

# LIVING RIVERS

COLORADO RIVERKEEPER®

Green River Action Network  
Upper Green River Network  
Canyon Country Rising Tide

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July 2, 2018

Bureau of Land Management  
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Via eMail: [blm\\_ut\\_vernal\\_comments@blm.gov](mailto:blm_ut_vernal_comments@blm.gov)

Re: FEIS for Enefit American Oil Utility Corridor Project

Dear Ms. Howard,

Thank you for this opportunity to provide comments for the Final Environmental Impact Statement (FEIS) regarding the Enefit American Oil Utility Corridor Project (Enefit). The utility corridor is located on public lands administered by the Bureau of Land Management (BLM). The intent of this project is to provide energy and water resources for the the mining, processing and distribution of hard rock oil shale on private land; this mining operation is called South Project. This mining operation is in the watershed of the White River. The White River is a tributary of the Green River, and the Green River is the major tributary of the Colorado River.

## **INTRODUCTION**

Living Rivers & Colorado Riverkeeper is a nonprofit organization based in Moab, Utah. Moab is the county seat of Grand County and South Project is located about 90 miles to the north. The Green River forms the western boundary of Grand County and the Colorado River flows through Moab. Living Rivers has approximately 1,200 members in Utah, Colorado, and other states. Since its inception in year 2000 Living Rivers has been engaged in advocating for responsible management of the Colorado River system for wildlife and humans. In 2002 Living Rivers was designated as the official Colorado Riverkeeper by the Waterkeeper Alliance, which is comprised of over 300 "Waterkeepers" on six continents. Living Rivers' trustees, partners, and members live, work, and

recreate on the land and waters of the Colorado River; we are downstream of Enefit's proposed South Project.

Living Rivers & Colorado Riverkeeper fiscally sponsors the following organizations: Green River Action Network, Upper Green River Network, and Canyon Country Rising Tide. These organizations have staff and members that conduct multi-day river and field trips in the Uintah Basin, a sub-province of the Colorado Plateau. Together we assess, educate, and protect this watershed for human and wildlife communities.

The Green River Action Network (GRAN) is an affiliate of Colorado Riverkeeper and a licensed member of the Waterkeeper Alliance. GRAN seeks to empower, educate, and engage communities across the Colorado Plateau to take part in the protection of our essential waterways. While focused on the integrity of the Green River and its riparian corridor, GRAN recognizes the threats to the Upper and Lower Basin of the Colorado River drainage as connected to larger questions of ecosystem integrity, climate mitigation and a just economic transition for the region.

The Upper Green River Network (UGRN), also an affiliate of Colorado Riverkeeper and a licensed member of the Waterkeeper Alliance. UGRN utilizes research, education, mobilization, and public involvement in Wyoming with the goal of conserving the naturally diverse values within the Green River Basin and into the greater Colorado River Basin.

Canyon Country Rising Tide (CCRT) is a grassroots organization based in Moab, Utah that works to confront the root causes of climate change on the Colorado Plateau by educating the public on regional climate justice issues, organizing residents to speak out and take action against fossil fuel development, and supporting local efforts to build just, sustainable, and climate-resilient community infrastructure.

## **COMMENTS**

The FEIS does not consider, for either alternative, the direct, indirect, and cumulative impacts from Enefit's South Project. The technology for the operation of this facility originates from Estonia, which is the most major polluter in the European Union. So we can assume that this project will also become a major source of pollution in the United States. Cumulative impacts are important to us because we live in the Colorado River basin; our water resources are drying up and our forest watersheds are burning down.

In this case, the federal government is unwilling to assess the actual amount of pollution that we, who live downstream and downwind of this project, must endure and at some unknown cost. Because this information was not provided to us, how could we possibly support either alternative? This FEIS must be revised to correctly adhere to the highest standards of the National Environmental Policy Act.

It would appear the Proposed Alternative would pollute our air and water less than the No Action Alternative, and that the Proposed Alternative is also more cost-effective for

the corporation (this includes decreasing the cost of synthetic crude transport, energy production, water transport, and allowing the upgrading of Dragon Road to facilitate speedier travel and decreased wear and tear on vehicles).

The state regulatory agencies of Utah also provided cost-effective alternatives and a paved road for oil corporations in Uintah County, and with the following results: (1) US Oil Sands is under receivership in Canada, and bankruptcy in the USA; (2) Red Leaf Resources is idle because they lost their major funding partner, Total SA. Market oil prices are driven by a multitude of erroneous supply and demand-driven factors, therefore, any argument towards utilizing demand factors is highly speculative.<sup>1</sup> Even in the case of Estonia where resource quality, technology, and fiscal regime issues are favorable, economic sustainability of oil shale is under question.<sup>2</sup> In the case of the Uintah Basin, the presence of low quality, new national technologies, and an extreme lack of water will make any extraction costs and subsequent profits minimal if not negative. Therefore, it is not unreasonable to assume that Enefit may follow a similar negative economic trajectory.

Oil shale is a known low-value product with marginal profit returns, and the extraction and refining process of the ore are associated with extreme and unacceptable impacts to air, water and human-coupled ecosystems. It will never succeed because the current global economy and infrastructure are designed to perform on energy resources that are inexpensive. Responsible corporations understand that high extraction costs of oil shale do not exceed societal and economic profits, and Enefit does not appear to recognize this.

It is not a stretch for us to assume that Enefit's South Project is wasting time and resources that otherwise could be directed toward developing energy solutions that are sensitive to the urgent problem of successfully sustaining the foundations of life beyond the 21st century. This FEIS and the South Project are not solution-orientated for the challenging times we are now coping with. We cite a multitude of studies from the United Nations that conclude the earth's hydrocycle is broken and desperately requires an international policy to fix it.<sup>3</sup>

For over 100-years, the public record demonstrates no corporation in the Uintah or Piceance basins has yet to test and prove an oil shale recovery technology that is economically feasible and does not create adverse impacts.<sup>4</sup> Oil shale is a precarious and experimental industry that requires sustained high oil prices in an increasingly volatile

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<sup>1</sup> Kallems, K. 2016. Economic Sustainability of Estonian Shale Oil Industry Until 2030. *Oil Shale*. Vol. 33, No. 3. p. 286.

<sup>2</sup> *i.d.*

<sup>3</sup> <http://research.un.org/en/climate-change/reports>

<sup>4</sup> Barbee, Darren. April 2017. Red Leaf, Total E&P USA End Utah Oil Shale JV. Oil and Gas Investor. <https://www.oilandgasinvestor.com/red-leaf-total-ep-usa-end-utah-oil-shale-jv-1490646>

market. The costs of production are huge, the obstacles to development substantial, and the margin of profit in Utah and Colorado are not sufficient to sustain this industry,<sup>5</sup> especially when the less-abundant, near-surface ore deposits are finally exhausted.

Additionally, we agree with the EPA in their letter dated July 31, 2013 (Ref: EPR-N) which states:

“In addition to looking at direct impacts and in the immediate vicinity of the proposed ROWs, CEQ regulations (Section 1502.16) instruct agencies to consider other effects that are reasonably foreseeable. Thus, the EPA supports the BLM’s plans to evaluate the potential impacts of Enefit’s South Project in addition to considering the impacts of ROW development. The evaluation would appropriately include air emissions, and greenhouse gas emissions, potential impacts to quality and quantity of water resources, and the potential related human health impacts to local communities from mining, retorting, upgrading, and waste management activities. These types of impacts are exactly the kind of reasonably foreseeable potential impacts that NEPA was designed to address.”<sup>6</sup>

A technical memo and policy brief recently released by Ecoshift Consulting, LLC analyzes potential water use and carbon dioxide emissions related to the development of oil shale and tar sands in the Colorado River Basin on lands now available for leasing. There is much important technical information contained within both reports, which are hyperlinked in the footnotes below. Please add these documents to the administrative record for this EIS process.

The Report finds that “if full commercial scale development occurs, U.S. greenhouse gas emissions from unconventional fuels alone would be over three times the United States’ total emissions in 2014; the water footprint of the United States’ unconventional fuel industry would equal between 1/5 to eight times the annual flow of the Colorado River.”<sup>7</sup>

The Ecoshift report subsequently breaks down the emissions and water use by site, which is directly relevant to the FEIS in question. They predict that Enefit South will use 3,204 Million barrels (MMBbls) of water to produce 1,200 MMBbls of oil (based on developer water use estimates)<sup>8</sup>. This is equivalent to 412,973 acre-feet of water withdrawn from the Colorado River system for the Enefit South Project. The report also

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<sup>5</sup> Headwaters Economics. January 2010. “Oil Shale in the West: 14 Unanswered Questions.” [https://headwaterseconomics.org/wp-content/uploads/energy-14Questions\\_2010.pdf](https://headwaterseconomics.org/wp-content/uploads/energy-14Questions_2010.pdf)

<sup>6</sup> EPA Letter to BLM. July 31, 2013. Accessed at: <http://www.riversimulator.org/Resources/OSTS/Enefit-FEIS/EPA2013EnefitUtilityCorridorScopingComments.pdf>

<sup>7</sup> Ecoshift Consulting, LLC. April 2017. The Potential Water and Carbon Costs of Oil Shale Development in the Upper Colorado River Basin: A Policy Brief. <http://www.riversimulator.org/Resources/OSTS/EcoshiftExecutiveSummary2018.pdf>

<sup>8</sup> *Ibid.*

points out “that for the period from 2001 to 2008 there was a deficit of nearly 30,000,000 acre-feet in the Colorado River Basin.”<sup>9</sup>

The overallocation of Colorado River water is a serious and time-sensitive issue, especially considering long-term climate change and the ongoing drought in the Colorado River Basin. In a study of the likelihood of future failure to meet water delivery needs in the Basin, Barnett and Pierce say, “[w]ith either climate-change or long-term mean flows, currently scheduled future water deliveries from the Colorado River are not sustainable. However, the ability of the system to mitigate droughts can be maintained if the various users of the river find a way to reduce average deliveries.”<sup>10</sup>

It should also be noted that the Bureau of Reclamation protested the water right for the Enefit South Project and utility corridor (Water Right 49-258) when the owner requested a change to the point of diversion from the White River to the Green River. The Bureau claims that the company needs, but does not have, a service agreement for water coming from the Flaming Gorge Dam, which the Bureau administers and holds rights to.<sup>11</sup> The change was granted by the State of Utah regardless of the protest, but it serves to demonstrate how precarious and over-allocated the Green and Colorado River systems are, and how future conflicts, worsened by drought, overallocation, and legal uncertainties, are sure to play a role in the development of oil shale resources in the Basin.

In Section 4.4.3.1.1.1. of the FEIS entitled South Project Complex Greenhouse Gas Effects, the report states, “Connection of project-specific GHG emissions to GHG emission effects at the state, regional, or global level would have no context and would not be useful in the BLM’s decision making regarding construction of the Utility Project.”

We believe this statement goes against Secretarial Order 3289, signed by Ken Salazar on September 14, 2009, which directs Department of the Interior agencies, including the BLM, to consider and analyze potential climate change impacts. The Order “establishes a Department-wide approach for applying scientific tools to increase understanding of climate change and to coordinate an effective response to its impacts on the land, water, ocean, fish, and wildlife, and cultural heritage resources that the Department manages.”<sup>12</sup>

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<sup>9</sup> Ecoshift Consulting LLC. April 2017. Technical Memorandum: Greenhouse Gas & Water Footprints of Oil Shale & Tar Sands Resources & Projects in the Upper Colorado River Basin. <http://www.riversimulator.org/Resources/OSTS/CarbonWaterFootprintTechMemo2018Ecoshift.pdf>

<sup>10</sup> Barnett, Tim and David Pierce. 2009. Sustainable water deliveries from the Colorado River in a changing climate. PNAS May 5, 2009. 106 (18) 7334-7338; <https://doi.org/10.1073/pnas.0812762106>.

<sup>11</sup> Communication between Bureau of Reclamation and Utah Division of Water Rights. April 2, 2013. Available at: [https://www.waterrights.utah.gov/asp\\_apps/DOCDB/DocImageToPDF.asp?file=/docImport/0556/05563675.tif](https://www.waterrights.utah.gov/asp_apps/DOCDB/DocImageToPDF.asp?file=/docImport/0556/05563675.tif)

<sup>12</sup> Secretarial Order No. 3289, (Sept. 14, 2009), [https://casc.usgs.gov/sites/default/files/documents/other/SO\\_3289\\_Amended.pdf](https://casc.usgs.gov/sites/default/files/documents/other/SO_3289_Amended.pdf).

It is of utmost importance that the BLM begin to take into account the cumulative effects of all greenhouse gas emissions from projects permitted on BLM administered land. Federal lands accounted for 23.7 percent of fossil fuel production in the U.S. in 2014.<sup>13</sup> The cumulative effect of this is substantial, though not specific. The BLM needs to be addressing this in each individual EIS process and taking steps to limit overall greenhouse gas emissions. By the logic outlined in the above quote from the FEIS, the BLM could never take action to limit greenhouse gases because specific regional effects cannot be pinned down. There is an ocean of scientific literature supporting the need to limit greenhouse gas emissions and outlining specific ways in which climate change is affecting the state of Utah and the Colorado River Basin.<sup>14,15</sup> The life-cycle emissions of carbon dioxide for Enefit's South Project were calculated in the Ecoshift Consulting Report to be between .39 gigatons and .45 gigatons (based on a surface retort done with the Alberta Taciuk Processor).<sup>16</sup> For context, this represents between 6 and 7 times the amount of energy-related carbon dioxide emissions released in the entire state of Utah in 2015.<sup>17</sup>

Section 5 of Secretarial Order 3289 entitled "American Indians and Alaska Natives" states,

"the Department will ensure consistent and in-depth government-to-government consultation with tribes and Alaska Natives on the Department's climate change initiatives. Tribal values are critical to determining what is to be protected, why, and how to protect the interests of their communities. The Department will support the use of the best available science, including traditional ecological knowledge, in formulating policy pertaining to climate change. The Department will also support substantive participation by tribes in deliberations on climate-related mechanisms, agreements, rules, and regulations."<sup>18</sup>

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<sup>13</sup> Ecoshift Consulting, LLC. April 2017. The Potential Water and Carbon Costs of Oil Shale Development in the Upper Colorado River Basin: A Policy Brief. <http://www.riversimulator.org/Resources/OSTS/EcoshiftExecutiveSummary2018.pdf>

<sup>14</sup> Udall, B. and J. Overpeck (2017), The twenty-first century Colorado River hot drought and implications for the future, *Water Resour. Res.*, 53, 2404– 2418, doi:10.1002/2016WR019638.

<sup>15</sup> IPCC, 2014: Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]. IPCC, Geneva, Switzerland, 151. Accessed at <http://www.ipcc.ch/report/ar5/syr/>.

<sup>16</sup> Ecoshift Consulting, LLC. April 2017. The Potential Water and Carbon Costs of Oil Shale Development in the Upper Colorado River Basin: A Policy Brief. <http://www.riversimulator.org/Resources/OSTS/EcoshiftExecutiveSummary2018.pdf>

<sup>17</sup> U.S. Energy Information Administration. January 2018. Energy-related carbon dioxide emissions by state, 2000-2015. Table 1. State energy-related carbon dioxide emissions by year (2000, 2005-2015). Accessed at <https://www.eia.gov/environment/emissions/state/analysis/pdf/stateanalysis.pdf>.

<sup>18</sup> Secretarial Order No. 3289, (Sept. 14, 2009), [https://casc.usgs.gov/sites/default/files/documents/other/SO\\_3289\\_Amended.pdf](https://casc.usgs.gov/sites/default/files/documents/other/SO_3289_Amended.pdf).

The entire site of the Enefit South Project and proposed utility corridor are located within the original boundary of the Uintah and Ouray Reservation. The FEIS states that there will be future communication with the Northern Ute Tribe, though no plan for this communication is outlined in detail, nor does it seem that the decision would be affected by this communication. Because neither a tribal land use plan nor a tribal climate plan has not been completed by the Northern Ute Tribe, and in the spirit of Secretarial Order 3289, we believe the BLM should consult the tribe before making this decision to grant a right-of-way.

This issue is already highly contentious. A recently filed law suit by the Ute Tribe deals with disputed lands, water, and past royalties collected by the federal government in this area. “Their litigation also aims to settle the long-disputed status of the lands west of the Colorado border, asking a federal judge to declare that they be “restored” to trust status, citing a 1945 order issued by the Interior Department. Currently, the land is managed by the Bureau of Land Management for multiple use by ranchers, oil and gas developers, and the general public.”<sup>19</sup>

Also of note is the Ute Water Compact, that has not yet been ratified by the Ute Tribe. This water compact, once settled, will lead to greater withdrawals (~186,000 acre-feet per year) from the Green River system. The Enefit South Project has junior water rights to the soon to be settled Ute water rights. Further water withdrawals from the Green River should not be supported until the above mentioned legal interventions by the Ute Tribe and the Ute Water Compact with the State of Utah have been settled.

Air quality standards in the Uintah Basin are already exceeding acceptable levels on Indian Lands and other federal reserve lands like Dinosaur National Monument. In May of this year, the Uintah Basin was designated as an ozone nonattainment area by the EPA.<sup>20</sup> This fact was not noted in section 3.2.2.5.2 Existing Air Pollutant Monitoring Data.

The DEIS did not adequately address comments about the unique nature of the synthetic crude oil (SCO) potentially produced at the Enefit site, and the impacts that a spill of this substance would have on either Evacuation Creek or the White River ecosystem. Exhaustive documentation on the potential hazards of a SCO can be found in the FEIS in Appendix I—Public Comments on the Draft EIS and Agency Responses on page 16-64. The only response given by BLM is, “No impacts related to solid or hazardous waste are anticipated from the Utility Project. Discussion of solid and hazardous waste has been moved to Section 4.3 under cumulative impacts.” A spill of an undisclosed hazardous waste (SCO) into a river would be an indirect impact as a result of the BLM

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<sup>19</sup> Maffly, Brian. May 2018. Ute Tribe takes U.S. government to court over ‘theft’ of land and water in historic Uncompahgre. Salt Lake Tribune. <https://www.sltrib.com/news/environment/2018/03/13/ute-tribe-takes-us-government-to-court-over-theft-of-land-and-water-in-historic-uncompahgre/>.

<sup>20</sup> Penrod, Emma. May 2018. Feds give Utah three years to bring ozone pollution down to acceptable levels. Salt Lake Tribune. <https://www.sltrib.com/news/environment/2018/05/01/feds-give-utah-three-years-to-bring-ozone-pollution-down-to-acceptable-levels/>.

permitted ROW. The impact of which should be considered in full detail in the FEIS, including the impact on critical habitat and endangered species downstream in the Green and Colorado Rivers.

The Middle Green River is the site of necessary floodplain wetlands for razorback sucker and Colorado pike minnow larvae. Reclamation's 2006 ROD for Flaming Gorge Operations explicitly states assessing and improving the connectivity of floodplain habitats to "improve entrainment of larval razorback suckers into floodplain habitats, maintain the river channel, restore natural variability of the river system, and meet other goals of the Flow and Temperature Recommendations at lower peak flow levels where feasible." Further, a Recovery Program study delineates Bonanza Bridge as a wetland study site.<sup>21</sup> Therefore, we speculate the additional depletions of Green River water and probable degradation of surface water (ES-7) will have an impact to direct endangered species habitat. This raises the question of ESA Section 7 compliance which the state of Utah is committed under Reclamation agreement R14AP00007.<sup>22</sup>

The US Fish and Wildlife Service has stated the recovery plan for the mainstream endangered fish of the Upper Colorado River includes the habitat value of the White River. When the proposed crude oil pipeline crosses the White River, the pressures will be considerable and a rupture is possible; especially during a cloudburst or a 100-year flood (snow melt). If a rupture occurs at (or near) the crossing of the White River, the forces of gravity will displace a huge amount of raw crude into the river. The EIS does discuss the requirement of automatic shut-off valves for the pipeline. We are concerned that these shut-off valves may not work properly under such pressures. Additionally, a failure due to a lapse in the maintenance of these shut-off valves is also possible.

Paleoflood research in the Colorado River basin has advanced steadily in the last 35-years. Studies above the confluence of the Green and Colorado Rivers indicate the magnitude of snow melts in the last 2,100 years have been 2 to 3 times greater than the snow melts of the 20th century. The paleoflood record demonstrates that over 34 floods have been greater than the accepted 100-year flood event, and most of these large floods have occurred in the last 500-years. As to the historic record of snow melts in the Colorado River basin, the USGS estimates the peak discharge of the Colorado River at the Grand Canyon in 1862 was 500,000 cfs, and in 1884 at Topock, AZ the peak discharge was 300,000 cfs. We do not know what the peak discharge of the White River is, but it is likely that the footings of the bridge that span the White River would be compromised when such events arrive.<sup>23</sup>

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<sup>21</sup> Larval Trigger Study Plan Ad Hoc Committee. 2012. Study Plan to Examine the effects of using larval razorback sucker occurrence in the Green River as a trigger for Flaming Gorge Dam peak releases.

<sup>22</sup> Colorado River Recovery Program FY-2018-2019 Proposed Scope of Work for Utah Program Management. <http://www.coloradoriverrecovery.org/documents-publications/work-plan-documents/sow/18-19/mgmt/1%20Utah%20PrMgt%20FY%2018-19.pdf>

<sup>23</sup> <http://www.riversimulator.org/Resources/Hydrology/2000YearRecordMagnitudeFrequenciesLargestUpperColoradoRiverFloodsMoabUtahGreenbaum2014.pdf>



In conclusion, we encourage the BLM to take into consideration a very hard look into all the cumulative effects of the South Project when choosing to grant or deny the right-of-way. We also encourage strong participation with the Ute Tribe, on whose land the project resides. We realize that your agency holds a lot of responsibility in matters of the water and climate of the arid west. We encourage you to do your best at administering these lands for present and future generations and continue to solicit input from diverse public entities.

Sincerely yours,

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