

WATER TRANSFER WORKING GROUP PROJECT DESCRIPTION

APPLICATION NO./COURT CLAIM NO. 1) Pending / Court Claim No. 01724 (S4-83660-J) 2) Pending / New WBN Water Right		
APPLICANT NAME City of Mabton	CONTACT NAME Tyson Carlson, Aspect Consulting	TELEPHONE NO. 509-895-5923
WATER RIGHT HOLDER'S NAME (if different) Pautzke Bait Company, Inc		EMAIL tcarlson@aspectconsulting.com

DATE OF APPLICATION(S) 1) Kittitas Conservancy Board – Pending 2) Ecology - Pending	PRIORITY DATE 1) May 24, 1884 2) Pending, mitigated by a 1884 water right
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WATER SOURCE: 1) Reecer Creek 2) Groundwater – Up to two wells completed in the Basin-Fill Deposits	CROP: 1) Timothy Hay 2) N/A
INSTANTANEOUS QUANTITY: 1) 3.32 cfs 2) TBD	ANNUAL QUANTITY: 1) 690 ac-ft/yr 2) 489 ac-ft/yr (total), based on 60% return flow; not to exceed 195.64 ac-ft/yr (CU)
PERIOD OF USE: 1) April 1 to October 15 2) Year round, as needed	
PLACE OF USE: 1) The NE ¹ / ₄ NE ¹ / ₄ Section 33, and the SE ¹ / ₄ SE ¹ / ₄ of Section 28, T. 18 N., R. 18 E.W.M. 2) City of Mabton UGA	PURPOSE OF USE: 1) Irrigation of 61 acres and stockwater 2) Municipal
IRRIGATION METHOD: Irrigation is performed using surface flood methods to grow timothy hay. A mix of gated pipe and boards are used to divert water from multiple locations on Reecer Creek to the surrounding fields. Water typically flows from the north to south across the property until intercepted by laterals directing return flow back to Reecer Creek.	

CONSUMPTIVE USE CALCULATION: Based on the aerial photo review, there were about 61.5 acres of irrigation associated with the authorized place of use in 2003. The irrigated area was reduced slightly around 2005 when the pond in the southwest corner of the property was expanded. Since that time, irrigated area has been fairly consistent with at least 58.8 acres irrigated within any 5-year window. The monthly WIG data indicate that the updated Crop Irrigation Requirement (CIR) for
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clover – the surrogate crop used for timothy hay near Ellensburg – is 2.76 feet/year. Using Ecology's *Guidance Document, GUID-1210, Determining Irrigation Efficiency and Consumptive Use*, application efficiency (Ea) was estimated to be about 24.4 percent for flood irrigation. This estimate results from a calculation of the annual CIR (2.76 feet/acre) divided by the Court confirmed water duty or Total Irrigation Requirement (TIR; 11.3 feet/acre). The sum of the monthly TIR multiplied by the number of authorized irrigated acres is the total quantity of water required to fully irrigate the authorized place of use (665.11 ac-ft/yr). Based on this analysis, the TIR for the 58.8 acres is summarized in Table 1 below.

Table 1 – Total Irrigation Requirement (TIR)

	Unit	May	Jun	Jul	Aug	Sep	Oct	Total
Qa	acre ft.	65.03	143.70	196.89	157.15	89.51	12.84	665.11
Average Qi	cfs	1.06	2.42	3.20	2.56	1.50	0.21	-

In determining percent of consumptive use (%CU), 5 percent was added to the Ea to account for evaporative losses, totaling about 29.4 %CU. Monthly consumptive use for irrigation was then calculated by multiplying the TIR by the specified %CU and the area to be fallowed (CU = TIR x %CU). Based on this analysis, Table 2 summarizes the amount of consumptive use from fallowing of 58.8 acres for mitigation and instream flows that will be transferred to the TWRP.

Table 2 – Consumptive Use (Secondary Reach)

	Unit	May	Jun	Jul	Aug	Sep	Oct	Total
Qa	acre ft.	19.13	42.27	57.91	46.22	26.33	3.78	195.64
Average Qi	cfs	0.31	0.71	0.94	0.75	0.44	0.06	-

NARRATIVE DESCRIPTION OF PROJECT:

The City of Mabton is currently under contract to purchase a pre-1905 water right from Pautzke Bait Company, Inc. on Reecer Creek outside of Ellensburg. The water right will help meet Mabton's current water supply shortfall, and will provide for significant long-term economic growth and water supply reliability. Mabton proposes to change the water right to mitigation and instream flow, then receive a new water budget neutral water right using consumptive use mitigation credits from the State's TWRP. The new water budget water right would authorize Mabton to withdraw groundwater from two or more proposed wells completed in the basin-fill deposits for municipal water supply within Mabton's Urban Growth Area (UGA).

As documented in numerous studies (Jones et al, 2007; Vaccaro et al, 2009) shallow units (i.e. Basin-Fill Deposits) near Mabton have a readily available supply of groundwater and have characterized regional groundwater level trends in the Basin-Fill Deposits as stable (Jones, et al, 2007).

The suitability of water rights for mitigation in the lower Yakima Basin are illustrated in

Ecology's Central and Lower Yakima Basin Water Exchange Mitigation Suitability Map. Mabton is located west of the Yakima-Benton County line, south of the Yakima River, in the green area. The green area is defined as being suitable for mitigation of TWSA with a pre-1905 mainstem water right.

Mabton proposes to mitigate year-round consumptive use (up to 195.64 ac-ft/yr) through nonuse and fallowing of land currently appurtenant to Court Claim No. 01724 (S4-83660-J). The water will be left instream in Reecer Creek and on the mainstem Yakima River from the historic point of diversion near Ellensburg, over Parker gage at Sunnyside Dam, before being withdrawn about 10 miles upriver of the gage and diversion dam at Prosser.

Mabton proposes the Bureau of Reclamation manage the water to meet in-time all instream flow target on the subject reaches of the Yakima River, including YRBWEP and TWRP instream flow target water and any reach-specific target flows based on System Operation Advisory Committee (SOAC) recommendations. In addition, during periods outside of designated target flow periods, the subject reach of the lower Yakima River maintains sufficient winter-time flow to satisfy downstream senior water rights and maintain instream habitat.

Mabton is currently undergoing significant infrastructure upgrades which is expected to reduce the amount of leakage through its water distribution system. Based on available metering data, Mabton water use is currently about 40 percent consumptive, therefore the cumulative annual quantity (Qa) of the Mabton's water right is estimated at about 489 ac-ft/yr. However, upgrade of meters is underway and the data collected will be used to inform the permit prior to certification. It is anticipated the final consumptive use will be near 50 percent.

CONCLUSION

Aspect Consulting recent completed a draft water right diligence and hydrogeologic investigation (available upon request). The findings of the investigation (summarized above) indicate that fallowing of Court Claim No. 01724 will result in 195.64 ac-ft/yr (consumptive use) available for instream flow and mitigation for out of priority uses from surface water and/or sources in continuity with the Yakima River. The proposed Mabton wells completed in the Basin-Fill Deposits are in high continuity with the Yakima River. In addition, groundwater in the regional Basin-Fill Deposits is physically available for appropriation and authorization of the proposed wells will not impair nearby groundwater users, nearby surface water – including TWSA, or ESA-listed species.

CLAIMANT NAME: **Pautzke Bait Company, Inc.**

COURT CLAIM NO. 01724

Certificate Number: S4-83660-J

Subbasin: 07 Reecer Creek

Source: Reecer Creek

Use: Irrigation of 61 acres and stock water

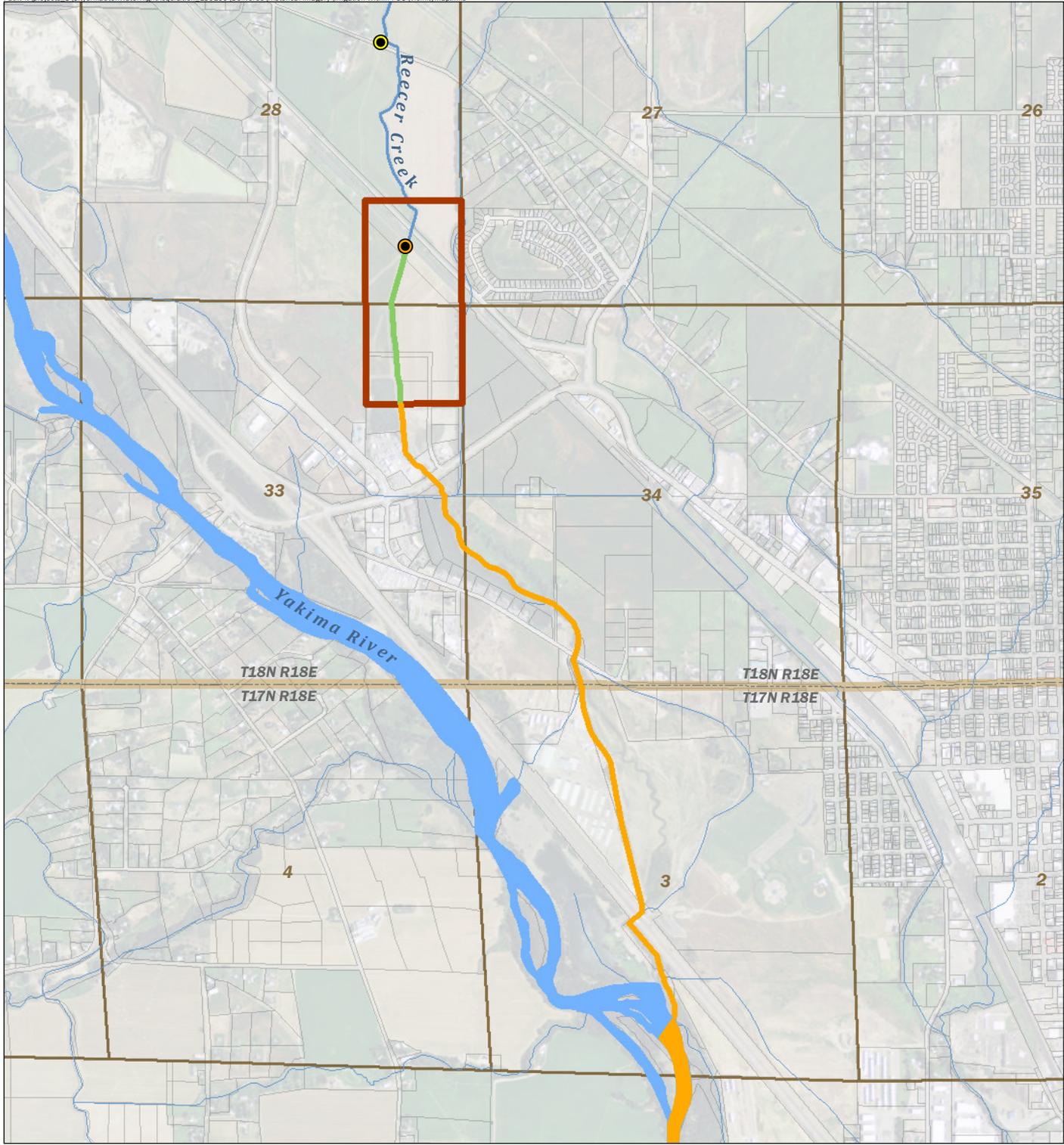
Period of Use: April 1 to October 15

Quantity: 3.32 cubic feet per second, 690 acre-feet per year

Priority Date: **May 24, 1884**

Point of Diversion: 1700 feet south and 1100 feet west from the northeast corner of Section 28, being within the SE $\frac{1}{4}$ NE $\frac{1}{4}$ Section 28, T. 18 N., R. 18 E.W.M.

Place of Use: The NE $\frac{1}{4}$ NE $\frac{1}{4}$ Section 33, and the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 28, T. 18 N., R. 18 E.W.M.

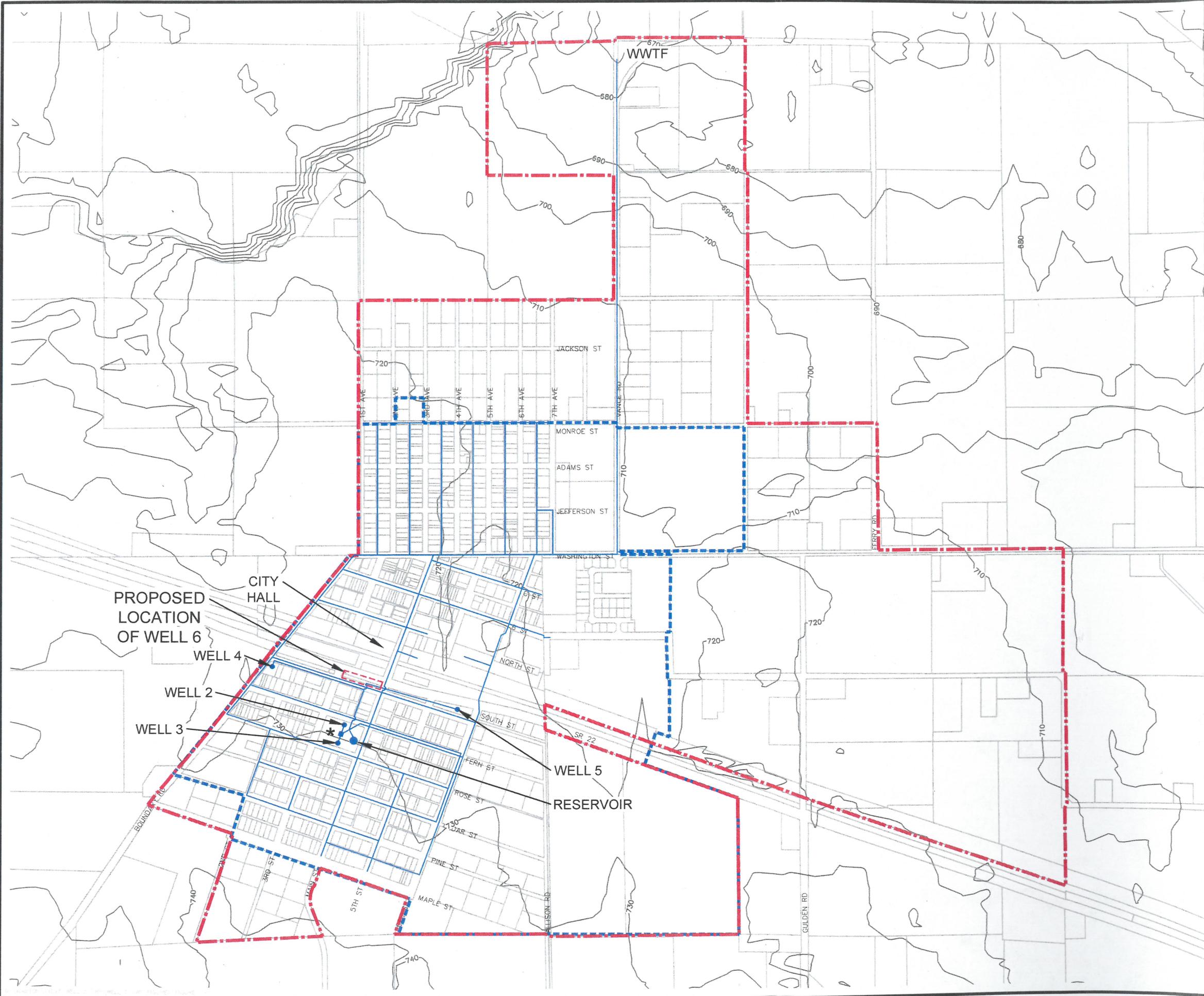


-  Point of Diversion (De-facto Change)
-  Point of Diversion (Authorized)
-  Place of Use
-  Primary Reach
-  Secondary Reach
(extends to Columbia River)
-  Township/Range
-  Section
-  Parcels



Vicinity Map
 Pautzke Bait Company, Inc.
 Court Claim No. 01724
 Kittitas County, Washington

	APR-2016		FIGURE NO. 1
	ASPECT PROJECT NO. 150100	FIGURE BY: JLE / RMB	



1"=1000'

- CITY LIMITS
- - - URBAN GROWTH AREA
- WATER MAIN
- RESERVOIR
- WELL
- BOOSTER
- ~ 10' CONTOURS

Please note that Well 6 has been constructed since this map was drafted

CITY OF MABTON
SOURCE WATER PROTECTION PROJECT

FIGURE 1-1
EXISTING WATER SYSTEM AND WELL LOCATIONS


Gray & Osborne, Inc.
CONSULTING ENGINEERS