



Oregon Water Resources Department
 725 Summer Street NE, Suite A
 Salem OR 97301-1266
 503-986-0900
 www.oregon.gov/owrd

Application for Instream Water Right Certificate

SECTION 1: ORGANIZATION INFORMATION AND SIGNATURE

Organization Information

NAME OREGON DEPT. OF FISH AND WILDLIFE		PHONE 503-947-6000	FAX 503-947-6202
ADDRESS 4034 FAIRVIEW INDUSTRIAL DR. SE			CELL
CITY SALEM	STATE OR	ZIP 97302-1142	E-MAIL *

Agent Information – The agent is authorized to represent the applicant in all matters relating to this application.

AGENT / BUSINESS NAME ADRIENNE AVERETT / OREGON DEPT. OF FISH AND WILDLIFE		PHONE 971-808-8799	FAX 503-947-6202
ADDRESS 107 20 TH STREET			CELL
CITY LA GRANDE	STATE OR	ZIP 97850	E-MAIL * ADRIENNE.W.AVERETT@STATE.OR.US

* By providing an e-mail address, consent is given to receive all correspondence from the Department electronically. (Note that paper copies of the Final Order documents will also be mailed.)

Adrienne Averett
 Acting Water Program Manager

3/18/2021

Applicant Signature

Print Name and Title

Date

Applicant Signature

Print Name and Title

Date

SECTION 2: NOTIFICATION TO DEQ, ODFW, AND PARKS

Please indicate the date you notified other state agencies of your intent to file an instream water right application.

Oregon Department of Environmental Quality was notified on: 10/21/2020

Oregon Department of Fish and Wildlife was notified on: N/A

Oregon Parks and Recreation Department was notified on: 10/21/2020

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SECTION 3: NOTIFICATION TO AFFECTED LOCAL GOVERNMENTS

Please provide copies of letters of your intent to file an instream water right application to each affected local government within whose jurisdiction the instream use is proposed. Affected local government means any city, county or metropolitan service district formed under ORS Chapter 268 or an association of local governments performing land-use planning functions under [ORS 197.190](#).

SECTION 4: SOURCE AND REACH

Stream or lake name: Fish Creek

Tributary to: North Umpqua River

If the source is a stream, indicate the reach delineated by river mile (the upstream point to the downstream point) of the proposed instream water right:

Fish Creek, tributary to North Umpqua River, beginning at river mile 7 (NWNE, S23, T27S, R3E, WM) in Douglas County (43.211027, -122.425097) and continuing downstream to the mouth river mile 0.0 (SESW, S21, T26S, R3E, WM) in Douglas County (43.286063, -122.47073).

If the source is stored water that is authorized under a water right permit, certificate, or decree, attach a copy of the document or list the document number (for decrees, list the volume and page, or decree name). _____

If the source is stored water and you do not, or will not, own the reservoir(s), please enclose a copy of your written agreement with the owner of the reservoir to release flows identified in this application.

SECTION 5: PUBLIC USES AND AMOUNTS

ODFW Administrative Rule 635-400-0015(7) & (8) require ODFW to request flows that meet the following standard:

(7) An instream flow requirement shall be specified as a quantity of water or water surface elevation as determined by the methodologies in this section and dependent upon other habitat factors, fish or wildlife species plans, basin or subbasin plans, management objectives or other commission policies for the waterway.

(8)(a) The instream flow requirement for any specified period shall be no less than the highest instream flow or water surface elevation required by any of the fish or wildlife species of management interest during that period;

OWRD Administrative Rule 690-077-0015(4) requires OWRD to limit the approved flow to meet the following standard:

(4) If natural streamflow or natural lake levels are the source for meeting instream water rights, the amount allowed during any identified time period for the water right shall not exceed the estimated average natural flow or level occurring from the drainage system, except where periodic flows that exceed the natural flow or level are significant for the applied public use. An example of such an exception would be high flow events that allow for fish passage or migration over obstacles.

The public uses to be served by the requested instream water right are: For the conservation, maintenance and enhancement of aquatic and fish life, wildlife, and fish and wildlife habitat.

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The monthly (or half-monthly) flows in cubic feet-per-second (CFS) or acre-feet (AF) or by lake elevation (LE) necessary to support the public uses are:

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Unit
130	130	130	130	130	130	130	130	130	130	130	130	<input checked="" type="checkbox"/> CFS

If this is a multi-agency request, please indicate the monthly (or half-monthly) flows in cubic feet-per-second (cfs) or acre-feet (af) or by lake elevation (le) that are necessary to support the public uses for each category of public use.

USE	J	F	M	A	M	J	J	A	S	O	N	D	
													<input type="checkbox"/> CFS <input type="checkbox"/> AF <input type="checkbox"/> LE
													<input type="checkbox"/> CFS <input type="checkbox"/> AF <input type="checkbox"/> LE

SECTION 6: DATA, METHODS, AND COMPLIANCE

Please describe the technical data and methods used to determine the requested amounts.

ODFW relied on an IFIM/PHABSIM study to determine the requested amounts (North Umpqua Hydroelectric Project IFIM Study, Harza Northwest 1995. See attached). This method quantifies physical habitat at different streamflow rates for all life stages of fish, based on stream hydraulics (Bovee et al 1998; Bovee 1997; Bovee 1982). It typically requires measurements at one to three flows, and uses hydraulic simulation to predict habitat over a wide range of flows. Results are tabulated for various life stages and can include: spawning and incubation, fry, juvenile and adult rearing, and passage flows. Criteria for spawning, rearing, and incubation include depth, velocity, substrate and cover. Fish passage is based on depth and velocity only.

ODFW used the habitat vs. flow relationships and instream targets produced by this study to derive recommended flows in Fish Creek. ODFW used the habitat vs. flow relationships for appropriate species and life stages to recommend flow levels specifically designed to meet the seasonal biological requirements of important fish species in Fish Creek. These recommended flows were used in this instream water right application. The desired flow levels are determined by examining habitat vs. flow over the range of flows simulated, for each species and life stage according to the appropriate time periods.

Please explain how you have complied with the requirements contained in your Department’s own administrative rules for instream water rights, including application of the required methods to determine the requested flows.

OAR 635-400-0015 Determination of Instream Flow Measurement Methodologies

The methodology used in the study was IFIM/PHABSIM (North Umpqua Hydroelectric Project IFIM Study, Harza Northwest 1995. See attached). As such, it conformed to the procedures laid out in the agency’s rules - Determination of Instream Flow Measurement Methodologies, Oregon Administrative Rules Division 400, 635-400-0015. Specifically, the studies on Fish Creek used IFIM/PHABSIM to produce a relationship between physical habitat and flow. ODFW is satisfied that correct field and

computer procedures were followed to produce the results (Bovee et al 1998; Bovee 1997; Bovee 1982). ODFW examined and interpreted the results of the study to determine the requested flows.

OAR 635-400-0020- Standards for Selection of Streams or Stream Reaches for Instream Water Right Applications

Consistent with our rules, ODFW used the following resources and standards to prioritize waterways for instream water right applications: 1) basin and subbasin plans, management objectives, statutes, administrative rules and Commission policies; 2) the presence of fish and wildlife species that are considered endangered, threatened, sensitive or otherwise important; 3) the need to conserve, maintain or enhance fish or wildlife habitats or functions, including but not limited to, passage, spawning, incubation, rearing, and wintering habitats that maintain or improve the species.

OAR 635-400-0025- Responsibilities to WRD

ODFW will coordinate with OWRD for instream water rights monitoring as necessary for priority reaches. Specifically, ODFW will coordinate with OWRD to develop monitoring plans for instream water rights, revise or create a Memorandum of Understanding between the ODFW and WRD to include issues related to instream water rights, such as measuring, monitoring and enforcement of instream water rights.

OAR 635-400-0030- Internal Process for Instream Water Right Application

Instream Water Rights application initiation, consultation, review, processing, submittal, and record keeping was consistent with ODFW rules. Specifically, the application was initiated and processed by the proper ODFW staff, was presented to OWRD within the timelines stated in the internal rules, and ODFW shall also abide by the review requirements and make any required corrections requested by OWRD.

References:

Bovee, K. D. (1982). *A guide to stream habitat analysis using the instream flow incremental methodology* [Instream Flow Information Paper No. 12]. U.S. Fish and Wildlife Service.

Bovee, K. D. (1997). *Data collection procedures for the physical habitat simulation system*. U.S. Geological Survey, Biological Resources Division.

Bovee, K. D., Lamb, B. L., Bartholow, J. M., Stalnaker, C. B., & Taylor, J. (1998). *Stream habitat analysis using the instream flow incremental methodology* [Information and Technology Report]. U.S. Geological Survey, Biological Resources Division.

SECTION 7: WITHIN A DISTRICT

If the reach is located within an irrigation district or other water district, please provide their contact information.

Irrigation District Name	Address	
City	State	Zip

SECTION 8: REMARKS

Use this space to clarify any information you have provided in the application.

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- The Fish Cr. results were part of a broader IFIM/PHABSIM study (North Umpqua Hydroelectric Project IFIM Study, Harza Northwest 1995). The relevant Results portion of the study is attached; additional information is available upon request.
- Copies of letters to local governments are not attached to each application individually; rather, they are provided separately (hard copy and electronically) for each administrative basin.

SECTION 9: MAP

Please provide a basin map that identifies the reach of the stream or the lake.

- Attached at end of application.

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YOU ARE ENCOURAGED TO PROVIDE THIS INFORMATION:

A means and location for measuring the instream water right:

- Please see section 6

The strategy and responsibility for monitoring flows for the instream right:

- Please see section 6

Any provisions needed for managing the water right to protect the public uses: None

- Please see section 6

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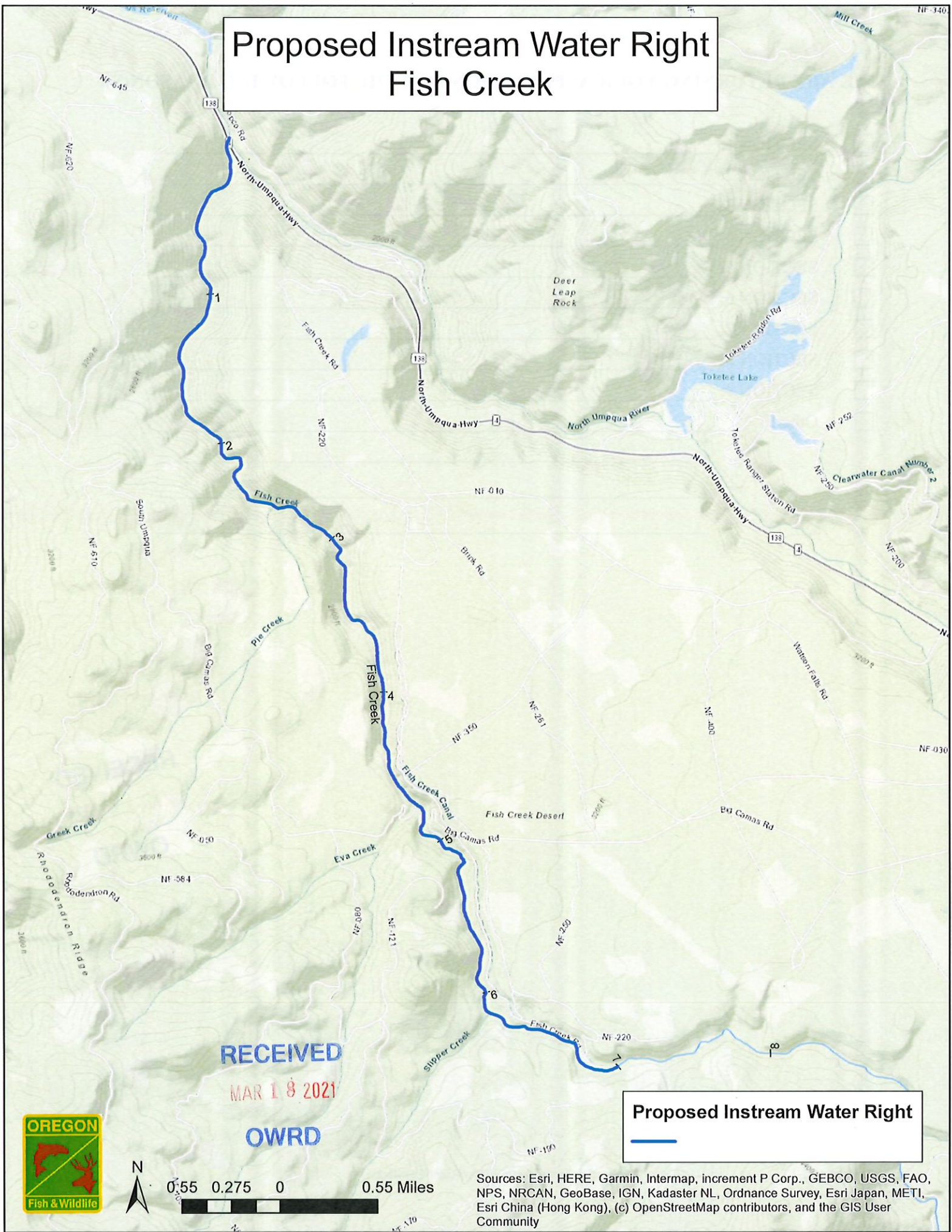
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WE ARE RETURNING YOUR APPLICATION FOR THE FOLLOWING REASON(S):

- SECTION 1: _____
- SECTION 2: _____
- SECTION 3: _____
- SECTION 4: _____
- SECTION 5: _____
- SECTION 6: _____
- SECTION 7: _____
- SECTION 8: _____
- SECTION 9: _____
- Other: _____

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Proposed Instream Water Right Fish Creek



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Proposed Instream Water Right

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community



6.2.11 Fish Creek

6.2.11.1 Upper Sub-reach

This reach is not affected by accretion, but spill at the diversion is significant, especially in the winter and spring.

Rainbow trout adults: Peak exceedance WUA occurred at a minimum release of 90 cfs. This matched the result of the standard WUA graph; however, the peak was broadened by the effect of spill. The 90 percent range of exceedance WUA was from 30 to 200 cfs. In winter, the peak occurred at a release of 50 cfs (90 percent range 10 to 200) (Figures 6.2-89 and 6.2-90).

Rainbow trout spawning: A minimum release of 120 cfs yielded peak exceedance WUA. As above, the peak was broadened by the effect of spill (90 percent range 80 to 160 cfs) (Figure 6.2-91).

6.2.11.2 Lower Sub-reach

This reach is significantly affected by accretion and by spill. It is the only reach in the study affected by both factors. Several of the standard WUA graphs (Section 5) had flat shapes; the added effects of spill and accretion made the 90 percent ranges even wider. Peaks also tended to exist at a range of flows, rather than a single flow. With high minimum flow rules, no diversion of water is possible, and the amount of water in the channel is equal to the total flow.

6.2.11.3 Resident species

Rainbow trout adults: For summer, peak exceedance WUA occurred at a minimum release of 160 to 200 cfs (90 percent range 30 to 200 cfs). For winter, exceedance WUA was extremely flat; all the results were within 1 percent of the maximum for flows from 10 to 200 cfs (Figures 6.2-92 and 6.2-93).

Rainbow trout spawning: Minimum releases of 160 to 200 cfs all yielded peak exceedance WUA. The peak was strongly affected by spill and accretion, and by the bimodal shape of the standard WUA graph (Figure 5). The 90 percent range was discontinuous (10 to 40 and 80 to 200 cfs), but all flows over the range modeled produced exceedance WUA of at least 89 percent of the maximum (Figure 6.2-94).

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Fish Creek Upper Subreach

Rainbow Trout Adult during Summer

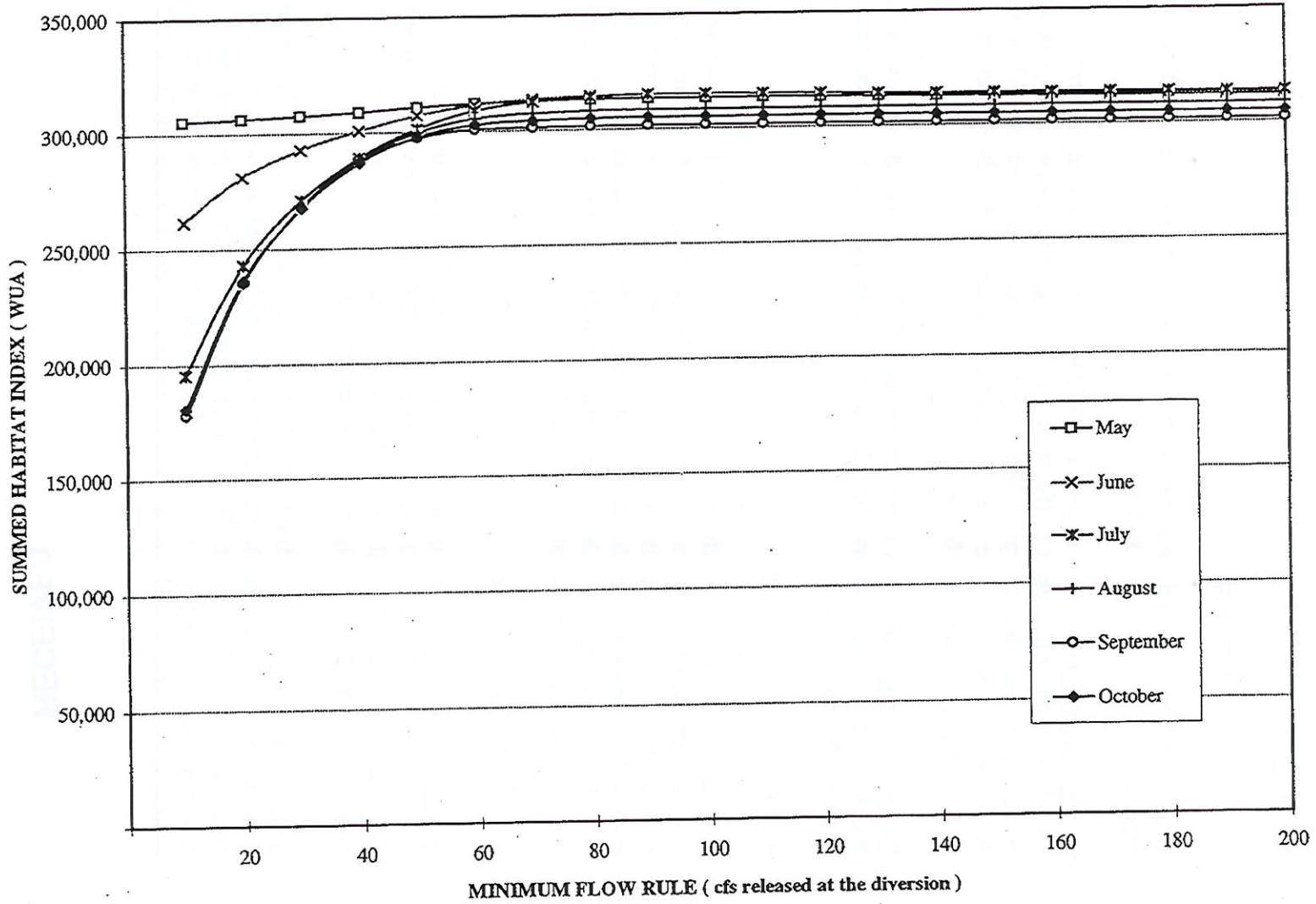


Figure 6.2-89. Habitat exceedance values resulting from alternative minimum flow rules. Fish Creek Upper Subreach, rainbow trout adult during summer.

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Fish Creek Upper Subreach
Rainbow Trout Adult during Winter

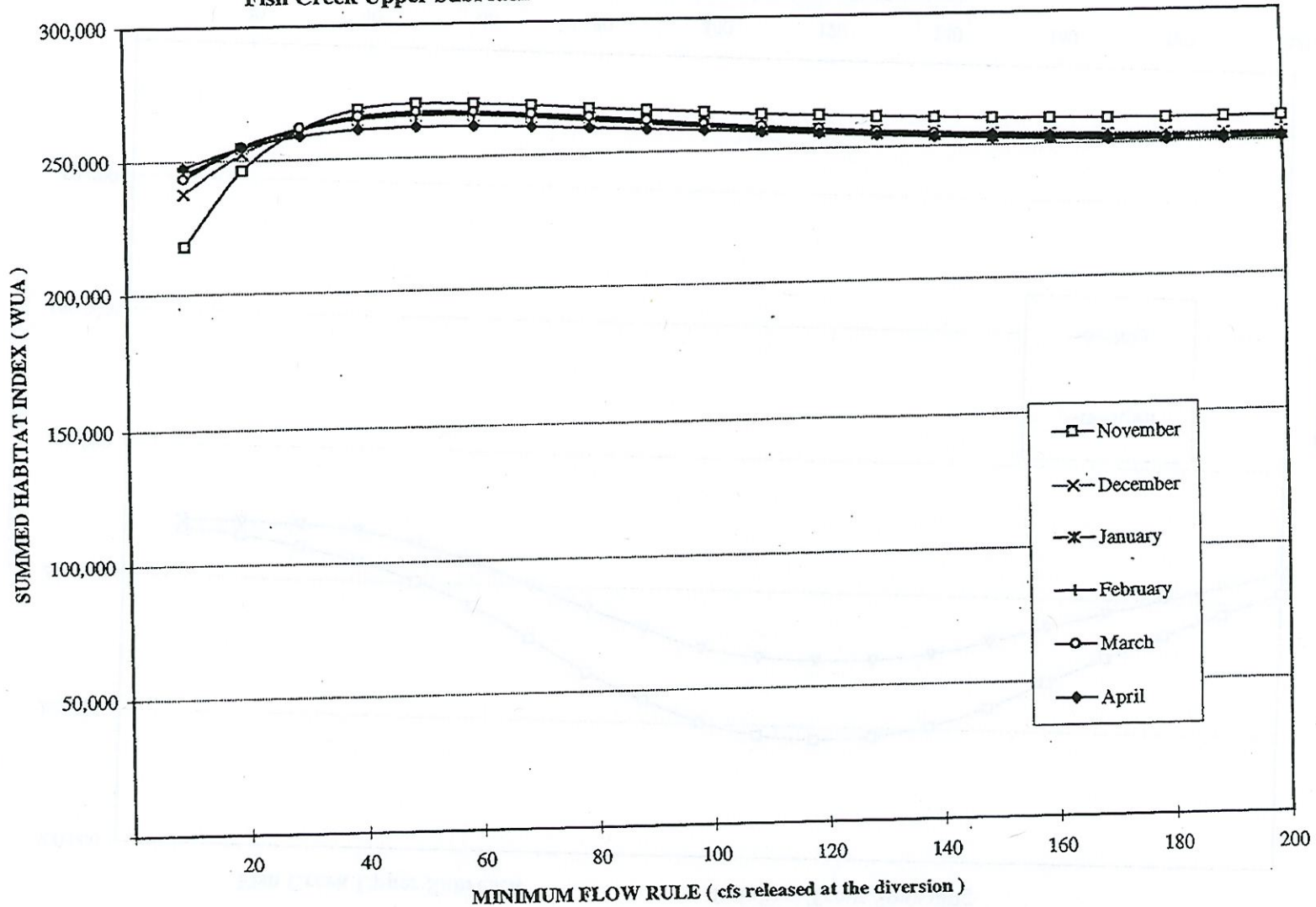


Figure 6.2-90. Habitat exceedance values resulting from alternative minimum flow rules. Fish Creek Upper Subreach, rainbow trout adult during winter.

Final Technical Report 6-105

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Fish Creek Upper Subreach

Rainbow Trout Spawning

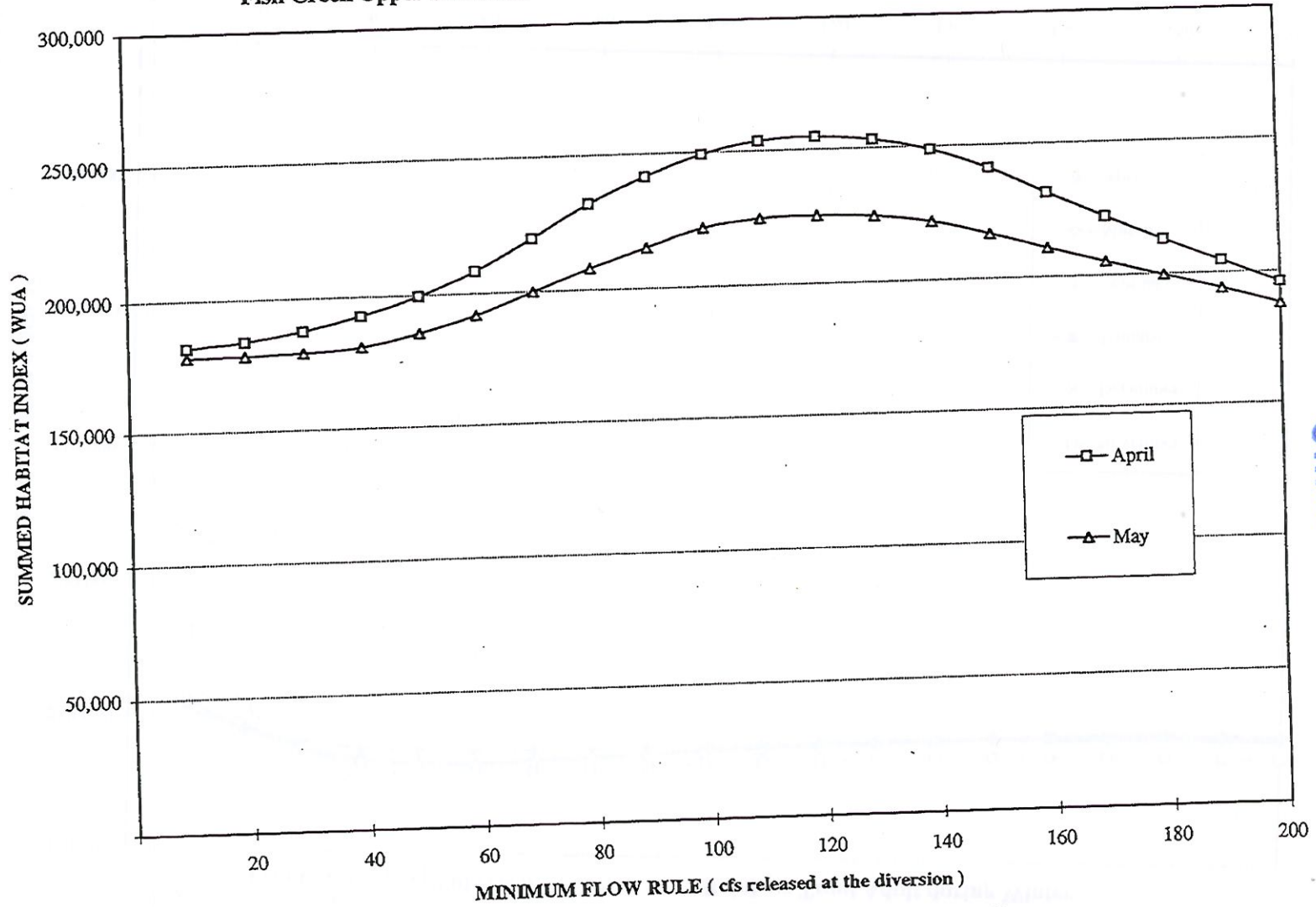


Figure 6.2-91. Habitat exceedance values resulting from alternative minimum flow rules. Fish Creek Upper Subreach, rainbow trout spawning.

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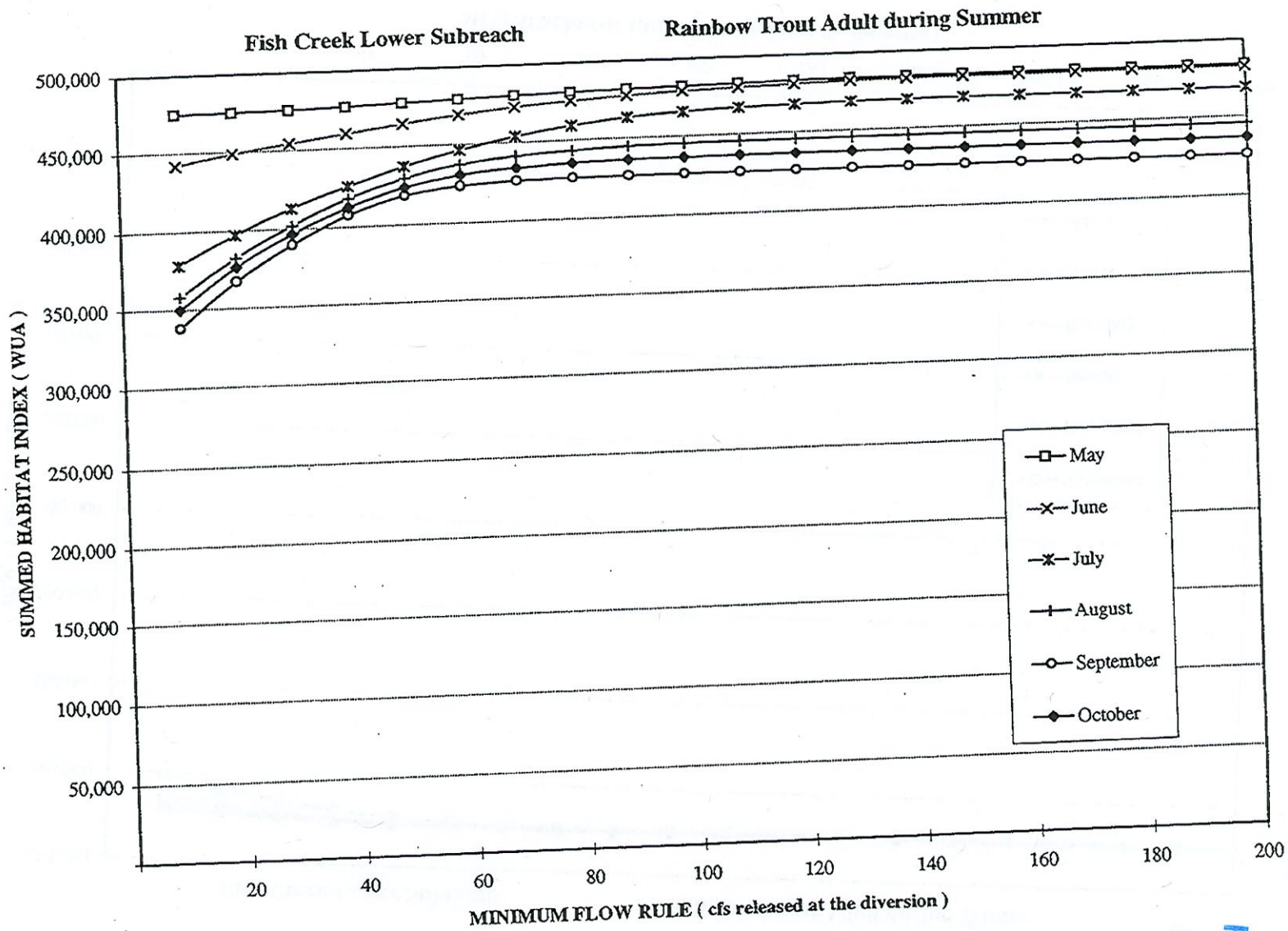


Figure 6.2-92. Habitat exceedance values resulting from alternative minimum flow rules. Fish Creek Lower Subreach, rainbow trout adult during summer.

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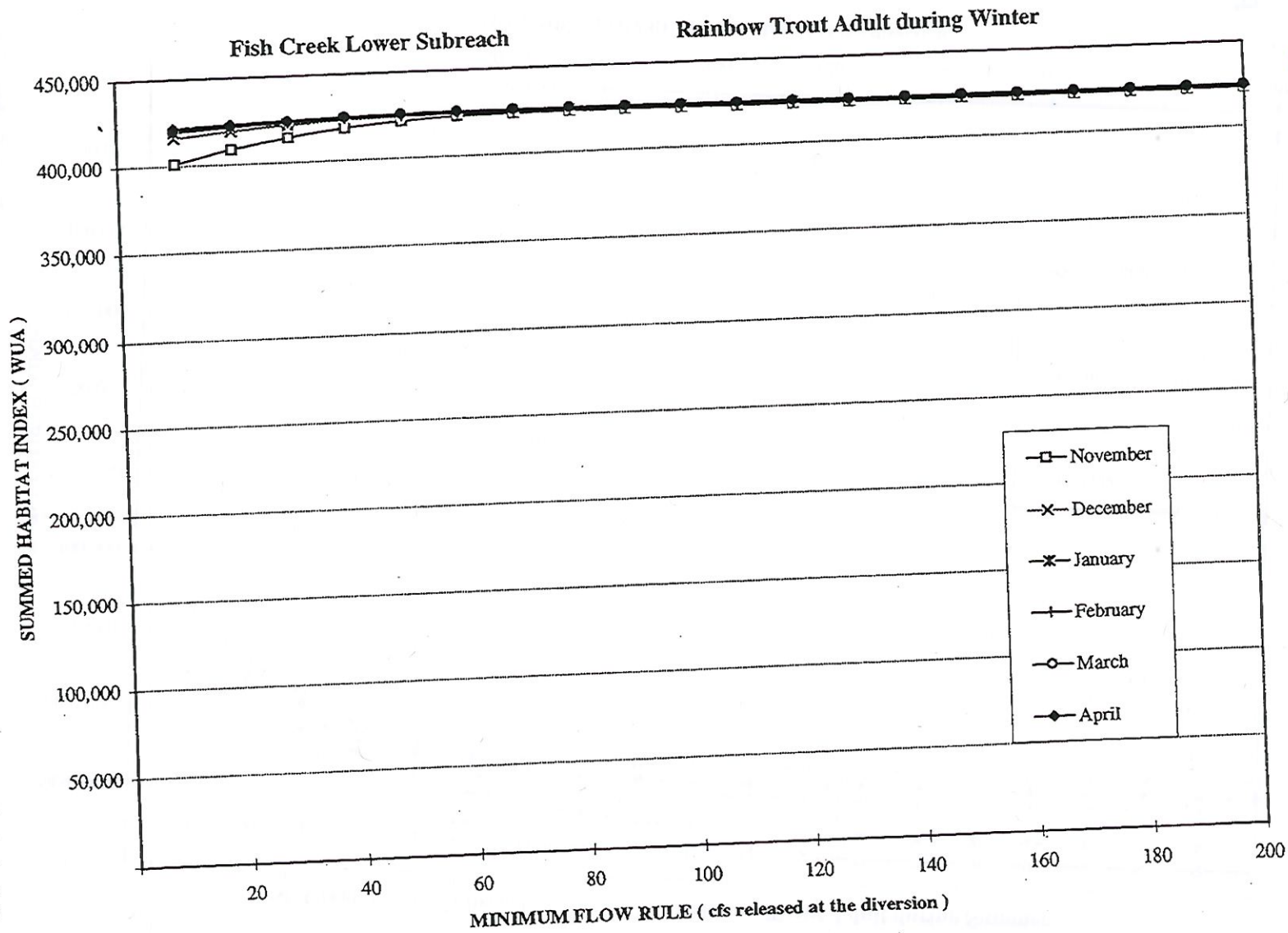


Figure 6.2-93. Habitat exceedance values resulting from alternative minimum flow rules. Fish Creek Lower Subreach, rainbow trout adult during winter.

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Fish Creek Lower Subreach

Rainbow Trout Spawning

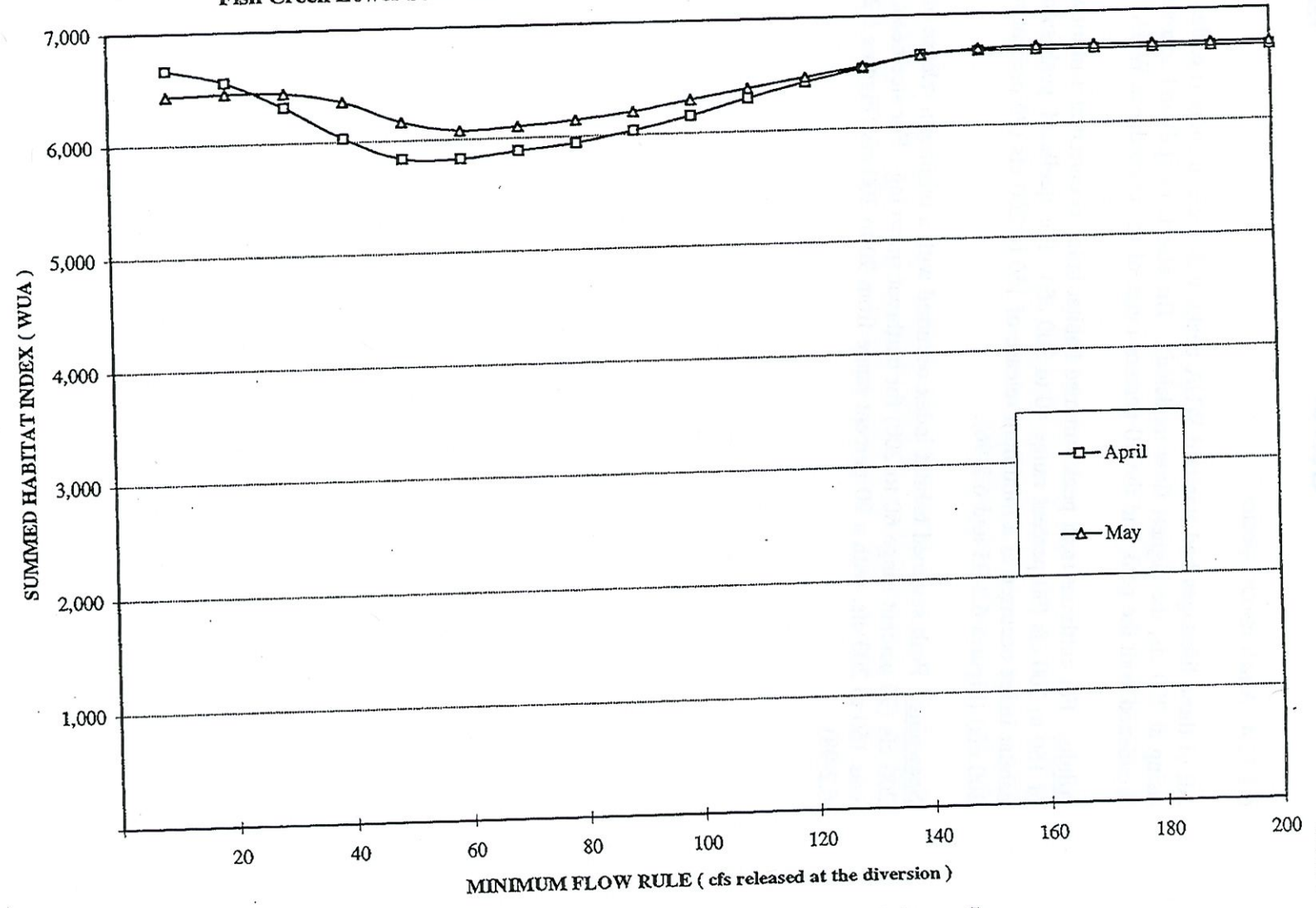


Figure 6.2-94. Habitat exceedance values resulting from alternative minimum flow rules. Fish Creek Lower Subreach, rainbow trout spawning.

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6.2.11.4 Anadromous species

All of these lifestages had standard WUA peaks at 200 cfs or more (i.e. the curve was rising at 200 cfs, the highest flow modeled). The effects of spill and accretion broadened both the peak and the 90 percent range of the exceedance WUA.

Adults: For cutthroat trout peak summed habitat index occurred at a minimum release of 160 to 200 cfs (90 percent range 40 to 300 cfs). For steelhead, peak summed habitat index occurred at a minimum release of 160 to 200 cfs (90 percent range 80 to 200 cfs) (Figures 6.2-95 and 6.2-96).

Spawning: Peak summed habitat index occurred with a minimum release of 150 to 200 cfs (90 percent range 60 to 200) for cutthroat spawning. For steelhead, the peak was 160 to 200 cfs, with a 90 percent range from 90 to 200 cfs (Figures 6.2-97 and 6.2-98).

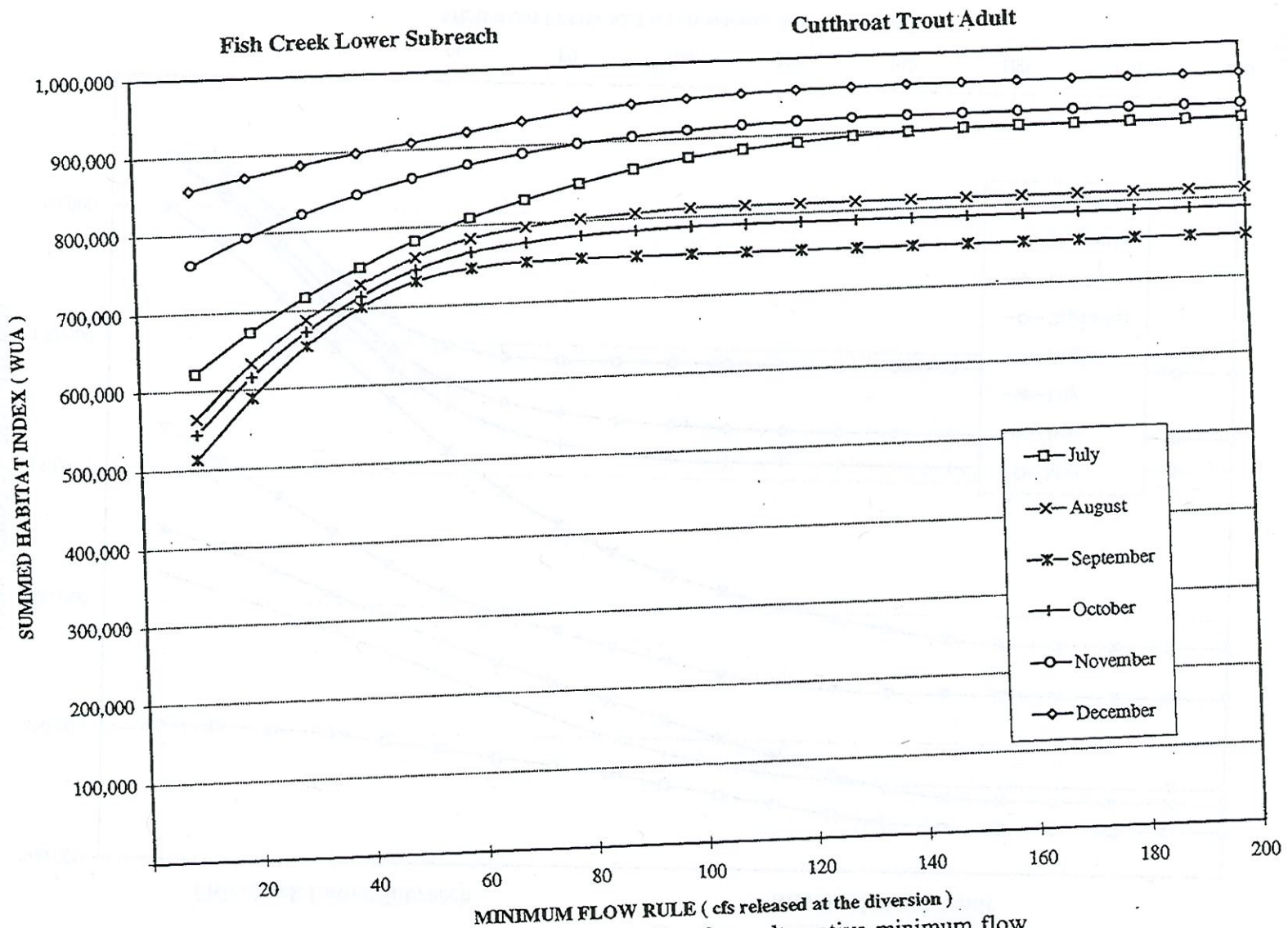


Figure 6.2-95. Habitat exceedance values resulting from alternative minimum flow rules. Fish Creek Lower Subreach, cutthroat trout adult.

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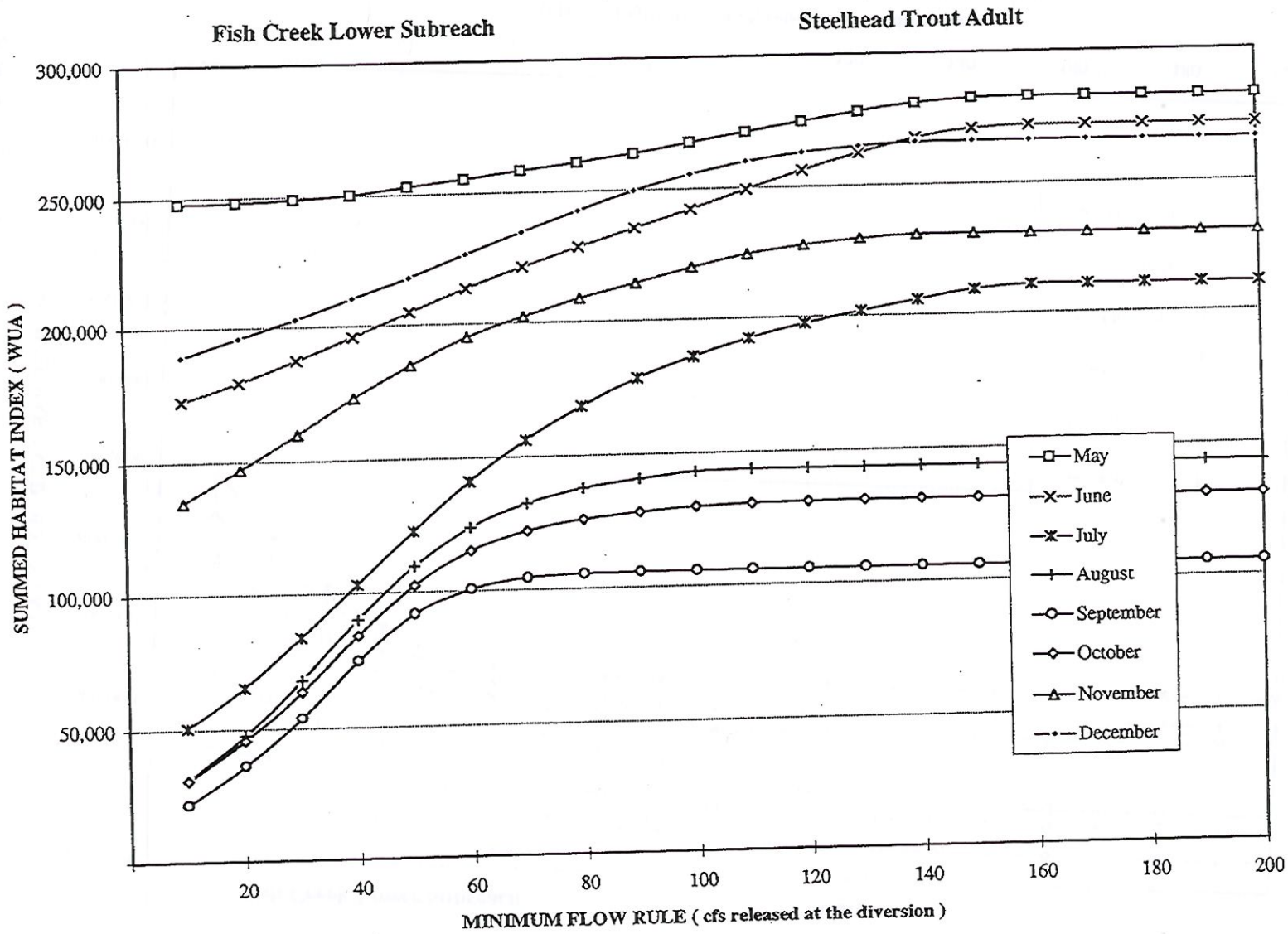


Figure 6.2-96. Habitat exceedance values resulting from alternative minimum flow rules. Fish Creek Lower Subreach, steelhead trout adult.

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Fish Creek Lower Subreach

Cutthroat Trout Spawning

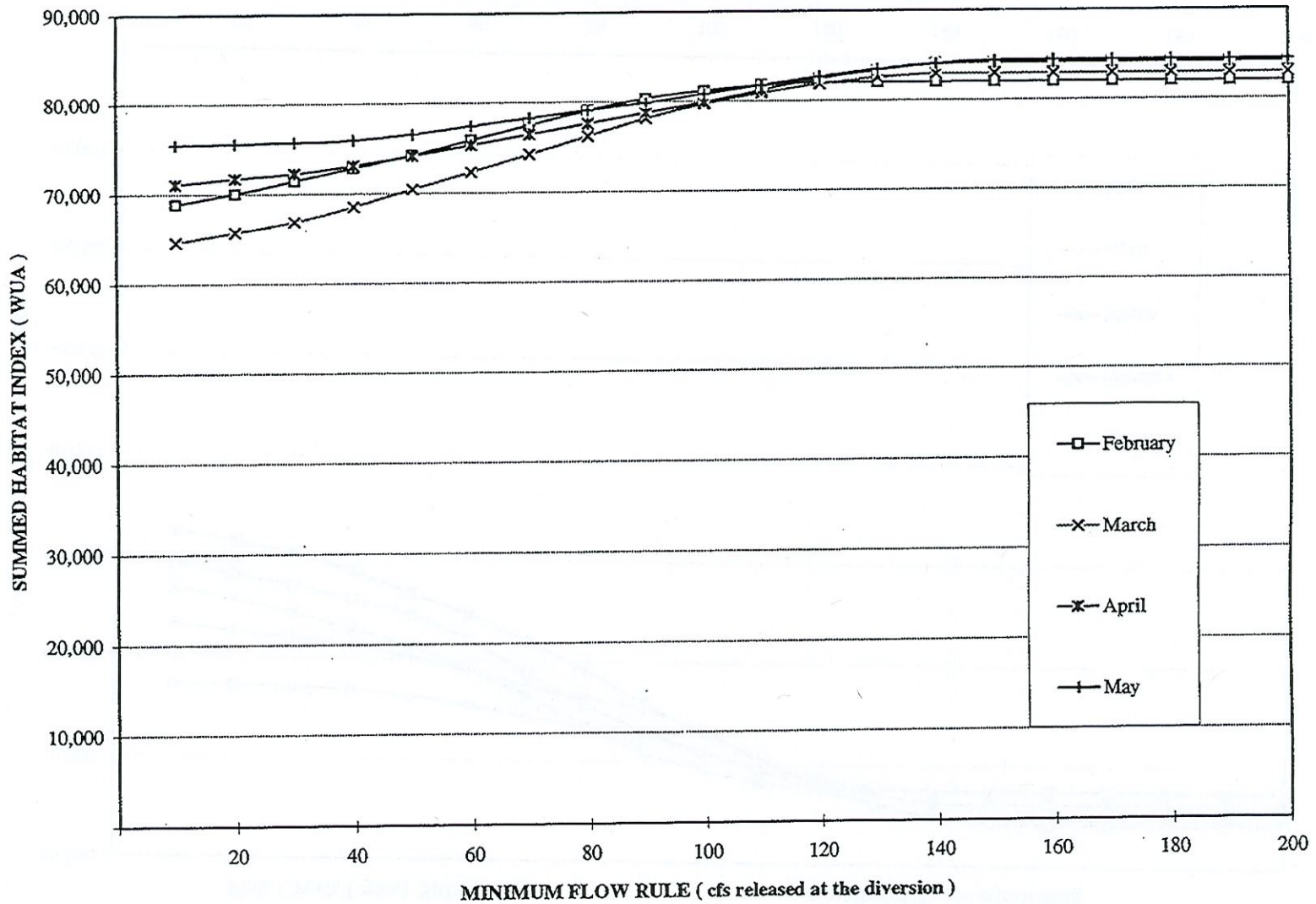


Figure 6.2.97. Habitat exceedance values resulting from alternative minimum flow rules. Fish Creek Lower Subreach, cutthroat trout spawning.

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Fish Creek Lower Subreach

Steelhead Trout Spawning

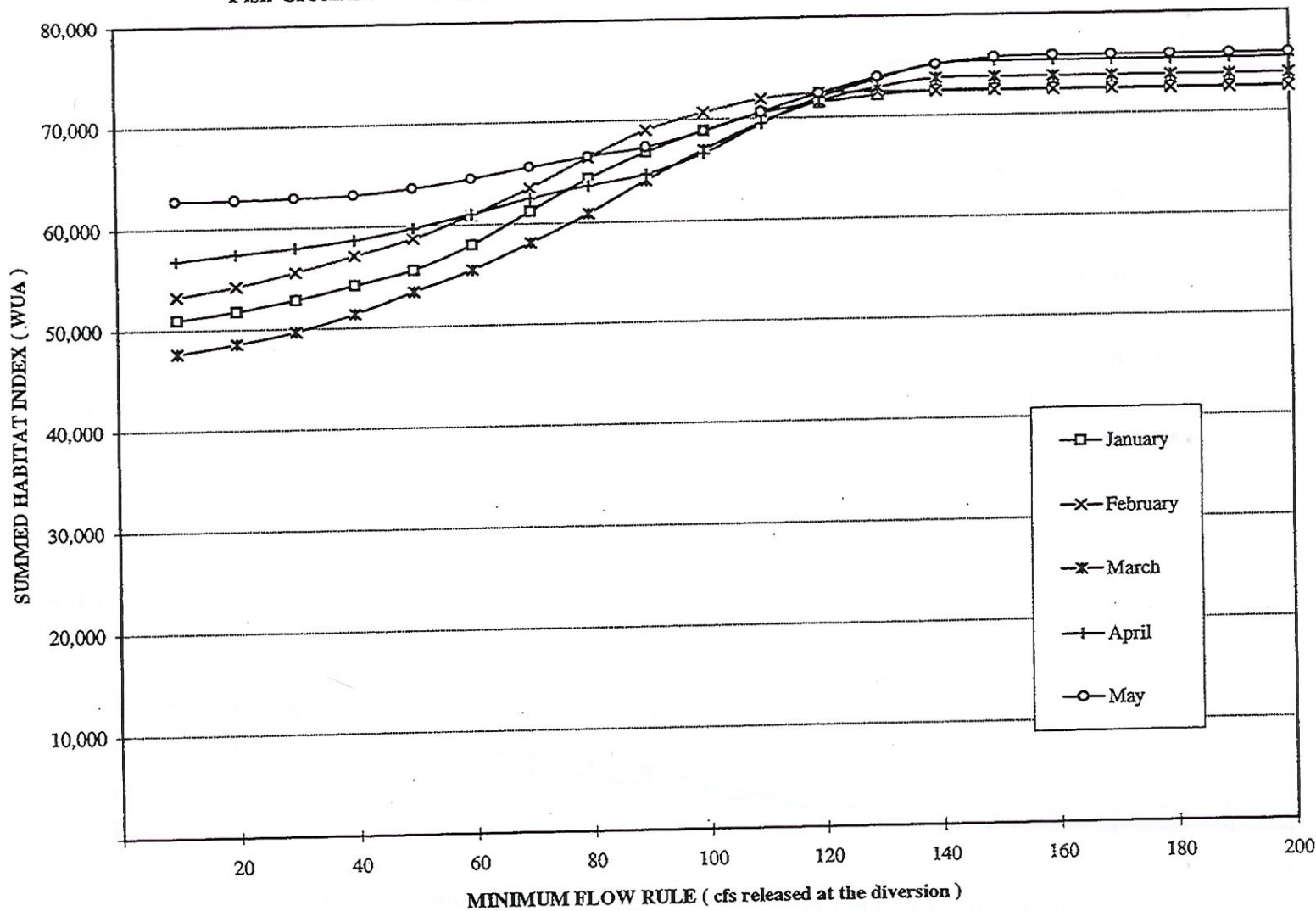


Figure 6.2-98. Habitat exceedance values resulting from alternative minimum flow rules. Fish Creek Lower Subreach, steelhead trout spawning.