

OUTDOOR ALLIANCE



May 4, 2012

Draft OSTs PEIS
Argonne National Laboratory
9700 S. Cass Avenue
EVS/240
Argonne, IL 60439

Re: Outdoor Alliance Comments to Bureau of Land Management Draft Oil Shale and Tar Sands Resources Programmatic Environmental Impact Statement

Dear Reviewers:

Outdoor Alliance, a coalition of six national, member-based organizations includes Access Fund, American Canoe Association, American Hiking Society, American Whitewater, International Mountain Bicycling Association, and Winter Wildlands Alliance, and represents the interests of the millions of Americans who hike, paddle, climb, mountain bike, ski, and snowshoe on our nation's public lands, waters, and snowscapes. These lands include those affected by this Draft Programmatic Environmental Impact Statement and Possible Land Use Plan Amendments for Allocation of Oil Shale and Tar Sands Resources on Lands Administered by the Bureau of Land Management in Colorado, Utah, and Wyoming (DPEIS). Collectively, Outdoor Alliance has members in all fifty states and a network of almost 1,400 local clubs and advocacy groups across the nation. We prepared these comments to assist the BLM in harmonizing the important goals of the DPEIS with other sustainable uses of our public lands, particularly human-powered outdoor recreation.

The Outdoor Alliance has a significant interest in this DPEIS because our members recreate and live in close proximity to the areas identified for oil shale and tar sands leasing (see below and attached maps). While we certainly support the prudent development of energy resources on our public lands, we are concerned that the longstanding recreational opportunities and associated economic benefits¹ established in this DPEIS planning area could be irreparably harmed by the large-scale development of oil shale or tar sands. This destructive and poorly-understood extractive development experiment could also put at risk sensitive and over-used water resources and threaten other important values such as clean air, wildlife habitat, cultural resources as well as the cultural vitality of rural communities.

The scope of federal public lands that could eventually be leased for oil shale and tar sands development through the Final PEIS (FPEIS) is simply too large. All told, the BLM is considering the potential for oil shale and tar sands development on 2,431,000 acres of public land in Colorado, Wyoming, and Utah, a region which boasts one of the most popular tourist economies in the country thanks to several national parks and iconic landscapes such as the San Rafael Swell, Dirty Devil River, and Desolation Canyon. These unique resources must be

conserved for the region to progress towards a diversified and sustainable economy. Before the BLM permits any new commercial leases for oil shale or tar sands, critical research must demonstrate that proven technologies can develop oil resources without harming the resources that currently support stable, long-term economies and healthy communities.

Because oil shale and tar sands development remains economically speculative with many as-yet unknown environmental impacts, Outdoor Alliance supports Alternative 3 identified in the DPEIS. Alternative 3 appropriately recognizes the need for additional research, development, and demonstration (RD&D), and takes a precautionary approach toward the expansion of risky and unproven development in an area with existing, world-class outdoor recreation.

COMMENTS

The Outdoor Alliance supports the focus of this DPEIS on RD&D of the viability of oil shale and tar sands technology. The lands affected by this planning area are internationally significant recreation areas that sustain robust local economies and promise long-term economic benefits² from activities such as mountain biking, rock climbing, hiking, canyoneering, and boating. The DPEIS provides a partial listing of the many recreational areas located within an approximately 50-mile radius of the oil shale and tar sands resources to demonstrate the overall importance of recreational land use and the large variety of recreation areas in the region.³ Many more important recreation areas are located in the DPEIS planning areas and are noted below.

Several important questions remain about the economic viability of producing oil from oil shale and tar sands, much less whether it can be done without negatively impacting the recreation assets and other important values in the planning area. The 2008 BLM PEIS, which this initiative will update, noted then that:

The current experimental state of the oil shale and tar sands industries does not allow this PEIS to include sufficient specific information or cumulative impact analyses to support future leasing decisions within these allocated lands ... [nor] for land use plan amendments to include sufficient site-specific information or cumulative impact analysis to support issuance of a lease.⁴

Much new information has emerged since the BLM's 2008 PEIS that underscores the point that many known problems and uncertain outcomes remain with experimental oil shale and tar sands development. These problems are well-documented in the current DPEIS and other sources⁵ and include:

- Production of oil shale and tar sands would necessitate massive mining operations and developed infrastructure causing significant impairment to world-class visual resources and soundscapes. Significant visual resource degradation will negatively affect the rural character of local communities and fundamentally ruin the experience at the many popular recreation areas adjacent to potential leases.

- High energy needs for oil shale and tar sands development requires the consumption of large quantities of scarce water resources and will degrade air quality, causing long term negative impacts to local communities and recreation viewsheds.
- No extraction technology has proven commercially successful for Utah's "oil-wet" tar sands resource.
- Oil shale development creates more than three times the carbon footprint of conventional oil production, contributing significantly to climate change.⁶
- Oil shale development in Colorado, Wyoming, and Utah would require massive water consumption, affecting one of the country's driest regions. This consumption will divert water from traditional agricultural uses, undermine the rural character of many local communities in the planning area, and threaten the ability of rivers and streams to sustain water-based recreation.

Outdoor Alliance supports Alternative 3 which outlines the most conservative and responsible approach to protecting the famous public landscapes and productive recreation economies of Wyoming, Colorado, and Utah. Alternative 3 requires development proponents to demonstrate conclusively—through comprehensive RD&D—that oil shale and tar sands development will not harm the established economies and unique, sensitive resources in the planning area.

We support the direction under Alternative 3 (Oil Shale Research Lands Focus for Oil Shale) which limits any new lands available for commercial oil shale leasing to existing RD&D leases at the time the FPEIS is signed (a total of 32,640 acres available for potential oil shale leasing). Furthermore, Alternative 3 would also analyze foregoing the leasing of tar sands entirely except for one tar sands lease currently under consideration and covering approximately 2,100 acres. Significantly, Alternative 3 requires subsequent NEPA analyses for any pre-existing lease proposals and reduces the risk of damage from experimental oil shale and tar sands development by over 2.4 million acres. This leaves an appropriate amount of acreage available to research and demonstrate whether these technologies are feasible.

I. RECREATION ASSETS LOCATED IN THE DPEIS PLANNING AREA

World class recreational opportunities are found throughout DPEIS planning area. These include famous paddling opportunities in Desolation and Gray Canyons on the Green River; climbing, boating, pack-rafting, and canyoneering in the San Rafael Swell; canyoneering and mountain biking in the Tar Sands Triangle; and climbing, mountain biking, and canyoneering in the White Canyon area. Intensive extractive development of the region will irrevocably harm the unique recreational opportunities found only at these places and severely compromise the robust recreation economy that thrives across the PEIS planning area.⁷ Under any planning alternative, all of these valuable recreation areas, and their associated viewsheds and watersheds, should be excluded from oil shale and tar sands leasing consideration in order to preserve their recreational and scenic qualities and their contributions to local and regional economies.

Given the extensive and varied recreational activities that take place in the areas covered by this DPEIS, and the already extensive amendments being made to ten local Resource Management Plans through this PEIS, the BLM should also consider Extensive Recreation Management Area

(ERMA) designations at the locations discussed herein. Appropriate ERMA designations could help to ensure that subsequent NEPA analyses and leasing decisions authorized under this PEIS give due consideration to existing recreational uses and visitor health and safety. Additionally, BLM should evaluate whether to expand Area of Critical Environmental Concern (ACEC) designations in the planning area to protect the fragile watersheds and other sensitive resources that play a central role in many of the recreational activities that occur throughout this vast area.

A. Tavaputs Plateau (Roan Cliffs/Book Cliffs) – Potential Oil Shale Development Area

- Paddling on the Desolation and Gray Canyons of the Green River

The Green River through Desolation and Gray Canyons is a popular multiday float trip, highlighted by gentle whitewater, idyllic beach camping, spectacular scenery, and compelling historic landmarks. The Utah Preferred Leasing Footprint for oil shale with impact the famous and unique Desolation and Gray Canyons. An enormous area immediately upstream on both the Green and White Rivers from this remote, world-famous area could be available for leasing under the BLM's preferred Alternative 2(b) in the DPEIS. Large scale oil shale development in this area would cause severe water overconsumption issues and water quality and air quality degradation, affecting everything downstream on the Green and Colorado Rivers. Additionally, the Wyoming Preferred Leasing Footprint is bisected by the Green River and lies entirely within its drainage. Negative impacts to water quality and availability must not be permitted to imperil the recreational value of the peerless resources downstream, including the commonly floated sections of the Green River between Flaming Gorge and Lodore; the Gates of Lodore section; and Desolation and Gray Canyons. The scenic and fragile Desolation and Gray Canyons attract large numbers of private boaters and commercial clientele. This highly valued public use and commercial activity will be lost if experimental oil shale development impairs water quantity and quality in this world-class recreational resource.

- Paddling on the White River (Colorado and Utah)

The 100-mile stretch on the White River between Rangely, Colorado and the Green River near the head of Desolation Canyon is valued by boaters for its high desert scenery, geology, historic resources, wildlife, hiking, and solitude.⁸ Some have called the White River above Desolation Canyon the best canoeing in Utah. Many streams within the DPEIS's Colorado Preferred Leasing Foot print are direct tributaries to the White River. All of the concerns regarding Utah Preferred Leasing Footprint apply to concerns with experimental oil shale development in the Colorado Preferred Leasing Footprint because impacts will affect much of the same river basin.

- Paddling on the Yampa River (Colorado and Utah)

The Yampa is one of the country's most classic multi-day whitewater float trips and is popular with commercial outfitters and private boaters. Most paddlers spend three to five days floating the Yampa and Green Rivers through Echo Park and into Dinosaur National Monument. Paddlers put in near the east edge of Dinosaur National Park and float more than 70 miles to the most common takeout at Split Mountain Campground near Vernal, Utah. Through this section,

paddlers enjoy spectacular scenery and gentle whitewater. The canyon contains pictographs, petroglyphs, and cliff ruins from multiple cultures, and the canyon is home to Peregrine Falcons, Bald Eagles, Colorado Pikeminnow, and Razorback Sucker. The canyon is believed to be the last remaining breeding grounds for the Colorado Squawfish, and the Yampa is the longest free-flowing river remaining in the Colorado Basin. The Wyoming Preferred Leasing Footprint encompasses streams that are direct tributaries to the Yampa River. This highly valued public use and commercial activity⁹ will be lost if experimental oil shale development impairs the water quantity and quality in the Yampa River basin.

B. San Rafael Swell Special Tar Sand Areas

The PEIS states that “in situ” mining methods would be the preferred methods of production for the San Rafael Swell Special Tar Sands Area because the overburden is too great for recovery of the bitumen by surface mining. We anticipate that visits by climbers, campers, and hikers (and their economic contributions to local and regional economies) would plummet if a large-scale tar sands leasing area is developed. The FEIS efforts in the region must ensure RD&D proving that tar sands development causes no water quality or quantity impacts from “in situ” mining methods that could affect the world class boating and canyoneering routes in the San Rafael River and Muddy Creek tributaries to the Dirty Devil River. Likewise, the PEIS must ensure infrastructure and associated industrial machinery does not degrade the world class scenery in this region, which is very popular with climbers and frequented by hikers, river runners, and mountain bikers. The following recreation resources are among those found in the larger San Rafael Swell area:

- Climbing: San Rafael Swell North

The San Rafael Swell is a large anticline that is split in two by Interstate 70. Much of the documented climbing north of I-70 is concentrated within a few miles of the BLM campground at the junction of Cottonwood Wash Road and the Mexican Mountain Road. Climbing areas in the north San Rafael Swell area include Assembly Hall Peak, Bottleneck Peak, Dylan Wall, Eagle Canyon, Head of Sinbad North, Lower Buckhorn Wash, Pine Canyon, Tiki Tower, the Weasel Formation, and Window Blind Peak, among others.¹⁰ The largest concentration of routes in this northern section is the Dylan Wall, two miles east of the campground on the north side of the river. This popular climbing area, popular partly because of its convenience to Salt Lake City, is valued for its challenging climbs, expansive views, and sense of seclusion. Climbers at San Rafael Swell North would also look directly into a significant Special Tar Sands Area (STSA) Preferred Leasing Footprint where the viewshed, soundscape, and air quality would be significantly and possibly permanently degraded.

- Climbing: San Rafael Swell South

The San Rafael Swell South area also lies within a STSA Preferred Leasing Footprint. This area includes climbing areas such as Back of the Reef, Eastern Reef Slabs and Walls, Factory Butte, Head of Sinbad South, Little Spotted Wolf Canyon, San Rafael Knob, Swaseyland, Upper Muddy Creek, and Viewfinder Towers.¹¹ The southern San Rafael Swell is a huge area with big

slabs on the San Rafael Reef, isolated towers and domes, and long, large walls. Currently there are well over a hundred routes in this area with potential for many more.

- Paddling on the Escalante River, Escalante to Lake Powell

The Escalante River downstream from the town of Escalante to Lake Powell has been described as “the most impressive 73 miles of creek in all of Utah.” Often a trip of seven days or more, the water quality of this pristine, one-of-a-kind drainage must be protected from impairment by mining activity at the Circle Cliffs site, part of the identified Special Tar Sand Areas.

- Paddling on the San Rafael River, Fuller Bottom to San Rafael Campground (Little Grand Canyon)

The San Rafael Swell STSA Preferred Leasing area is also likely to negatively affect the water quantity and quality of the San Rafael River, including the popular pack rafting and kayaking adventure known as the Little Grand Canyon. This upper stretch of the San Rafael River is attractive to paddlers wanting a relatively easy float through a fantastic canyon offering outstanding camping, spectacular side hikes, and fascinating pictographs. Negative impacts to the San Rafael River from experimental tar sands development will also affect the popular Dirty Devil River downstream.

- Paddling and Canyoneering on the San Rafael River, Bridge at San Rafael Campground to I-70 (Black Boxes 1 & 2)

The Black Boxes section of the San Rafael cuts through an amazing canyon that provides excellent exposure to the geology of the San Rafael Swell. Typically run in two days, the Black Boxes section of the San Rafael is one of the highlights of whitewater paddling in the Southwest, featuring spectacular scenery with challenging, accessible, and intermediate-to-advanced whitewater. As with many runs in the Southwest, finding sufficient flow can be a challenge, and any chosen alternative with regard to resource development must ensure maintenance of water levels necessary for recreational activity in the smaller watersheds throughout the areas covered by this PEIS such as the San Rafael River.

- Boating and Canyoneering Muddy Creek

Muddy Creek, another important tributary to the Dirty Devil River, has been described as “the quintessential beginner slot canyon run” because it provides a rare opportunity where novice kayakers and rafters can experience a world class canyoneering float trip of as long as seventy-two miles through a superlative landscape. Most put in off of I-70, traveling to a takeout near the town of Hanksville, Utah. Any permitted activity in the San Rafael Swell area should ensure continued water quantity and quality for this spectacular river.

- Hiking and Canyoneering in the San Rafael Swell

Several hiking and canyoneering areas are popular in the San Rafael Swell, including Devils Canyon, Eagle Canyon, Upper San Rafael River Gorge, the Black Boxes, Swazy's Leap, Black Dragon Canyon, Lower San Rafael River, the San Rafael Reef, Eardley Canyon, Straight Wash, Crack and Chute Canyons, Bell and Little Wild Horse Canyons.¹²

- Mountain Biking in the San Rafael Swell

Mountain Biking in this area is popular at 5 Miles of Hell, Black Dragon Canyon, Buckhorn Wash, Good Water Rim Trail, June's Bottom Trail, Nefertiti Trail, Bull Bottom Trail, Horseshoe Bend, Temple Mountain, Three Fingers Canyon, and The Wikiup.¹³ These trails are used for two annual mountain bike festivals sponsored by the Mecca Mountain Bike Club in Emery County. The festivals are also supported by Decker's Bicycle shop in Price. Both participants in the festivals and revenues to the bikes shop have climbed steadily since the inception of the festivals. As the areas reputation for backcountry cycling opportunities grows, visitation from around the country increases. If the pristine nature of the area is compromised, visitors will choose other locations.

C. Tar Sand Triangle - Special Tar Sand Areas

The PEIS notes that the "Tar Sand Triangle deposit may be technically suitable for surface mining; however, the remoteness of the area and other considerations could limit this potential." It is the remoteness of this area that attracts hikers, mountain bikers, climbers, and paddlers along the Dirty Devil River. Surface mining, especially given the uncertainties of this area's economic potential for tar sands, indicates that the BLM should not allow any tar sands leases in this area in order to ensure that the remote and unique character is maintained. The following are among the recreational attractions located in or potentially affected by tar sands development of the Tar Sands Triangle.

- Paddling on the Dirty Devil River

The Dirty Devil, from its beginning at the confluence of the Fremont River and Muddy Creek to a takeout at Lake Powell, offers a wilderness float trip with fantastic scenery and side hikes. Because much of the water from the Fremont River and Muddy Creeks is withdrawn for agricultural and domestic use, leaving the Dirty Devil largely dependent on flows from side streams along its length, this first-class, seventy-five mile, multi-day float trip is exceedingly vulnerable to disturbances in water quantity and quality stemming from mining activity in the Tar Sands Triangle area. The FEIS should ensure no water quality or quantity impacts to the sensitive region from experimental tar sands development.

- Hiking and Canyoneering in the Tar Sands Triangle: Happy Canyon and Environs

Happy Canyon is a spectacular and remote canyon south of Robbers Roost Country. A major tributary to the Dirty Devil River, Happy Canyon is a very large drainage basin and offers spectacular hiking and technical canyoneering.¹⁴

D. White Canyon - Special Tar Sand Areas

The DPEIS notes that the lack of site-specific data precludes any consideration of mining methods for the White Canyon deposit. The data available on the quality of the deposit suggest that it is not of commercial grade because it may be too heavily jointed for in situ methods, and the heavy overburden appears to be unfavorable for surface mining.¹⁵ Because of this uncertainty about the viability of mining tar sands and the following exceptional and popular recreation resources in this area, under any planning alternative the BLM should remove the White Canyon area from consideration for tar sands leasing

- Canyoneering at White Canyon: Lower White Canyon (Black Hole)

White Canyon is a spectacular slot canyoneering adventure with 400-foot Cedar Mesa sandstone walls and required bouldering and swimming pools. The Black Hole offers one of the longest and coolest swims of the Colorado Plateau and most use a rope and require advanced route-finding skills.¹⁶

- Climbing: Jacob's Chair

Jacob's Chair, also in the White Canyon STSA, is a prominent Wingate Sandstone landmark and climbing destination just north of Fry and White Canyons. Jacob's Chair was first climbed in the 1970s and climbers still go here and the neighboring "Cheesebox" for a remote wilderness climbing experience.¹⁷

III. ADDITIONAL ISSUES THAT MUST BE ADDRESSED IN THE FINAL PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

In addition to analyzing socio-economic impacts such as whether the recreation resources and the associated economy of the region will be threatened by these developments, the BLM should include in the Final PEIS language that addresses the following:

REQUIRED NEPA PROCESSES SUBSEQUENT TO THE FEIS

Because the BLM will defer NEPA analyses on individual development proposals until specific leases are considered, this FPEIS should define the scope of these NEPA studies, including how it will analyze cumulative impacts and define mitigation actions. Effects to the regional recreation economy should be addressed in a cumulative fashion.

WATER DEMAND AND QUALITY

We are encouraged that the BLM through this DPEIS seeks to gain a clearer understanding of the implications of development of oil shale for water quality and quantity. These impacts are particularly significant to those local communities that rely on these water sources and regarding those rivers where the public recreates in the PEIS planning area. The State of Utah has noted that limited quantities of water are available for new energy development and that much of Utah is already closed to new consumptive appropriations. “Given Utah’s population growth and projected economic growth over the next decade, the possibility of increased drought, and with limited new water resources available, water consumption of energy resources should be given careful consideration.”¹⁸ Accordingly, this FPEIS should require a rigorous analysis of the impacts of utilizing water for oil shale and tar sands on local communities (especially municipal, agricultural, and recreational needs), in particular accounting for existing and prospective water demands and water rights. The FPEIS should also require adequate research that documents impacts to water quality and how any proposed project would avoid degrading water quality. Recreational users will not be interested in visiting areas with water quality concerns; private boaters, commercial outfitters, and dependent local economies will all suffer from degraded water quantity and quality.

WILD AND SCENIC RIVERS PROTECTION

The Outdoor Alliance supports management proposals common to all DPEIS alternatives that all areas eligible for Wild and Scenic River (WSR) designation be protected from oil shale and tar sands development.¹⁹ Per the BLM Manual, the Bureau “shall afford protective management to all eligible river segments as necessary to ensure that the existing qualities upon which their eligibility is based are not degraded.”²⁰

Given the uncertainty surrounding potential impacts from prospective resource development in the planning area, the FPEIS should address protections for eligible river segments in a basin-wide fashion. Given the potential impacts of oil shale and tar sands development on water quantity and quality, including effects to groundwater resources, protecting only a 1/4 mile buffer surrounding eligible WSR segments is simply inadequate to address the nature of potential threats. Eligible rivers identified above in the DPEIS planning area include the Dirty Devil River, Escalante River, Fremont River, Green River, Muddy Creek, San Rafael River, White Canyon Creek, and the White River. At minimum, BLM, through the PEIS process, should demonstrate conclusively that any decision regarding buffer protections is adequate to ensure that these eligible river segments are not degraded.

AIR QUALITY

The DPEIS fails to adequately analyze air quality impacts. Air quality is already compromised in Utah, Colorado, and Wyoming from oil and gas development, and oil shale and tar sands development would exacerbate air quality degradation in the region. Because a recreation economy cannot thrive or be sustained in an environment where air quality is degraded (not to mention threats to the health of local communities), the FPEIS should ensure the completion of

adequate research documenting any impacts to air quality from of oil shale and tar sands development and how lessees will be required to prevent and mitigate impacts from any development if leases are considered by the BLM.

VISUAL RESOURCES

Oil shale and tar sands development will degrade already-affected Class 1 and Class 2 visual resource areas. In Colorado, Utah, and Wyoming, the BLM has concluded that oil and gas development would further affect Class 1 air-sheds and that oil shale and tar sands development activities will make matters worse at these locations, both in terms of on-the-ground disturbance and emissions from new power plants needed to support increased industrial activity. The FPEIS should address this problem by requiring research that demonstrates the impact industrial development would have on the air quality of the region.

* * *

Environmental protection and the conservation of key recreation areas serve as an important economic driver in Utah, Colorado, and Wyoming. More diversified recreation economies have taken the place of areas that were formerly dependent on resource extraction.²¹ Furthermore the America's Great Outdoors Initiative specifically recognizes the economic value in protecting these lands for recreation.²² It is critical that this initiative be mindful of the extremely valuable recreation resources found in the PEIS planning area and that the FEIS include restrictions so that any future oil shale and tar sands development does not irreparably harm recreation resources and their viewsheds. We look forward to being included in this process, and welcome additional consultation or opportunities for public comment related to this important issue.

Best regards,

Brady Robinson
Executive Director, Access Fund

Gregory Miller
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Wade Blackwood
Executive Director,
American Canoe Association

Mark Singleton
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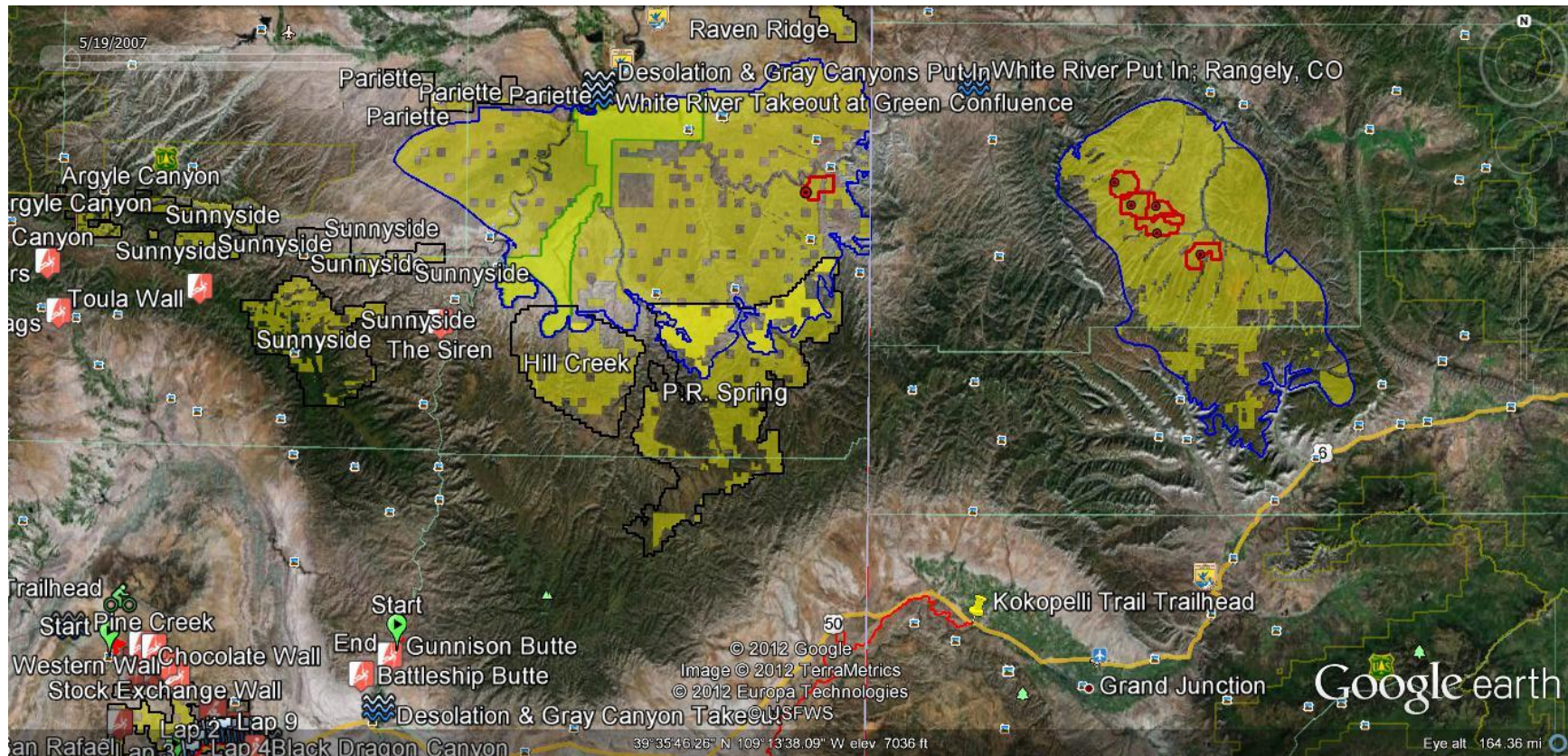
Michael Van Abel
Executive Director,
International Mountain Bicycling
Association

Mark Menlove
Executive Director,
Winter Wildlands Alliance

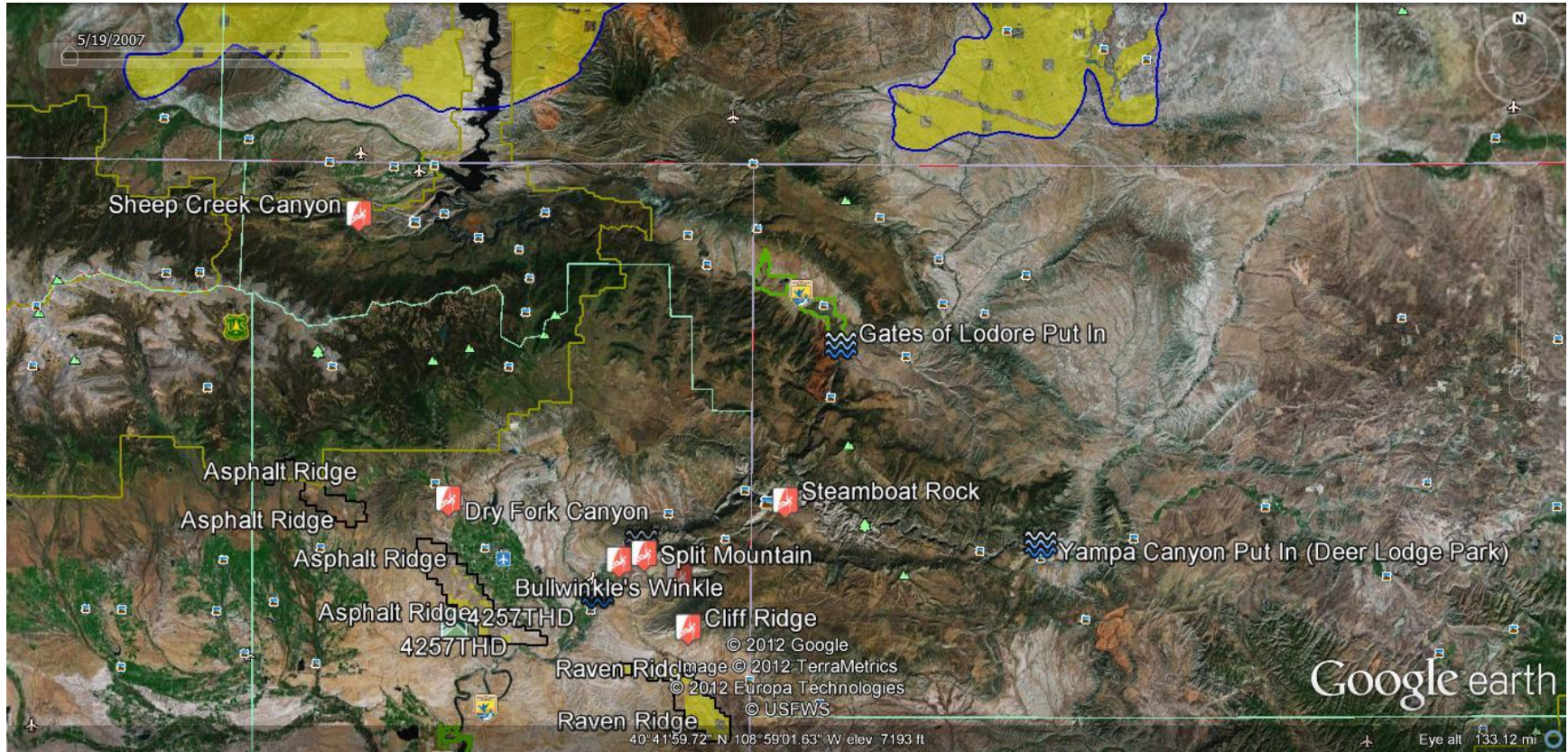
cc: The Honorable Ken Salazar, Secretary, US Department of the Interior
Bob Abbey, Director, Bureau of Land Management

Juan Palma, Utah State Director, Bureau of Land Management
Helen Hankins, Colorado State Director, Bureau of Land Management
Don Simpson, Wyoming State Director, Bureau of Land Management
Carl Rountree, Director, Office of National Landscape Conservation System and
Community Programs, Bureau of Land Management

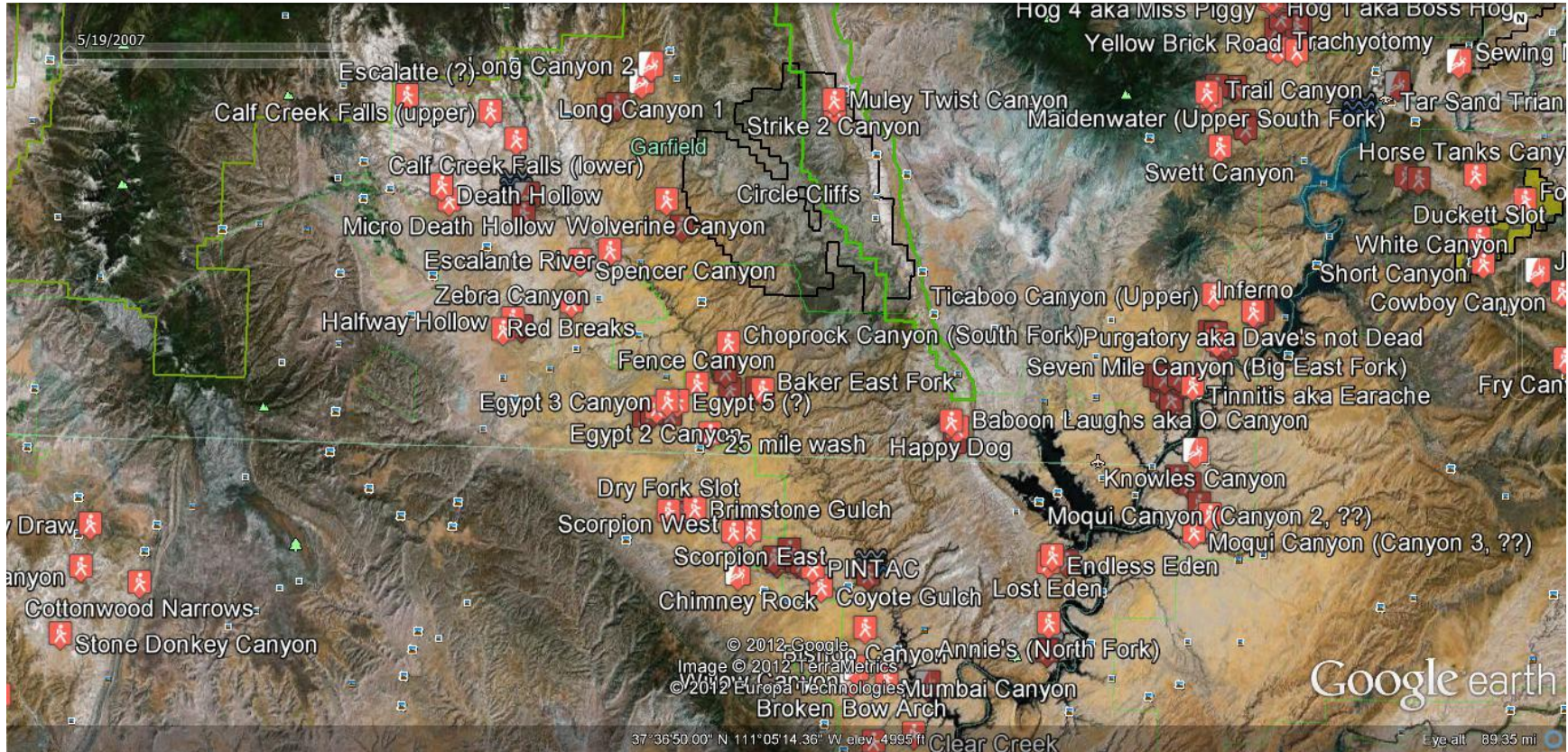
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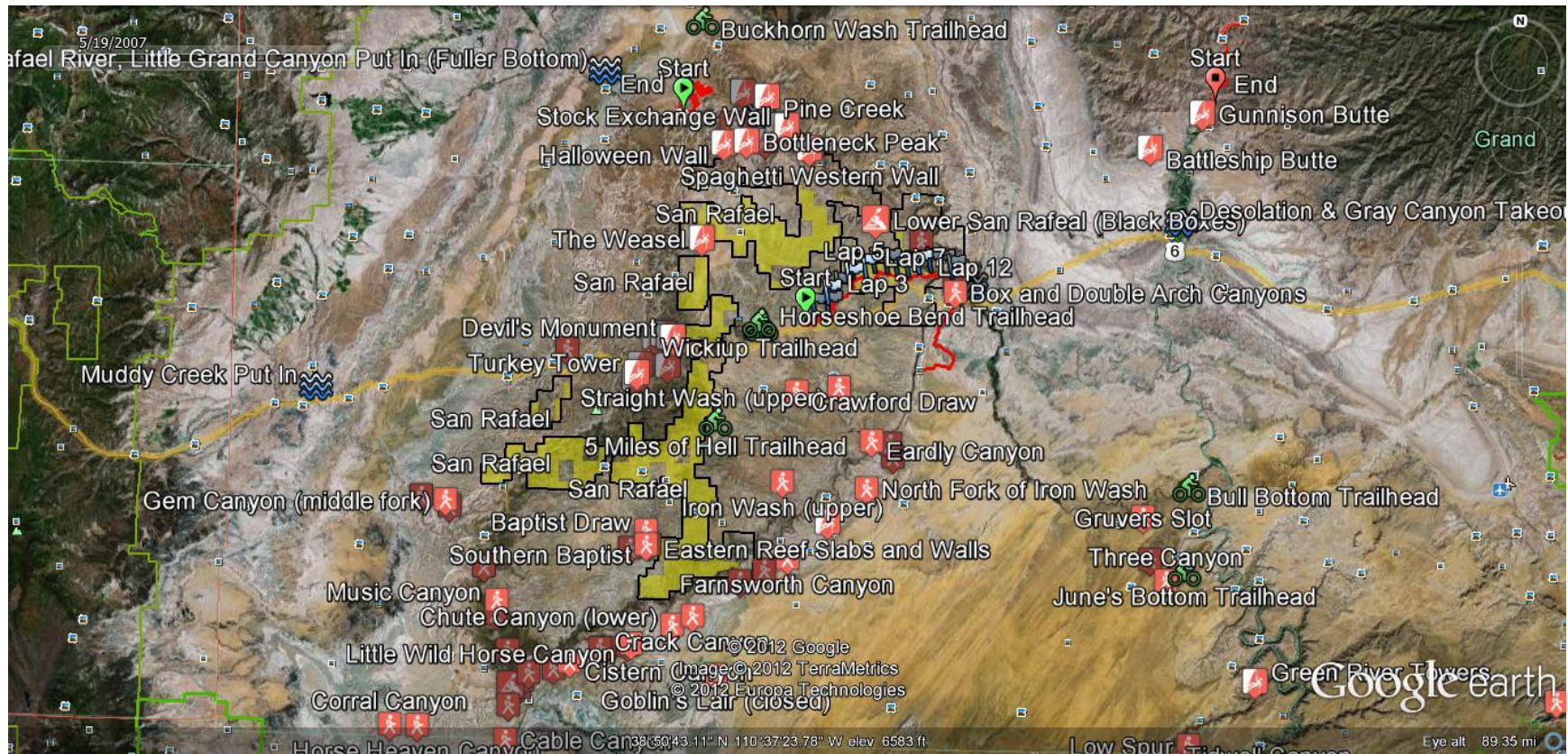
Paddling on the Green River (Desolation and Gray Canyons) and White River – CO and UT



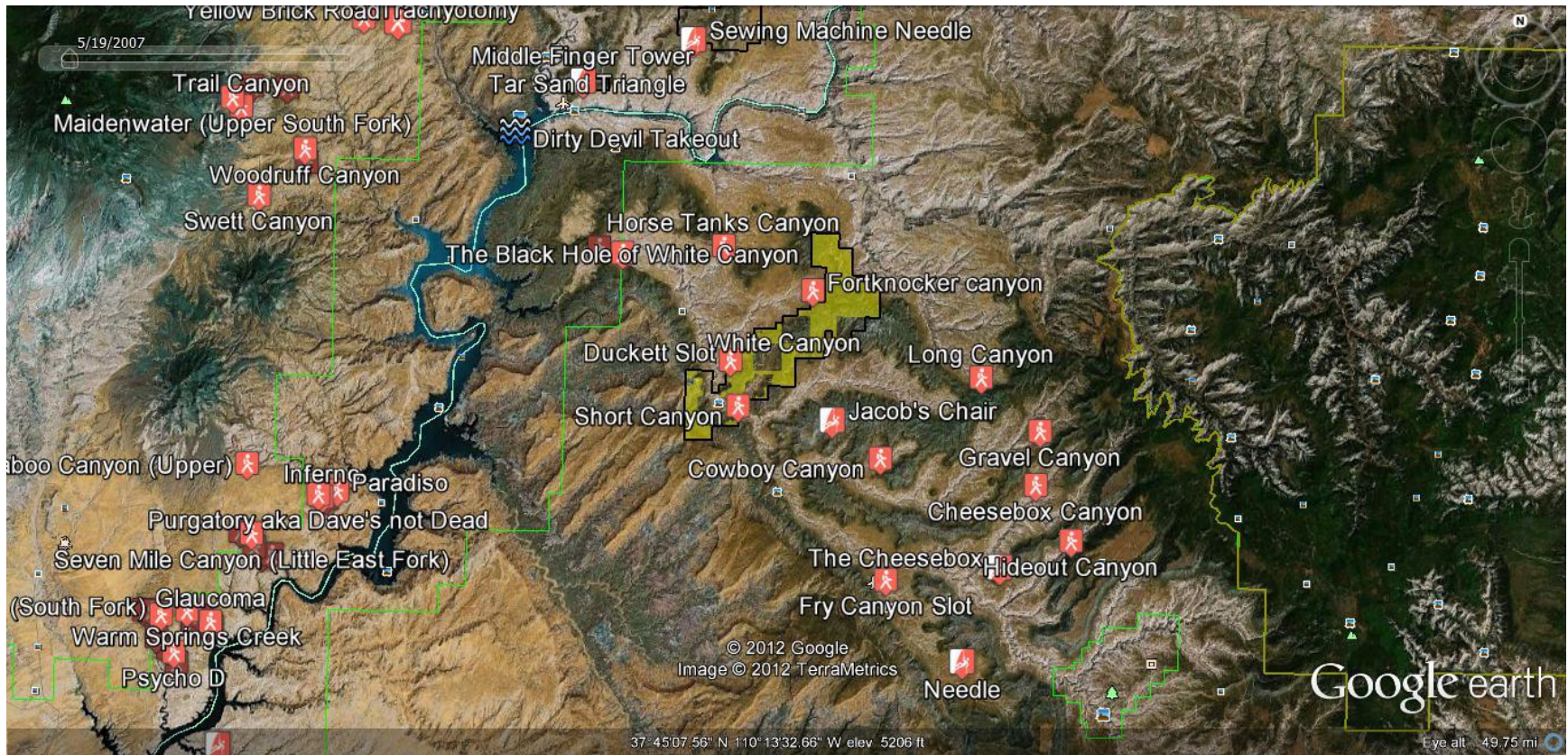
Paddling on the Green River (Gates of Lodore) and Yampa River – UT, WY, and CO



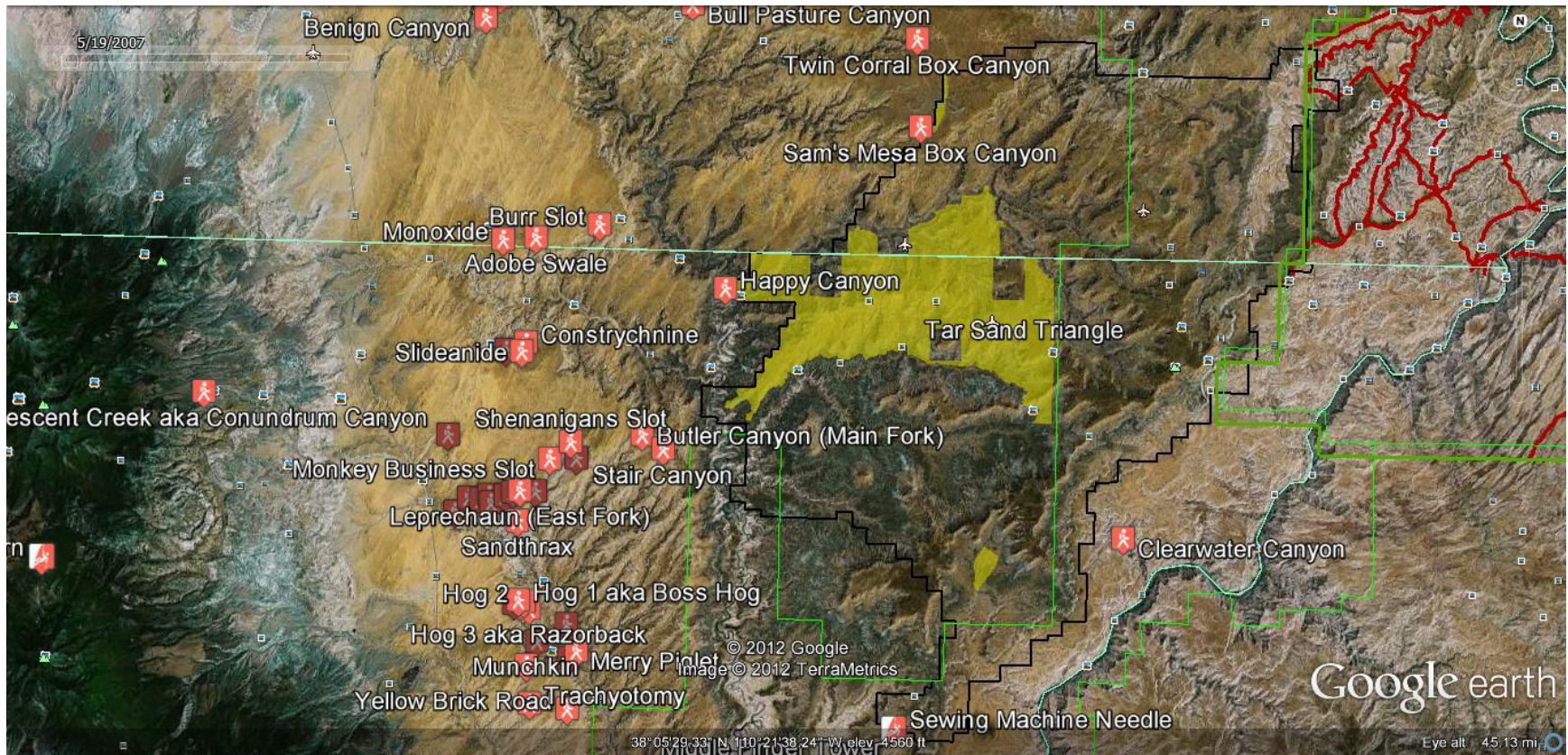
Paddling and Canyoneering, Escalante River/Circle Cliffs STSA – UT



Padding, Climbing, Mountain Biking, and Canyoneering, San Rafael Swell STSA – UT



Canyoneering, Climbing, and Mountain Biking, White Canyon STSA – UT



Canyoneering and Mountain Biking, Tar Sand Triangle STSA – UT

¹ See “The Economic Value of Public Lands Around Grand County, Utah,” Headwaters Economics (2011) at <http://headwaterseconomics.org/land/reports/economic-grand-county/>.

² Utah’s recreation economy produces \$7.1 billion annually and sustains over 113,000 jobs; Colorado’s recreation economy produces \$10 billion annually, supporting 107,000 jobs; and Wyoming’s recreation economy produces \$4.4 billion annually and sustains over 52,000 jobs. See “Active Outdoor Recreation Economy Report,” Outdoor Industry Association (2006) at http://www.outdoorindustry.org/research.php?action=detail&research_id=52.

³ See DPEIS, TABLE 3.1.2-1 at http://ostseis.anl.gov/documents/peis2012/chp/OSTS_Chapter_3.pdf, page 3-42.

⁴ See the BLM’s 2008 Oil Shale and Tar Sands Final Programmatic Environmental Impact Statement at <http://ostseis.anl.gov/documents/fpeis>.

⁵ See “Oil Shale 2050: Data, Definitions & What You Need To Know About Oil Shale In The West,” Western Resource Advocates (2012) at <http://www.westernresourceadvocates.org/oilshale2050/WRA-OilShale2050.pdf>.

⁶ Id.

⁷ See “Active Outdoor Recreation Fuels Economic Growth In Utah,” Outdoor Industry Association (2006), at <http://www.outdoorindustry.org/pdf/UtahRecEconomy.pdf>. Additionally, in Colorado alone, water-related activities inject into the economy between \$7 billion and \$8 billion, and employ 85,000 people. See <http://cwcb.state.co.us/environment/non-consumptive-needs/Pages/main.aspx>. Non-consumptive uses are fundamental to these industries.

⁸ See http://home.mesastate.edu/~jerry/guide/white/WRG_2.PDF

⁹ The commercial activity on this river benefits many outfitters and local guides. For an extensive list of commercial rafting companies that see Yampa River trips, see <http://www.nps.gov/dino/planyourvisit/commercialguidedrivertrips.htm>

¹⁰ See <http://www.mountainproject.com/v/san-rafael-swell-north/105716808>

¹¹ See <http://www.mountainproject.com/v/san-rafael-swell-south/105716823>

¹² See <http://canyoneeringusa.com/utah/swell/>

¹³ See <http://www.singletracktreks.com/sanRafaelArea.jsp>

¹⁴ See <http://www.summitpost.org/happy-canyon-narrows/705698>

¹⁵ See DPEIS at http://ostseis.anl.gov/documents/peis2012/chp/OSTS_Appendix_B.pdf, page B-14.

¹⁶ See <http://canyoneeringusa.com/utah/cedar/blackh.htm>

¹⁷ See “Desert Rock IV: The Colorado Plateau Backcountry, Utah,” by Eric Bjornstad (Falcon Press, 2003), at 315.

¹⁸ See Energy Initiatives and Imperatives: Utah’s 10-Year Strategic Energy Plan,” March 2011, at 25. <http://www.energy.utah.gov/index.htm>. See also the Government Accountability Office’s “Energy-Water Nexus: A Better and Coordinated Understanding of Water Resources Could Help Mitigate the Impacts of Potential Oil Shale Development” (October 2010).

¹⁹ DPEIS, Table 2.3.2-2 at 2-28.

²⁰ BLM Manual, 8351 Wild and Scenic Rivers- Policy and Program Direction for Identification, Evaluation, and Management, Rel. 8–61 at 10 (May 19, 1992).

²¹ See R. Rasker, B. Alexander, J. van den Noort and R. Carter.2004. The Sonoran Institute, Public Lands Conservation and Economic Well-Being. Tucson AZ: The Sonoran Institute.

²² <http://americasgreatoutdoors.gov/>