

Integrated WATER Services, Inc.

Rocky Mountain Dude Ranch Ready To Ride

In the Spring of 2011, IWS completed the construction of an Orenco AdvanTex wastewater treatment system for Peaceful Valley Ranch just South of Colorado's famous Rocky Mountain National Park. Peaceful Valley Ranch is a full-service guest and dude ranch settled in the high Rocky Mountains along the banks of the Little South St. Vrain River. The Ranch offers hiking, fishing, and equine activities in the spring, summer, and fall as well as snowshoeing and cross-country skiing in the winter. The Ranch is also a popular location for weddings, family reunions, and other get-togethers.

The extremely rugged and rocky site coupled with high elevation and severe temperatures posed challenges for the project engineer, Bob Wright, of CHURCH Onsite Wastewater Consultants, LLC (www.cowc.info) from Lakewood, CO. There also was very little space in the valley in which to construct a wastewater treatment system to serve the ranch facilities. Further complicating matters, the Ranch owner wished to construct a treatment system that would not visually impact the beautiful setting of the Ranch. Mr. Wright proposed a below-grade AdvanTex treatment system in which the majority of system components are at or below grade. Rising to the challenge, IWS assisted Mr. Wright with the grade de-



Out for a ride at Peaceful Valley Ranch

sign to minimize the transport of excavated soils off of the site as well as "hide" the wastewater treatment plant so that visitors entering the ranch would not know it is there.

The treatment plant consists of two 25,000 gallon septic tanks, one 25,000 gallon recirculation tank, one 2,000 gallon dose tank, eight AdvanTex treatment filters, and an insulated control building housing a telecom control panel and ultraviolet disinfection system. Wastewater is transported from the Ranch facilities to the treatment system via a septic tank effluent gravity (STEG) system. Septic tanks are located adjacent to the ranch facilities that remove the majority of the solids in the waste stream. From there, the resulting effluent travels by gravity through small diameter collection pipes to the septic/settling tanks located at the location of the treatment plant. Effluent then flows by gravity to the recirculation tank and is pumped to the AdvanTex Filters. Following treatment in the filters, the effluent is diverted to a dose tank and then pumped through an ultraviolet disinfection system and then discharged directly to the Little South St. Vrain River. Due to very cold temperatures, heated air from the control



A dusting of snow covers the treatment tanks



The treatment pods required insulation to protect from freezing temperatures

building is piped underground to each of the treatment pods to maintain adequate temperature in the filters and prevent freezing.

Since the site is located in a very rocky valley on the banks of the Little South St. Vrain, excavation of huge boulders was necessary in order to set the tanks. Additionally, groundwater was encountered at shallow depths requiring a discharge permit and dewatering to the river.

Peaceful Valley Ranch is the fifth project that IWS and Church Onsite Wastewater Consultants have worked on together. Bob Wright commented on the IWS relationship, " We enjoy working with IWS and appreciate their technical and construction expertise and approach to onsite wastewater projects. We would recommend them to others for onsite projects and look forward to working with them again in the future." •

About Us

Integrated Water Services, Inc. (IWS) provides services to municipalities, developers, communities, and businesses to address their water and wastewater needs. IWS leverages its extensive experience in permitting, engineering, construction, project management, site development, and project finance to provide a range of services to its clients with the ultimate objective of providing a solution that meets all the stakeholders' needs. IWS teams with engineering firms, consultants, suppliers, and other contractors to provide the client best value for their specific project needs.

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