



February 25, 2022

Elizabeth E. Howard

Admitted in Oregon, Washington and
North Dakota

T: 503-796-2093

C: 503-312-8765

ehoward@schwabe.com

Katherine E. Nordholm
Oregon Department of Fish & Wildlife
4034 Fairview Industrial Drive SE
Salem OR 97302

RE: Jump Creek Fish Passage Exemption: Silvies Valley Ranch, LLC
Our File No.: 120252-167160

Dear Ms. Nordholm:

I write this letter on behalf of Silvies Valley Ranch LLC with regards to its Jump Creek Fish Passage Exemption Application. Please include this letter and its attachments in the materials to be considered by the Oregon Fish and Wildlife Commission when it next considers this matter.

Timeliness & History of the Applications

The Jump Creek exemption request currently under consideration was submitted to the Oregon Department of Fish and Wildlife ("ODFW" or "Department") on September 28, 2020. However, the initial exemption for Jump Creek, which was for the same ten environmental restoration weirs addressed in the current application, was filed on January 26, 2018.

Both of these applications were filed at ODFW's request, in coordination with ODFW staff, and after ODFW staff had been on site, examined the creek several times, and (repeatedly) found that Jump Creek did not have any redband trout or native migratory fish, or sufficient habitat to support either.¹

Having filed the application ODFW requested and recommended twice, Silvies Valley Ranch has now waited **more than 4 years** for the agency to approve a fish passage exemption request for a stream that i) is ephemeral to intermittent at best, ii) flows only during spring runoff and at minimal levels even at that time, iii) has no connection and has had no connection to the Silvies River for well over 100 years, according to available records, iv) was determined by the agency to be inadequate to support redband trout survival prior to construction of the environmental

¹ ODFW initially visited and evaluated Jump Creek in 2009, prior to construction of environmental restoration weirs. At that time, Silvies Valley Ranch was asking ODFW to consider planting redband trout in the creek. ODFW declined because it was of the opinion that redband trout would not survive.

restoration weirs, and v) has zero documentation of having ever supporting redband trout or native migratory fish.

Native Migratory Fish Are Not & Have Not Historically Been Present in Jump Creek

In support of the exemption application, Silvies Valley Ranch respectfully requests that the Oregon Fish & Wildlife Commission consider the above considerations as well as the following evidence, which confirms that native migratory fish are not present, and have not been present, in Jump Creek:

- ODFW’s July 21, 2021 Staff Report (the “Report”), makes the following findings, based on observations, surveys, and data:
 - Habitat quality on the public lands (upper Jump Creek) is poor and does not support redband trout or other native fishes; “there is no suitable spawning habitat within the public land portions of Jump Creek.” Report, pp. 5-6
 - Jump Creek “lacks consistent water flow throughout the year to support native migratory fishes or any part of their life cycle.” Report, p. 2.
 - The watershed is likely too small to support the entire life cycle of redband trout and other native species. Report, p. 2.
- **Jump Creek was not listed as historical habitat for redband trout in the April 13, 2018 Malheur Lakes Redband Trout Conservation Plan** (public draft), p. 97, *see* Figure A1-2. Silvies River redband trout population.
- The Great Basin Redband Trout Stream Distribution Map (2001, ODFW): Malheur Lake Basin, which is based on data through summer 1999, classified Jump Creek as having no redband trout present.
 - Note: Silvies Valley Ranch also heavily relied on the Great Basin Redband Trout Stream Distribution Map when it undertook its original assessment and identified Jump Creek as one of the highly degraded streams to restore with environmental restoration weirs. The fact that Jump Creek was not designated as a redband trout stream on this published, data-driven map was also a key reason why Silvies Valley Ranch chose Jump Creek (and not other streams) for its restoration efforts.
- Stream surveys/sampling in 1999, 2000, and 2021 found no native migratory fish or redband trout present despite markedly improved stream conditions on the reach of Jump Creek located on private property above the pre-existing impoundment (discussed below). Report, p. 6.

Despite the dearth of evidence to support it, the Report, p.5, posits that “Under historic conditions, this tributary would have functioned as spawning and rearing habitat for redband trout and other fish species native to the Silvies watershed.” No data is presented in the Report to support this statement, and we are aware of none that would support it. To the contrary, this statement is inconsistent with the data in ODFW’s 2018 Malheur Lakes Redband Trout Conservation Plan and the data in the Great Basin Redband Trout Stream Distribution Map—

both of which conclude (based on decades of surveys, data, and observations) that Jump Creek is not and has never been, redband trout habitat.

Note: WaterWatch of Oregon predicated nearly all of its January 10, 2022, written comments this statement from the Report: “Under historic conditions, this tributary would have functioned as spawning and rearing habitat for redband trout and other fish species native to the Silvies watershed.” This statement must be retracted as it is not supported by substantial evidence or, indeed, by any of the agency’s own data and publications. Moreover, it is misleading to those who have not observed or been to Jump Creek, causing them to believe—contrary to all observations, surveys and data available—that Jump Creek has or would be able to provide native migratory fish habitat.

The Jump Creek Dam and Irrigation Diversion

The September 28, 2020 Jump Creek Exemption Application, discusses a small dam constructed on Jump Creek. This dam likely replaced the original diversion dam, which is depicted on the 1912 map (attached) prepared by the State Engineer in association with the Silvies River water rights adjudication. The 1926 Silvies River water rights adjudication decree (excerpts attached) also confirms that Jump Creek has been diverted since at least 1888 to irrigate seventy-eight (78) acres via the Jump Creek Ditch (the impoundment dam is shown in the 1912 map as being directly connected with this diversion). These documents collectively confirm that Jump Creek has been diverted for well over a century (at least 134 years) for irrigation.²

Notwithstanding these historical facts, this diversion impoundment has inexplicably drawn the attention of WaterWatch and others who—without evidence to support their claim—contend that its removal is required and that such removal would restore connectivity between Jump Creek and the Silvies River.

Under the Silvies Valley Ranch Consent Agreement (Enforcement File No. 7394-ENF), the Oregon Department of State Lands (DSL), ODFW, state agency staff, and Silvies Valley Ranch, inventoried all removal-fill activities, including the environmental restoration weirs installed by the ranch, to be addressed under the Consent Agreement. At no time was the pre-existing historic Jump Creek dam considered to be of concern, nor was it included in the required removal-fill activities inventory. Indeed, it never has been and is not a requirement under the

² The diversion dam is depicted on the State Engineer’s adjudication map in a different location than its current location. This is likely a result of the fact that the adjudication map pre-dates the actual decree by nearly 2 decades and adjudication survey maps are notorious for being inaccurate as to precise locations for point of diversions, etc. This is a well-known fact for those who work with these historical adjudications and decree documents in Oregon. It is also important to note that, even if the dam was located in a different spot than its original location on Jump Creek, a water right cannot be lost simply because water is being diverted from a different point of diversion than authorized by the decree or a certificate. So long as the water continues to be drawn from the original source, as it is here, the water right remains valid and the use is legal. *See Russell-Smith v. Water Resources Dept.*, 152 Or App 88, 98-99 (1998).

Consent Agreement that Silvies Valley Ranch remove or provide passage around or through this long-standing impoundment.

There is no viable regulatory reason to require that this historical structure be removed, either. It is associated with the diversion of a valid, adjudicated water right, and, it is not impeding the use of other authorized water rights. There is only one water right on Jump Creek, and it is held by Silvies Valley Ranch. Additionally, Silvies Valley Ranch holds the adjudicated water rights on the Silvies River that irrigate the length of the valley, including all of the water rights immediately downstream of the (long-dry) location where Jump Creek may have historically intersected the Silvies River.

Jump Creek Lacks Sufficient Hydrology to Connect to the Silvies River

The idea that removal of this historical impoundment would restore connectivity to the Silvies River or would tip the scale in ODFW's net benefit analysis is contravened by at least three additional, critical points of information:

First, the hydrology of the small Jump Creek drainage does not support sustained flows at a level sufficient to create surface water connectivity to the Silvies River (with or without the dam being present). As the Exemption Application, Attachment 2 discusses in detail, "Jump Creek is an intermittent and ephemeral drainage, with minimal surface flow resulting from spring runoff between mid-March and late May/early June in a median year." Further, "Though listed as a tributary to Silvies River, it does not have a hydrological connection to the Silvies River. This is due to the hydrology and geomorphology of the drainage." Attachment 2 was prepared using all available data and the personal observations of its author, Dr. Caroline Nash, who holds a Ph.D in hydrology from Oregon State University.³ This document's well-founded conclusions stand starkly apart from the (wholly unsupported) assertion that Jump Creek could be or was historic redband trout habitat.

Second, Silvies Valley Ranch holds the sole water right on Jump Creek and can lawfully divert nearly all or all of its flows—which, as explained in the Exemption Application, Attachment 2, are generally present only during the earliest part of the irrigation season in any case. Thus, with or without the dam in its present location, the limited spring runoff in Jump Creek would not reach the Silvies River: Its flows will simply continue to be diverted and used for irrigation. Therefore, it is a false premise to suggest—as WaterWatch does in its January 10, 2022 comments—that removing the dam would restore connectivity to the Silvies River or change the net benefit analysis. To the contrary, Jump Creek would continue to be lawfully and fully diverted and likely at the same location or further upstream because flows would otherwise fully

³ Note, Dr. Caroline Nash's authorship of Attachment 2 mistakenly excluded from the September 28, 2020 Exemption Application itself.

absorb into the highly permeable alluvial fan at the bottom end of the Jump Creek drainage, as explained in Attachment 2.

Third, it is important to understand that prior to Silvies Valley Ranch's purchase of the property, and for as long as it has owned the property, there was and has been an eighteen (18) foot elevation drop between what might have been the historic downstream end of Jump Creek, close to its long-dry "mouth," and the Silvies River's current ordinary high water mark. Further, a historic railroad bed and irrigation ditch lay parallel to the Silvies River and would intercept any flows that might make it across the highly permeable alluvial fan to the Silvies River, if Jump Creek had sufficient flows to make it that far. This drop and the intervening high ground and ditch (and the permeable alluvial fan) would be an impassible barrier for redband trout to access Jump Creek – even if they were present in the Silvies River and even if there was sufficient runoff and sustained flows to support redband trout in Jump Creek during any part of their life cycle, which there is not.

Silvies Valley Ranch's Goal : Restoring Degraded Streams

Since it began its efforts – efforts that were applauded by Oregon's Governor, elected officials, ODFW, Oregon Natural Desert Association, Oregon State University fisheries scientists, Oregon Water Resources Department, and federal agencies (Bureau of Land Management and the US Forest Service) for years before the Oregon Department of State Lands (DSL) asserted there to be a violation of state law from the installation of the environmental restoration weirs—Silvies Valley Ranch was and has always been motivated by the goal of restoring the highly degraded stream systems within the valley and drainages that span this ranch property. As documented in Silvies Valley Ranch's most recent remedial action plan, and as confirmed by DSL in multiple written correspondence, these extensive efforts have indeed been effective at restoring highly degraded systems: They have restored stream channels, riparian vegetation, wetlands, wet meadows, and vibrant fisheries in Camp Creek & Hay Creek, as planned. These restored and restoring streams also support many types of birds, otters, beaver, large game and other wildlife species that were conspicuously absent or largely so when Silvies Valley Ranch purchased the property. Also, of critical importance to the Commission and ODFW in its considerations here, the restored Camp Creek and Hay Creek streams was the only locations where redband trout were visibly present and able to weather the drought and summer of 2021.

These same outcomes are beginning to manifest themselves on Jump Creek. ODFW reported the benefits of the environmental restoration weirs installed on Jump Creek to a certain extent, stating that: "in May of 2021, 23 of 24 sites contained flowing water with suitable water

temperatures....” Report, p. 2. Below is a photo of one of these sites excerpted from the Jump Creek Exemption Application:



This 2020 photograph documents just one of the areas where environmental restoration weirs were installed and have restored riparian vegetation and wetlands on Jump Creek, in a location that was previously sage brush and other upland species. Environmental restoration weirs were installed on Jump Creek in 2009.

These conditions stand in stark contrast to those reported by ODFW on the upstream public lands, where environmental restoration weirs have not been implemented to restore stream channel conditions. There, ODFW reported that over a mile of Jump Creek had limited riparian shade, few pools, dry sections, and sections completely lacking a channel (November 2019). Report, pp. 5-6.

After many years of trying, last year, the Oregon Legislature passed legislation acknowledging the value of environmental restoration weirs (HB 2298 (2021)). In passing that statute, the Oregon Legislative Assembly found and declared that:

- (1) Many small streams in eastern Oregon were historically inhabited by beaver populations and strongly influenced by beavers’ unique ability to modify their physical surroundings. Beaver dams had the effect of slowing the flow of water, allowing for natural

overflow onto surrounding ancient floodplains and providing many positive benefits to stream ecosystems and to the hydrologic functioning of streams and adjacent water tables.

(2) Due, in part, to the near eradication of the once prevalent beaver populations, many stream systems have become severely degraded during the past century, developing deeply eroded and incised stream channels that have lost connectivity with the natural ancient floodplain. These changes to the stream systems have resulted in adverse environmental and economic impacts.

(3) The public policy of the State of Oregon is to encourage and support a program for voluntary stream restoration actions by landowners that can help restore both environmental and economic health to eastern Oregon through the construction of environmental restoration weirs, provided that the voluntary stream restoration actions do not have significant adverse consequences for the environment or existing water rights.

(4) Environmental restoration weirs constructed pursuant to section 3 of this 2021 Act may provide benefits to stream restoration that include:

- (a) Improving habitat conditions;
- (b) Slowing stream runoff;
- (c) Decreasing the chance of catastrophic wildfire;
- (d) Improving carbon sequestration; and
- (e) Improving economic productivity of the adjacent ancient floodplain.

This legal recognition of the value of efforts like those of Silvies Valley Ranch follows on years of many peer-reviewed, published studies that have similarly found environmental restoration weirs to be a highly effective means for restoring degraded streams in arid climates historically inhabited by beaver.

With this background, the Commission should readily approve the Jump Creek Exemption Application for the ten environmental restoration weirs (aka artificial beaver dams), and allow Silvies Valley Ranch to focus its ongoing efforts on the continued restoration of ecological conditions in Jump Creek and across the ranch property. *See attached* “A Permit Runs Through It,” an article written by hydrologist and scientist Martin Dole, Ph.D, dated December 6, 2018, for additional perspective on the challenges Silvies Valley Ranch has faced as it has tried to simply restore the highly degraded systems which existed across the ranch when it purchase the property almost two decades ago.

Katherine E. Nordholm
February 25, 2022
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Thank you for your attention to these materials. Silvies Valley Ranch LLC looks forward to a timely approval of the Jump Creek Extension Application by the Oregon Fish and Wildlife Commission.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Elizabeth E. Howard', with a long horizontal line extending to the right.

Elizabeth E. Howard

EEH:cw

Attachments:

Silvies River Adjudication Map (1912)
Silvies River 1926 Decree, excerpts
A Permit Runs Through It, by Martin Dole (December 6, 2018)

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SILVIES RIVER DECREE on mandate (Feb. 23, 1926)

1. Gives inchoate right to all lands given one-half water right by Circuit Court (about 3,500 acres), and allows 5 years for completion (or until about the fall of 1930) (page 136) 55
2. Fixes present temporary duty of water. (page 134) 56
3. Fixes another duty of water to be effective in 3 years. (page 135) 57
(and leaves question of duty of water open for future determination)
4. Requires construction and maintenance of suitable measuring and distributing devices and works, for assistance of water master (page 129) 50
5. Enjoins all waste of water, after 3 years. (page 136) 58

SILVIES RIVER decree of Cir. Ct.
 allowed one-half water rights to:

page

342	Brown, L.M.	160	acres
352	Hanley, Wm. Co	88	
361	Hotchkiss, H.	51	
		14	
363	Kaufman, G.C.	50	
365	Leonard, C.H.	90	
		30	
373	O. & W. Colo. Co.	40	
379	P.L.S. Co.	70	
380		289	
381		47	
382		31	
386		313	
		422	
387		488	
		105	
388		68	
389		764	
390	Parker, Geo. J.	55	
391	Rembold, G.A.	45	
392	Ruh, Herman	91	
401	Welcome, J.C.	188	

Total, 3,499 acres

(NOTE: The above is just a rough check)

IN THE CIRCUIT COURT OF THE STATE OF OREGON, IN AND FOR
THE COUNTY OF HARNEY

In the Matter of the Determination)
of the Relative Rights of the Various)
Claimants to the use of the Waters) NO.
of the Silvies River and its Tributaries.)

DECREE ON MANDATE

This matter, having heretofore regularly been heard and considered by the Circuit Court of the State of Oregon, for Harney County, and the said Court having duly and regularly made its findings of fact and decree, and certain claimants being dissatisfied therewith having appealed from the same to the Supreme Court of the State of Oregon, the matter was thereupon heard and argued before said Court and submitted; after due consideration the said Court found that there was partial error as alleged in said appeal, and did thereupon

ORDER, ADJUDGE AND DECREE that the decree of the said Circuit Court be modified, and did thereupon issue its mandate directed to said Circuit Court which is on file herein, and it appearing that the claimants affected are entitled to judgement in accordance with said decree and mandate, which mandate is as follows:

BE IT REMEMBERED that at a term of the Supreme Court of the State of Oregon, held at the Supreme Court Room in the City of Salem, on the first Monday of March, 1925,

On this Friday the 2nd day of October, 1925, the same being the 49th judicial day of said term, there were present:

Thomas A. McBride, Chief Justice,
Henry J. Bean, Associate Justice,
George M. Brown, Associate Justice,
George H. Burnett, Associate Justice,
John L. Rand, Associate Justice,
Oliver P. Coshow, Associate Justice,
Harry H. Belt, Associate Justice,
Arthur S. Benson, Clerk,

whereupon the following proceedings were had:

IN THE MATTER OF THE DETERMINATION OF THE) RELATIVE RIGHTS OF THE VARIOUS CLAIMANTS TO) THE USE OF THE WATERS OF <u>SILVIES RIVER,</u>) AND ITS TRIBUTARIES,)	IN BANC. Appeal from Harney County.
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This cause having at Salem, on the sixth day of November, 1924, been duly tried, argued and submitted to the Court upon all the questions arising upon the transcript record and evidence, and then reserved for further consideration; and

An opinion having been rendered in this cause on the 23rd day of June, 1925, and the matter having been fully considered, it is now ORDERED, ADJUDGED AND DECREED by the Court that there is partial error as alleged. It is, therefore, ORDERED, ADJUDGED AND DECREED by the Court that the Decree of the Court below be and the same is in all things affirmed, except so far as the same is hereinafter expressly modified.

1.

PACIFIC LIVE STOCK COMPANY'S AWARDS FOR LANDS IN SILVIES VALLEY

In lieu of the awards fixed by the Court and Water Board, the awards to the Pacific Live Stock Company for the irrigation of its lands in Silvies Valley are hereby modified as set forth in the following tabulation; and the said Pacific Live Stock Company is granted awards for the irrigation of its lands as hereinafter described, with priorities and amounts as follows:

SILVIES RIVER - 1-A

Name and Postoffice Address of Appropriator	Date of Relative Priority	Amount Cubic Feet Per Second	Number Acres	Use	Name of Ditch	Stream	Description of Land or Place of Use
Pacific Live Stock Company Burns, Oregon.	1888		70	Irrigation	Owens Ditch	Camp Creek	40 acres in SW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 25, T. 17 S.R. 31 E.W.M. 30 acres in SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 26, T. 17 S.R. 31 E.W.M.
	1906		95	Irrigation	Owens Ditch	Camp Creek	35 acres in SE $\frac{1}{4}$ SE $\frac{1}{4}$ 30 acres in SW $\frac{1}{4}$ SE $\frac{1}{4}$ 20 acres in SE $\frac{1}{4}$ SW $\frac{1}{4}$ 10 acres in SW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 34, T. 17 S.R. 31 E.W.M.
	1889		150	Irrigation	Camp Creek Ditch	Camp Creek, Silvies River	30 acres in NE $\frac{1}{4}$ NE $\frac{1}{4}$ 40 acres in SE $\frac{1}{4}$ NE $\frac{1}{4}$ 30 acres in SW $\frac{1}{4}$ NE $\frac{1}{4}$ 10 acres in NE $\frac{1}{4}$ SW $\frac{1}{4}$ 40 acres in NW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 35, T. 17 S.R. 31 E.W.M.
					(Schroeder Appropriation)		
	1889		388	Irrigation	Miller, Mason & Potter Ditches	Silvies River	35 acres in NW $\frac{1}{4}$ NE $\frac{1}{4}$ 40 acres in SW $\frac{1}{4}$ NE $\frac{1}{4}$ 40 acres in NE $\frac{1}{4}$ NW $\frac{1}{4}$ 40 acres in SE $\frac{1}{4}$ NW $\frac{1}{4}$ 40 acres in NE $\frac{1}{4}$ SW $\frac{1}{4}$ 40 acres in NW $\frac{1}{4}$ SE $\frac{1}{4}$ 40 acres in SW $\frac{1}{4}$ SE $\frac{1}{4}$ 35 acres in SE $\frac{1}{4}$ SE $\frac{1}{4}$ 40 acres in SE $\frac{1}{4}$ SW $\frac{1}{4}$ 38 acres in NE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 36, T. 17 S.R. 31 E.W.M.
					(Miller Appropriation)		
	1888		140	Irrigation	Cottonwood Creek	Cottonwood Creek, Silvies River	30 acres in NE $\frac{1}{4}$ NE $\frac{1}{4}$ 30 acres in SE $\frac{1}{4}$ NE $\frac{1}{4}$ 25 acres in NE $\frac{1}{4}$ SE $\frac{1}{4}$ 40 acres in NW $\frac{1}{4}$ SE $\frac{1}{4}$ 15 acres in SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 1, T. 18 S.R. 31 E.W.M.
	1887		144	Irrigation	Dams & ditches	Bridge and Poison Creeks	40 acres in NE $\frac{1}{4}$ NW $\frac{1}{4}$ 25 acres in NW $\frac{1}{4}$ NW $\frac{1}{4}$ 40 acres in SE $\frac{1}{4}$ NW $\frac{1}{4}$ 39 acres in NE $\frac{1}{4}$ SW $\frac{1}{4}$ Section 18, T. 18 S.R. 32 E.W.M.
1888		1951	Irrigation	Eyers East & West side ditches	Silvies River	10 acres in NE $\frac{1}{4}$ SE $\frac{1}{4}$ 18 acres in SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 24, T. 18 S.R. 31 E.W.M. 36 acres in NE $\frac{1}{4}$ NE $\frac{1}{4}$ 39 acres in SW $\frac{1}{4}$ NE $\frac{1}{4}$ 38 acres in SE $\frac{1}{4}$ NE $\frac{1}{4}$ 35 acres in NE $\frac{1}{4}$ SW $\frac{1}{4}$ 20 acres in SW $\frac{1}{4}$ SW $\frac{1}{4}$ 40 acres in SE $\frac{1}{4}$ SW $\frac{1}{4}$ 40 acres in NE $\frac{1}{4}$ SE $\frac{1}{4}$	

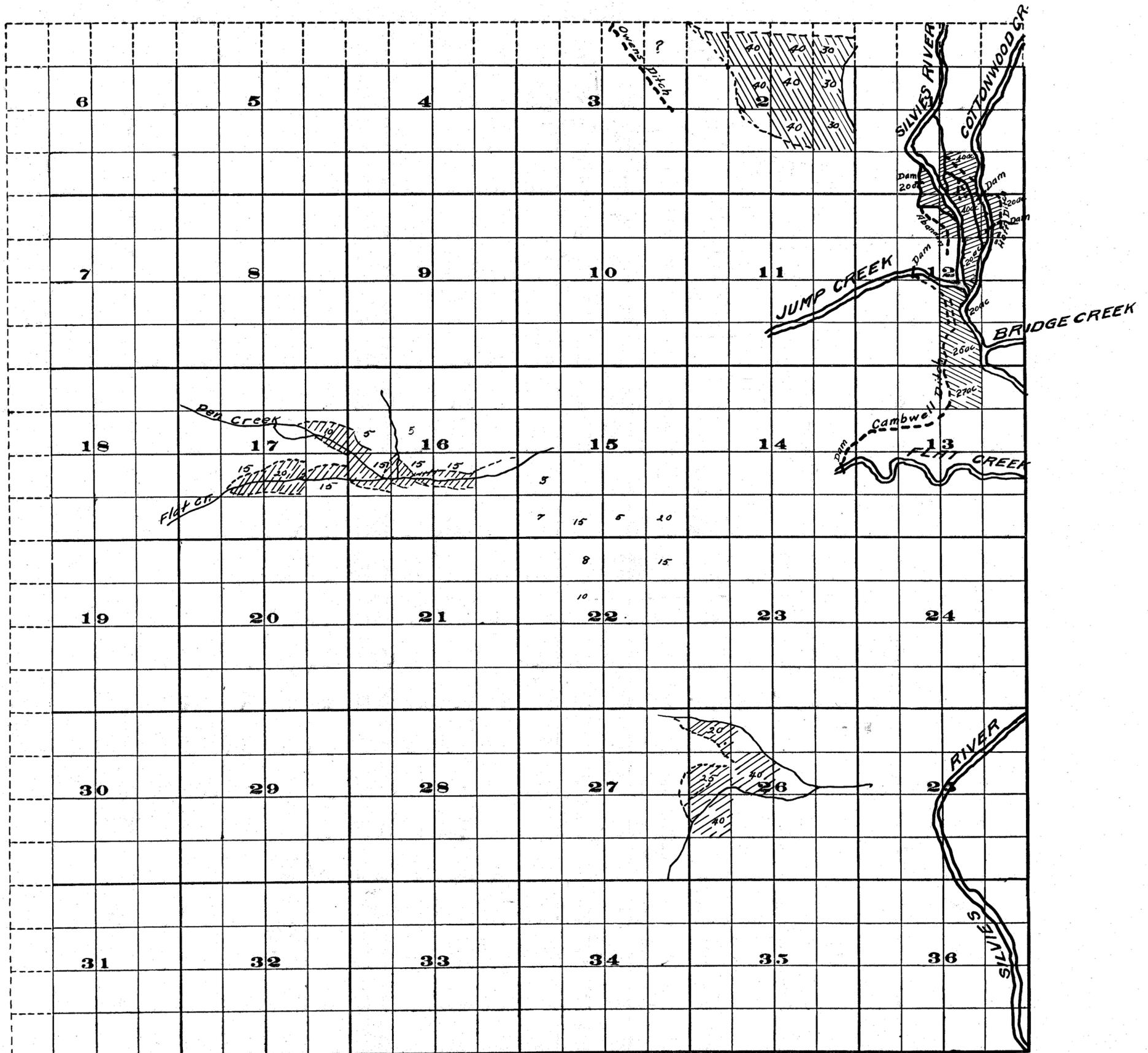
SILVIES RIVER - 2

Name and Postoffice Address of Appropriator	Date of Relative Priority	Amount Cubic Feet Per Second	Number Acres	Use	Name of Ditch	Stream	Description of Land or Place of Use
Pacific Live Stock Company (Continued)							39 acres in NW $\frac{1}{4}$ SE $\frac{1}{4}$ 29 acres in SW $\frac{1}{4}$ SE $\frac{1}{4}$ 30 acres in SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 25, T. 18 S.R. 31 E.W.M.
						40 acres in NE $\frac{1}{4}$ NE $\frac{1}{4}$ 10 acres in NW $\frac{1}{4}$ NE $\frac{1}{4}$ 40 acres in SW $\frac{1}{4}$ NE $\frac{1}{4}$ 30 acres in SE $\frac{1}{4}$ NE $\frac{1}{4}$ 40 acres in NE $\frac{1}{4}$ NW $\frac{1}{4}$ 32 acres in NW $\frac{1}{4}$ NW $\frac{1}{4}$ 32 acres in SW $\frac{1}{4}$ NW $\frac{1}{4}$ 40 acres in SE $\frac{1}{4}$ NW $\frac{1}{4}$ 40 acres in NE $\frac{1}{4}$ SW $\frac{1}{4}$ 40 acres in NW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 36, T. 18 S.R. 31 E.W.M.	
							38 acres in SW $\frac{1}{4}$ SW $\frac{1}{4}$ 40 acres in SE $\frac{1}{4}$ SW $\frac{1}{4}$ 30 acres in NE $\frac{1}{4}$ SE $\frac{1}{4}$ 40 acres in NW $\frac{1}{4}$ SE $\frac{1}{4}$ 40 acres in SW $\frac{1}{4}$ SE $\frac{1}{4}$ 40 acres in SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 36, T. 18 S.R. 31 E.W.M.
							8 acres in NE $\frac{1}{4}$ SW $\frac{1}{4}$ 14 acres in NW $\frac{1}{4}$ SW $\frac{1}{4}$ 15 acres in SE $\frac{1}{4}$ SW $\frac{1}{4}$ Section 18, T. 18 S.R. 32 E.W.M.
							24 acres in NW $\frac{1}{4}$ NE $\frac{1}{4}$ 25 acres in SW $\frac{1}{4}$ NE $\frac{1}{4}$ 29 acres in NE $\frac{1}{4}$ NW $\frac{1}{4}$ 10 acres in NW $\frac{1}{4}$ NW $\frac{1}{4}$ 24 acres in SW $\frac{1}{4}$ NW $\frac{1}{4}$ 39 acres in SE $\frac{1}{4}$ NW $\frac{1}{4}$ 38 acres in NE $\frac{1}{4}$ SW $\frac{1}{4}$ 25 acres in NW $\frac{1}{4}$ SW $\frac{1}{4}$ 23 acres in SW $\frac{1}{4}$ SW $\frac{1}{4}$ 40 acres in SE $\frac{1}{4}$ SW $\frac{1}{4}$ 10 acres in NW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 19, T. 18 S.R. 32 E.W.M.
							30 acres in NE $\frac{1}{4}$ NE $\frac{1}{4}$ 40 acres in NW $\frac{1}{4}$ NE $\frac{1}{4}$ 5 acres in SW $\frac{1}{4}$ NE $\frac{1}{4}$ 10 acres in SE $\frac{1}{4}$ NE $\frac{1}{4}$ 40 acres in NE $\frac{1}{4}$ NW $\frac{1}{4}$ 26 acres in NW $\frac{1}{4}$ NW $\frac{1}{4}$ 28 acres in SW $\frac{1}{4}$ NW $\frac{1}{4}$ 40 acres in SE $\frac{1}{4}$ NW $\frac{1}{4}$ 34 acres in NE $\frac{1}{4}$ SW $\frac{1}{4}$ 38 acres in NW $\frac{1}{4}$ SW $\frac{1}{4}$ 35 acres in SW $\frac{1}{4}$ SW $\frac{1}{4}$ 40 acres in SE $\frac{1}{4}$ SW $\frac{1}{4}$ 15 acres in NE $\frac{1}{4}$ SE $\frac{1}{4}$ 38 acres in NW $\frac{1}{4}$ SE $\frac{1}{4}$ 40 acres in SW $\frac{1}{4}$ SE $\frac{1}{4}$ 25 acres in SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 1, T. 19 S.R. 31 E.W.M.
							8 acres in SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 11, T. 19 S.R. 31 E.W.M.
							38 acres in NE $\frac{1}{4}$ NW $\frac{1}{4}$ 38 acres in SE $\frac{1}{4}$ NW $\frac{1}{4}$ 25 acres in NW $\frac{1}{4}$ SW $\frac{1}{4}$ 35 acres in SW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 12, T. 19 S.R. 31 E.W.M.

(NOTE: 65 acres in NE $\frac{1}{4}$ NW $\frac{1}{4}$ and SE $\frac{1}{4}$ NW $\frac{1}{4}$ also irrigated from Wintermeir dam under priority date of 1889)

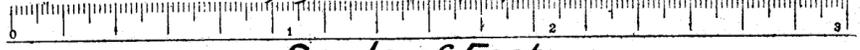
Name and Postoffice Address of Appropriator	Date of Relative Priority	Amount Cubic Feet Per Second	Number Acres	Use	Name of Ditch	Stream	Description of Land or Place of Use
Pacific Live Stock Company (Continued)							22 acres in NW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 13, T. 19 S.R. 31 E.W.M.
							12 acres in NE $\frac{1}{4}$ NE $\frac{1}{4}$ 9 acres in SE $\frac{1}{4}$ NE $\frac{1}{4}$ Section 14, T. 19 S.R. 31 E.W.M.
	1888		78	Irrigation	Jump Creek Ditch	Jump Creek, Silvies River	40 acres in NE $\frac{1}{4}$ NW $\frac{1}{4}$ 38 acres in SE $\frac{1}{4}$ NW $\frac{1}{4}$ Section 12, T. 18 S.R. 31 E.W.M.
	1889		260	Irrigation	Flat Creek Ditch	Flat Creek	32 acres in NE $\frac{1}{4}$ SW $\frac{1}{4}$ 21 acres in NW $\frac{1}{4}$ SW $\frac{1}{4}$ 40 acres in NE $\frac{1}{4}$ SE $\frac{1}{4}$ 39 acres in NW $\frac{1}{4}$ SE $\frac{1}{4}$ 8 acres in SW $\frac{1}{4}$ SE $\frac{1}{4}$ 40 acres in SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 13, T. 18 S.R. 31 E.W.M.
							40 acres in NE $\frac{1}{4}$ NE $\frac{1}{4}$ 40 acres in SE $\frac{1}{4}$ NE $\frac{1}{4}$ Section 24, T. 18 S.R. 31 E.W.M.
	1883		236.5	Irrigation	Trout Creek	Trout Creek, Silvies River	40 acres in NW $\frac{1}{4}$ NE $\frac{1}{4}$ 27.5 acres in SW $\frac{1}{4}$ NE $\frac{1}{4}$ 40 acres in SE $\frac{1}{4}$ NE $\frac{1}{4}$ 40 acres in NE $\frac{1}{4}$ NW $\frac{1}{4}$ 12 acres in SE $\frac{1}{4}$ NW $\frac{1}{4}$ 17 acres in NE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 13, T. 19 S.R. 31 E.W.M.
							20 acres in SW $\frac{1}{4}$ NW $\frac{1}{4}$ 40 acres in NW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 18, T. 19 S.R. 32 E.W.M.
	Jan. 19 1891		91	Irrigation	Trout Creek	Trout Creek	24 acres in NE $\frac{1}{4}$ NE $\frac{1}{4}$ Section-13, T. 19 S.R. 31 E.W.M.
							28 acres in SW $\frac{1}{4}$ SW $\frac{1}{4}$ 39 acres in SE $\frac{1}{4}$ SW $\frac{1}{4}$ Section 18, T. 19 S.R. 32 E.W.M.
	Oct. 1 1892		18	Irrigation	Trout Creek	Trout Creek	18 acres in NE $\frac{1}{4}$ SW $\frac{1}{4}$ Section 18, T. 19 S.R. 32 E.W.M.
1899		60	Irrigation	Dams and ditches	Hall Creek	25 acres in SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 26, 20 acres in NW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 36, 15 acres in NW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 25, T. 18 S.R. 31 E.W.M.	
1899		55	Irrigation	Payne Creek	Payne Creek	30 acres in SW $\frac{1}{4}$ SW $\frac{1}{4}$ 5 acres in SE $\frac{1}{4}$ SW $\frac{1}{4}$ Section 17, T. 18 S.R. 31 E.W.M.	
						15 acres in SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 18, T. 18 S.R. 31 E.W.M.	
						5 acres in NW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 20, T. 18 S.R. 31 E.W.M.	

Township 18S, Range 31E.



Survey by J.S. Mahan Sept. 1911. Resurvey by H.K. Donnelly 1912.

FROM OFFICE OF THE STATE ENGINEER, SALEM, OREGON



LEGEND

-  Irrigated Land with Area
-  Ditches
-  Streams

ADJUDICATION
 OF
SILVIES RIVER & TRIBUTARIES
 JOHN H. LEWIS STATE ENGINEER

Examined Aug. 22, 1912.



Construction of a series of “artificial beaver dams” helped restore wetlands like this one, on the Silvies Valley Ranch in Oregon.

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A Permit Runs Through It

Oregon ranchers who set out to restore streams in Silvies Valley find regulatory purgatory

Martin Doyle (<https://www.perc.org/people/martin-doyle/>) December 6, 2018

Colby Marshall has given up on calling this area “eastern Oregon.” Most people hear that phrase and conjure mental images of Bend, a rapidly growing community of nearly 100,000 people in the central part of the state

where retirees and millennials are moving in droves. He instead refers to this region as “Frontier Oregon,” which does a much better job of capturing its landscape, population, and realities of land management.

Marshall is the livestock manager of the 140,000-acre Silvies Valley Ranch, which sits in the high desert between John Day and Burns, Oregon—closer to Idaho than Bend. With only 10 inches of rain per year, Marshall must grapple with perpetual droughts, recurrent forest fires, and the vagaries of cattle prices. With a ranch of this scale, he has to think of ways to do things differently than they may have been done before. He has to constantly be on the lookout for innovations.

Marshall and the ranch owners, Scott and Sandy Campbell, have set their goal on proving that ranches in Frontier Oregon can be sustainable and resilient, particularly in economic terms. And they have done so by making the ranch a hub of environmental innovation. This approach is, in fact, a key advantage of a ranch of this size, because large ranches—those that are tens of thousands of acres—under single ownership allow for experimenting: trying things in one area of the ranch to see what works, and then replicating throughout the ranch what does and abandoning what doesn't.

The Campbells and Marshall have tried all types of experiments on Silvies Valley Ranch. They have gradually shifted toward smaller cows of around 1,150 pounds, more like what was initially raised here decades ago. They're also trying out goats—lots and lots of goats—with their herd now reaching more than 4,500. The goats are well-adapted to the Oregon high desert, having evolved in the same type of climate in Central Asia; they can eat what cattle cannot, and they are easier on streams and soil. There is also a large and rapidly growing global demand for high-quality chevon—meat from adult goats—making this new venture quite profitable.

The experiment came with a big surprise: The native grasses that once grew in these valley bottoms came right back once moisture returned to the soils. The raised water table helped drown the sagebrush, which was quickly replaced with thick grassy meadow.

But their biggest and most successful experiment has been with beavers, or at least the effect of beavers. Scott Campbell—a native of Frontier Oregon and a voracious reader of its history—found reference to Silvies Valley in the journals of Peter Ogden, one of the West’s most prolific trappers and traders. Ogden passed through the valley in the early 19th century at least three times and estimated that the catchment had somewhere near 200,000 beavers. When beavers populated the West, their ubiquitous dams backed up water, and their ponds gradually filled with sediment. Over time, the accumulated silt became meadows, and water slowly passed through the silty sediment on its way through the valley. The dams, meadows, and ponds kept the water table high and, when combined with the slow-moving water meandering through the meadows, worked to sustain springs late into the summer and fall. The landscape back then was a quilt of sagebrush on the hillsides with grassy meadows, wetlands, and streams threading through the valleys, punctuated by ponds and dams maintained by the incessantly working beavers.

Then came trappers like Ogden, who did a remarkably thorough job. When the workaholic beavers were removed, their dams decayed, and streams throughout the West incised into their valleys, eroding and flushing out the sediment that had accumulated over centuries. As the streams lowered, so did the local water tables. Wet meadows dried out and became gullies and washes, which flowed only for brief periods in late spring or summer. Sagebrush moved from the hillsides into the now-dry valley bottoms, leaving behind the landscape that we now associate with the high desert: a sagebrush sea.

Resilient Restoration

The Campbells wanted to restore the resilience of the ecosystems native to Frontier Oregon, and they reasoned that beavers—or at least the effect of beavers—were likely the right starting point. Beavers couldn’t just be parachuted into Silvies Valley, however, because there wasn’t enough riparian vegetation. Instead, Scott Campbell took rock from local hillsides and built what he calls “artificial beaver dams,” which look a lot like road crossings that proliferate on most ranches. These artificial dams pond up water just like a beaver dam but let the baseflow percolate through the rock and flow on downstream, albeit very slowly. By building a series of dams along a valley, he created a series of ponds that looked and functioned a lot like real beaver ponds.

By slowing down the water, the snowmelt and early spring rains had the chance to percolate down into the remaining riparian soils rather than rush through the gullies. It was an experiment, and it came with a big surprise: The native grasses that once grew in these valley bottoms came right back once moisture returned to the soils. The raised water table helped drown the sagebrush, which was quickly replaced with thick grassy meadow.



Lush meadows have been restored to the valley bottoms of the ranch thanks to the effects of artificial dams, which slow water flows and allow rains to percolate into riparian soils.

With initial success, Campbell began to replicate the experiment in other valleys of the ranch, with similar results. Colby Marshall, the livestock manager, says that they can now bail hay in the late spring and still graze their cattle into the late summer, all on what had previously been marginally productive grazing land. Restoring the stream increased the ranch's core business: cattle.

Then, other surprises began showing up, creating additional benefits. The Campbells own all the water rights in the valley. Because the artificial dams allowed them to grow hay with existing spring soil moisture, they didn't need to divert water for irrigation in the early summer. They could let water pass by while still growing spring hay. This increased the water available for downstream ranchers, who have begun noticing the change in water in the river. And all of this is water that would have previously rushed by during the spring snowmelt; the dams have simply slowed the water long enough to

make it usable. As the meadows on Silvies Valley Ranch fill with organic material, the amount of water that can be retained will continue to increase through time.

In 2015, the experiment with artificial beaver dams created another critical, yet entirely unexpected benefit: fire breaks. On Camp Creek, Campbell built more than 100 artificial beaver dams along 3.5 miles of stream. Before the dams were constructed, the valley bottom was dry sagebrush and juniper, just like the hillsides all around. And with this vegetation, the bottom was just as susceptible to burning as the surrounding forests. But after building the dams along the valley, the bottom became wet meadow. During the peak of fire season, a controlled burn got loose, eventually scorching more than 5,000 acres. But when the fire got to Camp Creek, it couldn't jump the now-wet valley. The restored stream and riparian valley was a natural fire break. The fire reached the wet meadow and burned itself out, saving many more acres and a number of buildings.

The Silvies Valley experiment worked. And with such widespread benefits, the Campbells looked to use artificial beaver dams elsewhere and considered helping other ranchers try them out as well.

Regulatory Tautology

And then all hell—permitting hell—broke loose for the ranch.

It began with the fact that Campbell had never asked for permission to put rock and gravel in the gullies of his ranch; he had never asked for permission to restore the streams on his property. Normally, to put rock or dirt into a stream would require a permit from the federal government, specifically the Corps of Engineers. This agency regulates impacts to “waters of the United States” under the Commerce Clause of the Constitution; thus, any activity that might affect interstate commerce on waterways falls under the corps' jurisdiction.

But this region of Oregon is a geographic peculiarity. Campbell's ranch sits in the northernmost part of the Great Basin—the region of the western United States that drains internally and never reaches an ocean. In addition, the streams here don't feed into rivers that cross state borders, and so the streams aren't considered an extension of interstate waterways. Because of this, the streams don't fall under federal jurisdiction. Instead, streams of Silvies Valley are considered waters of the state of Oregon, and the state maintains its own permit program. If you want to do work on a stream in Frontier Oregon, then you have to get a permit from the Department of State Lands rather than the Corps of Engineers.

Here is where things get tricky for regulators. What is a stream, and what is not? The same question plagues the federal government's own permit programs, resulting in a morass of law reviews, opaque scientific studies, and impenetrable court opinions. The state of Oregon, through its own permit program, has had to wrestle with the question as well, and like many other regulatory agencies, it has attempted to do so by avoiding the pitfall of specificity.

Beyond fines and political wranglings, the end result of this permitting perversion is perpetual uncertainty for ranchers like the Campbells as to what regulations apply to which activities on which particular parts of their ranch.

When Scott and Sandy Campbell began their stream work, the brochure for landowners from the state agency said that a landowner needed a permit if the work was on a perennial stream—one that flows year round—or an intermittent stream with anadromous fish, like salmon, which migrate from streams to the ocean. With no hydrologic connection to the ocean, and thus no anadromous fish, intermittent streams were out. This left perennial streams as the only type for which the Campbells would need a permit from the state agency.

But when they began working on their first restoration project, Camp Creek was a desert gully that only flowed for a few weeks during snowmelt. The creek couldn't support any type of fish because most of the year it was little more than a desert wash with moist sand. So, pre-restoration, Camp Creek was far outside what could reasonably be considered a perennial stream, much less a stream that supported anadromous fish (even if a connection with the ocean did exist).

After restoration, with the artificial dams having restored the local water levels and slowed the water in the riparian soils, Camp Creek flowed year round and supported many species of fish. The Campbells created a perennial stream. Thus, they were caught in a regulatory tautology: Their work required a permit after the work was done, but not before. If restoration didn't work, then a permit was never needed; but if restoration did work, then you needed a permit for what you had already done.

As if that weren't enough, after all this work had been done at the ranch, the state changed the requirements. It decreed that permits were needed for work done on waterways that supported "migratory fish," the definition of which was broad enough to include virtually every fish, since all fish move around to some degree. There were other rule changes as well, many of which might be reasonable in Portland or Bend but bordered on the absurd in a rural landscape like Silvies Valley. When applied to the high desert, each of these requirements for permits were fickle in their rationale but consistent in their effects: maximizing the discretion of regulators while minimizing the discretion of landowners—particularly those interested in restoration.

And in the case of streams in Silvies Valley, the definition of "perennial" kept changing depending on who was in charge or which agency personnel happened to be sent to the ranch for an inspection. In the process of seeing these requirements change, the Campbells have had to jump through a range of regulatory hoops to sustain and replicate their restoration projects. They had to start by paying fines for doing past work without a permit. They've even had to go through the arduous process of trying to get state legislation passed that allowed them to do such restorative work on their ranch. (One such bill passed, but then the Campbells agreed to have it removed so that agencies could address the issue through rule-making. But that process didn't work, so the Campbells are back to working on specific legislation.) Even if legislation eventually resolves the Campbells' issues, it is unclear whether it would apply to other ranches where similar restorative work is needed. A rancher from outside Paulina recently reached out to the Campbells to see if they had any insight for how to get restoration work through the permitting process.

Beyond fines and political wranglings, the end result of this permitting perversion is perpetual uncertainty for ranchers like the Campbells as to what regulations apply to which activities on which particular parts of their ranch. That's a local problem, and one that the Campbells are growing used to dealing with. But the bigger problem is what effect these permitting requirements have on innovation more broadly.

Permissionless Conservation

Regulatory purgatory is not unique to Oregon, nor is it unique to streams. Landowners trying to do innovative resource management often develop a tolerance for the absurd regarding permitting. But there are two critical lessons of the Silvies Valley Ranch experience. The first is the importance of federalism, even at the state level. One of the elegant natures of federalism

at the national level is the recognition that what makes sense in Massachusetts might not make sense in Nevada. So we might set national level goals but leave their application at the local level to be worked out and specified in a way that makes sense for local conditions. Indeed, the fact that the (now restored) streams in eastern Oregon were not regulated by the federal Corps of Engineers but would have been in the Mississippi Delta indicates how this approach can work well: The United States is physiographically diverse, and regulations should reflect that reality.

The same is true within many states, particularly large, geographically diverse ones like Oregon. The aridity of the high deserts in Frontier Oregon are more akin to Nevada or Idaho than to Portland or Eugene; yet regulators at the state level often develop a myopic view of the goal of natural resource management being to curb the impacts of suburban sprawl on the patchwork of remnant natural ecosystems. These regulators tend to under-consider the hinterlands of their purview, often because of a lack of appreciation, or a simple lack of exposure.

A great example of this is Oregon's regulation of impervious surfaces such as rooftops and parking lots, which have proliferated in population centers such as Portland, Eugene, and Bend. The state has developed requirements for offsetting any expansion of impervious surfaces, perhaps a logical approach with clear rationale amidst suburban sprawl. But the state requires the same compliance in Burns, John Day, and on the Silvies Valley Ranch, where cattle outnumber buildings by several orders of magnitude. This approach applies uniformity to a non-uniform landscape. Instead, states should follow a federalist model that sets goals and principles but recognizes the staggering diversity of their own landscapes and whether those regulations conform to the realities of all regions, counties, and even cities. To paraphrase Louis Brandeis, let counties, towns, and cities be laboratories for democracy at the state level, just as states are laboratories for democracy at the federal level. So long as state governments apply regulations uniformly, they undermine the potential for such experimentation by their subsidiaries.



The more long-term damaging effect of permitting hell is how it undermines experimentation of management at the individual level. The cruel reality for any regulator—from federal to local—is that there is no one best approach to managing land, streams, and forests, whether in the arid streams of Frontier Oregon or the sloughs and swamps of Coastal Carolinas. What is most needed is for landowners to be encouraged to constantly experiment to find what works. Scott and Sandy Campbell have every incentive to figure out how to restore streams; they just need leeway to be able to test new approaches, and to see what variations of existing approaches might work with a few tweaks here and there. With ranches as vast as Silvie's Valley and its equally expansive neighbors, there are ample opportunities for landowners to conduct genuine experiments across the region, largely on private land.

The only way that this can happen is for regulators to be as innovative with permitting as landowners are with management. For regulators to do this, they have to be more focused on the end results than on the process; they must hold landowners accountable for the condition of the resource rather than for the specifics of the actions. This will require agency-representing watchdogs to take the time to get to know not only individual landowners but also the many particular landscapes, regions, and ecosystems over which they yield the scepter of regulation. Only with such an investment of time, along with a healthy dose of humility, can regulators recognize and encourage innovation. The innovations at the Silvie's Valley Ranch proved to

be extremely low cost, yet they restored native fish and bird populations and riparian vegetation, as well as increased summer springs flowing through the ranch.

Without such innovation, we will spend the coming decades living in a chronically degrading environment that is strictly regulated by platoons of policy-deploying automatons. Better to live in one that embraces not only the innovation of individuals but also the staggering variety of landscapes and ecosystems that make the West, and the nation, so uniquely diverse.

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Martin Doyle

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Julian Simon Fellow

Martin Doyle is professor of river science and policy at Duke University and was a 2009 PERC Julian Simon Fellow. He is the author of *The Source: How Rivers Made America and America Remade Its Rivers (2018)*.

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