

EXHIBIT U – 1041 APPLICATION SECTIONS

1041 PERMIT APPLICATION SUBMITTAL
FOR
TOWN OF RAMAH WASTEWATER SYSTEM
SEWER LIFT STATION
&
WASTEWATER TREATMENT PLANT

JULY 2022

AMENDED OCTOBER 2022

EE Job No.: 0043.0001

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RESPONSE TO CHAPTER 4, ARTICLE 2, OF THE COUNTY GUIDELINES

The following sections are in response to Chapter 4, Article 2, Paragraph 4.201 of the County Guidelines as the Project relates to Domestic Sewage Treatment within unincorporated El Paso County as outlined in Paragraph 4.201 of the guidelines.

SECTION 4.201 (1) AGENCY REVIEW

4.201 (1): *Preliminary review and comment on the proposal by the appropriate agency of the Colorado Department of Natural Resources and the Colorado Department of Public Health and Environment within sixty (60) days of the date of submittal of the proposal for review.*

The site application (30% plans) for the lift station was submitted to CDPHE for review in January 2022 and was amended in February 2022. In order for CDPHE to finalize the review of the site application, the 1041 permit needs to be approved and all agencies including El Paso County, the Pike's Peak Area Council of Local Governments, and the El Paso County Department of Health and Environment need to sign off.

SECTION 4.201 (2) SCOPE OF PROPOSAL

4.201 (2a): *Provide detailed plans of the proposal, including proposed system capacity and service area plans mapped at a scale acceptable to the Department.*

Detailed plans and information about the system capacity and service area can be found in the Site Application in Exhibit I.

4.201 (2b): *Provide a description of all existing or approved proposed domestic water or sewage treatment systems within the Project area.*

The closest domestic sewage system is the town of Ramah's existing wastewater system which is proposed to be replaced with the evaporative pond facility as part of this project. Currently, treatment is provided by the town's single existing influent septic tank and wastewater lagoon.

4.201 (2c): *Describe the design capacity of each domestic water or sewage treatment system facility proposed and the distribution or collection network proposed in the Project area.*

The lift station is designed to convey the wastewater flows from entire collection system of the town of Ramah to the proposed evaporative ponds facility through approximately 4,600 feet of 4-inch sewer force main. The lift station is designed to convey an average day flow of 11,203 gpd and a peak hour flow of 60,000 gpd. The design is discussed in detail in the Site Application in Exhibit I.

4.201 (2d): *Describe the excess capacity of each treatment system and distribution or collection network in the affected community or Project area.*

There are currently 72 active sewer services within the town service area serving an estimated 132 residents. The existing average daily flow of the service area is estimated to be about 11,200 gpd. Over the 20-year planning period for the project, the average daily flow of the service area is projected to increase to approximately 12,855 gpd with a projected population of the service area of 151 residents. The lift station is designed to convey flows for the both existing and 20-year planning period flows of the service

area. The lift station is not designed for excess capacity since it is designed to convey the projected flow of the service area over the 20-year planning period. A complete discussion of the design can be found in the Site Application in Exhibit I.

4.201 (2e): *Provide an inventory of total commitments already made for current water or sewage services.*

The town of Ramah service area includes the entire limits of the incorporated area of the town. No other communities or entities have commitments to the town wastewater system.

The town has an existing sewer fund and water fund for the sewer and water systems. The sewer fund is funded solely through the collection of monthly user fees and new service tap fees. The most current sewer fund budget is \$52,193 for the 2021 budget. This fund is for expenditures including providing maintenance for the existing wastewater facility and operation of the facilities as well as wages and benefits for the staff that operate and manage the wastewater facilities.

The proposed project is to be funded through a combination of grant and loan funding. The town recently was awarded a \$2,000,000 grant through the El Paso County American Rescue Plan Act for water and wastewater projects to be applied to the proposed wastewater project. The town was also able to previously obtain a Design and Engineering Grant for the engineering, design and permitting costs from the Colorado Department of Public Health and Environment (CDPHE). That grant fund totaled \$162,209.

This leave approximately \$544,000 of remaining project costs to be funded through loans as the town's wastewater budget is only capable of funding the operating and maintenance costs for the existing facilities. The town's existing sewer rates were recently raised to \$34.50 per month from \$20.50 per month in preparation for the proposed project. The increase in rates were to account for the preliminary design costs associated with the proposed project for permitting and engineering fees.

Based on the existing number of active sewer services, 72, the town would be looking at an approximately \$21,000 annual loan payment for the remaining project costs. In order to meet the proposed annual loan amounts, the town would need to raise its monthly sewer rates by approximately \$33.00 to a total monthly user fee of approximately \$67.00. This would be the towns maximum potential increase to its sewer fees and sewer fund budget. The rate increase would be significant as it would be nearly double the existing user fees. Therefore, the town is still seeking additional funding opportunities in addition to the grants it has received. The town plans to apply for another grant opportunity from the Department of Local Affairs (DOLA) grant fund program for the remaining portion of the project costs. If the town does not receive the additional grant funding or only a portion of the requested amount, then it will be borrowing for the remainder through the State of Colorado's State Revolving Loan Fund (SRF) program.

4.201 (2f): *Describe the operational efficiency of each existing system in the Project area, including the age, state of repair and level of treatment.*

As a result of this project, the existing wastewater lagoon and influent septic tank will be decommissioned. As part of the lagoon decommissioning, the existing lagoon biosolids that have accumulated over the years of operation are to be removed and disposed of. The decommissioned lagoon will then be dismantled. The former lagoon area will be regraded to match the grade and condition of the surrounding natural floodplain to the best extent reasonably possible. Surface restoration will also be implemented to the former lagoon area with the placement of topsoil to the affected area followed by seeding with a native grasses seed mix as recommended and approved by the Colorado Parks and Wildlife and the El Paso County Conservation

District. All necessary sedimentation and erosion control measures will be implemented during the decommissioning and restoration work to ensure there are no stormwater runoff related impacts to the Big Sandy Creek and Antelope Creek during construction. This will include but is not limited to the use of silt fence, straw wattles, and straw erosion control matting for stabilizing regraded and seeded surfaces. Once surface restoration is determined to be complete with the establishment of native grasses, the restored area will remain town property. The town has no formal plans for the area following completed surface restoration as it is within the 100-year floodplain. There are no plans for municipal use or recreation use at this time.

The existing septic tank is also to be decommissioned as well. Once the new wastewater treatment facility and lift station are complete and online, the existing tank is to be drained of any remaining wastewater and sludge. Once drained, the tank will be crushed and abandoned in place. If necessary, the crushed tank will be backfilled with fill material and the disturbed area will be regraded to match the grade and condition of the surrounding area. This will also include surface restoration on the disturbed area around the tank including the replacement of topsoil and the seeding of the appropriate native grasses seed mix. All necessary sedimentation and erosion control measures will be implemented during the decommissioning and restoration work to ensure there are no stormwater runoff related impacts to the Big Sandy Creek and Antelope Creek during construction. This will include but is not limited to the use of silt fence, straw wattles, and straw erosion control matting for stabilizing regraded and seeded surfaces. Once surface restoration is determined to be complete with the establishment of native grasses, the restored area will remain town property. The town has no formal plans for the area following completed surface restoration. There are no plans for municipal use or recreation use at this time.

4.201 (2g): *Describe the existing water utilization, including the historic yield from rights and use by category such as agricultural, municipal, and industrial supply obligations to other systems.*

There are no other systems to which the town of Ramah's wastewater system has water utilization obligations to.

SECTION 4.201 (3) DEMONSTRATION OF NEED

4.201 (3a): *Provide population trends for the Project area, including present population, population growth and growth rates, documenting the sources used.*

The population of the Town of Ramah has fluctuated between 98 to 132 people over the previous 29 years of reported data from the US Census Bureau. Since 2001 the town has seen a relatively constant increase in population averaging 0.69% annual increase. Assuming an average growth rate of 0.69%, the existing population is estimated at 132 as of 2021. An average max month flow of 85 gpd per capita was assumed for the service area per standard design conditions. Utilizing this usage rate and the existing population estimate of 132, an existing average daily flow of 11,203 gpd was determined. Using the projected population estimates, the 20-year average day flow was calculated to be approximately 12,855 gpd. In order to be conservative, the evaporative pond facility will be designed for 15,000 gpd and the influent lift station will be designed for 60,000 gpd.

4.201 (3b): *Specify the predominant types of developments to be served by the proposed new water and/or sewage systems or extensions thereof.*

The service area that will be served by the lift station and evaporative ponds facility is the town of Ramah. The service area in Ramah is comprised of predominantly residential service users with only a couple of commercial users including the town post office and several churches. There are no proposed future developments that will be served by the lift station and evaporative ponds facility.

4.201 (3c): *Specify at what percentage of the design capacity the current system is now operating:*

(i) *Water treatment system.*

Not Applicable

(ii) *Wastewater treatment system.*

As the town's existing wastewater treatment system and lagoon is not metered and therefore no existing flow data exists for the current system preventing design capacity estimates. Since the existing wastewater lagoon is not adequately sized as an evaporative pond, it is suspected that the existing wastewater treatment system is operating above its original design capacity. This original design capacity is not known as there were no record drawings or site location approvals documented.

Based on the rough dimensions of the existing lagoon, which is 230 feet by 250 feet, the total surface area is approximately 58,000 square feet or 1.3 acres. The depth is unknown and therefore the volume cannot be determined at this time.

4.201 (3d): *Specify whether present facilities can be upgraded to accommodate adequately the ten-year projected increase needed in treatment and/or hydraulic capacity.*

The existing town wastewater treatment facility is currently undersized and improperly constructed to adequately accommodate the existing flow as well as the 10-year and 20-year projected flows of the service area. The existing wastewater lagoon facility cannot be upgraded to accommodate the existing and future flows because it is located and in the 100-year flood zone and it is more cost efficient to construct new wastewater lagoons at a separate location because of the biosolids removal process that would be required to reuse and expand that existing lagoon. The proposed new evaporative ponds facility and lift station is designed to accommodate the existing and projected future flows of the service area.

SECTION 4.201 (4) WATER USAGE

4.201 (4): *Description of the water to be used by the Project and, to the extent identified by the Director in consultation with the applicant, alternatives, including: the source, amount, the quality of such water; the applicant's right to use the water, including adjudicated decrees or determinations and any substitute water supply plans, and applications for decrees or determinations; proposed points of diversion and changes in the points of diversion; the existing uses of the water; adequate proof that adequate water resources have been or can and will be committed to and retained for the Project, and that applicant can and will supply the Project with water of adequate quality, quantity, and dependability; and approval by the respective Designated Ground Water Management District if applicable. If an augmentation or replacement plan for*

the Project has been decreed or determined or an application for such plan has been filed in the court or with the Ground Water Commission, the applicant must submit a copy of that plan or application.

The proposed lift station and evaporative ponds will not require the use of any water. The proposed project will utilize only domestic wastewater from the town of Ramah as part of the proposed treatment process.

SECTION 4.201 (5) LOSS OF AGRICULTURAL PRODUCTIVITY

4.201 (5a): *Information on any agricultural water rights in the region converted to provide water for the Project, now or in the future.*

No agricultural water rights will be converted to provide water for the project now or in the future.

4.201 (5b): *Information on the amount of irrigated agricultural lands taken out of production, and a description of revegetation plans.*

The evaporative ponds facility is proposed to be constructed on a 39-acre parcel of previously used agricultural land the town recently purchased for the construction of the evaporative ponds. The land is not anticipated to be used for agriculture once the construction of the evaporative ponds is completed. During construction, erosion and sedimentation control measures will be deployed for stabilization of the site and protection of the existing vegetation. Following construction, disturbed areas of vegetation will be restored to provide protective cover of the site using native grasses. All Best Management Practices for erosion and sediment control will be strictly followed.

4.201 (5c): *Economic consequences of any loss of irrigated agriculture, including loss of tax base, in the region.*

Economic consequences of the loss of land are minimal with the proposed project. The land that the project will be constructed on was acquired by the town from a private owner. The price of the land purchase was reasonably determined based on any minimal loss of income the selling of the land may have caused. The tax implications are also minimal and deemed acceptable by the town, as the town is the entity undertaking the project, including land acquisition.

4.201 (5d): *Information as to loss of wildlife habitat, loss of topsoil, or noxious weed invasion, as a result of the transfer of water rights and subsequent dry-up of lands.*

No loss of wildlife habitat, loss of topsoil or weed invasion are anticipated as a result of the proposed project as it will be confined to existing developed town right of way and formerly used agricultural land. No transfer of water rights or subsequent dry-up of lands are anticipated from the project.

4.201 (5e): *Information on impacts to agricultural head gates and water delivery systems.*

There are no anticipated impacts to agricultural head gates and water delivery systems.

SECTION 4.201 (6) FINANCIAL IMPACT

The financial impact analysis of site selection and construction of major new water and sewage treatment facilities and/or major extension of existing domestic water and sewage treatment systems shall include but need not be limited to the following items:

c4.201 (6a): *A review and summary of any existing engineering and/or financial feasibility studies, assessed taxable property valuations and all other matters of financial aid and resources in determining the feasibility of the proposed new facility, including:*

- (i) *Service area and/or boundaries.*

The service area can be seen in the Site Application in Exhibit I. The project will be publicly funded via State of Colorado State Revolving Funds program. The residents of the town of Ramah will pay for the project in the long term with gradually increased service user rates.

- (ii) *Applicable methods of transmitting, storing, treating and delivering water and collecting, transmitting, treating and discharging sewage, including effluent and/or sludge disposal.*

The proposed lift station will convey wastewater to the proposed Evaporative Ponds Wastewater facility.

- (iii) *Estimated construction costs and period of construction of each new or extension facility component.*

It is anticipated that construction will start in the spring of 2023. Construction is expected to take approximately 6 to 7 months.

- (iv) *Assessed valuation of the property to be included within the service area boundaries.*

The land that the project will be constructed on was acquired by the town from a private owner. The price of the land purchase was reasonably determined based on any minimal loss of income the selling of the land may have caused as well as the consideration of the market value of the property.

- (v) *Revenues and operating expenses of the proposed new or extension facility, including but not limited to historical and estimated property taxation, service charges and rates, assessments, connection and tap fees, standby charges and all other anticipated revenues of the proposed new facility.*

The town of Ramah operates a separate sewer fund for the operation, maintenance, and expansion costs of its wastewater system. Town wastewater service users are charged for service on a monthly user rate.

An alternatives analysis, including financial considerations (capital construction costs and ongoing operation and maintenance costs), was completed as part of the planning of this project in the form of a Project Needs Assessment. This document considered all feasible alternatives to bring the town's wastewater system into existing and future compliance with state and federal

regulations. This analysis showed that the alternative with the lowest 20-year life-cycle cost was the construction of a new evaporative pond system (proposed project).

(vi) Amount and security of the proposed debt and method and estimated cost of debt service.

The project will be publicly funded through State of Colorado State Revolving Funds program.

(vii) Provide the details of any substantial contract or agreement for revenues or for services to be paid, furnished, or used by or with any person, association, corporation or governmental body.

The town of Ramah operates a separate sewer fund for the operation, maintenance, and expansion costs of its wastewater system. Town wastewater service users are charged for service on a monthly user rate. Rates are reviewed annually to determine necessary increases to cover the expenses associated with operating and maintaining the wastewater system. The proposed facility construction will be funded through a combination of grants and loans. Loan payments will be covered by increases to monthly user rates. Tap fee income was not included in the financial analysis as growth in the area is not significant, therefore this source of income is not considered reliable.