

REQUEST FOR PROPOSALS  
FOR  
ENGINEERING SERVICES  
CANYON AREA WASTEWATER TREATMENT  
& DISPOSAL OPTIONS  
RFP # 2007-01

The Big Sky County Water and Sewer District 363 is soliciting proposals for engineering services to assist in the preparation of a preliminary engineering report for a wastewater system improvement project to determine the feasibility of expanding central wastewater services to the canyon area of Big Sky. At the sole discretion of the District, engineering services may be extended to design and construction administration services from preparing the bid package through completion of construction and project closeout. All engineering services shall be in conformance with the requirements of the TSEP program, Department of Environmental requirements, and the various state and federal funding agencies.

**I. Proposed Project Description**

This is a wastewater system project. The project would provide sewer and treatment service to an area currently served by on-site treatment and disposal systems. The District will procure engineering services in accordance with 18-8-201 MCA. Following acquisition of financial assistance, the District will proceed with development of a Preliminary Engineering report in compliance with the format required for Montana Public Facility Projects.

**II. Project Location**

The Big Sky Water and Sewer District is located in both Gallatin and Madison Counties. The District currently provides water and sewer service to the Mountain Village and Meadow Village areas of Big Sky. A map of the District boundary is attached as **Exhibit A**. The project being considered is to evaluate options for providing central sewer service to an area along Highway 191 (Canyon area) attached as **Exhibit B**. The area is currently outside the District boundary and is predominantly served by on-site systems.

**III. Project Synopsis & Goals**

The Big Sky County Water & Sewer District currently treats and disposes 100 million gallons of wastewater annually. 100% of this wastewater is treated by a Sequencing Batch Reactor (SBR), filtered as tertiary treatment, chlorinated and then stored in large lined storage ponds. During the summer months this treated water is pumped to the Meadow Village golf course which is owned and operated by Big Sky Resort. The District also has 2 pump stations that allow water to be pumped to the storage pond that serves the Yellowstone Club golf course.

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Because of the limitations of this type of system, winter storage and summer irrigation the District currently has limitations in its ability to expand the District service area to new customers outside of the existing service area. This engineering study will identify alternative means to treat and dispose of wastewater to service a larger area that includes the canyon corridor. The report will also evaluate the cost, regulatory effectiveness, political feasibility and potential environmental impacts

If the study successfully identifies a centralized alternative for the Canyon area, the scope of the study area will be expanded to investigate the feasibility of future service to the Antler Ridge and Firelight Meadows developments.

**IV. System History and Background Information**

In August 1971, the Gallatin County Commissioners created Special Improvement District 305. At that time the boundary for the District was essentially the Meadow Village area which is in Gallatin County. In April of 1973, the boundaries of RID 305 were expanded to include the Mountain Village area which is in Madison County. In July of 1993, the voters approved the creation of the Big Sky County Water and Sewer District 363.

In December of 1997 a Long Term Compliance Plan was submitted to the Montana Department of Environmental Quality to satisfy the requirements of regulatory actions. The 1997 report evaluated several treatment and disposal options including a regional plant that would serve the Canyon area. At the time there was little public support to expand the service area to include the Canyon area and consequently the area was not included in the Long Term Compliance Plan. The recommended alternative included discharging up to 27.7 million gallons per year of treated effluent to the Gallatin River. A discharge permit was obtained but there was wide public opposition to the discharge.

In June 2001, an Amendment to the Long Term Compliance Work Plan for Wastewater Treatment and Disposal was submitted to the Montana Department of Environmental Quality which eliminated the need to discharge to the Gallatin

The Big Sky County Water and Sewer District completed the construction of a new advanced treatment plant in the spring of 2004. The treatment plant consists of a SBR facility followed by filtration and disinfection. Treated effluent is currently used as irrigation water on the Meadow Village golf course and provisions were made to irrigate on the Yellowstone Mountain Club golf course. As part of the project a pipeline to a 100 MG storage pond on the Yellowstone Mountain Club was also installed.

Public opposition to the discharge permit eventually sparked the effort to have the Gallatin River classified as an Outstanding Resource Water. The Board of Environmental Review received a petition from American Wildlands in December 2001 requesting the Board initiate rulemaking to designate the mainstem Gallatin River from the Yellowstone Park boundary to the confluence with Spanish Creek as an Outstanding Resource Water. MDEQ published a Final EIS concerning the designation of the Gallatin as an ORW in January of 2007. The EIS concluded that the designation as an

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ORW would limit development to an additional 75 dwelling units and 2645 square feet of commercial development. The impact represented an 89% reduction in allowable dwelling units and a 99% reduction in commercial development. At the January 26, 2007 Board of Environmental Review meeting, the MDEQ recommended that the Board extend the comment period. The recommendation was based on indications that local groups were exploring options that would protect the Gallatin River without the need for an ORW designation.

***A. Known or Presumed Deficiencies***

Wastewater treatment for the Canyon area consists of on-site treatment systems with disposal through drainfields. Bucks T4 has a small lagoon system. Land in the Canyon area is largely privately owned and is highly desirable for both private home sites and commercial development. Shallow groundwater in the area has a direct hydraulic connection to the Gallatin River and therefore is likely to convey pollutants from the wastewater disposal sites to the Gallatin River.

Water quality in the mainstem of the Gallatin is generally very good with some nitrate enrichment. However, increased development with continued reliance on septic tanks and drainfields for disposal will increase the degradation of the Gallatin River.

***B. Compliance Issues***

The District has no compliance issues at this time. We are not aware of any known compliance issues in the Canyon area. If the ORW designation is granted by the BOR and approved by the legislature any planned developments would have to show that their impacts, when reviewed cumulatively, with other discharges, would be below trigger values for water quality standards.

**V. Scope of Services**

At a minimum, the services to be provided will include:

***A. Preparing the preliminary engineering report***

The preliminary engineering report will evaluate the wastewater collection, treatment and disposal options for an area along highway 191 extending approximately 5 miles south from the intersection of highway 191 and highway 64 referred to as the Canyon area.

***B. Preparing the Grant Application***

Engineer selected for the project will be responsible for preparing any subsequent grant applications from appropriate funding sources.

***C. Flow and Capacity Determination***

The Canyon area will be evaluated to determine existing and future build-out density using the existing zoning designations. The total wastewater loading in terms of flow and BOD loading from this analysis will be applied to the various alternatives for treatment and disposal alternatives discussed below.

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***D. Treatment Alternatives for Consideration***

1. Constructing a sewer collection system for the Canyon area and pumping to the District's treatment plant.
2. Constructing a sewer collection system and treatment plant for the Canyon area with disposal options of:
  3. Alternative of using Level 2 subsurface wastewater treatment systems (SWTS) at some locations with a sewage collection system and treatment plant, either the District's or a new plant, serving other areas.
  4. Alternative of using Level 2 treatment systems exclusively for the Canyon area either as individual or clustered systems.

***E. Disposal Alternatives for Consideration***

The Big Sky County Water & Sewer District has a long history of reclaiming and re-using 100% of its treated wastewater for irrigation. Because of this history, alternatives that continue this reclaim and re-use approach will be preferred. The options will be evaluated for their re-use benefits to the Big Sky community.

**1. Groundwater Disposal**

This alternative investigates the feasibility of obtaining a groundwater discharge permit as a means of disposal: Big Sky still has large undeveloped tracts of land that could potentially be used for a large scale engineered groundwater discharging drainfield(s). The Meadow Village golf course area may also provide an area that could be suitable for a drainfield. Secondary methods of groundwater discharge that will also be evaluated include deep well injection and rapid infiltration ponds,

A benefit of this option is that the volume of wastewater disposed to groundwater could be claimed in an augmentation plant for future water right applications

**2. Surface Discharge**

Evaluate treating to standards that comply with current non-degradation rules and regulations and then apply for a new surface discharge permit that allows for a year round discharge. The discharge volume of the permit would be determined from the volume of wastewater flow calculated for the Canyon area at full build-out.

**3. Snowmaking.**

Snowmaking has been explored as an option for treating and disposing of wastewater. With thousands of acres of ski terrain located in Big Sky, treated wastewater could be pumped to a snowmaking site to make base-snow, or snow in areas designated for snowmaking that are off of the public ski terrain. This alternative has the potential for disposing a large volume of water.

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This alternative will be evaluated primarily as a disposal option. There is evidence that snowmaking can be used as a treatment option. Current Montana regulation view on snowmaking have been interpreted against this as a stand alone treatment option. Nonetheless, the scope will include a cursory investigation into using snowmaking as a stand- alone treatment option.

4. Winter Storage/Summer Spray Irrigation

This is effectively the status quo alternative. The District could continue to storage treated wastewater through the winter months and then spray irrigate that water during the summer. More storage pond(s) would need to be constructed for this option. The new golf course at Spanish Peaks could be used as another large irrigation site. The District's forcemain pipeline that runs up to the Yellowstone Club golf course passes a along the Spanish Peaks Resort area and a tee was installed and capped. Water could be diverted from this tee and piped up to Spanish Peaks. The golf course has some lined water storage built into the golf course. How suitable these are for wastewater storage and the volumes that could be stored there would need to be determined.

5. Level 2 Treatment Alternatives

Evaluate the alternative using Level 2 treatment system(s) for disposal to groundwater of wastewater generated from the Canyon area

6. Other Alternatives

a) Drinking Water: Evaluate the feasibility of treating wastewater to meet drinking water standards. Water treated to this level could then be disposed of in any number of ways and be viewed as having no environmental impact.

b) Evaporation: water falls, water features, agitation of the water surface, etc., can greatly increase the amount of water that is lost through evaporation. If this is done during the entire non-growing season, current storage space could be freed up. This would have the secondary benefit of oxygenating the water to increase the ability for aerobic bacteria to break-down the nutrients in the water.

c) Any other options presented by the engineer selected for the project that is deemed by the District as a potential solution.

***F. Project Activities***

Selected engineering firm will be responsible for the final report and separate meetings with various development groups and their respective engineers. These developments include the Big Sky Resort, Yellowstone Mountain Club, Spanish Peaks Resort, Moonlight Basin, Bostwick Properties, and Westland Enterprises. In addition to these meetings, the engineer will also be required to attend at least 5 meetings with various groups working on this project and least 2 public informational meetings to present the report findings.

***G. Deliverables***

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1. Bi-weekly synoptic reports on activities related to project scope. These reports will be in the form of PDF files that will be emailed to a distribution list of the working group and local media;

2. Copies of all maps and reports in electronic format;
3. Attend and present at 2 public informational meetings

**VI. Responses**

Responses must include the following:

- the firm’s legal name, address, and telephone number;
- the qualifications of the professional personnel to be assigned to the project;
- capability to meet time and project budget requirements;
- present and projected workload for key project staff;
- related experience on similar projects including the name and phone number of a local official knowledgeable of the firms work;
- recent and current work for the District;
- the proposed project approach and schedule for activities to be performed.

**VII. Proposals Evaluation**

Engineering proposals will be evaluated according to the following factors:

- Overall quality of the proposal 20%
- Overall understanding of the project and project approach 20%
- Staff qualifications 20%
- Experience with planning and wastewater system design 15%
- Recent and current work for the District 10%
- Cost 10%
- Geographic Location of Firm 5%

**VIII. Selection Criteria**

The selection of firms to be interviewed will be based on the evaluation of the written responses, if deemed necessary. The District reserves the right to select a firm directly from the written proposals. The award will be made to the most qualified firm whose proposal is deemed most advantageous to the District, all factors considered. Unsuccessful firms will be notified as soon as possible.

Questions and responses should be directed to:

Ron Edwards, District Manager  
561 Little Coyote Road  
Big Sky County Water and Sewer District 363  
P.O. Box 160670  
Big Sky MT 59716

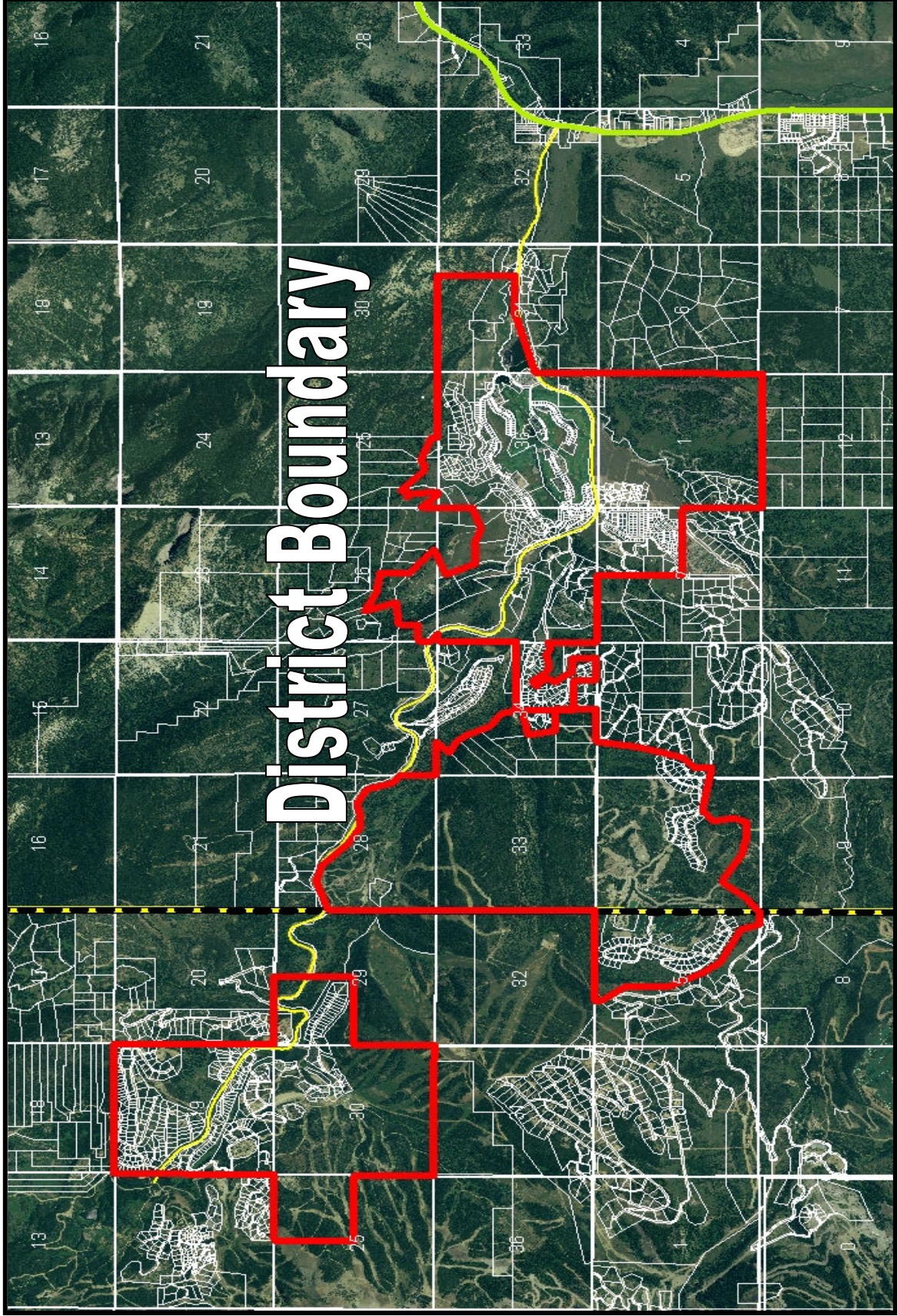
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**Five (5) copies of the proposal must be received by 3:00 PM June 22, 2007.** Please state “**Canyon Area Wastewater Treatment & Disposal Options Proposal**” on the outside of the response package.

This solicitation is being offered in accordance with federal and state requirements governing the procurement of professional services. Accordingly, the Big Sky Water and Sewer District reserves the right to negotiate an agreement with the selected firm based on fair and reasonable compensation for the scope of work and services proposed as well as the right to reject any and all responses deemed unqualified, unsatisfactory, or inappropriate.

**Exhibit A**  
**Map of the Big Sky County Water & Sewer District**



**Exhibit B**  
**Map of the Canyon Area**

