

2016 RECOMMENDATION-PLANNING PROJECTS

Project Name: UW Jacoby Golf Course Irrigation Well

Program: New Development

Project Type: Municipal Raw Water Project

County: Albany

Sponsor: University of Wyoming

Proposed Budget: \$800,000

WWDO Recommendation: Level II

Project Manager: Keith Clarey

Project Description:

1. Describe existing status in the program and previous appropriations.

Existing Legislation: none.

Prior Legislation: none.

2. Describe the location of the project.

The UW Jacoby Golf Course is located in the eastern part of the City of Laramie, Albany County, Wyoming. The project area is bounded to the west by 30th street, to the south by Willett Drive, and to the north by Grays Gable Road. The proposed Level II Study is located in the Laramie Basin and lies within the North Platte River Basin.

3. Summarize the request.

The University of Wyoming is seeking to develop non-potable sources of groundwater supply for irrigating the Red Jacoby Golf Course. The golf course currently irrigates 138 acres with treated, potable water purchased from the City of Laramie. Golf course irrigation uses approximately 63 million gallons per year and usage may exceed 75 million gallons during dry years.

The land developed into Red Jacoby Golf Course was part of a Land and Water Conservation Grant awarded to the University in the 1950's. Requirements of the grant include a provision to maintain the land as a recreational area in perpetuity for community benefit. The University developed and maintains the golf course as a community course. For many years, the City provided water at no cost to the University. That arrangement ended in 2006, with the execution of a water agreement that requires the University to pay for potable water at 25% of the current rate for the first 75 million gallons and full rate for usage in excess of 75 million gallons. The 10-year agreement expires in 2016.

Operation of the golf course has provided opportunities for the City and University to work together. The golf course is open to the public in exchange for reduced water rates. The golf course also serves a storm water control function for the City, by receiving and detaining storm water runoff from the northeastern part of the City in accordance with the 1984 East Campus Drainage Plan.

There are two irrigation systems at the University of Wyoming: One for the golf course and another one for the campus. The golf course irrigation system serves approximately 138 acres, using an average of 63 million gallons of treated, potable water per year purchased from the City. The UW campus irrigation system covers approximately 110 acres, primarily with well water from the aged, University Well No. 1 (S.C. 494), and supplemented by treated, potable water supplied by and purchased from the City. On average, the campus system uses approximately 60 million gallons per year.

Several projects are underway to improve the sustainability of the campus irrigation, primarily for reducing water consumption and simplifying operation of the irrigation systems. The golf course irrigation piping will be replaced to reduce leakage for the 50-year old system. The installation of weather-based, central irrigation control systems for the campus and the golf course is underway to optimize irrigation and reduce water use. UW expects water consumption will be reduced by 15% to 25% with the completion of these projects. Two new wells will be connected to the campus system in the near future to further reduce reliance on treated City drinking water for irrigation use.

Another objective of the proposed project is to assist the golf course in becoming financially stable. The golf course operates at an annual deficit of roughly \$100,000. The billed amount for City water has averaged \$90,000 per year over the last two years. If drought conditions arise, and the 75 million gallons per year threshold specified in the University—City agreement is exceeded, water costs would increase substantially. Water rates have trended upward significantly over the past two decades. The University water consumption costs have more than doubled from 2009 to 2013 (4 years). The University is now seeking an alternative water supply for golf course irrigation and other campus landscaped areas.

4. Summarize the reasons for the request.

In accordance with the 2015 Session of the 63rd Legislature of the State of Wyoming, Enrolled Act No. 56, the University of Wyoming is seeking WWDC funds to develop non-potable sources of groundwater for irrigating the Jacoby Golf Course. The University believes the benefits of such a study would lead to a reduction in the use of potable water for irrigation, a reduction in man-hours to operate and maintain the golf course, a better financial outlook for the golf course operation, and better turf quality.

PROJECT INFORMATION:

A. EXISTING WATER SUPPLY SYSTEM

1. Description of Present Water Supply:

a. Groundwater – Number of wells: None

Primary supply aquifer or formation: Treated potable water purchased from City of Laramie.

b. Surface Water - Source Name(s): Treated potable water purchased from City of Laramie.

c. Springs – Name of spring(s): N/A **Approximate Annual Yield:** N/A

2. Water Storage: **Treated (volume and description):** None
 Raw (volume and description): None

3. Transmission pipeline - Approx. Distance from Source to Distribution System: None

4. Treatment – Chlorination: City treated -- Chlorination **Other:** City treated -- Fluoridation

5. System Capacity (Potable water system only, independent of any raw water irrigation system)

a. Maximum capacity of the water supply system (gallons per day): N/A

b. What is the factor (bottleneck) that is presently limiting the system capacity (supply, treatment, storage, transmission, etc.): N/A

c. Increased capacity needed (gallons per day): N/A

d. Estimated system water losses (percentage): N/A

6. Is there an independent raw water irrigation system? No

a. Raw water system capacity (gallons per day): N/A

b. Average annual raw water usage (gallons): N/A

B. FINANCIAL INFORMATION

1. Population (2000 Census): N/A (Current Estimate): N/A

a. How many taps served within the corporate limits/JPB service area? N/A

b. How many taps outside the corporate limits/JPB service area? N/A

c. Names of other water systems served? N/A

d. Does the applicant have a comprehensive planning boundary? N/A
If so, what is the estimated additional population that could be served in the future? N/A

2. Tap Fees – Residential: N/A Commercial: N/A

3. Water Rates: N/A

4. Water Usage

a. Estimate the total number of gallons produced by the source annually: 0

b. Gallons used per capita per day: Average Day: N/A Peak Day: N/A

5. Financial Statement: N/A

C. COMPARISON WITH OPERATING CRITERIA

1. Is the sponsor a public entity? Yes

2. Project Priority according to the Criteria? 9 – Municipal and Rural Domestic Raw Water Projects.

3. Will the project serve at least 15 water taps? N/A Number of taps: N/A

4. Is the sponsor under any federal (EPA) mandates to improve your system? N/A

5. Is the sponsor eligible for funding from other state or federal programs? No

6. Is water metered? Yes Are billings based on meter readings? N/A

7. What is monthly water bill for 5,000 gallons? N/A 20,000 gallons? N/A

8. Theoretical monthly water bill (Median Household Income x 2.5%/12)
01-01-2015 City of Laramie 2013 AMHI \$37,657 x 0.025/12 = \$78.45

9. What water conservation measures are employed by the sponsor? During the off-season commencing in September 2015, UW will be rebuilding the golf course irrigation system to reduce leakage and conserve irrigation water. Other conservation measures include: building water service lines are

metered; UW matches the City of Laramie water rates for on-campus customers; and UW also voluntarily complies with any city water restrictions that may be in effect with its well water systems.

10. Is the operation of the water supply system self supporting in terms of revenues offsetting costs for operation, maintenance, debt retirement, replacement funds and emergency funds? No, the golf course currently operates at an annual deficit of approximately \$100,000.

If not, how is the difference subsidized? (e.g., general funds, sales tax, mill levy) It is subsidized by University of Wyoming funds.

11. Will the project consider regional solutions? No

12. Can the project be delayed or staged? Yes Should it be? No

13. Basis for the funding recommendation: In accordance with Enrolled Act No. 56, the University of Wyoming is seeking to develop non-potable sources of groundwater for irrigating the Red Jacoby Golf Course. Grant funding for a WWDC Level II groundwater feasibility study would greatly further efforts for improving the sustainability of the golf course operation. In summary, the benefits would include: A reduction in the use of potable City water for irrigation, reduction in man-hours to operate and maintain the golf course, a better financial outlook for the golf course operation, and better turf quality.

Location Maps



Image Map -- University of Wyoming Red Jacoby Golf Course

Photos



Resolution

The University of Wyoming
Trustees' Report
June 15, 2015
Page #

AGENDA ITEM TITLE: Authorization to Submit a Grant Application to the Wyoming Water Development Commission for Water Well Development at UW's Red Jacoby Golf Course Mai/Collins

CHECK THE APPROPRIATE BOX(ES):

- Work Session
- Education Session
- Information Item
- Other Specify: Committee of the Whole (Consent Agenda)

BACKGROUND AND POLICY CONTEXT OF ISSUE:

In the recent supplemental budget, the state legislature granted \$2.6 million in funding to replace the original Red Jacoby Golf Course irrigation system. The current irrigation system is over 50 years old and continues to experience ongoing maintenance problems. The new irrigation system is scheduled to be installed in the fall of 2015 and will include new piping, sprinkler heads and a state-of-the-art automated controls system. It's anticipated that the upgrades to the golf course irrigation system will substantially reduce costs in maintenance and potentially reduce water consumption by 20-25%. In the enabling legislation for the irrigation system (Enrolled Act No. 56), the University was also directed to pursue grant assistance from the Wyoming Water Development Commission (WWDC) for the development of non-potable water wells to serve as the primary irrigation source for the golf course.

The Red Jacoby Golf Course irrigation system currently uses treated water provided exclusively by the City of Laramie to irrigate a total of 138 acres. The golf course uses an average of 63 million gallons of potable water per year. Water and labor are the two largest expense items for the course. Prior to 2007, the City provided water to the course at no charge since it was constructed with a Land and Water Conservation grant that stipulated the course be open to the public. Since 2007, the University has had to pay for water and has incurred annual losses for that expense. The current water agreement with the City expires in August 2016.

University officials have met with representatives of the Wyoming Water Development Commission to obtain relevant information and criteria on the WWDC's Water Development Program Level II grant program. The University has been invited to complete an application packet and submit it to the WWDC before the grant submittal deadline of August 15, 2015. If successful, the WWDC grant program would initiate a feasibility study in the spring of 2016.

PRIOR RELATED BOARD DISCUSSIONS/ACTIONS:

None.

WHY THIS ITEM IS BEFORE THE BOARD:

WWDC grant guidelines require a resolution of support from the governing body of the representative entity.

ARGUMENTS IN SUPPORT:

- Enrolled Act No. 56 directed the University to pursue grant assistance for water well development at Red Jacoby Golf Course through the Wyoming Water Development Commission.
- A new groundwater source could reduce the City's need to pump, treat and store potable water for the golf course.
- The development of water wells for irrigation purposes will enable the University to realize significant cost savings at Red Jacoby Golf Course by reducing its consumption of potable water from the City of Laramie.
- The Red Jacoby Golf Course is a unique community asset providing an important recreational resource for UW golf teams, students, faculty/staff, community members and visitors.

ARGUMENTS AGAINST:

None.

ACTION REQUIRED AT THIS BOARD MEETING:

Board approval to submit an application to the Wyoming Water Development Commission's Level II Water Development Grant Program for well development at UW's Red Jacoby Golf Course.

PRESIDENT'S RECOMMENDATION:

It is recommended that the Board of Trustees of the University of Wyoming approve the submission of an application to the Wyoming Water Development Commission's Level II Water Development Grant Program for well development at UW's Red Jacoby Golf Course.