

Water Right Changes

Legal Background & Historic Use Analysis

By Scott Irvin

Montana Department of Natural Resources & Conservation
March, 2010

WATER POLICY INTERIM
COMMITTEE
MARCH 10, 2010
EXHIBIT 8

Historical Evaluation

Resources Considered

- Application Materials
- Statement of Claim
- Water Court Documents
- Historic Decree
- Water Measurement/Use Records
- Water Resources Survey
 - Field Notes
 - Aerial Photo
- Series of Aerial Photos
- Topographic Maps
- Soil Surveys
- Field Investigation
- Water User Communications
 - History of Irrigation Practices
 - Crop Production

40714
4-20-52

STATEMENT OF CLAIM FOR EXISTING WATER RIGHTS
IRRIGATION RECEIVED APR. 20 1952
DEPT. OF NATURAL RESOURCES
For the Water Courts of the State of Montana and construction

CONTRACT NUMBER: 40714

1. Owner of Water Right: BUTLERIDGE RANCHES, INC., A Corporation
Contract No. 40714
Contractor or Other Interest Owner: SPOKANE RANCHES, A Corporation

Address: 9140th St., Spokane, Montana, Zip Code: 59761
Home Phone No.: 489-2343 Business Phone No.:

2. Person completing form: SOUTHERN MONTANA ABSTRACT & TITLE COMPANY
Address: P.O. Box 300, Phone 526-6346
City: DEER LODGE, MONTANA 59721 Zip Code:

3. Name of ditch, creek or river: South Fork - Big Hole River
Use: Irrigation Domestic Flood

4. Method of Irrigation Used: Subirrigation Furrow Flood

5. Source of Water: Check Only One

Rank	Name
1	Big Hole River
2	Big Hole River
3	Big Hole River
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50	Big Hole River

6. P. to: 1. 1/2 Sec. 10, T. 12 N., R. 10 W., S. 10 E., Big Hole River, Big Hole County, Montana.

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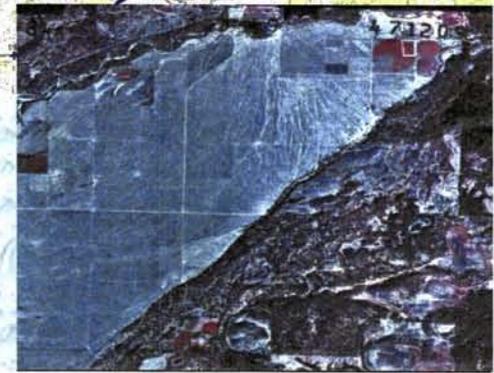
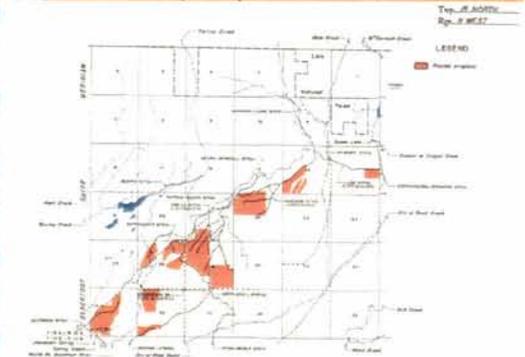
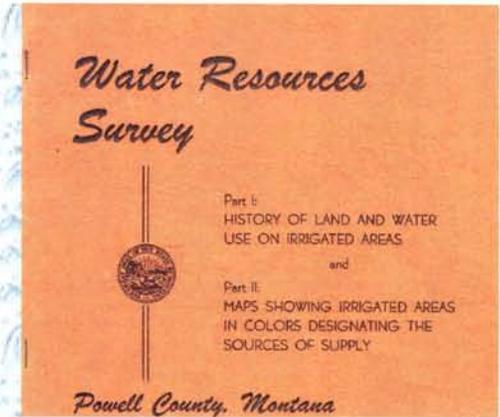
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Irrigation Methods

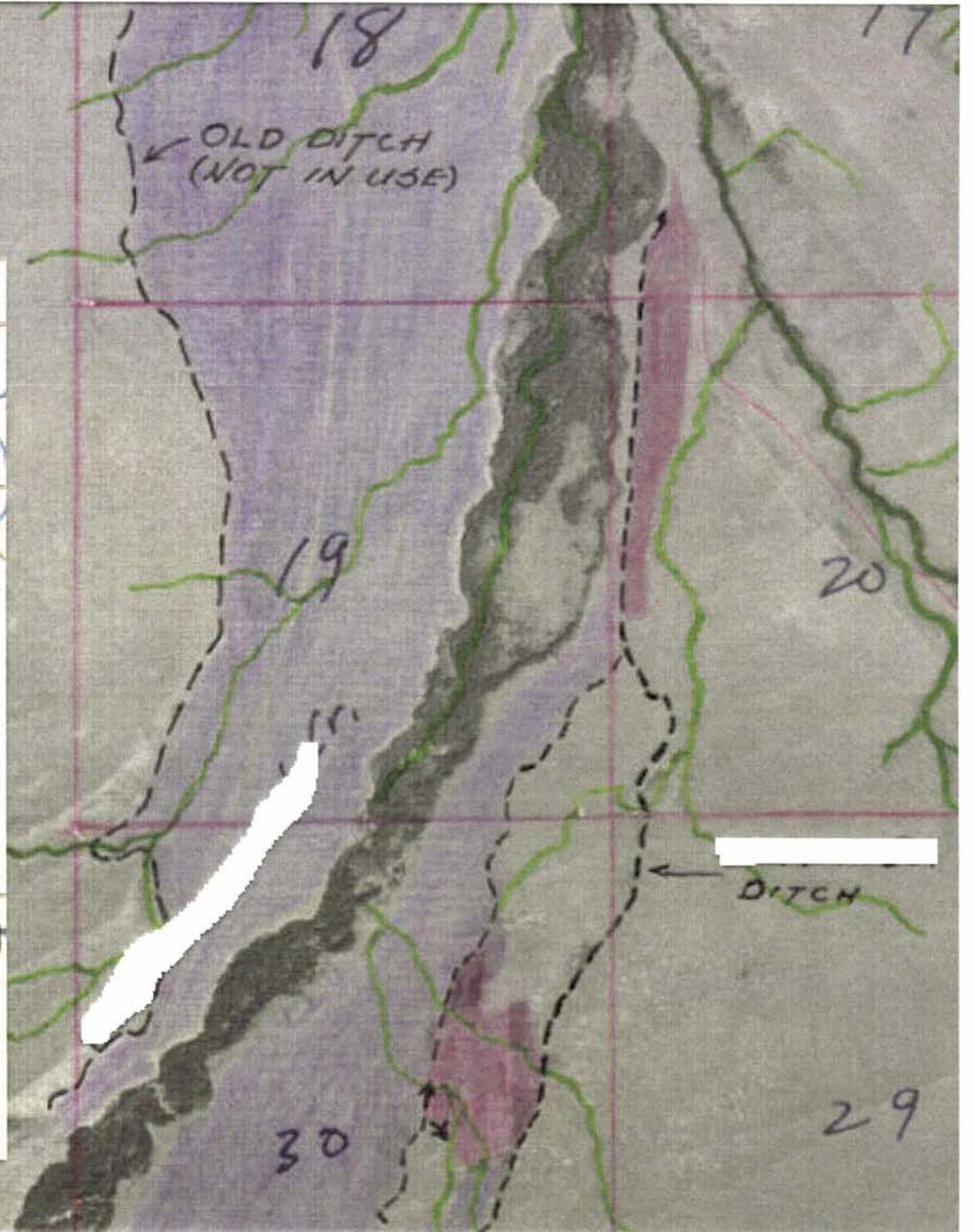
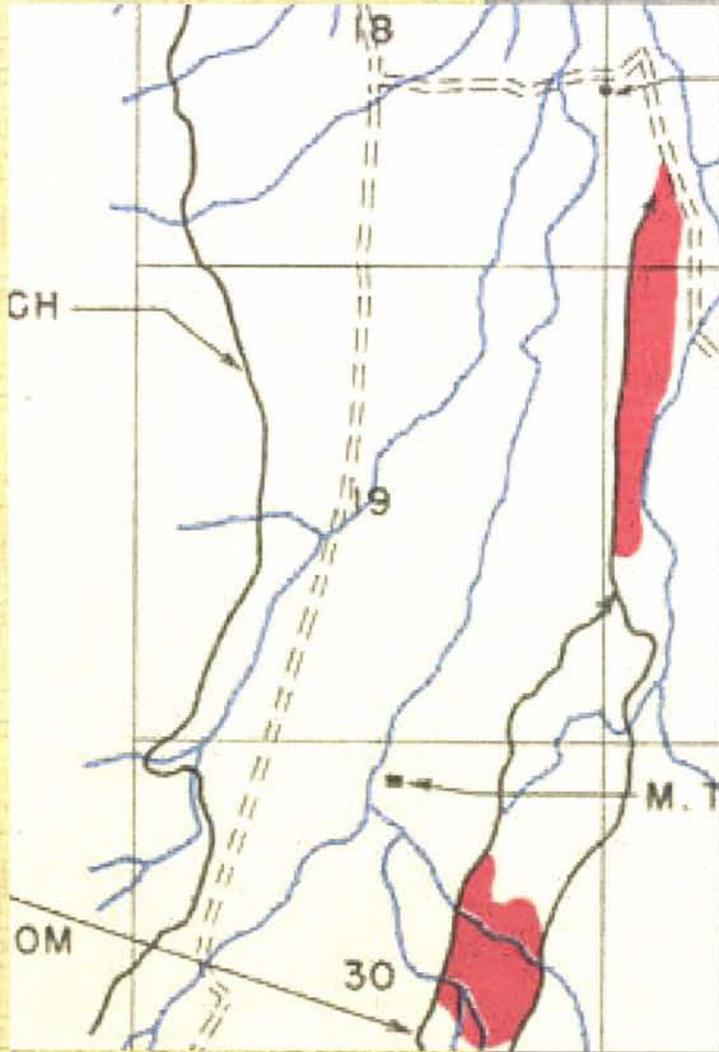
- Border
- Center Pivot
- Wild Flood
- Wheel Line
- Contour Ditch
- Row Crop
- Gated Pipe
- Sub-Irrigation
- Water Spreading
- Big Gun
- Hand Line
- Drip



**Flood Irrigation
Lower Yellowstone River**



**1947 Aerial Photo
Water Resources Survey**

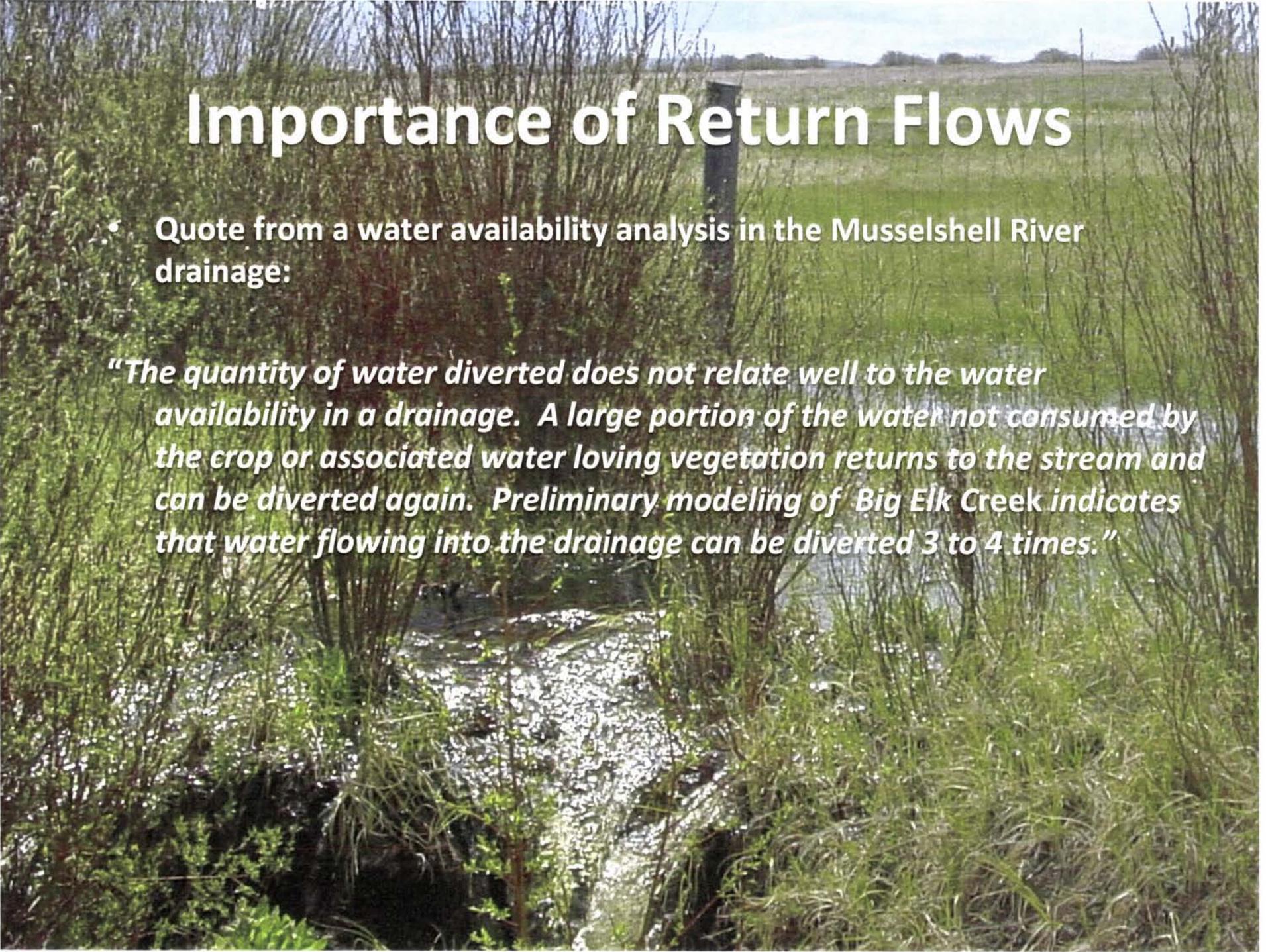


1979 Aerial Photo



2005 Aerial Photo





Importance of Return Flows

- Quote from a water availability analysis in the Musselshell River drainage:

“The quantity of water diverted does not relate well to the water availability in a drainage. A large portion of the water not consumed by the crop or associated water loving vegetation returns to the stream and can be diverted again. Preliminary modeling of Big Elk Creek indicates that water flowing into the drainage can be diverted 3 to 4 times.”

Comments on water right applications about the potential impacts of changes:

- *XYZ Creek* “is typical of higher elevation mountain type streams. The creek peaks from late May to early June, and after mid June the flows continue to subside until July and August, when flows are often not adequate for irrigation needs.” *Joe* “has installed several sprinklers on the drainage, and has long range plans to install additional sprinklers. This will eventually make it possible to provide full season irrigation.....”
- “Due to the extreme losses, there was never adequate water to irrigate the 1006.9 acres prior to installation of the sprinklers.”
- “These fields are in the alluvial flood plain along the *river*. An important consideration is that through direct runoff and deep percolation, a significant portion of the water almost immediately returns to the stream.”
- “As far as production goes, as you are aware, on a good year with adequate water and fertilizer, grass hay has the ability of 1.5-2 tons/ac. Probably, closer to the 1.5 tons per acre. As you are also aware, sprinkler irrigated land is capable of from 4-5 tons per acre/year.”

“The essential problem encountered by a change to sprinkler irrigation is that it is a more efficient, more highly consumptive use of water. A significant amount of the water initially diverted usually finds its way back to the stream, so that this “waste” or return flow from the old flood system may constitute a significant portion of the downstream flow relied upon and appropriated by other users.....Those who have relied upon the presence of the return flow to satisfy their appropriation right will obviously be adversely affected if the quantity of that return flow is curtailed.”

“Conclusion: If the change in use results in the total consumption of a greater quantity of water so that the amount of water effectively available for appropriation downstream is reduced, a new appropriation results.”

Ted J. Doney, Chief Legal Counsel
Dept. Natural Resources & Conservation
Memorandum of Law, November 12, 1974