

INPUTS AND OUTPUTS TO STREAMS IN THE MOSCOW-PULLMAN BASIN,
IDAHO AND WASHINGTON

by

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Introduction

The purpose of this report is to outline major inputs and outputs to the streams flowing in the Moscow-Pullman Basin. The following streams have been examined: Fourmile Creek, Missouri Flat Creek, Paradise Creek, South Fork of Palouse River, and Union Flat Creek. The reaches examined are outlined on the figures. Stream inputs and outputs (I/O) are located on the figures and discussed in the text. A preliminary evaluation of stream bed material along the reach is noted with suggestions for auger hole sites.

Fourmile Creek

1. Reach Examined. Essentially the entire reach of this stream was examined as shown on figure 1.
2. I/O. No inputs or outputs were found.
3. Stream Bed. The upper reach appears to be flowing on alluvium over loess. At the bend near the word "Fourmile" on the map, the stream flows over a basalt outcrop. Basalt cobbles are noticeably present to the intersection with the South Fork of the Palouse River northwest of Albion. This implies that in the stream is flowing close to the basalt bedrock in the lower reaches. Auger holes in both the upper and lower reach would be useful to delineate this increased proximity to bedrock.

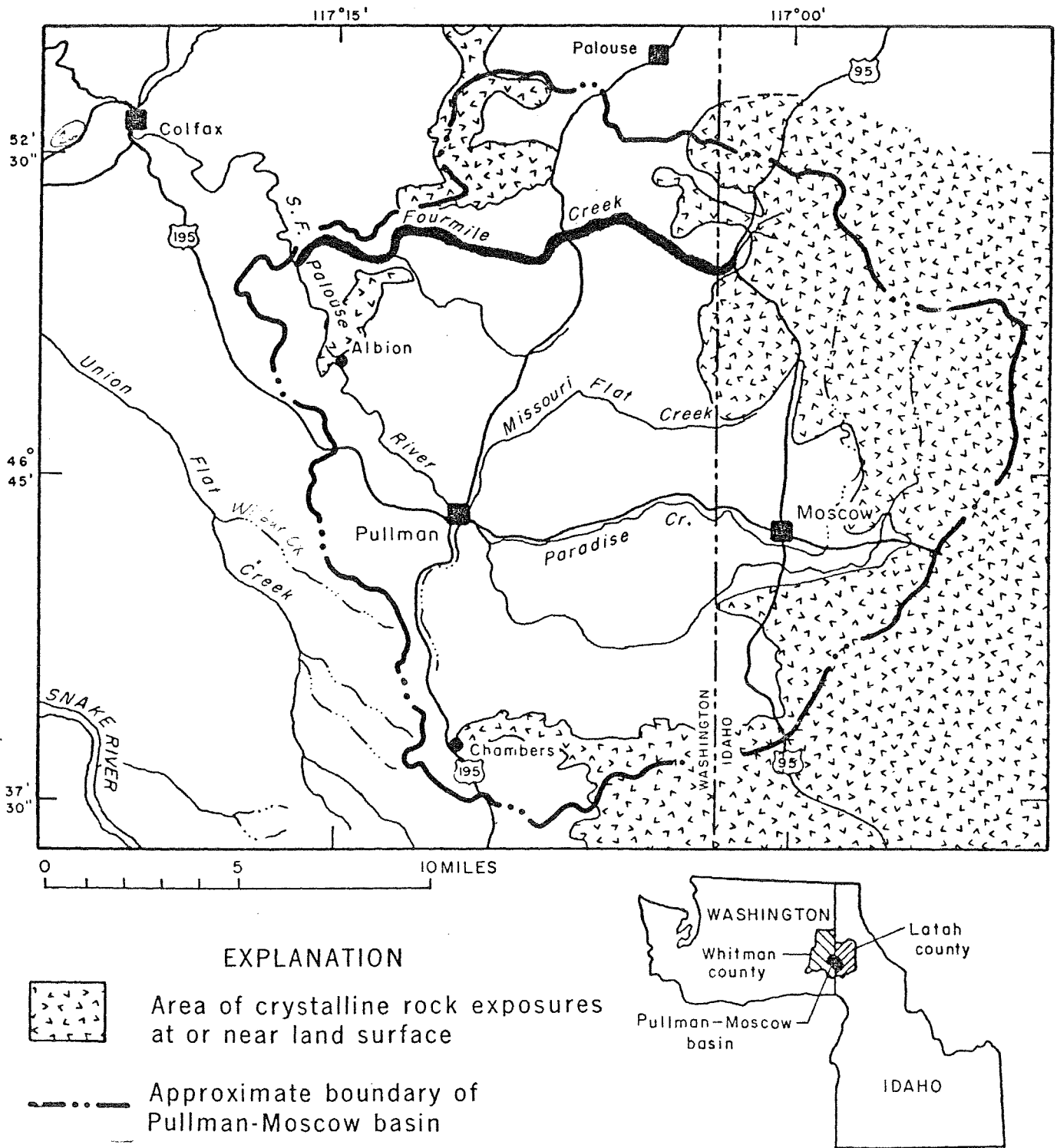


Figure 1. Portion of Fourmile Creek evaluated for inputs/outputs.

Missouri Flat Creek

1. Reach Examined. The creek was examined up to a point about 2 miles from the Washington-Idaho border as outlined on figure 2.
2. I/O. One output was noted. This is a small electric pump which appears to be primarily used for lawn irrigation. No one was home so this could not be verified. The exact location is 15N-45E-22M where Whelan Road crosses the creek.
3. Stream Bed. The creek flows primarily on alluvium over loess. Some basalt cobbles are present near the mouth.

Paradise Creek

1. Reach Examined. Paradise Creek was examined from Moscow to its mouth near Pullman as outlined on figure 3.
2. I/O. Inputs and outputs are more extensive as this stream passes through the major population centers of the basin. The Moscow Sewage Treatment Plant (39N-6W-12dc) is a large input to Paradise Creek. Daily average flows for each month are presented in table 1. The primary output for Paradise Creek occurs at the Palouse Asphalt Company near the mouth. Most days they withdraw 500-2,000 gallons for cleaning purposes, usually in the evenings.
3. Stream Bed. The stream bed along Paradise Creek seems to be the most difficult to quantify. This is due partially to the fact that access is much more difficult. In the reaches near Moscow and Pullman, basalt cobbles are prevalent in the alluvium. The alluvium appears to be primarily over loess near the Pullman Test Well (#1F1) located

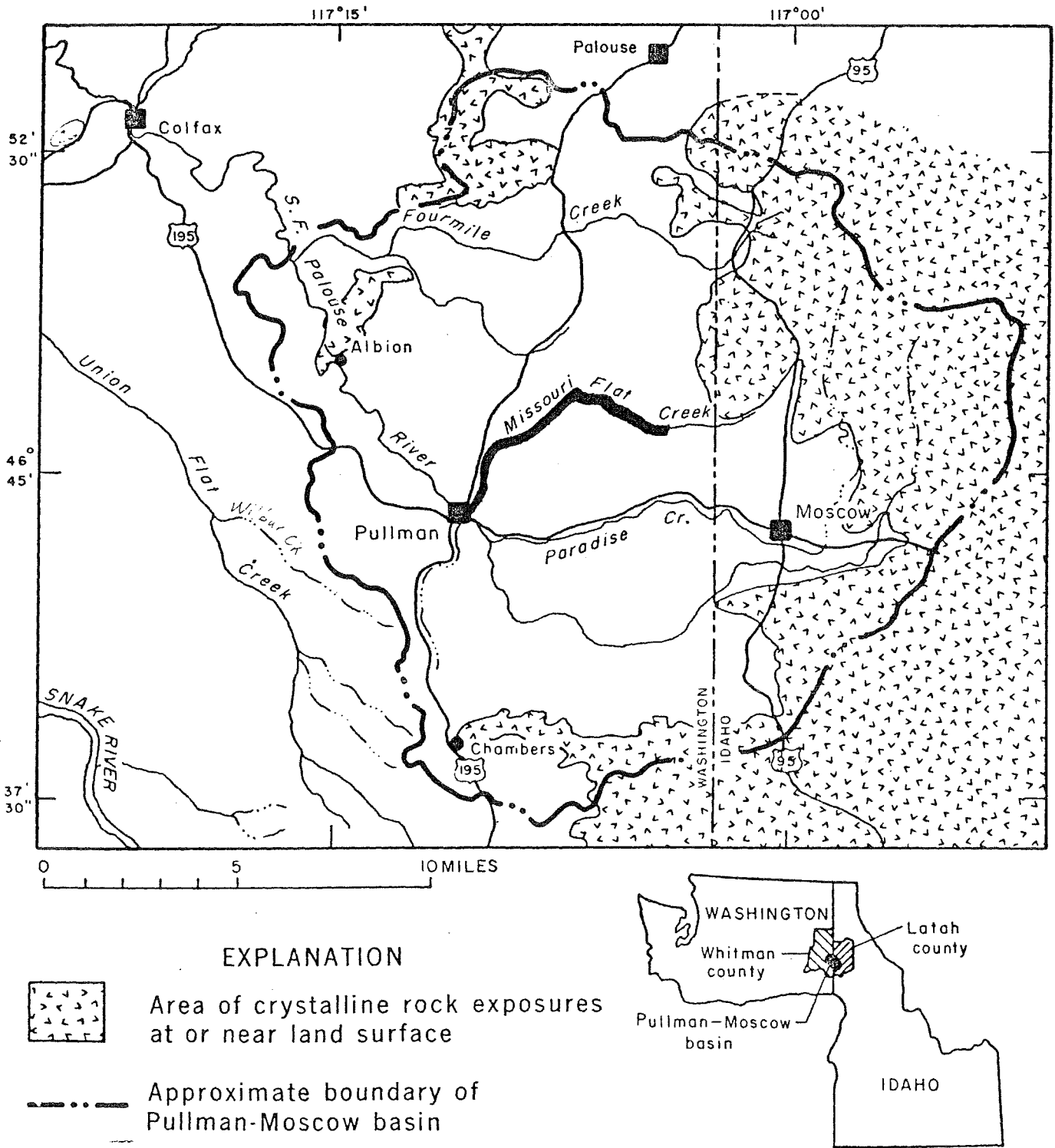


Figure 2. Portion of Missouri Flat Creek evaluated for inputs/outputs.

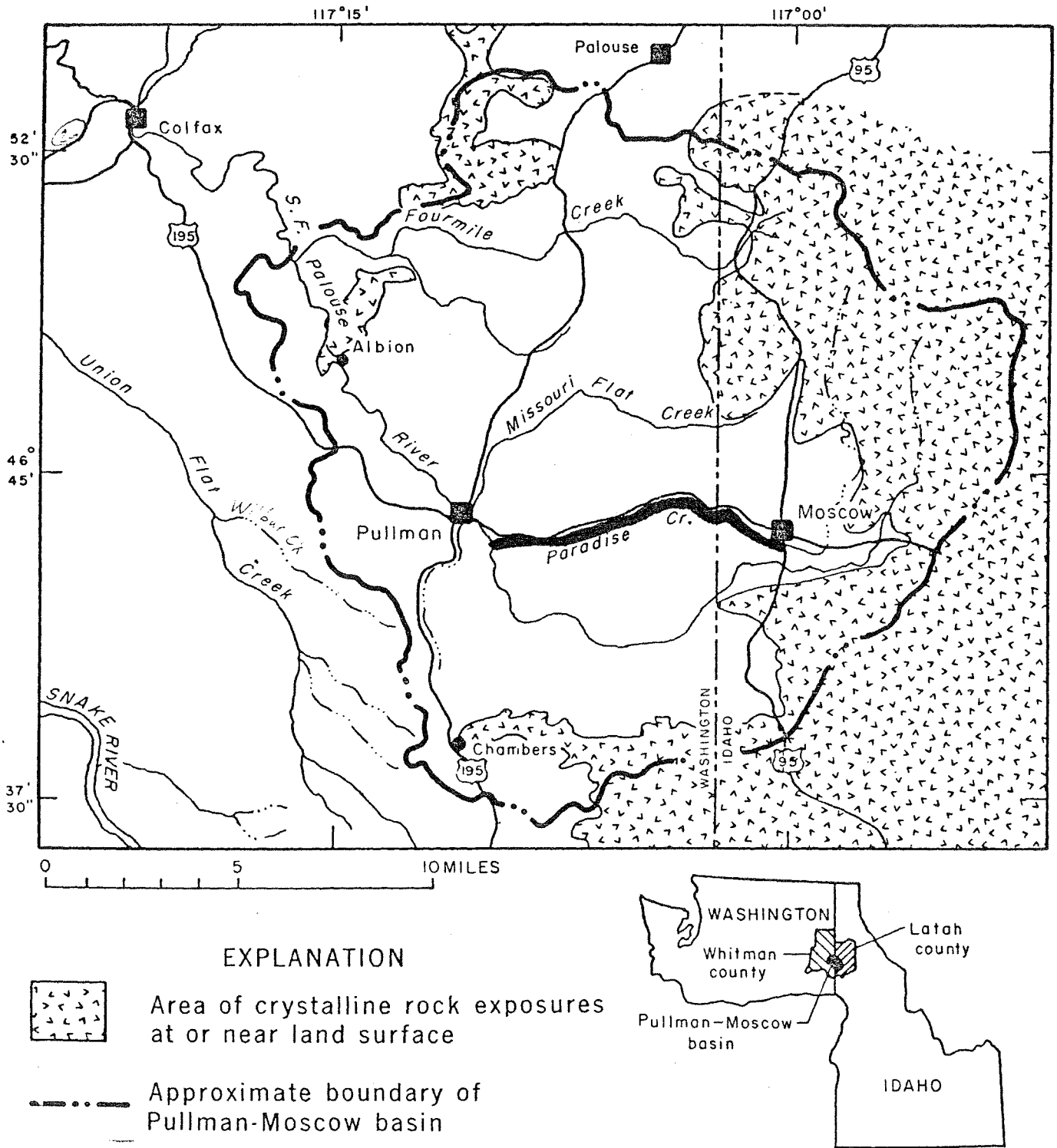


Figure 3. Portion of Paradise Creek evaluated for inputs/outputs.

Table 1. Average daily flows (MGD) at the Moscow Waste Water Treatment Plant.

Month	1981	1982	1983	1984
January	2.01	3.00	2.60	missing
February	2.78	4.04	3.03*	2.63
March	2.24	3.18	2.81	2.93
April	2.78	2.99	2.46	2.69
May	2.15	2.12	2.02	2.18
June	2.00	1.75	1.73	1.94
July	1.75	1.68	1.60	1.74
August	1.84	1.94	1.70	1.88
September	2.14	2.11	1.96	----
October	2.18	2.12	1.97	----
November	2.09	2.08	2.28	----
December	2.00	2.25	2.38	----

* Incomplete

at 45N-45E-1. This is near the intersection of Sunshine Road and Highway 270. Several auger holes along Paradise Creek would be particularly useful.

South Fork of Palouse River

1. Reach Examined. The South Fork was examined from Pullman to Colfax as outlined on figure 4. The reach upstream from Pullman was not examined due to time limitations.
2. I/O. The Pullman Sewage Treatment Plant (15N-45E-31Q) is the primary input to the South Fork. Daily average flows for each month are presented in table 2. Overflow from the Albion, Washington, sewage lagoons (15N-44E-15F) goes into the South Fork. There is no overflow at the present time, and in general, overflow only occurs during the spring months. No outputs were noted along the reach of the South Fork of the Palouse that was examined.
3. Stream Bed. Basalt Cobbles are present in the stream channel throughout the reach.

Union Flat Creek

1. Reach Examined. Union Flat Creek was examined from its intersection with Highway 26 southwest of Colfax to its intersection with Highway 195 south of Chambers. Thus, more reach was examined than appears on figure 5.
2. I/O. No inputs or outputs were noted.
3. Stream Bed. Union Flat Creek generally has basalt cobbles in its stream bed. The extreme lower reach examined near Highway 26 seems

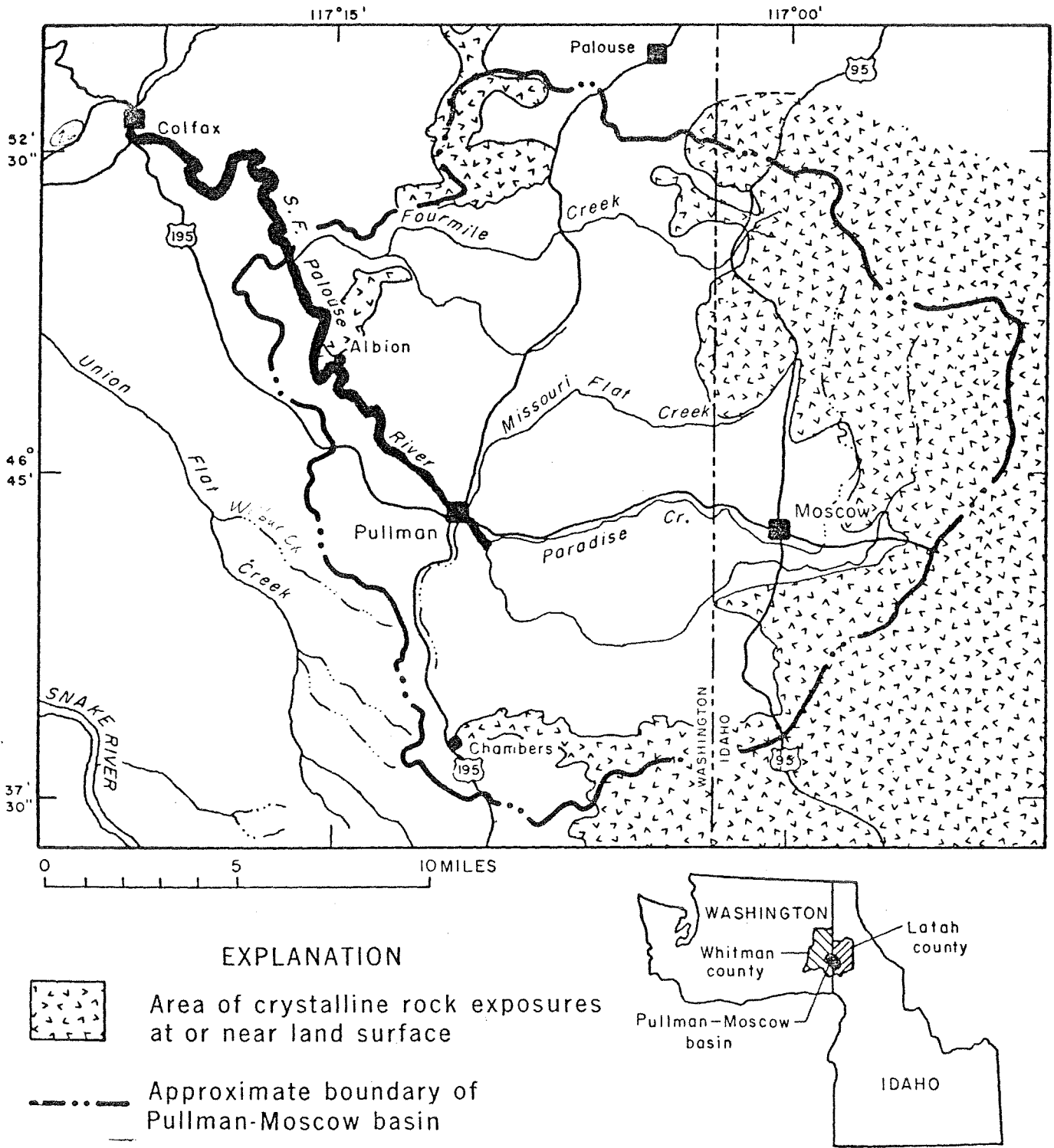


Figure 4. Portion of South Fork Palouse River evaluated for inputs/outputs.

Table 2. Average daily flows (MGD) at the Pullman Sewage Treatment Plant.

Month	1981	1982	1983	1984
January	3.38	4.17	3.7	4.32
February	3.78	4.73	4.2	3.87
March	3.73	4.56	4.2	4.14
April	3.39	3.81	3.37	3.56
May	3.55	3.72	3.62	3.70
June	2.70	2.82	2.6	2.72
July	2.52	2.65	2.57	2.63
August	2.40	2.37	2.53	2.7
September	2.87	3.01	3.09	3.6
October	3.50	3.58	3.61	----
November	3.11	3.20	3.38	----
December	3.38	3.23	3.39	----

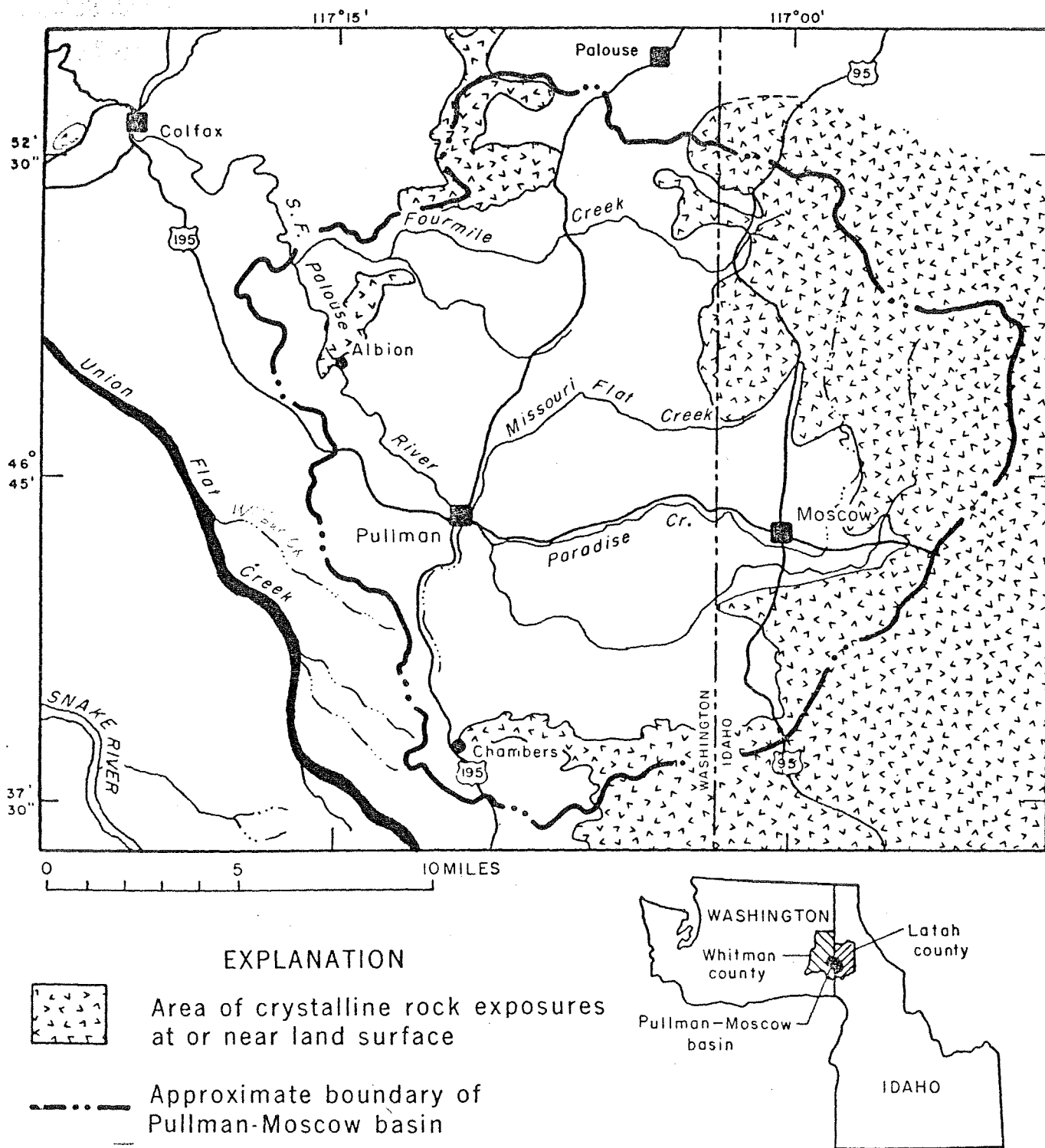


Figure 5. Portion of Union Flat Creek evaluated for inputs/outputs.

to have more loess derived alluvium. Just south of the intersection with Wilbur Creek directly west of Pullman, the creek flows over several hundred feet of exposed basalt bedrock. The reach from here south along Evartsville Road seems to noticeably lose water. Several auger holes along Union Flat Creek may be constructive.