



HIGHLAND CITY

AGENDA

HIGHLAND CITY WATER ADVISORY BOARD

Tuesday, February 5, 2019, 7:00 a.m.

Highland City West Conference Room, 5400 West Civic Center Drive, Highland Utah

CALL TO ORDER: Tavis Timothy, Chair

- Attendance – Tavis Timothy, Chair

APPROVAL OF MINUTES:

1. Approval of the October 9, 2018 meeting minutes.

PROJECT UPDATES:

2. Water Advisory Board presentation to City Council on November 13, 2018.
3. Year-end culinary and pressurized irrigation statistics

DISCUSSION ITEMS:

4. Annual water conservation public education.

OTHER BUSINESS:

BOARD COMMENTS AND SUGGESTIONS:

ADJOURNMENT:

NEXT MEETING: _____ at 7:00 a.m.

CERTIFICATE OF POSTING

The undersigned duly appointed City Recorder does hereby certify that on this 17th day of January, 2019 the above agenda was posted in three public places within Highland City limits. Agenda also posted on State (<http://pmn.utah.gov>) and City websites (www.highlandcity.org).

JoAnn Scott, Community Dev./Public Works Coordinator

- In accordance with the Americans with Disabilities Act, Highland City will make reasonable accommodations to participate in the meeting.
- Requests for assistance can be made by contacting the City Recorder at 801-772-4505, at least 3 days in advance to the meeting.
- The order of agenda items may change to accommodate the needs of the Board, the staff and the public.

THE PUBLIC IS INVITED TO PARTICIPATE IN ALL CITY MEETINGS.

1 **HIGHLAND CITY WATER ADVISORY BOARD**

2 **Tuesday, October 9, 2018, 7:00 a.m.**

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4 The Highland City Water Advisory Board met in a regular session on Tuesday, October 9, 2018
5 in the conference room at Highland City, 5400 W Civic Center Dr., Suite 100, Highland City,
6 commencing at 7:00 a.m.

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8 PRESENT: Tavis Timothy, Conducting
9 Jim Horrocks
10 Mark Thompson
11 Andrew Sparks

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13 STAFF PRESENT: Todd Trane
14 JoAnn Scott
15 Jeff Murdoch

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17 OTHERS PRESENT: Kurt Ostler

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19 Tavis Timothy welcomed all present and called the meeting to order at 7:00 am.

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21 **APPROVAL OF MINUTES:**

- 22
23 1. Review and action to approve minutes of July 10, 2018 meeting.

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25 **MOTION: Mark Thompson motioned to approve the minutes of July 10, 2018.** Seconded by Jim
26 Horrocks.

27 Yes - Tavis Timothy
28 Mark Thompson
29 Jim Horrocks
30 Andrew Sparks
31 Todd Trane

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33 Motion passes.

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35 **ACTION ITEMS:**

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37 2. Action by board to recommend water conservation suggestions to City Council.

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39 Tavis provided a handout of suggestions that were discussed in the July, 2018 meeting relative to
40 water conservation measures that this board would like to recommend to the City Council. This
41 information was provided to the board members prior to this meeting and input sought. Tavis
42 stated that he received comment from Andrew Sparks, stating that he was satisfied with what
43 Tavis had prepared.

44
45 Tavis will work with City staff to prepare a presentation for the City Council in a meeting in the
46 near future. Board members will be informed of when that meeting will take place.

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48 **MOTION: Jim Horrocks motioned to forward the recommended water conservation**
49 **suggestions as prepared by Tavis Timothy to the City Council.** Seconded by Mark Thompson.

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51 Yes - Tavis Timothy
52 Mark Thompson
53 Jim Horrocks
54 Andrew Sparks

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Todd Trane

Motion passes.

3. Action to approve Water Advisory Board meeting dates during 2019.

MOTION: Mark Thompson motioned to approve the proposed dates for 2019 with the time being changed to 7:00 am. Seconded by Andrew Sparks

Yes	-	Tavis Timothy
		Mark Thompson
		Jim Horrocks
		Drew Sparks
		Todd Trane

Motion passes.

PROJECT UPDATES:

4. Pressurized Irrigation Master Plan Update – Tavis

In 2016 the State of Utah provided an infrared imaging for the Wasatch front. Tavis used the different pixels from that imaging to determine the irrigated area acreage within Highland. This information is being used as the basis of the master plan. The information gives 95% accuracy for each parcels irrigable area. It was determined that there is less ground being irrigated than previously thought. Tavis stated that this would imply that there is more water being used on less land acreage. Master planning should look at yearly and daily source demands and monitor what is being put into the system from a variety of sources. Pump stations utilized to pump water into the system have meters on them which are read by the SCADA system. This information along with the irrigable acreage is used to model usage over an extended period showing where pressures are a problem and how this is impacted by demand.

The State compared the infrared imaging and water usage to rank several cities throughout state on their water use. This information was provided to Tavis in his work with Hansen Allen and Luce, Inc. While Highland City was not one of those cities identified by the state, Tavis was able to use the states infrared data with our water usage and determine that Highland City residents were out pacing other communities in the study in water used per irrigated acres.

Tavis modeled future water use taking into consideration the current and projected growth. He explained that when new residents come into Highland, they should expect a predetermined pressure from their irrigation water. If there are high demands on the system from over usage, then the pressures will drop. Tavis shared a graph of how much water Saratoga Spring residents used before metering and then after. He indicated that Spanish Fork has a metered system as well. Spanish Fork’s rate tiers are not as high as Saratoga Springs and their usage is higher. Tavis has looked at the level of service that Highland City residents have now adding in that of future growth and feels that while metering the pressurized irrigation is probably inevitable, there is still much that the residents can do to conserve and reduce water usage. He would like to use resident education and potentially incentives for conservation.

Tavis shared some information with the board (see attached). Tavis stated that Highland City currently has municipal water rights of 5200 acre feet assigned as ground water. This is well water that is pumped for culinary use and some pressurized irrigation. Surface water rights are

107 allocated among various water entities such as the irrigation companies, Provo River Water
108 Users Association, Utah Lake District, etc. Total acre feet of surface water are 14,999.

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110 Tavis looked at what our system would look like if we had a 50% drought situation. This year
111 the water flow from American Fork Canyon was down to 20% of normal. In a 50% drought
112 situation, with current water rights and taking into consideration the use by residents, our system
113 is at a break-even point.

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115 There are currently 7 locations of source capacity. They are American Fork canyon, American
116 Fork flume and Lehi flume, upper pond, 11800 North well, 10700 North well, (2) CUP
117 connections and the diversion from the Murdock canal.

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119 Addressing water storage in the Master Plan, our future needs are in a deficit compared to what
120 we currently have available. Tavis reviewed areas where the City should consider projects
121 including distribution connectivity, water storage expansion, additional wells, etc.
122 There could be an additional PRV to boost pressure in the north west area.

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124 Interconnectivity in the Beacon Hills area will come with development in the area.

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126 **Dry Creek Storage**

127 Tavis stated that the City Council recently asked that a look be taken at the Dry Creek facility for
128 storage. A brief history of how the Dry Creek facility came to be was given. It is currently
129 operated by the North Utah County Water Conservancy District (NUCWCA) and was built
130 originally as a debris basin to address flooding in the 1950's and 1960's. NUCWCA recently
131 sought to improve the Dry Creek basin for water storage. Lehi partnered with NUCWCA to
132 expand the Dry Creek area so that they could use it for a pressurized irrigation source. Water
133 will be taken in during the summer season honoring hard dates and supply.

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135 The use will be for recreation and storage. Water coming into the new pond can be augmented by
136 the Murdock Canal.

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138 Highland City Council has requested that this board look at Dry Creek and evaluate whether it
139 should consider this location as a storage site as well. Kurt Ostler asked NUCWCA if Highland
140 could buy in at a later date and was told no.

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142 Todd stated that a large part of the water we utilize comes from American Fork canyon. As a
143 major stock holder in the Lehi Irrigation Company, Highland City finds that it is advantageous to
144 take as much water as we can at the canyon versus water from other sources that we are not able
145 to get into our system. Currently Highland City trades water with Lehi City. We can augment
146 water from the CUP and take it into the system at other storage locations. Todd felt that it was a
147 huge benefit to take the water at the canyon as there would be less overhead in pumping costs,
148 carrying costs, etc. Kurt Ostler asked if this were a good time to protect Highland City's interest
149 by asking that an agreement be entered into that if things changed in the future, Highland could
150 take water from Dry Creek.

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152 Jim stated that a written document will not provide the flexibility that currently works to the
153 benefit of Highland City.

154 Ultimately there will be no tail water going into the Dry Creek pond.

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156 Tavis is looking at a potential project to capture and tail water before it goes into Dry Creek on
157 the Workman property. This may require that a flume be put at the top of the hill going into Dry
158 Creek but an evaluation needs to be considered of cost versus benefit.

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160 Jim states that there needs to be something in the Master Plan, that would allow for us to capture
161 water going into Dry Creek.

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163 Todd recommended that Highland City approach Lehi City with a proposed agreement language
164 that would allow for a trade of water that is Highland City tail water going into Dry Creek in
165 trade for water from the canyon.

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167 Jim Horrocks motioned that a recommendation be put forward to the Highland City Council to
168 negotiate with Lehi City on language for a letter of understanding for water storage that would
169 protect Highland City rights to tail water flowing into Dry Creek. If no agreement can be made,
170 City Council should then consider building an additional facility to hold tail water before
171 entering the Dry Creek reservoir. Todd Trane seconded the motion.

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173 Yes - Mark Thompson
174 Jim Horrocks
175 Drew Sparks
176 Todd Trane
177 Abstained - Tavis Timothy

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179 Motion passes.

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181 5. Report on metering of PI water – Brent Wallace
182 **Brent was not in attendance.**

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184 **DISCUSSION ITEMS:**

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186 **OTHER BUSINESS:**

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188 **BOARD COMMENTS AND SUGGESTIONS:**

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190 **ADJOURNMENT: Jim Horrocks moved to adjourn at 8:30 am. The motion was**
191 **seconded by Mark Thompson.**

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193 **NEXT MEETING: *February 5, 2019 at 7:00 a.m.***

WATER ADVISORY BOARD UPDATE

November 13, 2018



Outdoor Watering Conservation

Background – During the past few years the Water Advisory Board has had significant discussion regarding water conservation within the City’s secondary system. Recent studies have provided that the City’s water use is as much as double over similar water systems. Due to growth and the drought conditions the Water Advisory Board would like to strongly recommend the following for City Council consideration.

In a unanimous motion of the five Board Members in attendance, the Water Advisory Board recommends the following to the City Council:

Conservation Items for Consideration

1. **Allow alternatives to sod in the park strips** – It has been found that park strips are an area that requires more watering due to high inefficiencies. It is the Board's recommendation that the City review current standards to either allow sidewalks next to the curb or ease the requirements of lawn in the park strip and/or to provide more xeriscaping.
2. **Promote xeriscape** – As part of public education provide incentives and education for xeriscaping within existing residential and city properties.
3. **Make public more aware of the value of smart controllers and possible CUWCD rebates**
 - Provide additional education, possibly teaming with a smart controller company to educate and setup smart controllers within the City. Currently, CUWCD provides rebates for smart controllers. These smart controllers have been found to decrease use up to 50%, per the EPA's findings.
4. **Provide additional conservation notices/education to the residents** – Similar to the recent flyer regarding the current watering schedule, continue to provide conservation notices and educate the residents.
 - Additional funding for conservation education/public outreach – Conservation efforts require additional funding to be effective.
 - Magnets, hangers, mailers, etc.
5. **Review ordinances & regulations related to water conservation and update as necessary.**
6. **Initiate grant funding applications for meters** (possibly to assist with the cost of metering parks). CUWCD and other federal agencies in the past have had matching grants for installation of metered systems. The City would likely need to pay a match to receive these grants. However, any funding that the City can receive should be investigated.

Pressurized Irrigation Master Plan & Dry Creek Storage Update

1. The Board was provided Master Plan status and information similar to that presented to City Council on August 21st, 2018. The Board did not object to the findings or proposed capital improvements.
2. The Dry Creek Reservoir was discussed as a possible storage facility for the City's pressurized irrigation system, with Councilman Ostler in attendance. After some deliberation the Board recommended in a motion that:
 - The City begin negotiating with the City of Lehi towards a mutual understanding regarding Highland City's tail water/overflow rights that makes its way to the reservoir.
3. As follow up to the Dry Creek discussion, the Board suggested placing two projects into the Master Plan:
 - A facility to capture and pump the tailwater/overflow water into the PI System.
 - A facility to pump excess water in Highland Glen pond into the PI System.