainlines; provide overflow to one line	X			$5,000	B
GH3	CONC	Roofing deteriorated	Option A.3a: Provide new membrane roof	X			$19,000	C
			Option A.3b: Provide new elastomeric coating at roof deck and interior of parapet	X			$10,000	C
			Option A.4a: Provide new elastomeric coating at roof coping	X			$8,000	B
			Option A.4b: Provide new standing seam coping at parapet and its interior side		X		$25,000	B
			Option A.5: Preserve existing Ransome floor lights			X	-	-
GH3	BALC	Non-historic balcony	Option A.1: Maintain deck until it needs major repair or is no longer necessary			X	-	-
GH3	DOOR	Non-original doors	Option A.1: Maintain existing metal door assembly; preserve existing cast iron sill			X	-	-
			Option A.2: Replace doors and frame; preserve existing cast iron sill		X		$12,000	B
GH3	WIND	Wood members weathered; operable - not operating	Option A.1: Preserve wood windows; provide minor repairs		X		-	-
GH3	INT	Metal stair has rust	Option A.1: Maintain metal stairway, wood cabinet, and existing historic mechanical equipment intact			X	-	-
			Option A.2: Provide limited interpretive tours, develop portable signage and graphic		X		$4,000	-

Structure	Component	Observation	Recommendation	S	L	M	Cost	Contractor Skill Level (2)
			Option A.3: Provide additional documentation, inventory and photographs of existing historic mechanical equipment		X		$4,000	A
GH3	STEP	Spalling on lower steps	Option A.1: Preserve, patch and repair entry steps, clean concrete surfaces, patch tests, patch spalled areas		X		$4,000	B
		Portions of original plaza missing	Option A.2: Preserve remains of original plaza and sidewalk, restore missing portions; coordinate work with adjacent site paving		X		$10,000	B
RESERVOIR 3								
36 WEIR BUILDING								
WB3	CONC	Exterior walls and roofing in good condition; small roof drain prone to clogging	Option A.1: Clean concrete exterior, test for water absorption, apply breathable sealer, if needed			X	$8,000	A
			Option A.2: Consider a cementitious or concrete finish coating		X		$20,000	A
			Option A.3: Revise existing roof drain; provide free standing roof drain, or revise the drain	X			$4,000	B
WB3	DOOR	Door and frame in fair condition; need repainting; exterior light rusty	Option A.1: Maintain existing non-original door			X	-	-
			Option A.2: Replace current door when worn out		X		$2,000	B
			Option A.3: Replace current light fixture when worn out		X		$1,000	C
WB3	WIND	Non-historic window in good condition	Option A.1: Maintain existing non-original window			X	-	-
			Option A.2: Replace current window when worn out		X		$1,500	B

Parsons, Susan

From: floy jones <floy21@msn.com>
Sent: Tuesday, April 21, 2015 8:54 PM
To: Council Clerk – Testimony; Moore-Love, Karla
Subject: FW: HSR Wash Park #2- LU 14-24968M – Demolition Review for Washington Park Reservoirs
Attachments: 1945_001.pdf

The attached Historic Structure Report is submitted for the Washington Park Demolition Review record (pt. 2 of 9)
LU 14-249689 DM – Demolition Review for Washington Park Reservoirs

Floy Jones

Structure	Component	Observation	Recommendation	S	L	M	Cost	Contractor Skill Level [2]
WB3	INT	Finishes are in good condition	Option A.1: Preserve existing historic equipment in place		X		-	-
			Option A.2: Update interior finishes as needed		X		$3,000	B
WB3	STEP	Steps are in good condition	Option A.1: Maintain existing non-original stair and paint handrailing			X	-	-
RESERVOIR 3 SITE								
S3	RES	Presence of stained concrete, extensive cracks, evidence of settlement (long-term)	Option A.1: Clean concrete dam face and walls; test for water absorption, patch test; install cementitious patching		X		$40,000	A
			Option A.2: Provide regularly scheduled cleaning of dam face			X	$8,000	B
			Option A.3: Continue to monitor dam stability and geologic/hydraulic affects on existing basin		X	X	-	-
		Platform in good condition	Option A.4: Prep and paint valve platform			X	$3,000	C
		Non-original stainless steel framing	Option A.5: Remove stainless steel pipe framework		X		$5,000	C
			Option A.6: Restore original paving		X		-	
S3	WALL	Areas of wall deteriorated, metal fence needs minor repairs, original lights and poles need repair	Option A.1: Clean concrete basin walls and urns; test for water absorption, patch tests; install cementitious patching; apply breathable sealer to wall caps	X			$100,000	A
			Option A.2: Preserve metal fencing and light fixture posts; repair and repaint	X			-	B
			Option A.3: Test basin walls; seal guardrailing wall cap and urns		X		$60,000	B
			Option A.4: Rehabilitate historic light fixtures and posts; provide new lighting		X		$75,000	A

Structure	Component	Observation	Recommendation	S	L	M	Cost	Contractor Skill Level [2]
			Option A.5: Replace existing modern poles and light fixtures with historically appropriate		X		$100,000	B
			Option A.6: Remove-consolidate electrical and data conduits that obscure wall pattern		X		-	-
S3	WALK	Walkways damaged, broken and spalled concrete. New gutters do not match original	Option A.1: Clean and preserve existing paving and gutter			X	$5,000	C
			Option A.2: Clean soiled walls, patch spalls and cracks; monitor hillside irrigation			X	$15,000	B
			Option A.3: Clean, plumb, repair free standing urn at SW corner of basin	X			$4,000	B
			Option A.4: Replace, patch damaged walkway slab		X		$20,000	B
			Option A.5: Replace, patch damaged gutter sections		X		$30,000	B
			Option A.6: Preserve historic grates and assorted historic metal lids			X	-	-
			Option A.7: Replace walkway and gutter; section not matching original design when worn		X		$15,000	B
S3	STAIR		Option A.1: Maintain and preserve stairs, railings, walls and urns			X	-	-
			Option A.2: patch spalls and cracks			X	-	-
S3	OTHER	Fencing and gates are in good condition	Option A.1: Preserve nonhistoric, but historically compatible fencing and gates			X	-	-
RESERVOIR 4 GATEHOUSE 4								
GH4	CONC	Walls have areas of spalling and deterioration. topping slab has spider cracking. roof drain prone to clogging. Problem with roof flashing.	Option A.1: Clean concrete exterior; test; install cementitious patching; apply breathable sealer to above waterline portion; retain below waterline wall as is	X			$25,000	A

Structure	Component	Observation	Recommendation	S	L	M	Cost	Contractor Skill Level [2]
			Option A.2: Check drainline for integrity; install new interior drainline if leaks; provide overflow to line; check coping cap and flashings for integrity	X			$7,000	B
			Option A.3a: Provide new membrane roof	X			$15,000	B
			Option A.3b: Provide new elastomeric coating over existing roof deck and interior side of parapet	X			$8,000	B
			Option A.4: Preserve existing Ransome floor lights			X	-	-
GH4	BALC	Steel is in good condition; paint coating failing	Option A.1: Prep and paint valve platform			X	-	-
GH4	DOOR	Doors in good condition	Option A.1: Maintain existing metal entry door assembly; preserve wood door frame and cast iron threshold; paint threshold			X	-	-
			Option A.2: Maintain existing wood door, frame and mortise latch and cast iron threshold at reservoir side; replace hinges; paint threshold			X	$1,000	C
			Option A.3: Replace metal entry doors and frame; preserve existing cast iron sill		X		$12,000	B
			Option A.4: Replace wood door at reservoir side when deteriorated; retain mortise latch, replace hinges		X		$2,000	B
GH4	WIND	Windows in generally good condition	Option A.1: Preserve wood windows; provide minor needed repairs		X		-	-
GH4	INT	Stair has minor rusting, but good structural condition	Option A.1: Maintain metal stairway, wood cabinet and existing historic mechanical equipment intact; add modifications as needed			X	-	-
			Option A.2: Provide for limited interpretive tours, develop signage and graphics		X		$4,000	C

Structure	Component	Observation	Recommendation	S	L	M	Cost	Contractor Skill Level [2]
			Option A.3: Provide additional documentation, inventory and photographs of historic equipment		X		$4,000	A
GH4	STEP	Some staining and spalling at steps; some ponding at downspout terminus	Option A.1: Preserve, patch, repair entry steps; clean concrete surfaces; patch tests; patch spalled areas		X		$4,000	B
			Option A.2: Preserve and restore original sidewalk		X		TBD	-
RESERVOIR 4 PUMP HOUSE 1								
PH1	CONC	Structure no longer original, but in good condition. Scuppers worn from use and exposure	Option A.1: Maintain walls in good structural condition; clean and seal cornice band		X		$5,000	A
			Option A.2: Preserve and rehabilitate original rain scuppers		X		$3,000	A
			Option A.3: Preserve Ransome lights and skylights			X	-	-
			Option A.4: Coat exterior with cementitious finish; correct uneven window infill; restore door and window surrounds		X		$18,000	B
			Option A.5: Remove sloped roof and install membrane roofing; provide new skylight; provide revised rain drains		X		$65,000	B
PH1	DOOR	Doors and frames in fair to good condition	Option A.1: Maintain existing metal entry door assemble; preserve cast iron threshold; paint threshold			X	-	-
			Option A.2: Replace metal entry doors and frame when needed; preserve existing cast iron sill		X		$12,000	B

Structure	Component	Observation	Recommendation	S	L	M	Cost	Contractor Skill Level [2]
PH1	WIND	Remaining exterior windows in good condition	Option A.1: Preserve wood windows; provide needed minor repairs; renew rope suspension on operable windows			X	$3,000	B
PH1	INT		Option A.1: Preserve historic equipment			X	-	-
			Option A.2: Provide regular maintenance of interior finishes and equipment, including floor painting			X	-	-
			Option A.3: Develop historic interpretive materials			X	$4,000	C
			Option A.4: Provide additional documentation, inventory and photographs of historic equipment		X		$4,000	A
PH1	STEP	Entry in good condition	Option A.1: Replace existing step when deteriorated; coordinate with installation of raised door opening surrounds		X		$3,000	C
RESERVOIR 4 GENERATOR BUILDING								
GB4	CONC	Building in fair condition. Vegetation and soil from hillside has overgrown the roof.	Option A.1: Remove vegetation and lower soil level at hillside above structure to at least 12" below roof line; maintain roof drainage operation; install overflow drain	X			$6,000	C
			Option A.2: Periodically clean and maintain walls; seal cornice band			X	$4,000	B
			Option A.3 Preserve and rehabilitate original rain scupper		X		$1,500	A

Structure	Component	Observation	Recommendation	S	L	M	Cost	Contractor Skill Level [2]
			Option A.4: Coat exterior with cementitious finish:		X		$6,000	B
GB4	DOOR	Non-historic door in good condition	Option A.1: Maintain existing door			X	-	-
			Option A.2: Replace current door when worn out		X		$2,000	B
GB4	WIND	Non-historic windows in good condition	Option A.1: Maintain existing windows			X	-	-
			Option A.2: Replace current windows when worn out		X		$5,000	B
GB4	INT	Interior wall paint needs refinishing	Option A.1: Maintain in current condition; repaint			X	-	-
GB4	STEP	Concrete in good condition	Option A.1: Maintain in current condition			X	-	-
RESERVOIR 4 SITE								
S4	RES	Basin lining has extensive patching. Dam face has heavy staining and biological growth. Evidence of leakage (efflorescence).	Option A.1: Clean concrete dam face, walls and urns; test for water absorption, patch tests; install cementitious patching; apply breathable sealer to wall caps and urns	X			$35,000	A
			Option A.2: Provide regularly scheduled cleaning of dam face; consider application of breathable sealer			X	$10,000	B
			Option A.3: Maintain reservoir basin structure, monitor leading; provide waterproofing or basin liner as necessary		X	X	-	
			Option A.4: Remove stainless steel pipe framework		X		$15,000	C
			Option A.5: Restore original paving		X		$25,000	B

Washington Park Reservoirs Historic Structures Report
Condition Analysis and Recommendations
TABULAR SUMMARY

Structure	Component	Observation	Recommendation	S	L	M	Cost	Contractor Skill Level [2]
S4	WALL	Wall has normal wear and tear. Deteriorated patches with exposed reinforcing. Walls are heavily soiled and stained.	Option A.1: Clean concrete basin walls; test for water absorption, install patch tests; install cementitious patching; apply breathable sealer to wall caps	X			$140,000	A
			Option A.2: Preserve metal fencing and light fixture posts; make repairs and repaint	X			-	B
			Option A.3: Test basin walls for water absorption; seal guardrailing wall cap and urns			X	$85,000	B
			Option A.4: Rehabilitate historic light fixtures and posts; providing new lighting		X		$60,000	A
			Option A.5: Replace existing modern poles and light fixtures historically appropriate units		X		$140,000	B
			Option A.6: Rehabilitate/restore historic lamp posts at ends of dam; provide new lighting		X		$35,000	A
			Option A.7: Remove/consolidate electrical and data conduits that obscure wall pattern					
S4	WALK	Damaged and broken slabs. Gutter has deteriorated portions.	Option A.1: Clean and preserve existing paving and gutter			X	$5,000	C
			Option A.2: Clean soiled walls, patch spalls and cracks; monitor hillside irrigation to prevent excessive moisture			X	$15,000	B
			Option A.3: Replace, patch damaged walkway slab		X		$8,000	B
			Option A.4: Replace, patch damaged gutter sections		X		$30,000	B
			Option A.5: Preserve historic grates and assorted historic metal lids			X	-	-

Structure	Component	Observation	Recommendation	S	L	M	Cost	Contractor Skill Level [2]
			Option A.6: Replace non-matching walkway and gutter sections when worn with new matching		X		$15,000	C
S4	OTHER		Option A.1: Maintain gate tunnels and access			X	-	-
			Option A.2: Remove vegetation from stone wall; repair masonry as needed			X	-	-
			Option A.3: Preserve stairs and road improvements to former caretaker's cottage			X	-	-
			Option A.4: Preserve non-historic fencing and gates			X	-	-
			Option A.5: Possible reuse of caretaker's cottage; document alterations; possible historic photos		X		-	-
RESERVOIR 4 FOUNTAINS								
F4	FOUN	Public fountain at north end of Reservoir dam largely intact; bowl has spalled-broken corners; some minor wear and surface damage on bowl and pedestal; heavily stained basin; plumbing fittings missing	Option A.1: Preserve-Repair Public Fountain; patch/repair concrete; clean concrete; clean up landscaping			X	$3,000	A
			Option A.2: Preserve-Repair Public Fountain: restore for operation - refit plumbing, fit with bubbler and operator for on-demand use		X		$5,000	A
	FOUN	Pedestal fountain adjacent to generator building has majority of basin missing; broken base corners; staining; interior pipe and bronze fitting intact	Option A.3: Preserve Pedestal Fountain: Preserve in storage until able to restore			X	-	-

Structure	Component	Observation	Recommendation	S	L	M	Cost	Contractor Skill Level (2)
			Option A.4: Preserve-Repair-Restore Pedestal Fountain: Cast replacement bowl, patch base corners, clean concrete; restore for operation; consider relocation to public area		X		$5,000	B
			Option A.5: Preserve - Provide interpretive signage for the two fountains		X		$1,500	-

(1) S Short term (1 to 5 years)
L Long term (5 to 10 years)
M Maintenance (Varies and ongoing)

Contractor Skill Level:
(2) A. Requires Historic Preservation Specialist/Specialty Contractor
B. Contractor with preservation background (i.e. 5 similar projects)
C. Qualified contractor or Water Bureau Maintenance Personnel

Parsons, Susan

From: floy jones <floy21@msn.com>
Sent: Tuesday, April 21, 2015 8:57 PM
To: Council Clerk – Testimony; Moore-Love, Karla
Subject: FW: HSR - Wash Park 3 LU 14-249689 DM – Demolition Review for Washington Park Reservoirs
Attachments: 1946_001.pdf

The attached is part 3 of the Washington Park Reservoir Historic Structure report submitted for the City Council Washington Park Demolition Review record (part 3 of 9). Please assure that all sections of the report are presented to City Council for review prior to decision. As mentioned in the first e-mail, the Water Bureau refused to send this document secured via a public records request as a whole document.

Floy Jones

INTRODUCTION

WASHINGTON PARK HISTORY AND SIGNIFICANCE

Portland first established its municipal water system in the 1890s. This was representative of other sizable municipalities across the country that sought to provide urban utility systems with an adequate supply of water for their growing cities. The supply was necessary not only to ensure safe water for domestic consumption, but also for fire fighting and manufacturing. The creation of the Portland water system involved significant effort and cost. The supply source, distribution network and reservoir system all needed to be assembled. Portland's leaders believed that the development of a dependable and safe water supply demonstrated the City's commitment to growth and the well-being of its citizens and future generations.

The effort to establish the municipal water system was the responsibility of Portland's Water Committee, a group created by the state legislature during special session in 1885. At that time there were issues relating to constant, adequate supply, and water purity facing the growing city that then depended on the local, privately owned water companies. Portland was growing, becoming industrialized, and was downstream from other developing towns that used the river for waste and sewer disposal. The city's residents were faced with the degradation of its river water like many other comparably sized cities in the country.

Water was needed for a wide variety of purposes, including domestic, agriculture, manufacturing, construction, and notably, fire fighting. The city's growth resulted in areas of densely populated, wooden structures, with essentially no fire protection. Although building practice was beginning to change from all wooden structures to a more substantial type with masonry exteriors and wood interior framing, nearly all remaining buildings from that era reveal fire scars on their interior framing, attesting to the day-to-day fire risks.

During this time, period health science was developing. New research discovered that certain epidemic diseases were water borne. Water purity increasingly became a concern for city leaders. Across the country, municipalities increasingly began to develop and control their own water supplies. Portland's Water Committee led the local effort to secure a clean, dependable source and supply of water at reasonable costs for its residents.

The new water system required a dependable source, the means to transmit the water, local storage facilities and the local distribution network. The Water Committee hired Colonel Isaac Smith as lead engineer for the project, and directed him to find a dependable water source replacement for the Willamette River. He recommended Bull Run Watershed and River,Lake, which the committee was able to secure, along with some surrounding watershed area. In addition, the Committee was able to secure federal protection for the greater watershed area (a current no trespass reserve).

Construction of Conduit No. 1 (pipeline) from the Bull Run Watershed to Portland was a considerable undertaking. The distance was great, the terrain difficult, and largely wilderness.

Construction required excavations, trestles and bridges to carry the gravity transmitted water from an initial elevation of 710 feet at the intake of the bull Run River to Mount Tabor, the chosen distribution site, at an elevation of 411 feet..

In Portland, Reservoir No. 1 was built at the Mount Tabor site. This reservoir fed and worked in conjunction with Reservoir No. 2 at the foot of Mount Tabor for east Portland service. The reservoirs at Mount Tabor supplied Reservoirs No. 3 and No. 4 at City Park (now Washington Park) through a conduit beneath the Willamette River for westside and downtown service. These four reservoirs provided a combined capacity of 66 million gallons of water, a 4-5 day supply for Portland.

In years following the 1905 Lewis and Clark Exposition, Portland grew significantly to a size nearly triple that of the initial system design. The water system came under pressure to enlarge its capacity to accommodate this new growth. A second supply line from Headworks, conduit No. 2, was added along with additional storage Reservoirs No. 5 and No. 6 at Mount Tabor in 1911. The reservoirs were interconnected by conduits in concrete tunnels between Reservoirs No. 1 and No. 5, (same elevation) and No. 6 on the lower west slope of Mt. Tabor. In 1923 a weir building (screen house) was added at Reservoir No. 1. In 1945, Conduit No. 3 (36" in size) and the accompanying 36 Weir House were added between Mount Tabor and Washington Park to provide additional supply for growth on the west side of Portland. Since that period, there have been other periodic enlargements and improvements to the Bull Run source supply, system conduits, and operations to keep pace with technology and growth. Yet, the system still utilizes the core design and most of the structures from the original period, a testament to its thoughtful long-term vision.

The construction of the first structures at Washington Park consisted of Reservoirs No. e and No. 4 and their associated gatehouses, dams, and reservoir basins. Reservoir design took engineering advantage of the natural terrain and also reflected the ideals of the City Beautiful Movement that was then becoming popular. These concepts sought to reinforce natural beauty within the built environment by creating a sense of order in the setting and harmony between structures and landscape. This was exemplified by the perimeter walkway and its decorative fencing around the reservoir, the paths, stairways, water fountains, and adjacent parkland and other public areas within a complex that provided municipal services. The Gatehouse used a Romanesque Revival design that was then popular in the country for engineering works, but was also a design reference to fortress gatehouses in England and the European Continent, where some similar structures also employed the use of water. The design conveyed a sense of strength and durability. It now also conveys a romantic setting.

Washington Park Reservoirs No. 3 and No. 4 dams, lining, perimeter walls, and gatehouses are constructed of poured in place concrete, the first large scale projects using the Ransome method that utilized twisted iron reinforcing bars. This was cutting edge technology at the time, as were the early concrete mix designs using Portland cement. The ability of liquid concrete to be formed and cast into a variety of shapes and surface textures added to its attractiveness. Popular styles could be constructed faster, stronger and more economically than previously. Work at the reservoirs later ancillary buildings continued the design style and type of construction using

current engineering and construction technology, but still with craft and attention to details. Much of the original piping, equipment, and mechanical construction still exists.

The Washington Park Reservoir structures and buildings are nationally significant as part of an early design of a city's water system. There are only a small number of major water districts still utilizing and operating their historic open reservoirs within an urban setting. The system is historically significant for its initial construction and additions involving monumental civic undertakings, for the exemplification of early concrete engineering construction technology, and for its architectural design.

PROJECT SCOPE & APPROACH

The purpose of this project is to develop a Reservoirs Historic Structures Report (RHSR) to provide an assessment of current conditions and recommendations for immediate and on-going maintenance, and for long-term preservation of the historic facilities and features within the Mount Tabor Park Reservoirs and Washington Park Reservoirs Historic Districts. The work items and procedures noted are generally not defined to a construction bid level in nature, although work items are noted sufficiently to define the project, uncover significant unknowns, and provide a basis for establishing a construction budget. This RHSR is based on the existing National Register Historic District nomination and includes review of existing historic research and documentation of the features, review of prior alterations, fieldwork for condition assessments, a tabular summary of results, and creation of an implementation plan. The tabular summary includes a prioritization list which identifies the immediate maintenance required to preserve the facilities against significant deterioration and the ongoing maintenance recommendations for items of lesser concern and significance.

The work is divided into two phases: Phase A – Mount Tabor Park, and Phase B – Washington Park. This RHSR pertains only to Phase B– Washington Park Reservoirs Historic Structures, and analyzes the condition of historic features as identified in the Washington Park Reservoirs Historic District (January 15, 2004). Buildings, structures, and objects included in this analysis are:

Reservoir 3	Gatehouse 3
	36 Weir Building
	Site (Reservoir Structure and Dam, Site Wall [Parapet Wall] Assembly, Stairway, Walkways)
Reservoir 4	Gatehouse 4
	Pump House 1
	Site (Reservoir Structure and Dam, Site Wall [Parapet Wall] Assembly, Walkways, Stairways, Valve Tunnels)

The Historic District boundary, including structures and other features, is shown in Figure 1, Site Plan.

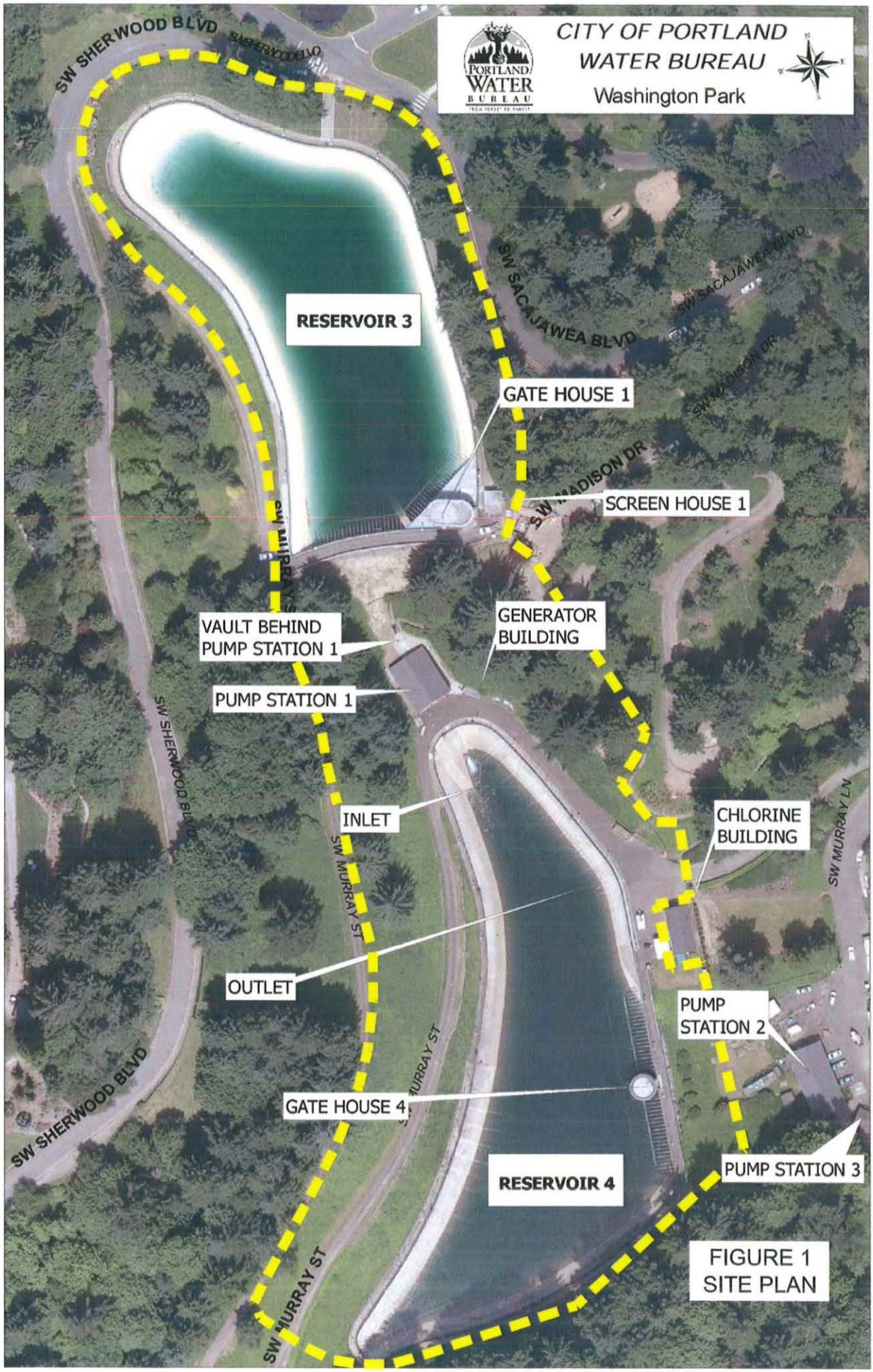


FIGURE 1
SITE PLAN

Phase B was divided into two parts. In Part 1 of Phase B, each of the historic contributing features of the above resources in the Washington Park Reservoirs Historic District were identified and reviewed, with a condition assessment developed for each. These were discussed with the Portland Water Bureau staff and the stakeholder groupo that included internal and external members. The results were documented in Technical Memorandum No. 1.

The consultant team visited each of the historic contributing resources over a three-week period during the field work portion. The visits were conducted by a team consisting of an architect to review the overall condition of the building or structure, a structural engineer to identify any pertinent structural deficiencies, and a civil engineer to review operational concerns. Each discipline then reviewed the findings in light of the building's or structure's historical significance. The reviews were visual and documented by digital photography. No testing or analysis was done in the course of the reviews.

Each of the contributing features was reviewed. A condition assessment for each of the features was developed, including a description of the facilities, discussion of the operations, photos, and an itemized list of apparent deficiencies.

Subsequently, in Part 2 of Phase B, alternative treatment means and methods to address deficiencies identified in the condition assessment were analyzed. Recommendations for improvements and a plan to implement the preferred alternatives were developed and discussed with the Portland Water Bureau staff and the stakeholder group that included internal and external members. The recommendations and implementation plan included a prioritization of major repairs and an ongoing maintenance plan. The results were incorporated into the final report. For some recommendations there may be alternative, but equally acceptable solutions. Those are labeled as sub-items, e.g. A.1 and A.2.

Final Report Format

The information from the technical memorandum have been integrated into this final RHSR. In the report, a separate, tabbed section is presented for each of the two Reservoirs (3 and 4). Within a particular section, each contributing resource is listed separately, such as Gatehouse 3, 36 Weir Building, etc. The building or structure is further broken down by contributing feature or component (such as balcony, windows, doors, etc), each of which includes a brief description, observations/conditions, treatment recommendations, alternative treatment options, and a priority (urgency, not significance) ranking. This information is summarized in the Executive Summary. Report appendices include a selected bibliography and relevant Department of Interior Historic Preservation Briefs. (These Briefs are typically not directed specifically toward the types of features and materials found at Washington Park, but they have some useful information and relevant methodology.) In addition, a Construction and Materials Reference Guide discussing the type of deterioration and typical remedial treatment for the different materials used in the district has been specifically developed and included.

METHODOLOGY FOR REPAIRS

Please Note: As work is completed on these facilities, appropriate documentation should be provided.

Treatment Guidelines

The recommendations and principles presented in this RHSR are in accordance with accepted good practice, and follow the Guidelines For Rehabilitating Historic Buildings as developed by the Secretary of the Interior in their "Standards for Rehabilitation". These recommendations for specific work on the buildings and structures follow those principles, guidelines, and methodology and are described below.

Fundamental Guideline for Treatment:
Work on historically significant buildings and structures seeks to

Identify, Retain and Preserve

those historic features and resources that distinguish their historic character.

Alternatives for Treatment

Once historic character defining features are identified and their conditions are assessed, recommendations can be made for their preservation. Those decisions need to consider both the nature of the feature and its anticipated use.

The following Secretary of the Interior guidelines define the possible alternatives for treatment, starting from the least invasive:

Protect and Maintain (Preserve): This method essentially seeks to slow deterioration. Often this is the recommended procedure, and always is the situation when there are adjacent projects that may damage the feature. This could be the recommendation when the feature can continue its intended use as is, or with minimal intervention, or when other repairs might threaten its integrity, or as an interim step until other treatment can occur. This work can also be considered as good maintenance.

Repair: When the physical condition of the historic character defining materials or features warrant, repairing is recommended. The general principle is to consider the least amount of repair necessary, then move to more extensive or invasive work where necessary. Repair may include limited replacement of heavily deteriorated materials. A project may, for example, include a basic level of repair work that satisfies most of the problem, and a smaller amount of more extensive repair. The existing condition should be well documented before any work commences.

Replace: The most invasive method of preservation is replacement. Generally this is only employed when the physical condition of the historic character defining materials or features is so deteriorated that suitable repairs are not feasible. The best replacement materials are those

that are in 'kind' or close to the original material in composition, performance and resultant expression (See Restore below). Replacement can also occur for other reasons, such as structural conditions, or greatly altered operational use. In these situations, the replacement required within the new design should be incorporated into the historic fabric as much as possible. The existing conditions should be well documented before any work commences.

Restore, Design For Missing Historic Features: When an entire feature or component is missing, it no longer plays a part in physically defining the historic character of the structure or building unless it can be accurately recovered. Salvage of the missing item is most preferable and should be the first objective. But salvage may not be feasible (or may occur later at an unknown time in the future). An alternative is to reproduce the feature. Typically, use of similar materials and the same design is necessary. For example, a new door or window, or lantern may be made using an original as the pattern and study guide. A second acceptable option is the replacement of the item with an alternative, historically compatible design. This design should not detract from the remaining historic feature attributes in its design, materials and finish. This alternative might be a necessary, but temporary solution for the continued protection of the structure (such as roofing or downspouts) that is then later removed when the original can be restored. The alternative design (second option, not first) should be sufficiently differentiated from the original historic feature so that it is not generally perceived as the original historic component.

Alterations/Additions: It is important that the historic building or structure be able to continue its use. Alterations or additions might be necessary to achieve this goal. They may be part of the overall preservation strategy, and may affect historic features directly or indirectly. Such work needs to be considerate of the character defining materials and features and should weigh alternative solutions or strategies. Work should be designed in such a manner that there is the least impact. This may include work on lesser or non-character defining features rather than on the primary ones. The work should not radically change, obscure or destroy character defining features. Reversibility of the proposed work should be considered (Can this be easily removed in the future? Could the original be restored?). Alterations can include removal of non-historic materials or elements. The existing conditions should be well documented before any work commences.

Prioritization

The highest priority is for the continued preservation of the most significant historic features, and for those that are most in danger of being lost. This is followed by those features having lesser deterioration, or having less imminent damage. The recommendations are grouped into Short-Term, ideally to be completed within 5 years, and Long-Term, from 5-10 years. No sub-definition should be used, since it is beneficial to allow preservation to occur as funding for other operational projects is obtained. In this way, lower priority items may be completed earlier than expected, but in concert with adjacent work, which improves construction and funding efficiency and does not require revisions of otherwise completed work. Other work may be best considered as maintenance and thus performed on a regular cycle using annual funding.

Preservation recommendations are primarily concerned with the continued retention, structural integrity, and 'well being' of the historic building and its features. A secondary aspect is the aesthetic quality of the resource and its environment or context. These attributes are those that can be reconciled over time without great concern for loss of historic material. Although secondary, they are important since they provide additional citizen support and pride.

Procedures

Work procedures on historic materials are very important. Inadequate knowledge, preparation, skill, or inappropriate materials can do more harm than good for particular items. However, the historic materials used on buildings and structures in the Washington Park Reservoirs Historic District are generally durable and heavily constructed. These materials, though worn, have a very long life span and can last much longer with appropriate maintenance.

While each specific material needs to be handled with regard to its specific properties, the general procedure for all repairs is as follows:

1. Inspect deteriorated conditions thoroughly to determine scope and degree of work. Document and photograph existing conditions.
2. Develop appropriate preservation and repair options; this often is a combination of strategies, not "one size fits all".
3. Fragile and very important historic features need closer guidance and review throughout the design and repair process.
4. Use test samples to determine the best remedial solution for the particular work; at highly visible features or where the outcome is not certain, first utilize separate test samples, then try field samples on the structure when reasonably assured of favorable results.
5. Use the gentlest means first, then step to more aggressive means if necessary; keep in mind that more aggressive repairs can also mean more loss of historic integrity, and potentially more rapid future deterioration.
6. If materials and products do not work satisfactorily, consider benefits of scaling back to a 'Preserve' strategy; future technology may provide a better result if the feature can last.
7. Since many repairs over time result in accumulated loss of original material, repair only what is necessary.
8. Replacements usually involve removal of original materials. Apply the test of reversibility to determine the best design; evaluate the ability to retain original materials in the replacement; document historic conditions; salvage materials in sound condition.
9. Review prior alterations and rehabilitation work to determine whether there is an adverse impact to the historic materials. If so, evaluate alternatives to design and installation.

Skill Level of Practitioners

The background and skill level of those involved in the repairs of historic features is an important aspect in the success of the repair and in the long term preservation of the resource. The formulation, design, specification and at times, the monitoring of most projects should be performed by individuals having adequate professional knowledge and historic expertise. The Tabular Summary assigns a construction skill level for each recommendation that is based on the combination of the feature or material's historic or unique nature, the current general availability of repair and replacement materials and the provider's skills.

Skill Level:

A: Use of a specialist historic preservation contractor is necessary; typically involves specialty products requiring prior experience on historic projects.

B: Use of a contractor with similar historic preservation experience; suggested: 5 similar firm projects, and primary workers to have experience on at least 3 similar projects.

C: Use of a qualified contractor or maintenance crew from PWB.

SUMMARY OF FINDINGS

From a historic perspective (not from an asset management perspective), the historic features in the district are in fair to good condition, are largely intact, and reflect their original construction. The buildings, structures and site are actively utilized and are maintained. None of the rehabilitation work necessary is of an immediate nature, i.e. the historic features are not in a position of needing urgent repairs to prevent their loss. There are, however, various projects that need to be completed in the short term (1-5 years) to prevent worsening conditions.

There are a large percentage of projects that can be remedied under a long-term time frame. These also include restoration-type projects that would enhance the district. Finally, there are various projects that can be incorporated as maintenance.

DOCUMENTATION

Historical structures may, in some cases, warrant certain procedures for documentation that complies with methods outlined in "Historic Architectural Building Survey" (HABS) in which the media (such as large format or digital photographs, drawings, etc. process) is used to record certain features. This is especially true for structures and components slated for demolition or extensive remodel. The facilities at Washington Park already bear historical designation and such documentation is not warranted at this time. If any large scale changes are planned, beyond the scope of this report, it is recommended that a Memorandum of Understanding be prepared that outlines any proposed changes and that the changes will be consistent with the State Historical Preservation Office.

IMPLEMENTATION PLAN

The Implementation Plan will be based on the Tabular Summary provided in this report. The Tabular Summary uses abbreviations to facilitate sorting according to Feature, Structure and Component and corresponds to the report narrative. The Feature or Structure (first column) is identified by its affiliated Reservoir, such as "GH3" for Gatehouse 3 at Reservoir 3 and "GB4" for Generating Building at Reservoir 4. The Component (second column) for each structure is further abbreviated by using letters from the component, such as "CONC" for concrete walls, floor and roof.

Portland Water Bureau (PWB) will use the Tabular Summary as a starting point to develop a detailed Implementation Plan. A PWB stakeholder group will be established consisting of the appropriate representatives and will use the Tabular Summary to facilitate sorting work projects by priority, cost or skill level and update as necessary to reflect personnel availability and financial conditions.

Parsons, Susan

From: floy jones <floy21@msn.com>
Sent: Tuesday, April 21, 2015 8:58 PM
To: Council Clerk – Testimony; Moore-Love, Karla
Subject: FW: HSR - Wash Park #4 LU 14-249689 DM – Demolition Review for Washington Park Reservoirs
Attachments: 1947_001.pdf

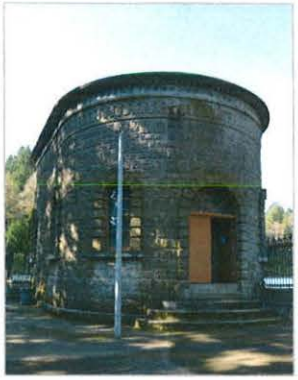
Attached is part 4 of 9 of the Washington Park Reservoir Historic Structures Report submitted for the City Council Washington Park Demolition review record, LU 14-249689 DM – Demolition Review for Washington Park Reservoirs. Please confirm that this and all of the nine sections of the report have been submitted to City Council for review prior to decision.

Floy Jones

RESERVOIR 3

Contributing historic features at Reservoir 3 include the basin, its perimeter wall system and dam, gutter and walkway, the gatehouse on the southeast side, and the 36 Weir Building (screen house) adjacent to the gatehouse near the southeast corner.

GATEHOUSE 3



Reservoir 3 - Gatehouse 3

Concrete Walls, Floor and Roof

The building is a poured in place reinforced concrete structure, oval in plan, measuring 47 feet east-west and 26 feet north-south, and is symmetrically composed and located on the south side of the reservoir toward the inlet chamber on the east. It was constructed using Ransome construction and finish patents that were the latest technological achievement at the time of its 1894 construction. The exterior was formed with a rusticated block pattern that was bush hammered to provide a heavy rock finish, while the interior is smooth and painted. There is a low projecting parapet with a frieze using repetitive chamfered square recesses, horizontal molding lines and a projecting cornice with a dentil course below aligning with the frieze pattern. Door and window openings are round arch headed and have projecting surrounds with a prominent sill projection. There is a molded water table base. The lower water facing exterior below the water table line (floor line projection) is unpatterned and coated with cement plaster and waterproofing. The concrete floor deck is finished with a smooth troweled concrete and is without other finishes. The floor has imbedded glass relights installed under the Ransome's patent method. The concrete roof deck, 19½ feet above the floor, is supported on concrete beams. Roof drainage is internal by means of two cast iron pipes embedded in the exterior wall, one at the northeast and one at the southwest, that are routed under walkways to daylight into surface drainage facilities. The exterior was rehabilitated in 1988-89 with work that included patching injection crack filling, an exterior cementitious coating at the window sills, cornice and on the below waterline walls. The coping and roof deck were coated with an elastomeric deck coating. There are several unflashed steel brackets.

Condition/Observations: The exterior wall is in fair to good condition. There are some new cracks and spalled areas, some where reinforcement is exposed. There are some horizontal hairline cracks at the concrete cold joints, although none run through the wall to the interior. There is some soiling and moss accumulation on the exterior water table projection, sills and other horizontal projections. The roof coating is over 20 years old and well worn. Moisture was noticed at the top of the interior wall on the southwest, south and east sides; this appears to be due to roof and rain drain leaks at these locations. There is also some leakage in the center of the roof. The interior is reported to typically have significant condensation. Below the deck level at the waterline the wall is eroded. The roof drain design is prone to clogging.

Treatment Recommendations: The patterned concrete above the waterline requires protection to minimize future deterioration. Damaged and spalled areas should be patched. The original concrete finish should be expected to be difficult to match.

Option A.1: Preserve and Repair – Gently clean the concrete exterior; test for water absorption, perform patch tests; install cementitious patching to rebuild severely deteriorated horizontal projections and apply a breathable sealer to the above waterline, articulated concrete finish; retain lower below waterline wall as is.

Priority: Short-term

Option A.2: Repair, Replace – Check both drainlines for integrity. Install new interior drainlines if existing leak; provide overflow to one of these lines.

Priority: Short-term

Option A.3a: Replace – Provide a new membrane roof. This will require revision or removal of protruding brackets.

Priority: Short-term

Option A.3b: Repair – Provide new elastomeric coating over the existing roof deck and interior side of parapet.

Priority: Short-term

Option A.4a: Repair Replace – Provide new elastomeric coating over the existing roof coping.

Priority: Short-term

Option A.4b: Repair Replace – Provide new standing seam coping at parapet and its interior side similar to Gatehouse 4.

Priority: Long-term

Option A.5: Preserve – Preserve existing Ransome floor lights.

Priority: Maintenance

Metal Decking, Balcony

There is a wide reservoir side deck that was installed as part of Water Bureau Project Number 3367, Washington Park Open Reservoirs 3 and 4 Improvements, completed in 2003-2004. It is constructed of stainless steel and utilizes a hatch door to allow access to the reservoir stairway below. The valve operating platform is located on the dam – this is described in the Site section.

Condition/Observations: The non-historic stainless steel decking and related metal work is in good condition.

Treatment Recommendations: The metal decking and framing although in good condition is not historic and may be removed if no longer needed for operations.

Option A.1: Maintain – Maintain the deck until such time as it needs major repair or is no longer necessary, then consider revisions or removal.

Priority: Maintenance.

Doors

The single entry has inswinging doors topped with a fan light and is located at the top of five concrete steps on the east side of the building. The minimal top landing is covered with the original cast iron sill. The doors are flush steel (1980's) mounted on a hollow steel frame that are replacements for the original wood units. The arched transom and fan light has an outer plexi-glass glazed protection window. There is no reservoir side door or opening.

Condition/Observations: The non-original paired hollow metal entry doors and frame are in fair condition.

Treatment Recommendations:

Option A.1: Preserve and Repair – Maintain the existing metal door assembly as is. Preserve the existing cast iron sill.

Priority: Maintenance.

Option A.2: Repair and Replace – Replace the doors and frame with historically appropriate wood doors. Preserve the existing cast iron sill.

Priority: Long-term.

Windows

There are nine windows symmetrically located around the building. Windows are arch topped, wood double hung, 4/4 with rope suspension; all but two windows have missing ropes. Some have latch locks, and none have lift hardware. Glass is intact, but most of it appears to have been replaced over time. It is not historic, and one pane is cracked. The non-roped windows are unused. Windows have recently been fitted with interior security grilles fabricated of expanded galvanized metal. the new interior grills replaced similar ones previously on the exterior.

Condition/Observations: The windows and sills are generally in good condition but minor repairs and painting are needed.

Treatment Recommendations:

Option A.1: Preserve and Repair – Preserve the wood windows. Provide needed minor repairs including caulking, patching and painting. Replace rope suspension on windows designated to be operable; Suspension improvements are not needed on inoperable units.

Priority: Long-term

Interior Space

The interior retains much original wheeled valve and mechanical equipment, operable but no longer used since valves are operated remotely. Overhead trolley and curved track are intact, but the lifting cranes have been removed. There are multiple (Ransome) glass floor lights, and iron lids that are intact. There is an historic wood storage cabinet on the north wall. A curved iron stairway descends clockwise to the lower level starting at the west end. The treads have been overlaid with expanded metal for better traction, but otherwise the assembly is in historic condition. The metal stairway to the lower level is similar to the design shown on Mount Tabor Gatehouse 1 drawings dated 1917 that apparently replaced the original stair and matched the 1911 stair at Mount Tabor Gatehouse 5. The interior lighting is by modern floodlights surface-mounted overhead around the perimeter.

Condition/Observations: The metal stair has some surface rusting, but appears structurally well maintained.

Treatment Recommendations:

Option A.1: Preserve – Maintain metal stairway and railing to the extent possible, wood cabinet, and existing historic mechanical equipment intact; New equipment modifications added as needed with minimal removal or replacement of historic materials.

Priority: Maintenance

Option A.2 – Provide for limited interpretive tours, develop portable signage and graphics depicting operations.

Priority: Long-term

Option A.3 – Provide additional documentation, inventory and photographs of existing historic mechanical equipment

Priority: Long-term

Entry Steps

There are five concrete steps including the upper step flush with the entry doors that ascend from the walkway. The top step is straight and has a cast iron threshold at the entry doors. The lower three steps have radiused returns in a Romanesque style that extend past the door to the building wall. The step nosing is square and without a projection; the steps appear to have been rebuilt in the past to match the originals except for the nosing. There are no handrails. A section of the original walkway, approximately ¼ circle, exists on the south side; it has 20" square tooling pattern that radiates from the building. It appears that more of the remaining walk is overlaid with asphalt.

Condition/Observations: There is some spalling on the lower steps on the south end.

Treatment Recommendations:

Option A.1: Preserve and Repair – Preserve, patch and repair the entry steps with matching material; Clean concrete surfaces, remove loose and deteriorated material; patch tests; patch spalled areas.

Priority: Long-term

Option A.2: Preserve and Repair – Preserve the remains of the original plaza and sidewalk and restore missing portions or those overlaid with new construction. Coordinate work with adjacent site paving.

Priority: Long-term

36 WEIR BUILDING

Reservoir 3 – 36 Weir Building

Constructed in 1945, the 36 Weir or Inlet Building is located a short distance to the east of Gatehouse 3. It was originally built when the additional westside 36" diameter Conduit #3 was constructed. The screening function was replaced by facilities at Powell Butte, and currently the building is utilized for security and storage.

Concrete Walls, Floor and Roof

The rectangular single story reinforced concrete building measures approximately 10 feet by 16 feet and is approximately 3 feet above the adjacent grade. The small structure is built into the hillside on the east. The exterior wall surface is smooth with a short regressed parapet. The building has a flat concrete roof deck, and has a steel I-beam for screen hoisting.

The roof has a modified bitumen membrane covering that terminates at the outside edge of the parapet coping with a sheet metal flashing. The roof drain [currently a 2" sleeve] is routed through the low coping at the northeast corner. The drain connects to a 4" cast iron downspout that in turn drains into the adjacent walkway catchbasin at the end of the open walkway gutter.

The front, or south side, adjoins a large raised concrete water vault lid of more recent construction. Some of the concrete walls have been refinished and display plywood form and gridding marks.

Condition/Observations: The exterior walls are in good condition. The roofing appears to be in good condition. The small roof drain is prone to clogging.

Treatment Recommendations:

Option A.1: Preserve– Gently clean the concrete exterior; test for water absorption, and apply a breathable sealer if needed.

Priority: Maintenance.

Option A.2: Preserve and Repair – Consider a cementitious or concrete finish coating to allow a uniform and protective finish.

Priority: Long-term

Option A.3 Preserve and Repair – Revise the existing roof drain; Provide a free standing roof drain connected to the existing pipe and an open overflow, or revise the drain to be an open scupper style.

Priority: Short-term

Door

There is a single entry with an inswinging door on the east side. It is a flush metal door with metal frame. Over the entry door there is a contemporary surface mounted light fixture.

Condition/Observations: The non-original hollow metal entry door and frame are in fair condition, and only need repainting. The opening is not scheduled for revision under recent Water Bureau Project numbers 3366 and 1086, Washington Park Interim Security and Deferred Maintenance. The exterior light fixture is intact, but slightly rusty.

Treatment Recommendations:

Option A.1: Preserve– Maintain the existing non original door.

Priority: Maintenance.

Option A.2 Preserve and Repair– Replace the current door when worn out with a door similar to the original construction.

Priority: Long-term.

Option A.3 Preserve and Repair– Replace the current light fixture when worn out with a fixture similar to the original construction.

Priority: Long-term.

Parsons, Susan

From: floy jones <floy21@msn.com>
Sent: Tuesday, April 21, 2015 8:59 PM
To: Council Clerk – Testimony; Moore-Love, Karla
Subject: FW: HSR - Wash Park #5 LU 14-249689 DM – Demolition Review for Washington Park Reservoirs
Attachments: 1948_001.pdf

Attached is part 5 of 9 of the Washington Park Reservoirs Historic Structures Report submitted for the City Council Washington Park Demolition Review record, LU 14-249689 DM – Demolition Review for Washington Park Reservoirs. Please confirm that the entire report all 9 sections have been submitted to the City Council for review prior to their decision.

Floy Jones

Window

There is a single window on the south side. The current window, which is a late 1990's replacement, is a paired painted metal casement with single pane wire glazing. The sash is divided horizontally.

Condition/Observations: The non-historic window is in good condition.

Treatment Recommendations:

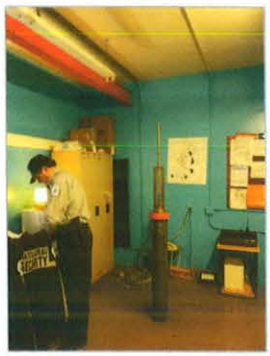
Option A.1: Preserve– Maintain the existing non original window.

Priority: Maintenance.

Option A.2 Preserve and Repair– Replace the current window when worn out with a window similar to the original construction.

Priority: Long-term.

Interior Space



The interior is a single room with smooth painted concrete walls and ceiling. The wood floor structure is covered with vinyl composition tile. Lighting is by pendent mounted contemporary florescent fixtures. The screen lid, water gauge, and hoisting I-beam are intact historic materials. New security equipment has been installed in the room.

Condition/Observations: The finishes are in good condition.

Treatment Recommendations:

Option A.1 Preserve– Preserve the existing historic equipment in place. If required to relocate, record equipment and installation, store or reinstall at safe location.

Priority: Long-term.

Option A.2 Preserve and Repair– Update the interior finishes as necessary in a manner that is historically appropriate.

Priority: Long-term.

Entry Steps

A concrete stairway and landing provides access from the south walkway along the edge of the raised vault. The five steps are simply detailed with sloped risers. There is a painted pipe handrail on the open side. This stairway appears to have been rebuilt, but the handrailing appears to be original.

Condition/Observations: The steps are in good condition.

Treatment Recommendations:

Option A.1: Preserve–. Maintain the existing non original stair and paint the handrailing.

Priority: Maintenance.

SITE

Reservoir 3 – Site

Reservoir Structure and Dam

Reservoir 3 was formed by damming the drainage on the south. The resulting basin utilized a concrete lining that tied into a site wall (parapet wall) around the perimeter of the basin. A concrete stairway descends into the basin from the southeast corner by the gatehouse.

At a hydraulic grade line of 299 feet, the reservoir serves by gravity the upper portions of downtown Portland and northwest neighborhoods to approximately NW 23rd Avenue. The basin is Portland's deepest at 49 feet and is roughly 180 feet wide by 500 feet long. The construction included retrofitting of the drain tunnels. PWB is unaware of any tunnels under the reservoir, but they do know that tunnels are located on slopes adjacent to the reservoir. These systems are still in operation. The reservoir has had various waterproofing systems over time to resolve leak issues. The current flexible hypalon membrane was installed in 2003.

A stainless steel pipe framework descending from the dam and gatehouse walls into the reservoir is intact. The structure was installed in 2003 to allow a previously proposed reservoir cover to be pulled back for basin maintenance.

The gently radiused, 175 foot long dam has a base of approximately 40 feet that narrows at the top to provide a 10 foot wide vehicle lane, with narrow walks and guard walls on each side (discussion of these walls is included under Basin Wall Assembly). The earthen dam is concrete faced on both sides. On the dry side, the design employs a rusticated block pattern from the base upward. The top section uses the design of a blind arcade of embossed stone pattern to give the appearance of a classic viaduct. This is achieved by forming the arched structure portion (arches at 10 foot centers) and roadway walls vertically, while the lower wall continues up and into the arches maintaining its slope. The roadway asphalt is overlaid on portions of the original 4-foot wide sidewalks. A portion of the walks are visible at the east end near the gate house.

There is a painted steel valve platform located west of the gatehouse on the reservoir side of the dam. It is a non-historic fabrication that has replaced the original at this location.

Condition/Observations: The basin has had a long history of drainage and geologic problems. Measures have been taken to stabilize the condition, but with the underlying geologic condition, these problems presumably will continue. At this time, there is a buckling or heave zone at the most problematic section on the west side of the reservoir, that is evident beneath the liner and that extends across the walkway and hillside retaining wall. Reservoir 3 construction undercut the toe of an ancient landslide. Landslide continues to move or creep.

The dam has numerous cracks on the south or downstream side. Crack monitors have been installed at various times in the past, some as much as 20 years ago, according to Water Bureau staff. A review of available reports and literature indicates that larger scale geological movements have been an ongoing concern for the Washington Park reservoirs and dams. The open guard rail at the west end of the dam has several significant cracks.

The recently constructed valve platform at the reservoir side of the dam is in good condition except for its paint which is peeling. The paint did not properly bond to the galvanized coated steel.

Treatment Recommendations:

Option A.1: Preserve and Repair – Gently clean the concrete dam face and walls; test for water absorption, perform patch tests; install cementitious patching to rebuild severely deteriorated areas; apply a breathable sealer to the wall caps.

Priority: Long-term

Option A.2: Preserve– Provide regularly scheduled cleaning of the dam face to reduce biological and environmental damage and the subsequent need for stronger cleaners.

Priority: Maintenance.

Option A.3: Preserve and Repair – Continue to monitor dam stability and geologic/hydraulic affects on the existing basin.

Priority: Maintenance, Long-term

Option A.4: Preserve and Repair – Properly prep and paint the valve platform.

Priority: Maintenance.

Option A.5: Preserve and Repair – Remove stainless steel pipe framework that was installed for the reservoir cover maintenance.

Priority: Long-term.

Option A.6: Preserve and Repair – Restore original paving located beneath the asphalt overlay.

Priority: Long-term.

Site Wall (Parapet Wall) Assembly

Along the dam portion on the east side there is a 42" high guard wall on the free side that is designed as a massive square sectioned balustrade. The wall terminates at massive concrete post bases on each end. These supported decorative lamposts with triple light fixtures, the center post portion of which survives. On the reservoir side, the guard wall is solid, 38" high, with a raised diamond pattern set within recessed panels. The pattern on this side is mostly obscured by multiple (7) electrical service conduits. The wall features a projecting crowned and chamfered cap, an apron beneath and a projecting base. The wall on the reservoir side has ornamental iron fencing mounted to its cap. Beyond the dam, it becomes heavily battered with smooth finished concrete and without pattern or base design. The cap and fencing design continues.

On top of the concrete reservoir wall there is a six foot high, ornamental wrought iron fence. This historic fence consists of decorated upper and lower rails, and vertical bars alternating in height all with a spear design. The end posts of the fence segments are set into the concrete cap and have a curved brace on the reservoir side. The wrought iron is fabricated with solid square and flat bars. There are a total of five four-sided ornamental fence columns serving as light poles. At these locations the concrete wall widens to receive the metal post. These posts still retain the wrought iron top that once held gas lamps that provided walkway lighting. At the gatehouse the wall returns to join the gatehouse wall. Original lighting was by a single gas lamp. Each end of the dam's open railing is punctuated by a large ornamental lamp post composed of square shaped concrete base that is 3-1/2 feet wide and 6 feet high that supports a wrought iron light standard, originally with three gas lights. Current lighting is from free standing tapered aluminum posts with globe and top reflector type fixtures that are located next to the rail wall.

Condition/Observations: The low concrete wall has many areas that are deteriorated, including the cap, projecting diamond patterns, and joint edges. There have been some prior patching repairs, but many other defects now are evident. The iron fencing is in fair condition needing minor repairs and repainting. Security monitoring cables have recently been attached to the metal work. Lighting on the fencing was discontinued long ago and the actual fixtures are missing, however most of the posts are in place. Electrical conduit feeds for the current light poles are surface mounted on the walkway side of the low wall and junction down to the base of each metal lamp post (50-foot spacing). The installation nearly covers the wall making it difficult to perform repairs. Additional security measures include cameras are mounted on these and newer posts.

Treatment Recommendations:

Option A.1: Preserve and Repair – Gently clean the concrete basin walls and urns; perform patch tests to develop best match; install cementitious patching to rebuild severely deteriorated areas.

Priority: Short-term

Option A.2: Preserve and Repair – Preserve metal fencing and light fixture posts; make repairs and repaint. Lead abatement is possibly required.

Priority: Short-term

Option A.3: Preserve and Repair – Test the basin walls for water absorption; Seal the guard railing wall cap and urns with a breathable sealer if appropriate; Due to the large area involved select only most needed elements for treatment.

Priority: Long-term

Option A.4: Preserve and Repair – Rehabilitate historic light fixtures and posts; provide new lighting for ambiance.

Priority: Long-term

Option A.5: Replace – Replace existing modern poles and light fixtures with units that are historically appropriate.

Priority: Long-term

Option A.6: Repair - Replace – Remove-consolidate electrical and data conduits that obscures the wall pattern.

Priority: Long-term

Walkways and Walls

The basin guard wall with iron fencing is surrounded by a continuous five-foot wide concrete walkway. The walk is scored in 30-inch squares and has a light broom finish. The lengths along the hillsides have an integral concrete gutter to capture and direct surface runoff. There is a free standing concrete urn adjacent to the walkway at the southwest corner of the basin. It is similar to those at the ends of dam rail walls. There are historic cast iron bar grates on the south gutter corners. In addition, there are several cast iron lids around the perimeter of the reservoir. Non-historic poles with lighting and security cameras (50-foot spacing) are located adjacent to the low wall around the basin and dam. The outer gutter perimeter changes from a low curb wall to a tall retaining wall as the hillside requires. These retaining walls are constructed as a battered (leaning back) wall with a rock faced block finish pattern. The wall cap has a smooth finish similar to the cap on the reservoir guard wall. There is a single large concrete urn at the south end of the wall on the west side. It is similar to ones at the grand north stair. The reservoir wash down piping and associated equipment is located just outside of the perimeter gutter curb and wall. The system includes valves and risers for hose connections. A hillside landscape irrigation system is located beyond the wash down piping.

Condition/Observations: The walkway has some damaged areas, including broken slabs, corners, spalls, and roughened surfaces, but is generally in good condition. Portions of the paving have been replaced as part of electrical and security improvements. At the northwest side approximately 200 linear feet of walkway and accompanying gutter have been replaced [this coincides with the earth movement zone]. The pavement tooling pattern at this section does not match the original and the gutter has a "V" shaped profile instead of the broad "U" shape. The gutter is in worse condition than the walkway having many deteriorated sections. The outer retaining walls are heavily soiled and mossy, and there are some areas of surface damage to the original block pattern. The free standing urn at the southwest corner of the basin has developed a lean, and is slightly deteriorated and soiled.

Treatment Recommendations:

Option A.1: Preserve and Repair – Clean and preserve existing paving and gutter.

Priority: Maintenance

Option A.2: Preserve and Repair – Clean soiled walls, patch spalls and cracks to match original design, texture and color; monitor hillside irrigation to prevent excessive moisture from damaging retaining walls.

Priority: Maintenance

Option A.3: Repair - Replace – Clean, plumb, repair the free standing urn at the southwest corner of the basin.

Priority: Short-term

Option A.4: Repair - Replace – Replace, patch damaged walkway slab; match original paving pattern and texture.

Priority: Long-term

Option A.5: Repair - Replace– Replace, patch damaged gutter sections with new to match original pattern.

Priority: Long-term

Option A.6: Preserve and Repair – Preserve historic grates, and assorted historic metal lids.

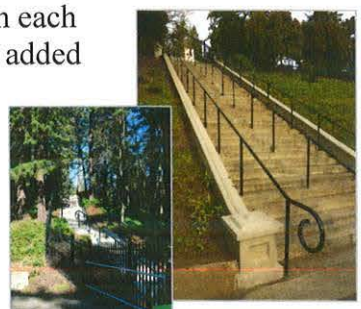
Priority: Maintenance

Option A.7: Replace – When worn, replace walkway and gutter sections not matching original design with new to match original

Priority: Long Term

Stairways

There are two stairways in addition to the vehicle roadways that provide access to the reservoir and its perimeter walkway. The stairway at the north was designed as a grand approach from the upper level circle drive. The concrete stair, which was built with the original reservoir construction, descends with two short stair runs rounding a planting bed that then join with a straight run that follows the hillside slope down to the reservoir walk. The main portion of the stairway is 11 feet wide and has low smooth concrete cheek walls with molded caps. These walls terminate at large concrete urns on each side and on each end. Recent (2008) painted metal handrails have been added inside each wall and at the centerline.



The second stairway is smaller in width (seven feet) and length and is located along hillside fencing on the southeast side of the reservoir, also connecting the circle drive to the reservoir near the gatehouse. This stair replaced a similar stair in 2008 that was heavily deteriorated.

Condition/Observations: The main and secondary stairs are in good condition following the recent rehabilitation work. The patches on the main stairway are very noticeable due to their color difference. The urns and associated walls at the top entry of this stairway are in good condition.

Treatment Recommendations:

Option A.1: Preserve and Repair – Maintain and preserve the stairs, their railings, walls and urns.

Priority: Maintenance

Option A.2: Preserve and Repair –Patch spalls and cracks to match original in design, texture and color.

Priority: Maintenance

Other Features

Much of the perimeter of the site is controlled by a six foot high painted steel picket fence installed in 2008. The fencing includes a powered operated vehicle gate and a pedestrian gate located just east of the 36 Weir Building. Pedestrian gates are also located at the top of the main stair. The fence is constructed with pickets and posts of tubing and horizontal channel supports (the original basin fencing is constructed of solid wrought iron members). The remainder of the less visible perimeter is controlled with a previously utilized chain link fence.

Condition/Observations: The fencing and its gates are in good condition.

Treatment Recommendations:

Option A.1: Preserve– Preserve the non historic, but historically compatible fencing and its gates.

Priority: Maintenance

Parsons, Susan

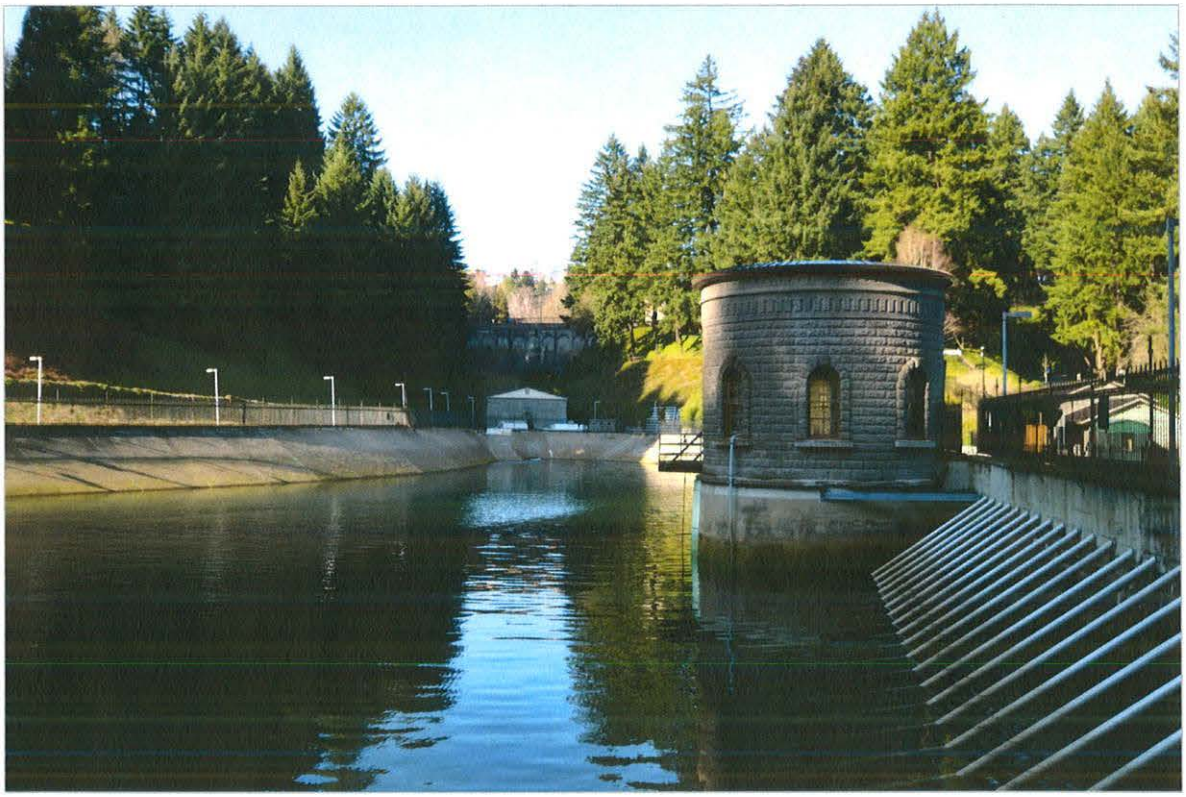
From: floy jones <floy21@msn.com>
Sent: Tuesday, April 21, 2015 9:00 PM
To: Council Clerk – Testimony; Moore-Love, Karla
Subject: FW: HSR - Wash Park #6 LU 14-249689 DM – Demolition Review for Washington Park Reservoirs
Attachments: 1949_001.pdf

Attached is part 6 of 9 of the Washington Park Reservoirs Historic Structures report submitted for the City Council Washington Park Demolition Review record, LU 14-249689 DM – Demolition Review for Washington Park Reservoirs. Please confirm that this and all sections of the report have been submitted to all members of the City Council prior to decision.

Floy Jones

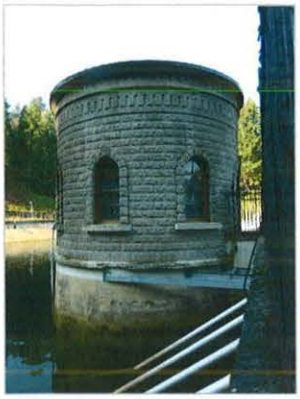
RESERVOIR 4

Contributing historic features at Reservoir 4 include the large two (or double) ended basin, its perimeter and site (parapet) walls, walkway and gutter system, related walks and gate stairs and two fountains, Gatehouse 4 in the center of the straight dam portion on the east side, Pump House 1 on the north end, and the small generator building on the northeast corner. The dam has a controlled access roadway that runs across the dam and up the hillside to the dam at Reservoir 3. There are also assorted cast and wrought iron grates and lids of historic interest.



GATEHOUSE 4

Reservoir 4 - Gatehouse 4



Concrete Wall, Floor and Roof

Constructed in 1894, the building is a symmetrically composed, poured in place concrete structure, circular in plan, measuring close to 25 feet in diameter. The exterior design and finish of the building are similar to the gatehouse of Reservoir 3. The exterior was formed with a rusticated block pattern with projecting water table, top banding and simplified cornice detailing. The parapet has a metal covered coping that slopes gently to the exterior (6" slope over 28"). The interior finish which shows its 6-inch board form pattern is smooth and painted. Door and window openings are round arched and have projecting quoined surrounds. The lower water facing exterior below the water table line (floor line projection) is unpatterned and coated with cement plaster. The concrete floor deck is finished with a smooth troweled topping slab and is without other finishes. There are multiple Ransome floor lights and their patent marks.

The exterior was rehabilitated in 1988-89 under Water bureau Project Number 3750, Washington park Concrete Demolition and Restoration, with work that included patching, injection crack filling, and exterior cementitious coating at the window sills, cornice band, and on the below waterline walls. The concrete roof deck and 5-inch high coping has an elastomeric deck coating, the outer 18 inches of which has been sealed with a bituminous product. The roof is drained by a single in-wall drain through the coping on the north side of the entry. The drain extends below the entry walk and daylights to the gutter system.

Condition/Observations: The exterior wall has some new areas of spalling and deterioration, but overall it is in fair to good condition following rehabilitation work in the late 1980's. Horizontal cold joints from the original construction are visible (inside and out) at roughly 2-foot spacing; the joint lines do not line up with the exterior block pattern. The interior concrete topping slab has some spider cracking. The roof drain is prone to clogging, and the inlet and/or the drain line are leaking, or the roof flashing is problematic as evidenced by continual dripping from the roof edge and moisture on the exterior wall.

Treatment Recommendations: The articulated above water concrete requires protection to minimize future deterioration. Damaged and spalled areas should be patched. The original concrete finish will likely be difficult to match.

Option A.1: Preserve and Repair – Gently clean the concrete exterior; test for water absorption, perform patch tests; install cementitious patching to rebuild deteriorated areas and spalls; apply a breathable sealer to the above waterline, articulated concrete finish portion; retain lower below waterline wall as is.

Priority: Short-term

Option A.2: Repair, Replace – Check drainline for integrity. Install new interior drainline if existing leaks; provide overflow to the line. Check coping cap and flashings for integrity to locate and correct source of dripping.

Priority: Short-term

Option A.3a: Replace – Provide a new membrane roof. This will require revision or removal of protruding brackets.

Priority: Short-term

Option A.3b: Repair – Provide new elastomeric coating over the existing at roof deck and interior side of parapet.

Priority: Short-term

Option A.4: Preserve – Preserve existing Ransome floor lights.

Priority: Maintenance

Metal Balcony

A painted steel platform and guard railing, and stainless steel valve assembly has replaced the original.

Condition/Observations: The steel is in good condition. The paint coating is failing.

Treatment Recommendations:

Option A.1: Preserve and Repair – Properly prep and paint the valve platform.

Priority: Maintenance.

Doors

There is a single entry with inswinging paired doors at the top of three exterior concrete steps on the east side. The doors are flush steel 1987 replacements with a hollow steel frame. The original wood jambs have been cut off at the transom line. The arched transom and fan light remain as does the cast iron sill. Similar to Gatehouse 3, the transom has an exterior plexiglass storm window. The reservoir side door is a single wood 4 panel stile and rail painted door (historic, but not original) with original wood frame and no transom. It has black finished mortise latch, replacement hinges, and the original cast iron threshold.

Condition/Observations: The non-original paired hollow metal entry doors and frame are in good condition. The reservoir side door is in good condition.

Treatment Recommendations:

Option A.1: Preserve and Repair – Maintain the existing metal entry door assembly as is. Preserve wood door frame and cast iron threshold; paint threshold.

Priority: Maintenance.

Option A.2: Preserve and Repair – Maintain existing wood door, frame, and mortise latch and cast iron threshold at reservoir side; replace hinges with balltip type; paint threshold.

Priority: Maintenance.

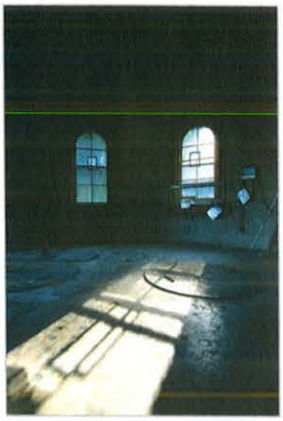
Option A.3: Repair and Replace – Replace the metal entry doors and frame with historically appropriate wood doors. Preserve the existing cast iron sill.

Priority: Long-term.

Option A.4: Repair and Replace – Replace wood door at reservoir side when deteriorated with one similar to the historic style, retain mortise latch, replace hinges with balltip type.

Priority: Long-term.

Windows



There are five windows that together with the reservoir side door are evenly spaced around the circumference. Windows are arch topped, wood double hung, divided 4/4. Two of the windows have suspension ropes and are operable. The suspension ropes on the others are missing. Glass is intact but most of it appears to have been replaced over time and is not historic. Windows have been fitted with interior security grilles.

Condition/Observations: The windows are generally in good condition. Two of the windows are operable, the other three are left sealed.

Treatment Recommendations:

Option A.1: Preserve and Repair – Preserve the wood windows. Provide needed minor repairs including caulking, patching and painting. Renew rope suspension on windows designated to be operable; Suspension improvements are not needed on inoperable units.

Priority: Long-term

Interior Space

The interior retains most of the original wheeled valves, water level measurement and mechanical equipment that is intact and operable, though mostly no longer used due to replacement equipment. In addition, there is new security equipment. The overhead trolley is intact. An iron stairway descends clockwise along the west curved wall to the lower level. The treads have been overlaid with expanded metal or straight bars for better traction, but otherwise the assembly is in original condition. It is enclosed with an iron pipe railing. The stairway is similar to the stairway at Gatehouse 3.

Condition/Observations: The metal stair has minor rusting, but appears to be structurally sound. Existing valve operators appear to be in good condition and are well-maintained.

Treatment Recommendations:

Option A.1: Preserve – Maintain metal stairway, wood cabinet, and existing historic mechanical equipment intact; New equipment modifications added as needed with minimal removal or replacement of historic materials.

Priority: Maintenance

Option A.2: Provide for limited interpretive tours, develop portable signage and graphics depicting operations.

Priority: Long-term

Option A.3: Provide additional documentation, inventory and photographs of existing historic mechanical equipment

Priority: Long-term

Entry Steps

Including the shallow upper landing, there are three curved concrete steps that ascend from the walkway to the entry doors. The upper step retains its curved cast iron threshold.

Condition/Observations: There is some staining and spalling at the steps. The entry receives moisture dripping off of the coping, and there is some ponding at the downspout terminus.

Treatment Recommendations: Repair of the steps should be coordinated with rain drain and adjacent sidewalk paving repairs.

Option A.1: Preserve and Repair – Preserve, patch and repair the entry steps with matching material; Clean concrete surfaces, remove loose and deteriorated material; perform patch tests; patch spalled areas.

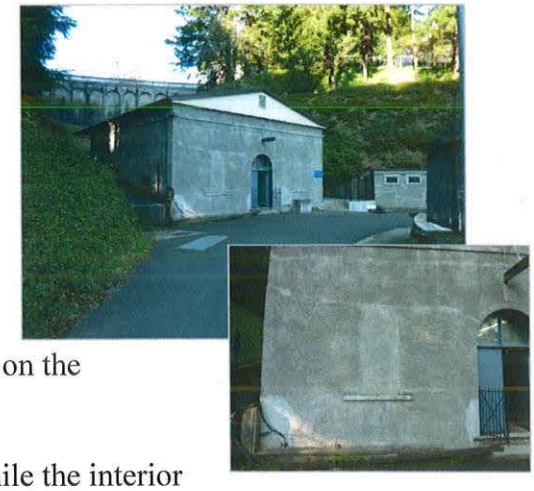
Priority: Long-term

Option A.2: Preserve and Repair – Preserve the remains of the original sidewalk and restore missing portions or those overlaid with new construction. Coordinate work with adjacent site paving.

Priority: Long-term

PUMP HOUSE 1

Reservoir 4 – Pump House 1



Concrete Wall, Floor and Roof

The building was built in 1894 as part of the original service construction. It is a poured in place concrete structure, rectangular in plan (small recess at northwest corner), measuring approximately 50 feet north-south and 36 feet east-west on the inside. The building is located below the Reservoir 3 dam and above the Reservoir 4 basin. It is situated close to the grade level on the Reservoir 4 side and is dug into the uphill slope.

The exterior is finished with a heavy texture plaster, while the interior is smooth and painted. The heavy exterior finish is believed to have been a later alteration, that covered cracks and also covered the raised door and window surrounds. The original parapet has a simple raised entablature. The original roof deck featured Ransome glass light sections in 18 of the coffered concrete spaces, and gabled skylights. The flat roof is intact, but it has been modified by the addition of a low pitched side to side gable that is framed in wood and has painted sheet metal roofing with short overhangs.

Door and window openings are typically arched with projecting sills. The windows flanking the front entry door on the south have been infilled. Roof drainage was originally by extruded ornamental concrete scuppers on the southeast and southwest corners that allowed runoff to cascade to the ground.

The exterior concrete walls are extremely thick, approximately 18 inches, possibly designed as such due to equipment vibration and noise as well as for strength due to their partially subterranean design. The concrete floor deck is finished with a smooth troweled topping slab and has a paint finish. The concrete roof deck that remains intact is supported on concrete cross beams. A previous tension beam has been replaced with steel framing, however original drawings indicated center posts. A steel equipment lift beam extends from above the center of the paired doors.

The exterior walls have been extensively repaired, most recently in 1988-89 under Water Bureau Project Number 3750, Washington Park Concrete Demolition and Restoration at the same time as work was performed on Gatehouse 3 and the rebuilding of 'Thumper'. Work included high flow crack injection [cementitious and epoxy], and patching. The walls remain in good condition, although since there was no exterior plastering, those repairs are visible. The damage was related to earth pressures against the partially underground building.

Condition/Observations: The scuppers are worn from use and weather exposure, but are no longer employed since the replacement roof has gutters and downspouts. The prior crack patching and window infills are visible. Door and window sills extend past the existing openings suggesting that former raised opening surrounds once existed.

Treatment Recommendations: Although the structure has been repaired from prior structural and weather problems, future rehabilitation could restore some of its original appearance while maintaining ease of maintenance.

Option A.1: Preserve and Repair – Maintain the walls in good structural condition. Clean and seal cornice band with breathable coating to reduce staining and deterioration.

Priority: Long-term

Option A.2: Preserve and Repair – Preserve and rehabilitate original rain scuppers.

Priority: Long-term

Option A.3: Preserve– Preserve Ransome lights and skylights.

Priority: Maintenance

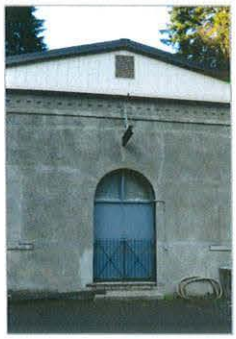
Option A.4: Preserve and Repair – Coat exterior with cementitious finish more consistent with original finish texture and concealing prior crack repairs; correct uneven window infill; restore door and window surrounds.

Priority: Long-term

Option A.5: Preserve–. Remove gabled roof construction and install membrane roofing over original concrete deck; provide new skylights to overlay and protect existing leaking Ransome lights; provide revised rain drains to prevent damage from the historic scuppers.

Priority: Long-term

Doors



The primary original entry is through an arched opening with a pair of inswinging doors in the center of the south side. This also serves as the equipment entry. There is a rectangular headed side entry on the east at the raised floor level. The doors are all replacements of the original doors, and consist of flush hollow metal with hollow metal frames. The arched transom on the south is divided in half and has an interior security grill. The current east door is over sized in width and appears to be lower than the original that probably consisted of a pair. On the interior, there are two heavy wood doors with half lights providing access at the raised floor area of the control room. These doors are 2¼" thick and have double glazing, presumably for sound attenuation.

Condition/Observations: The hollow metal doors and frames are in fair to good condition. The south doors have half height wrought iron gates and a cast iron threshold.

Treatment Recommendations:

Option A.1: Preserve and Repair – Maintain the existing metal entry door assembly as is. Preserve cast iron threshold; paint threshold.

Priority: Maintenance.

Option A.2: Repair and Replace – When the metal doors require a change, replace the metal entry doors and frame with historically appropriate wood doors matching the original height and width and design. Preserve the existing cast iron sill.

Priority: Long-term.

Parsons, Susan

From: floy jones <floy21@msn.com>
Sent: Tuesday, April 21, 2015 9:01 PM
To: Council Clerk – Testimony; Moore-Love, Karla
Subject: FW: HSR- Wash Park #7 LU 14-249689 DM – Demolition Review for Washington Park Reservoirs
Attachments: 1950_001.pdf

Attached is part 7 of 9 of the Washington Park Reservoirs Historic Structures Report submitted for the City Council Washington Park Demolition Review record, LU 14-249689 DM – Demolition Review for Washington Park Reservoirs. Please confirm that this and all sections/parts of the report have been submitted to City Council for review prior to decision.

Floy Jones

Windows

There are two remaining arched windows on the east side of the building. They have wood double hung sashes with 4/4 glazing and interior mounted security grilles. There were two windows on the south, each flanking the entry, and two on the north in a similar position. The west two have been removed and the openings infilled. The two openings on the north retain the wood frames, no sash, and have been infilled at the below grade exterior. Those north windows are now below the concrete valve chamber vault deck. There are interior wood framed relights allowing the control room visibility over the pump room.

Condition/Observations: The remaining exterior windows are in good condition.

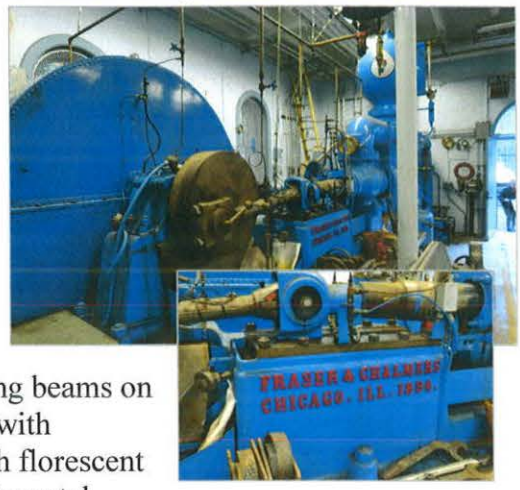
Treatment Recommendations: Restoration of removed window may not be feasible due to alterations in interior function and site limitations. Existing historic windows should be preserved.

Option A.1: Preserve and Repair – Preserve the wood windows. Provide needed minor repairs including caulking, patching and painting. Renew rope suspension on windows designated to be operable; Suspension improvements are not needed on inoperable units.

Priority: Maintenance

Interior Space

The interior of the main pump equipment room contains an original large pump on the east and three newer, but smaller pumps in a line on the west half. The room has a high ceiling that allows equipment repairs and removal. On the north end there is a separated and raised control room. The room is sound-proofed and allows for observation, recording and other tasks.



Manufactured by Fraser & Chalmers of Chicago in 1894, the large pump, with its Pelton Wheel and known as "Thumper", has been over-hauled and is operable, but it is no longer used because it requires intensive maintenance when running. The room contains three smaller electric pumps that are currently in operation. The pump room has painted smooth concrete finishes and surface mounted industrial florescent light fixtures. There are steel lifting beams on the ceiling. The control room has a raised wood floor with resilient flooring, and a suspended acoustic ceiling with florescent troffer lighting. Access to the room is by a non-historic metal stairway (1972).

Condition/Observations: The equipment is all kept operational. Although "Thumper" is not used, it is operational. The Pump House retains more historic equipment than the other buildings in the district. That equipment operates in conjunction with new machinery.

Treatment Recommendations:

Option A.1: Preserve and Repair – Preserve historic equipment; if no longer used, and space is required, develop alternatives for its preservation.

Priority: Maintenance

Option A.2: Preserve and Repair – Provide regular interior maintenance of interior finishes and equipment as necessary including floor painting.

Priority: Maintenance

Option A.3: Preserve and Repair – Develop historic interpretive materials describing the operation and design of the equipment and water system.

Priority: Long-term

Entry Steps and Context

The Pump House has a single concrete step that is the width of the door. The door threshold provides a shallow landing. The step is of recent construction. It appears to be narrower than the original step, just the width of the current door. The concrete sidewalks on the east and west sides have been replaced in recent times. On the east the height has been raised. The north side of the Pump House site was altered by a concrete platform that enclosed valves beneath. This work was done in conjunction with infilling of the building's north windows.

Condition/Observations: The entry is in good condition, although the step appears to have been narrowed. The perimeter walkways and platforms are in good condition. It was noted that the hillside to the west has displaced the short retaining wall and that geologic force is the likely cause for prior damage to the building structure.

Treatment Recommendations:

Option A.1: Repair and Replace – Replace existing step when deteriorated, with one matching the original design; coordinate with installation of raised door opening surrounds. There is sufficient room to provide a level landing with the revision.

Priority: Long-term

GENERATOR BUILDING

Reservoir 4 – Generator Building

Concrete Wall, Floor and Roof

The 1920's Generator Building is a small rectangular concrete structure located about 15 feet southeast of Pump House 1. The purpose of the building has been to provide power for facility lighting. The single-room building measures approximately 10 feet wide by 18 feet long. It has a low roof parapet with simplified ornamentation matching Pump House 1. The Generator Building is built into the east hillside and has retaining walls extending beyond its structure, with a steel sheet retaining system on the south and concrete on the north. There is a single door on the north end, a large louver and equipment exhaust on the south, and a row of three high windows on the west. The concrete walls are finished smooth. The parapet entablature, a 6-inch high base and raised window surrounds provide relief on the exposed sides. The roof has a modified bitumen membrane covering that terminates at the outside edge of the parapet coping with a sheet metal flashing. Roof drainage is handled by a scupper on the southwest corner designed similar to those at Pump House 1.

Condition/Observations: The building was rehabilitated in 1988 during Water Bureau Project Number 3750, Washington Park Concrete Demolition and Restoration, at the same time work at the Pump House was performed. Work included patching and crack filling. The walls are in good condition, although repairs are visible. There is staining below the scupper. The scupper was plugged and the roof was ponded to a depth of 6 inches at the time of inspection. Vegetation and soil from the hillside on the east has overgrown the roof.

Treatment Recommendations:

Option A.1: Preserve and Repair – Remove vegetation and lower soil level at the hillside above the structure to at least 12" below its roof line. Maintain roof drainage operational; install overflow drain.

Priority: Short-term

Option A.2: Preserve and Repair – Periodically clean and maintain the walls in good structural condition. Seal the cornice band with breathable coating to reduce staining and deterioration.

Priority: Maintenance

Option A.3: Preserve and Repair – Preserve and rehabilitate original rain scupper.

Priority: Long-term

Option A.4: Preserve and Repair – Coat exterior with cementitious finish to conceal prior crack repairs.

Priority: Long Term

Doors

There is a single entry door on the north end. It is a non historic metal door with a full ventilation louver set in a metal frame.

Condition/Observations: The non-historic door is in good condition.

Treatment Recommendations:

Option A.1: Preserve – Maintain the existing non original door.

Priority: Maintenance.

Option A.2 Preserve and Repair– Replace the current door when worn out with a door similar to the original construction.

Priority: Long-term.

Windows

There are three painted metal awning style windows on the west side. These windows are replacements of the original wood windows work that was performed as part of Water Bureau Project Number 3367, Washington park Open Reservoirs 3 and 4 Improvements in 2003-2004.

Condition/Observations: The non-historic windows are in good condition.

Treatment Recommendations:

Option A.1: Preserve – Maintain the existing non original windows.

Priority: Maintenance.

Option A.2 Preserve and Repair – Replace the current windows when worn out with windows similar to the original construction.

Priority: Long-term.

Interior Space

The interior is finished as smooth painted concrete. The equipment is not historic.

Condition/Observations: The equipment has been changed as needed over time. The interior wall paint needs refinishing.

Treatment Recommendations:

Option A.1: Preserve – Maintain in current condition; repaint.

Priority: Maintenance.

Entry Steps and Context

The building is situated at grade. There is a newer concrete retaining wall to the north and an older metal sheeting retaining wall to the south. The grade between the Pump House and this building has been revised so that the adjacent roadway is elevated with respect to the entry. There are steps down from this level to the Generator Building and to the site. The entry is secured by 6-foot high metal fencing on this raised concrete level.

Condition/Observations: The concrete is of recent construction and is in good condition.

Treatment Recommendations: The entry context has been slightly reconfigured from the historic layout and no alterations are advised.

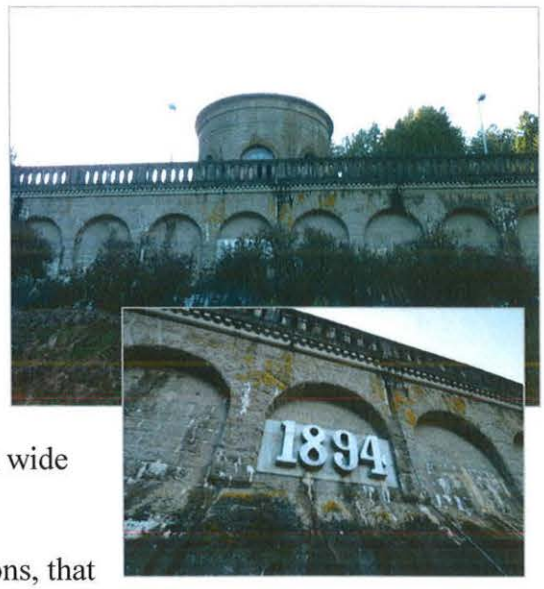
Option A.1: Preserve – Maintain in current condition.

Priority: Maintenance.

SITE

Reservoir 4 – Site

Reservoir Structure and Dam



The reservoir was formed utilizing the downstream slopes below Reservoir 3 on both the north and on the southwest with the construction of a dam on the east side. At a hydraulic grade line of 229 feet, the reservoir serves by gravity the lower portions of downtown Portland and northwest neighborhoods to approximately NW 10th Avenue. It also supplies other areas by pumping. The resulting basin has a concrete lining, similar to Reservoir 3. At the north end, a vehicle ramp descends southward allowing for maintenance. The basin is approximately 180 feet wide by 600 feet long.

The construction included extensive drainage provisions, that allowed the drainage tunnels to dewater the adjacent slope above the reservoir. These systems are still in operation. The reservoir has had various waterproofing repairs over time, but still relies on its original concrete lining. There is an overflow with stainless steel grating at the southeast corner. A stainless steel pipe framework descending from the dam and gatehouse walls into the reservoir is intact. This structure was installed in 1997 to allow the proposed reservoir cover to be pulled back for basin maintenance.

The straight 230-foot long dam has a wide base formed by the 1½: 1 slopes on either side of the dam. These slopes narrow at the top to provide a 10-foot wide vehicle lane. The surface is approximately 20 feet high from the walkway to grade. It has guard walls on each side (discussion is included under Basin Wall Assembly), but without defined walkways. The dam is concrete with an earthen embankment on the downhill side. On the free side, the design employs a rusticated block pattern from the base upward. The top section uses the design of a blind arcade of embossed stone pattern to give the appearance of a classic viaduct similar to the Reservoir 3 dam. This is achieved by forming the arched structure portion (arches at 10-foot centers) and roadway walls vertically, while the lower wall continues up and into the arches maintaining its slope. This dam is longer but lower in height than that of Reservoir 3.

Condition/Observations: The basin lining has numerous patches that give it a spider web appearance. The dam has heavy staining and biological growth on its lower sloped walls and below top drainage outlets. Water leakage appears to have been an ongoing issue, as evidenced by the extent of efflorescence and calcium/lime buildup at numerous locations on the lower portions of the downstream dam face. Some areas were wet during the site observations, indicating leakage is continuing.

The wall of the dam is heavily stained from the long term effects of moisture and biological matter. The lower section with block pattern design is nearly black, as is the exterior side of the guard rail. PVC pipe drains have been installed along the roadway on the open side.

Treatment Recommendations:

Option A.1: Preserve and Repair – Gently clean the concrete dam face, walls and urns; test for water absorption, perform patch tests; install cementitious patching to rebuild severely deteriorated areas; apply a breathable sealer to the wall caps and urns.

Priority: Short-term

Option A.2: Preserve– Provide regularly scheduled cleaning of the dam face to reduce biological and environmental damage and the subsequent need for stronger cleaners; consider application of a breathable sealer to deter soil build up for this very prominently visible structure.

Priority: Maintenance.

Option A.3: Preserve and Repair – Maintain the reservoir basin structure, and monitor leaking. Provide waterproofing or basin liner as necessary similar to the other basins to preserve structural integrity.

Priority: Maintenance, Long-term

Option A.4: Preserve and Repair – Remove stainless steel pipe framework that was installed for the reservoir cover maintenance.

Priority: Long-term.

Option A.5: Preserve and Repair – Restore original paving located beneath the asphalt overlay.

Priority: Long-term.

Parsons, Susan

From: floy jones <floy21@msn.com>
Sent: Tuesday, April 21, 2015 9:03 PM
To: Council Clerk – Testimony; Moore-Love, Karla
Subject: FW: HSR - Wash Park #8 LU 14-249689 DM – Demolition Review for Washington Park Reservoirs
Attachments: 1951_001.pdf

Attached is section 8 of 9 of the Washington Park Reservoirs Historic Structures report submitted for the City Council Washington Park Reservoirs Demolition Review record, LU 14-249689 DM – Demolition Review for Washington Park Reservoirs. Please confirm that the entire report (sections 1-9) have been provided to City Council prior to decision.

Floy Jones

Site Wall (Parapet Wall) Assembly

Similar to Reservoir 3, the basin has a low concrete parapet wall with wrought iron fence. Along the dam portion on the east side, there is a 42-inch high guard wall on the free side that is designed as a massive square sectioned balustrade. Each end of the dam's open railing is punctuated by a large ornamental, square shaped concrete base that is 3½ feet wide and 6 feet high, similar to lighting bases at Reservoir 3 but without any remains of their metal lampposts. On the reservoir side, the guard wall is solid, 38 inches high, with a raised diamond pattern set within recessed panels, also similar to that at Reservoir 3. The pattern on this side is mostly obscured by multiple (7) electrical service conduits and the metal plate pipe protection assembly from Pump House 1 to the Gate House. The wall also features a projecting crowned and chamfered cap, an apron beneath, and a projecting base.

Beyond the dam, it is a heavily battered wall with a smooth finished concrete and without pattern or base. The cap and fencing continues, however. The six foot high fence consists of decorated upper and lower rails, and vertical bars alternating in height all with a spear design. The end posts of the fence segments are set into the concrete cap and have a curved brace on the reservoir side. There are a total of seven, four-sided ornamental fence columns serving as light poles. At these locations the concrete wall widens to receive the metal post. These posts retain the wrought iron top that once held gas lamps which provided walkway lighting. At the Gatehouse the wall returns to join the Gatehouse wall. Provisions are made in the wall and fence for basin ramp access by vehicles at the north end by Pump House 1. Current lighting is from free standing tapered aluminum posts with shoe box style fixtures located at the edge of the walkway next to the rail wall, security measures have been retrofitted to these poles and to a few new poles. (*Lighting ca 1975, 250w High Pressure Sodium lamps, spaced at 50-foot interval*)

Condition/Observations: The low wall has normal wear and tear associated with its age. There have been some prior patching repairs (most with noticeable color difference), but many defects remain, including some exposed reinforcement. Walls are heavily soiled and stained. Lighting on the fence was discontinued long ago, and none of the actual fixtures are in place, although the framework is still extant. Multiple electrical conduit feeds for the newer separate pole lighting and security measures are surface mounted to the walkway side of the low wall and provide a junction point to feed each of the new metal lamp posts. The installation nearly covers the wall making it difficult to perform repairs. Additional security measures include cameras mounted on these and newer posts. The wrought iron fence is intact, but rusted. It needs repairs and needs to be repainted.

Treatment Recommendations:

Option A.1: Preserve and Repair – Gently clean the concrete basin walls; test for water absorption, install patch tests to develop best match; install cementitious patching to rebuild severely deteriorated areas; apply a breathable sealer to the wall caps.

Priority: Short-term

Option A.2: Preserve and Repair – Preserve metal fencing and light fixture posts; make repairs and repaint.

Priority: Short-term

Option A.3: Preserve and Repair – Test the basin walls for water absorption; seal the guard railing wall cap and urns with a breathable sealer if appropriate; due to the large area involved select only most needed elements for treatment.

Priority: Maintenance

Option A.4: Preserve and Repair – Rehabilitate historic light fixtures and posts; provide new lighting for ambiance.

Priority: Long-term

Option A.5: Replace – Replace existing modern poles and light fixtures with units that are historically appropriate.

Priority: Long-term

Option A.6: Preserve and Repair – Rehabilitate-restore the historic triple lamp posts at the ends of the dam; provide new lighting for ambiance.

Priority: Long-term

Option A.7: Repair - Replace – Remove-consolidate electrical and data conduits that obscure the wall pattern.

Priority: Long-term

Walkways

The basin wall is surrounded by a five foot wide concrete walkway (scored into 30 inch squares) that extends around the south and west sides of the reservoir. At the north end on the west side as the roadway descends, the walkway narrows to approximately three feet in width. This width continues around the north end next to the wide roadway. Along the east side, it is four feet wide. The walk is scored in squares and has a light finish. On the outer side of the walkway, there is the two foot wide gutter and low curb section that extends to the toe of the hill slope to receive and direct surface runoff. Historic drains are located at the gutter ends. Those grates are straight bar type made of cast iron. In addition, there are several cast iron lids around the perimeter of the reservoir. The gutter perimeter changes from a low curb wall to a tall retaining wall as the hillside requires. These walls are constructed as a battered (leaning back) wall with a rock faced block finish pattern, but repeating the smooth finish cap.

Non-historic poles with lighting and security cameras (50-foot spacing) are located adjacent to the low wall around the basin and dam. The reservoir wash down piping and associated equipment is located just outside of the perimeter gutter curb. The system includes valves and risers for hose connections.

Condition/Observations: The walkway has some damaged areas, including broken slabs, corners, spalls, and roughened surfaces, but is generally in good condition. Portions of the paving have been replaced as part of electrical and security improvements. On the west side, some walkway and accompanying gutter have been replaced (earth movement zone). The pavement tooling pattern at this section does not match the original and the gutter has a "V" shaped profile instead of the broad "U" shape. The gutter is in worse condition than the walkway having many deteriorated sections and largely soiled. The outer retaining walls are heavily soiled and mossy, there are some areas of surface damage to the original block pattern.

Treatment Recommendations:

Option A.1: Preserve and Repair – Clean and preserve existing paving and gutter.

Priority: Maintenance

Option A.2: Preserve and Repair – Clean soiled walls, patch spalls and cracks to match original design, texture and color; monitor hillside irrigation to prevent excessive moisture from damaging retaining walls.

Priority: Maintenance

Option A.3: Repair - Replace – Replace, patch damaged walkway slab; match original paving pattern and texture.

Priority: Long-term

Option A.4: Repair - Replace– Replace, patch damaged gutter sections with new to match original pattern.

Priority: Long-term

Option A.5: Preserve and Repair – Preserve historic grates and assorted historic metal lids.

Priority: Maintenance

Option A.6: Replace – When worn, replace walkway and gutter sections not matching original design with new to match original pattern.

Priority: Long-term

Other Features

Between Pump House 1 and the Reservoir 3 Dam, there are multiple valve tunnels and associated concrete walls and stairs with painted steel railings. Access to the tunnels is by (replacement) flush steel doors. These installations date to the historic period; but there have been ongoing equipment alterations as needed. There are also stairs, with newer square sectioned railings, ascending to a former caretaker's cottage.

A former caretaker's home once was located on the mid-level rise to the northeast of the reservoir and outside of the security fence. Although the home is no longer in existence, the paths, stairs and approaches still remain. These include a concrete stairway and top landing that descends south and east from the house site toward the lower reservoir approach road. The original paving finish was ribbed crosswise to the direction of travel. This stairway connects to another stairway constructed of red brick. A bit lower and to the south there is a contoured 7-foot wide approach, possibly for vehicles, that is constructed of stone and has a brick and cement gutter on one side and mortared basalt stones as a curbing on the other side. To the north and descending to Pump House 1, there is a paved path with several concrete stair runs having steel pipe railings.

As at Reservoir 3, much of the perimeter of the site is controlled by a 6-foot high painted steel picket fence installed in 2008. The fence is constructed with pickets and posts of tubing and horizontal channel supports. The remainder of the less visible perimeter is controlled with a previously utilized chain link fence. A wash down piping system is located outside of the reservoir walkway. The system includes valves and risers for hose connections.

The drive up the west slope to Reservoir 3 was the traditional access route.

Condition/Observations: The exposed portions of the gate tunnel accesses are in fair condition; the concrete is covered with moss, and railings are in need of painting.

The stone wall along the access drive is covered with ivy and vegetation.

The remaining stairs and paths to the former caretaker's cottage are in fair condition. The roadway and curbing are deteriorated from effects of weather and lack of use.

The perimeter fence and gates are in good condition.

Treatment Recommendations:

Option A.1: Preserve - Repair– Maintain gate tunnels and access stairs and railings; if required to alter, provide documentation.

Priority: Maintenance

Option A.2: Preserve - Repair – Remove vegetation from the stone wall at west drive, repair masonry as needed.

Priority: Maintenance

Option A.3: Preserve - Repair – Preserve stairs and road improvements to former caretaker's cottage.

Priority: Maintenance

Option A.4: Preserve– Preserve the non historic, but historically compatible fencing and its gates.

Priority: Maintenance

Option A.5: Repair - Replace – The level location of the former caretakers cottage could be utilized for a future facility; document alterations to existing improvements prior to development; possible historic photographs.

Priority: Long-term

FOUNTAINS

Reservoir 4 - Fountains

There are two water fountains that are considered as historic contributing objects. At the north end of Reservoir 4 dam, adjacent to the entry drive and situated in a stone alcove, is a small public fountain structure consisting of a receiving bowl in front and engaged with a water supply pedestal. It is constructed of cast concrete with a design similar to iron from the same period. It appears that water flowed up the pedestal and out its side arm to a bubbler to allow drinking. The low receiving bowl caught excess water and directed it to the adjacent reservoir drainage gutter. It is and was originally located just outside of the security fencing to allow public use.

The second fountain was located adjacent to the generator building. Also constructed of ornamental cast concrete, this fountain features a 16 inch diameter circular basin atop of a tapered octagonal pedestal with a square base, three feet high overall. It was removed from its location at the time of the previously proposed reservoir covering project and is now temporarily located in storage at Pump House 2.

Condition/Observations: The public fountain, located just outside of the security fencing, is largely intact. The outside of the receiving bowl has spalled-broken corners. There is also some minor wear and surface damage on the bowl and pedestal. The interior of the basin and splash area is heavily stained. Plumbing fittings are missing and the site is overgrown. The fountain probably operated continuously.

The smaller second fountain has two thirds of its basin missing, and two of the base corners are broken off. There is some staining. The interior pipe and bronze fitting are intact.

Treatment Recommendations:

Option A.1: Preserve– Repair - Public Fountain: Patch and repair concrete; clean concrete. Clean up adjacent landscaping.

Priority: Maintenance

Option A.2: Preserve– Repair - Public Fountain: Restore for operation: refit plumbing, fit with bubbler and operator for on demand use.

Priority: Long-term

Option A.3: Preserve– Pedestal Fountain: Preserve in storage until able to restore.

Priority: Maintenance

Option A.4: Preserve– Repair - Restoration: Pedestal Fountain: cast a replacement bowl, patch base corners, clean concrete. Restore for operation: refit plumbing, fit with bubbler and operator for on demand use. Consider relocation to a public area.

Priority: Long-term

Option A.5: Preserve - Provide interpretive signage for the two fountains.

Priority: Long-term

Parsons, Susan

From: floy jones <floy21@msn.com>
Sent: Tuesday, April 21, 2015 9:05 PM
To: Council Clerk – Testimony; Moore-Love, Karla
Subject: FW: HSR - Wash Park #9 LU 14-249689 DM – Demolition Review for Washington Park Reservoirs
Attachments: 1952_001.pdf

Attached is section 9 of 9 of the Washington Park Historic Structures Report submitted for the City Council Washington Park Reservoirs Demolition Review record, LU 14-249689 DM – Demolition Review for Washington Park Reservoirs. Please confirm that this and all 9 sections of the report (Water Bureau refused in 2012 to e-mail as one document) have been submitted to all members of City Council for the record prior to their decision.

Floy Jones

Appendix A

APPENDIX A
BIBLIOGRAPHY

Washington Park Reservoirs Historic District Nomination (January 15, 2004)

Open Reservoir Study – Phase 1, Appendix Volume 4 – Facilities Evaluation, prepared by Montgomery Watson Harza for the City of Portland Water Bureau (no date)

Open Reservoir Study – Phase 1, Appendix Volume 5 – Public Involvement and Historical Analysis, prepared by Montgomery Watson Harza for the City of Portland Water Bureau (no date)

Open Reservoir Study Enhanced Benchmark Maintenance Program, Montgomery Watson Harza, November 2001

Portland Open Water Reservoir Historic Analysis, Technical Memorandum, Shapiro & Associates for Montgomery Watson Harza

Federal Energy Regulatory Commission, Owners Dam Safety Program, Owner Self-Assessment Parameter, June 29, 2007

Various Dam Inspection Reports

The Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings (periodically updated: available from the State Historic Preservation Office, or www.nps.gov)

Preservation Briefs, National Park Service (available from State Historic Preservation Office, or www2.cr.nps.gov/tps/briefs/presbhom.htm

Appendix B

APPENDIX B
CONSTRUCTION AND MATERIALS REFERENCE GUIDE

CONCRETE WALLS AND STRUCTURE

Concrete is a durable material; its alkalinity helps deter damage from vegetation; concrete readily absorbs moisture both from the ground and from precipitation; water and moisture is the principal agent for deterioration; damaged and weathered concrete deteriorates at an accelerated pace.

Observations Encountered, Issues and Concerns:

- **Surface wear and deterioration, erosion** – The original finish has weathered with loss of cement and some fine aggregate, exposing a rough surface, larger aggregate; This surface now absorbs more moisture and holds soiling; This slow deterioration is part of the natural weathering process and may not be a significant issue, depending on location and severity; if on the top of the building parapet, this surface can then be expected to allow more moisture to enter the wall, causing further damage eventually; General Treatment: refinish, seal, coat or cover to slow or eliminate moisture.

- **Soiling, Staining** – The finish of the concrete is soiled from environmental conditions, or is stained from metals (usually ferrous) attached to the concrete, or interior reinforcement that is exposed to weather; stains from leaking drains, pipes or downspouts; stains also from salts or efflorescence; Typically a localized condition, though may be quite noticeable and detracting; if left untreated the stain will become more difficult to remove; General Treatment: soiling: clean by gentlest means; stains: remedy the situation producing the stain, then clean, repair the concrete; corrosion protection or isolation for metal staining; choice of materials and design.

- **Shrinkage cracking** – Generally small, somewhat random cracks, particularly in floor and roof slabs where there are minimal (or no) control joints; usually these are not a concern except where numerous and there is significant contact with water, in those cases the cracks can become channels and cause greater damage General Treatment: where protected, such as interior floors or under a roofing membrane no treatment is normally required; where treatment is advised, appropriate application of sealing or coatings.

- **Cold joints** – Though wall hairline cracks resulting from the original concrete setting during the construction; as with shrinkage cracking, these cracks are generally not of concern, and do not become a problem; the condition is more of a concern where a wall is exposed on both or all sides, such as a building parapet; General Treatment: monitor the condition to determine if it is worsening; no treatment is normally required; where treatment is advised, appropriate application of sealing or coatings.

- **Corrosion, freeze-thaw and structural cracking** – Generally larger cracks or spalls due to moisture within the concrete expanding during the freeze cycle; the moisture may also cause rusting and of the reinforcement which then expands and cracks the concrete; structural cracks may be caused by overloading, settlement, or thermal reasons; most cracking observed is associated with corrosion or freeze-thaw; (no settlement or overload cracking was observed); these are typically larger cracks that readily allow entry of water and further damage, these cracks have a priority for repair; General Treatment: determine the extent and cause of damage; remove-remedy problem source; repair may

include removal of concrete material; infill-inject the crack with cementitious, specially formulated material; epoxy grout may be necessary for structural reasons, final surface treatment may be advised if visibly prominent.

- **Spalls** – Loss of surface material in various sizes due to prolonged deterioration; may also be the result of deteriorated surface finish or prior patch failure; spalls can vary in extent and severity, may be isolated or rather continuous; consider each as the possibility for further damage and deterioration; General Treatment: determine the extent and cause of damage; usually removal of more concrete is necessary to achieve adequate bonding with patching material; adequate preliminary product research is necessary; generally use of very similar materials to the original; where visibly prominent, allow for on-structure test samples, then on structure samples to determine the best composition, texture, and appearance particularly if it is to be left unfinished; allow for proper curing and install in suitable weather conditions to best control result

- **Design or construction defects** – Rock pockets, voids, less than ideal mixing and placement, reinforcement too close to the surface; many of these defects are not an issue and many are unknown unless there is a failure; General Treatment: professional engineering consultation is necessary for revision of the problem, such as reinforcement being too close to the surface; the repair may include revising the localized condition, or a clean or repair patch method if a spall was encouraged by cracks or less serious conditions

CONCRETE WALKS AND STAIRS

The concrete walkways and site stairs are of durable construction, but are susceptible to deterioration from soil movement or erosion, and to the effects of adjacent vegetation.

Observations Encountered, Issues and Concerns:

- **Cracking Issues** – Cracking of walkway slabs or stairways can be from a variety of reasons: Overloading, inadequate control joints, tree roots, or loss of base support. Most of the cracking issues observed are due to loss of subsurface base support; the original compacted gravel is no longer adequately supporting the concrete slab; soil fine particles may have washed into the gravel, or the gravel worked downward into the soil; lack of adequate control joints, tree roots were not observed to be an issue. Overloading is a problem at Gatehouse 5 entry plaza (in conjunction with loss of support) where vehicles traverse the concrete. General Treatment: The usual treatment for broken slab corners is to remove the damage and pour new concrete; at larger repairs, removal of the slab sections and installation of new compacted gravel base along with the slab is recommended; filter fabric installed under the gravel retains the separation of gravel and fine soil particles below; the replacement concrete should have a finish, color and texture to match the original, some of which had cross ribs tooled for traction, and most did not have border trowel marks – simply a bullnosed edge.

- **Spalls** – This is primarily a concern at steps and stairways; spalls may be damage caused from force, freeze-thaw, due to advanced cracking, or in association with metal handrails. General Treatment: The usual treatment is to patch the broken area; advance samples are necessary especially in important visual areas since it is difficult to obtain patches that match the original, but worn adjacent concrete. Most of the original stair concrete has a cross rib pattern that has not been duplicated in previous repairs. Replacement of larger sections may require dowelling the new work into the existing to maintain surface continuity.

- **Landscape Issues** – Several issues arise in association with the adjacent landscape: erosion of the surround or adjacent grade which then allows undermining of the concrete walkway or stair base; the

reverse: gradual build-up of the adjacent grade so that the walkway can no longer drain properly, and staining due the biological matter; each of these issues was observed. General Treatment: Correct grading issues as work in the area is scheduled – this is preventative maintenance; staining or moss build up is not a concern unless a safety issue or if well advanced.

METAL WORK

The historic architectural metals used and still existing are primarily iron, (cast, wrought, formed), and steel. Various metals and alloys were used for piping, machinery and equipment – the treatment of those materials and their applications are not discussed in this document. The architectural metals were used for the reservoir perimeter wall fencing and lampposts, valve platforms, interior stairways, handrailing and door thresholds. These metals were designed to last a long time, their main causes of failure being corrosion, or breakage due to loss of support. Painted metals should be assumed to have been originally (and subsequently) coated with lead containing paints and primers. Use of bright stainless steel in visible locations is to be avoided. Refer to Preservation Briefs #27 (Cast Iron) and #13 (Steel Windows) for more information on repair and refinishing.

Observations Encountered, Issues and Concerns:

- **Cast Iron** – Cast iron was used for roof drain piping, often inside concrete walls, valve platform grating, and door thresholds. Being a brittle material and very susceptible to corrosion, it needs to be protected well with paint and supported adequately to prevent breaking. Cast iron members are typically very thick, which allows more wear and tear than their steel counterparts.
    - Repairing in wall roof drains is not feasible, and their leakage will cause damage to the concrete wall.
    - Replacement drain pipes may be interior or exterior surface mounted.
    - The cast iron platform grating is very thick, and if kept supported and coated, will last indefinitely. The chief issue is that the iron support framework can become deteriorated and allow uneven support that can then cause breakage. The grating can be salvaged and reused for grating. Due to the grating weight and difficulty in working with cast iron, its removal and reuse requires planning. The easiest preservation route is to maintain it in place, and provide additional support framework.
    - Cast iron thresholds are durable and still suitable. Maintenance includes cleaning and refinishing, and possibly regrouting with a non shrink cementitious grout where concrete base has deteriorated.
- **Iron and Steel Corrosion** – Light to moderate corrosion can be removed by mechanical abrasion keeping the item in place, such as wire brushing, sanding, light sand blasting, or chemical cleaning. Heavy corrosion requires light sandblasting, or removal of the section and chemically dipping, and possible abrasive follow up cleaning.
- **Aligning Bent Iron and Steel Sections** – Minor corrections may be possible in the field. More significant damage will generally require removal of the metal work and corrections in a shop situation with the use of heat and corrective support bracing.
- **Adding Repair Sections Iron and Steel** – New metal to be spliced into the existing is necessary when there is significant damage or deterioration. This work may involve making a clean cut on the

existing member and then welding or mechanically attaching the new section. New metals should match the profile and materials of the existing material. Avoid mixing materials that can create galvanic corrosion without adequate separation. Welds should be ground smooth and flush and coated well. Screws and bolts should be non corrosive or hot dipped galvanized, all primed well and painted.

- **Anchorage Repairs for Iron and Steel** – Anchorage points are often the first to become deteriorated; either from stress-strain or deterioration. Anchorage points to concrete are susceptible to corrosion. There are optional means for repairs, including new replacement anchor pieces replacing member anchorage, additional supports that reuse the existing anchorage, or simply new bolts or screws where only those have failed. The anchors should be non corrosive or hot dipped galvanized, all primed well and painted. Anchorage devices may include bolts (drilling preferred over power driven) with expansion shields, bolts that are epoxy grouted, and metal members directly set into concrete with nonshrink grout.

WOODWORK, WINDOWS, DOORS

Woodwork in the district is fairly limited on the exterior of buildings, consisting of the windows and doors. On the interior historic woodwork includes doors, relights, as well as partitions (some ceilings) and their trim. Wood is susceptible to changes in moisture that causes expansion and contraction, that then challenges working parts and paint coatings. Exterior wood requires periodic maintenance of paint and sealants to preserve the wood in good condition and avoid extensive repairs from weatherization or decay. Refer to Preservation Briefs #9 (Wooden Windows) and #10 (Exterior Paint) for more information on repair and refinishing.

Observations Encountered, Issues and Concerns:

- Periodic Maintenance – Preventative maintenance is key as it greatly reduces damage for exterior wood. When the paint coating or weather seals expose the wood, it is much more difficult to recoat successfully.

- Minor Repairs – Minor repairs should always be anticipated when repainting. These include crack filling (use high quality, flexible material made for wood), patching, removal of no longer needed anchors and brackets, reattachment of loose members (use non-corrosive nails, screws), caulking (paintable, high grade sealant) reputtying loose glass (oil based glazing putty, painted afterwards).

- **Window Repairs** – For sash that is desired to operate: provide missing hardware to match original and replace broken suspension chains-ropes (requires removing sash stop and sash to gain access to counter weight pocket).

- **Exterior Window Sills** – Close attention should be paid to the exterior sill condition, the member is difficult to remove and being horizontal, is most susceptible to decay. Damaged portions can be stabilized and repaired by patching with high quality wood epoxies that kill decay producing spores, use the remaining soft wood frame and infill voids.

- **Repairs Using Splices and Replacements** – Where the wood is sufficiently deteriorated, member or partial member replacement may be the only repair option. This is more desirable than total unit replacement. New wood members should match the wood type, size and profile of the existing member. On the exterior use Western Red Cedar. Since the amount of wood material is minimal, use tight grained wood, it is much longer lasting. Prime all surfaces to the wood (except face being glued or bonded to existing member), this is key to paint performance. New material can be spliced or

glued into the existing by routing out material to fit the repair block or member; any open joint are then infilled and patched. This method is often a remedy for infilling hardware lock holes. New material can also replace the entire member section, such as a window sash rail, or sash stop. These members need to exactly match the original.

- **Interior Woodwork** – Historic materials include moldings, board siding, relights, and doors. These materials do not receive extensive wear or deterioration, and can remain in place with very little maintenance. The best preservation strategy is for the materials to remain in place. If operational changes require relocation or removal, gentle techniques should be utilized; rough disassembly practice will result in unusable materials.

- **Hardware** – Consider all original hardware as historic. It was functional and rather ordinary in its time, but now is increasingly difficult to replace. Its material composition and finish is typically superior to what can be purchased today. The original hardware can remain intact at many openings, especially if there is infrequent use. Avoid painting prefinished hardware when repainting doors and windows.

RESOURCES:

Oregon State Historic Preservation Office, 725 Summer St NE Suite C, Salem, Oregon 97301, 503-986-0707

The Secretary of the Interior's Standards For Rehabilitation and Guidelines for Rehabilitating Historic Buildings; These recommendations were initially developed in 1977 to help owners and managers of historic properties. The ten standards are adopted within the Portland Historic Design Review ordinance. The Guidelines are general, but provide insight into Recommended and Not Recommended practices. The document is periodically updated; Available from the State Historic Preservation Office, or www.nps.gov

Preservation Briefs issued by the National Park Service address specific construction materials and features applicable; the following are applicable and are available from the State Historic Preservation Office, or www2.cr.nps.gov/tps/briefs/presbhom.htm

1. **The Cleaning and Waterproof Coating of Masonry Buildings** (Addresses masonry construction, but general principles apply to concrete buildings and structures)
9. **The Repair of Historic Wooden Windows**
10. **Exterior Paint Problems on Historic Wood**
13. The Repair of Historic Steel Windows (focuses on windows, but general steel treatment is applicable)
15. **Preservation of Historic Concrete: Problems and** General Approaches
27. **The Maintenance and Repair of Architectural Cast Iron**

Appendix C

APPENDIX C
HISTORIC PRESERVATION BRIEFS

HISTORIC PRESERVATION BRIEFS ARE AVAILABLE AT THE FOLLOWING WEBSITE:

http://www.nps.gov/history/hps/tps/briefs/presbhom.htm

Specifically relevant titles include:

01: Assessing Cleaning and Water-Repellent Treatments for Historic Masonry Buildings
09: The Repair of Historic Wooden Windows
10: Exterior Paint Problems on Historic Woodwork
13: The Repair and Thermal Upgrading of Historic Steel Windows
15: Preservation of Historic Concrete
27: The Maintenance and Repair of Architectural Cast Iron