SILVER BOW CREEK CORRIDOR

Superfund site requires multiple dump sites

Silver Bow Creek has wide variety of waste products

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Atlantic Richfield/BP confirmed Saturday that wastes excavated from sites along Silver Bow Creek in Butte will require more than one place to land.

"More than one repository location will be needed to dispose of waste materials excavated from the Silver Bow Creek Conservation Area project areas," the company said in an email.

One key reason, according to Atlantic Richfield/BP, is the array of wastes that will likely be encountered in those areas. And if the contaminated Berkeley Pit gets a green light from EPA and the Montana Department of Environmental Quality as one repository site its unique geochemistry might exclude certain types of wastes.

Atlantic Richfield/BP said EPA has approved collecting additional data to characterize the wastes in the Silver Bow Creek Corridor. Sites in the corridor include Diggings East, Northside Tailings, the Butte Reduction Works and others. One estimate has suggested roughly 850,000 cubic yards of material contaminated with heavy metals and other wastes would be excavated from sites in the corridor.

"This additional data collection is in response to the consideration of the Berkeley Pit as a potential repository location," Atlantic Richfield/BP said. "Data collected from the project sites will provide new information related to the quantity of available organic carbon, the presence of hazardous wastes, and the distribution and characteristics of municipal trash and debris.

"This field analysis is underway at the Northside Tailings project site," Atlantic Richfield said.

In addition, the company said current activities include conducting a geotechnical analysis "to learn more about soil properties at the Kelley Mine Area, Shields Avenue and the south ramp of the Berkeley Pit locations."

According to one definition, "geotechnical" means "relating to the practical application of geological science in civil engineering, mining and other fields. Geotechnical engineering is a branch of civil engineering that studies how natural geological materials behave in engineered systems."

The company also confirmed Saturday that Atlantic Richfield/BP's design teams are working to design a slurry system that could transport wastes from the creek corridor.

JOSEPH SCHELLER, THE MONTANA STANDARD

The proposed Kelley Mine Area wastes repository would be north of the Kelley Head Frame and would accept contaminated soils and sediments from Superfund areas in the Silver Bow Creek Corridor. Soon after it was identified as a potential repository site, officials began to consider the Berkeley Pit as an alternative or additional site.

"The slurry system, if used, would transport wastes from the project areas to the Berkeley Pit for disposal," Atlantic Richfield/BP said. "The slurry system would include a pug mill to mix contaminated soil and wastes with water from construction dewatering and effluent from the Polishing Plant [at Montana Resources]."

Pug Mills are mixers that rapidly mix multiple materials into a comparatively homogeneous blend.

"The slurry system alignment would follow the path of upper Silver Bow Creek until reaching the mine site," Atlantic Richfield/BP said.

One goal of a slurry system would be to limit the number of haul trucks on Butte roads.

Josh Bryson of Atlantic Richfield/BP and Eric Hassler, director of reclamation and environmental services, provided a repository update Wednesday night to the Butte-Silver Bow Council of Commissioners

Bryson said possible repository sites include an area off Shields Avenue on Montana Resources property, the already contaminated Berkeley Pit and corporation-owned land north of the Kelley Mine Area that is adjacent to Centerville. The existing Butte Mine Waste Repository is also in the mix but has a comparatively limited capacity.

Hassler said potential repository sites must be "technically feasible, scientifically feasible and legally feasible."

Residents of Centerville have expressed concern about toxic mining, smelting and other wastes being dumped in the vicinity of their neighborhood.

The primary contaminants of concern in the Silver Bow Creek Corridor are arsenic, cadmium, copper, lead, mercury and zinc. Any wastes dumped at a land-based repository would be capped with about 18 inches of soil and topped with vegetation, according to Atlantic Richfield/BP.

The company has promised not to dump wastes in what remains of the historic Dublin Gulch neighborhood. Bill Foley, a critic of the plan to site a repository near Centerville, said Atlantic Richfield/BP's current delineation of the Dublin Gulch neighborhood is too small.

Meanwhile, the company said it and Butte-Silver Bow intend to recommend one or more repository locations to EPA in October.

Siting a repository or repositories must happen before long-awaited major cleanup can launch in the Silver Bow Creek Corridor.

Writer hits parks big and small for book

New kind of travel guide looks at Yellowstone, Glacier

SIERRA CISTONE
for the Missoulian

For frequent visitors or first-timers to Montana's world-renowned Yellowstone and Glacier national parks, there is now a new kind of travel guide that can satiate anyone's curiosity.

"Big Sky, Big Parks: An Exploration of Yellowstone and Glacier National Parks, and all that Montana in Between," goes well beyond a description of Old Faithful and the Going-to-the-Sun Road. Rather, it covers the "everything else" that may not be common knowledge but is essential to understanding the beauty and significance of the areas.

Missoula author Ednor Therriault said that he had initially intended the book to be a classic travel guide to the parks. But with plenty of those already on the shelves, he switched gears. The final product became a detailed exploration into the events, history, biology, geology and culture that make these destinations so famous.

It's still a travel guide, albeit without the typical travel guide layout and complete with Therriault's own stories, narratives and, of course, his wit.

"I can't do anything 100% without injecting a little humor," Therriault said.

The book came together after a year and a half of writing, research and active exploration of the parks and surrounding Montana landscapes. During that time, Therriault drove all over the state, diving into everything from bison to ghost towns.

Despite the heavy dose of factual content, the book is far from dense. It's an undemanding read and each chapter is self-contained, making it easy for a reader to jump between chapters depending on interest. And whether you're a history buff, rock-hounder, or wildlife watcher, there's something to interest everyone.

One of the harder chapters to write, but one that Therriault knew to be essential to include, is "The Little Shell Tribe, the 'Newest' Nation in Montana." This segment covers the Little Shell Tribe of Chippewa Indians' successful efforts to gain status as a sovereign nation, which was finalized in 2019.

For Therriault, the book would not have been complete without including the stories and histories of Indigenous peoples in Montana. But as a non-Indigenous person, he also struggled with whether it was his story to tell and he "didn't want to get anything wrong," or "step on any toes."

Therriault received encouragement from a friend of his who is a Little Shell tribal member and who also became a resource when writing and researching for the chapter.

"History didn't start when colonialists came across the West," Therriault said. He wanted visitors to Montana to remember there was quite a lot of history "before white men ever showed up."

That was one of the more serious chapters, Therriault said. Other chapters cover subjects like the incredible Yellowstone geyser thermophiles, the mushrooms of Glacier and Virginia City, which he calls a "cradle of Montana history."

A chapter that Therriault found especially fun to research and write about is "The Pack is Back," which tells the story of the now-famous Druid wolf pack of Yellowstone.

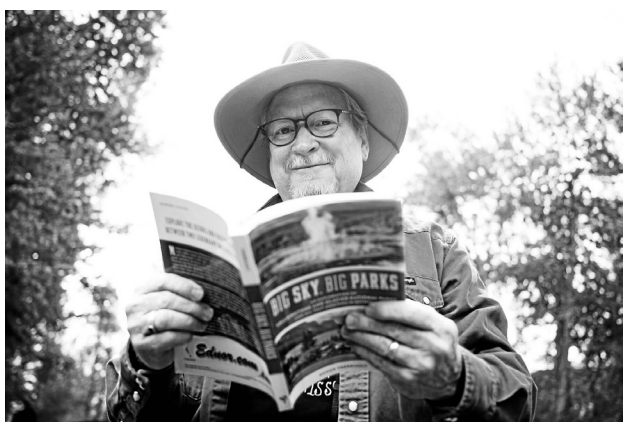
The wolves' story of complete eradication from the park and their inspiring reintroduction and return has become a well-known story, Therriault said. But the author enjoyed the opportunity to learn the tale in detail and gain a better understanding of the remarkable revival of the poster child of the park.

"That's kind of what I like to do," Therriault said. "Just completely go deep on something and learn as much as I can."

Therriault's innate curiosity kept him from being limited to the boundaries of the park and he also dives into hidden gems outside and in between them. There are chapters and sections on geological secrets outside of the parks, the "Ten Tasty Treasure State Treats to Try," and even a Big Sky tailored playlist for all the audiophile road-trippers making the drive from park to park.

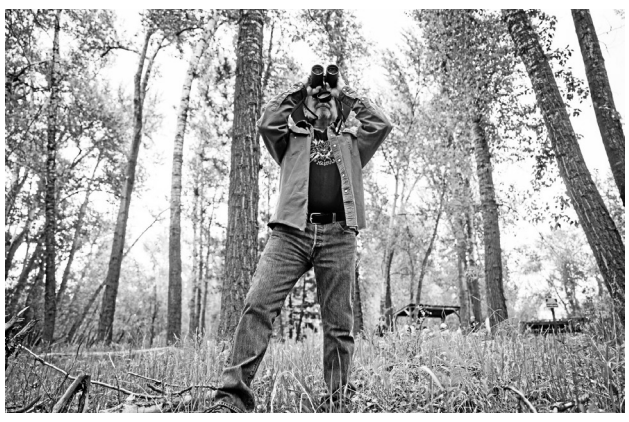
The distance and journey in between the parks is a full day's drive, said Therriault. "It's such a long, spectacular drive. You're going to see things you never imagined."

Sierra Cistone is a freelance journalist and photographer based in Missoula.



ANTONIO IBARRA OLIVARES PHOTOS, MISSOULIAN

Missoula author Ednor Therriault said his new book goes beyond writing descriptions of Montana's renowned Yellowstone and Glacier national parks. The book covers the "everything else" that is essential to understanding the beauty and significance of those areas.



Missoula author Ednor Therriault peers through a pair of binoculars at Travelers' Rest State Park in Lolo on May 17, 2024. Aside from Therriault's new book serving as a travel guide, "Big Sky, Big Parks: An Exploration of Yellowstone and Glacier National Parks, and all that Montana in Between" is also packed with the author's own personal stories, narratives and his wit.