

## **Town of Milliken**

### **New West Side Non-Potable Irrigation Well**

#### **Appropriation of New Alluvial Water Rights Engineering and Legal Scope of Work<sup>1</sup>**

1. Determine location of new non-potable wells.
  - a. Meet with staff to determine irrigation and operational needs and desired well(s) locations.
  - b. Evaluate park irrigation needs and locate adjacent private and Town owned wells to assess well interference issues.
  - c. Evaluate all alluvial Well Construction and Test Reports for all wells located within 600 feet of proposed new non-potable wells.
  
2. Select preliminary location of new non-potable wells.
  - a. Evaluate park location, adjacent wells and aquifer characteristics.
  - b. Conduct aquifer and river depletion analysis of new non-potable wells based on preliminary well locations.
  - c. Determine aquifer properties of proposed new wells (Transmissivity, Distance to Aquifer Boundaries and River).
  - d. Develop seasonal non-potable well irrigation demands and aquifer withdrawals.
  - e. Estimate monthly, seasonal and multi-year river depletions to the Little and Big Thompson River (AWAS model).
  - f. Prepare preliminary projection of new potable well depletions pursuant to 02CW339 based on projected seasonal irrigation well pumping and available augmentation replacement supplies (14 shares Consolidated Hillsborough Ditch).
  
3. Prepare Memo with recommendation of final location of new non-potable irrigation wells based on the preliminary location analysis.
  
4. Adjudication of new alluvial water rights.
  - a. Develop Division I Water Court Application with Kim Lawrence (Town's water attorney).
  - b. File application for new non-potable wells.
  - c. Develop Substitute Water Supply request to Division of Water Resources to seek approval to drill new non-potable wells and operate wells temporality until wells are decree in Division I Water Court.

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<sup>1</sup> This Scope of Work only presents the tasks needed to appropriate new water rights and does not include engineering and construction costs associated with drill new wells and other needed water distribution infrastructure.

- d. Develop proposed Water Court decree with Lawrence (integration of new non-potable irrigation wells with 02CW339 Augmentation Plan Operations.
- e. Negotiate proposed decree with objectors and Division of Water Resources<sup>2</sup>.

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<sup>2</sup> The type and time associated with negotiation of a successful decree is not known and is dependent on the number and type of objections filed. All costs associated with objector negotiations, trail preparation and trail will be billed at hourly engineering and legal rates applicate at the time of services.

**Town of Milliken: West Side New Non-Potable Irrigation Alluvial Water Right Appropriation Well Estimated Project Cost<sup>1</sup>**

Activity/Task	Cost
<u>Engineering</u>	
1. Determine location of new non-potable wells.	
a. Meet with staff to determine irrigation and operational needs and desired well(s) locations.	\$300
b. Evaluate park irrigation needs and locate adjacent private and Town owned wells to assess well interference issues.	\$1,200
c. Evaluate all alluvial Well Construction and Test Reports for all wells located within 600 feet of proposed new non-potable wells.	\$1,500
<i>Sub-Total</i>	\$3,000
2. Select preliminary location of new non-potable wells.	
a. Evaluate park location, adjacent wells and aquifer characteristics.	\$500
b. Conduct aquifer and river depletion analysis of new non-potable wells based on preliminary well locations.	\$1,500
c. Determine aquifer properties of proposed new wells (Transmissivity, Distance to Aquifer Boundaries and River).	\$1,500
d. Develop seasonal non-potable well irrigation demands and aquifer withdrawals.	\$500
e. Estimate monthly, seasonal and multi-year river depletions to the Little and Big Thompson River (AWAS model).	\$500
f. Prepare preliminary projection of new potable well depletions pursuant to 02CW339	\$1,500
<i>Sub-Total</i>	\$6,000
3. Prepare Memo with recommendation of final location of new non-potable irrigation wells based on preliminary location analysis.	\$500
<i>Sub-Total</i>	\$500
<u>Legal</u>	
4. Adjudication of new alluvial water rights.	\$500
a. Develop Division I Water Court Application with Kim Lawrence (Town's water attorney).	\$500
i. Engineering Cost	\$500
ii. Legal Cost	\$3,000
b. File application for new non-potable wells.	
i. Engineering Cost	\$0
ii. Legal Cost	\$1,000
c. Develop Substitute Water Supply request to Division of Water Resources.	
i. Engineering Cost	\$1,500
ii. Legal Cost	\$500
d. Develop proposed Water Court decree with Lawrence.	
i. Engineering Cost	\$500
ii. Legal Cost	\$6,500
e. Negotiate proposed decree with objectors and Division of Water Resources. (billed at hourly rate) <sup>2</sup>	N/A
<i>Sub-Total</i>	
Engineering Cost	\$2,500
Legal Cost	\$11,000
<b>Total Engineering</b>	\$14,500
<b>Total Legal</b>	\$11,000
Engineering Contingency (10%)	\$1,450
Legal Contingency (10%)	\$1,100
<b>Total Estimated Project Cost</b>	<b>\$28,050</b>

<sup>1</sup> Does not include costs of drilling and construction of non-potable infrastructure

<sup>2</sup> All costs associated with objector negotiations, trial preparation and trial will be billed at hourly engineering and legal rates applicable at the time of services.

