



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 ANNA PAKENHAM STEVENSON / OREGON DEPT. OF FISH AND WILDLIFE		PHONE 503-947-6084	FAX 503-947-6202
ADDRESS 4034 FAIRVIEW INDUSTRIAL DR. SE			CELL
CITY SALEM	STATE OR	ZIP 97302-1142	E-MAIL * ANNA.P.STEVENSON@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.)

Anna Pakenham Stevenson  
Water Program Manager

12/1/16

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: October 17 2016

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

Oregon Parks and Recreation Department was notified on: October 17 2016

## 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.

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**SECTION 4: SOURCE AND REACH**

Stream or lake name: South Fork Mill Creek

Tributary to: Mill Creek

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:

Beginning at the mouth of South Fork Mill Creek, tributary to Mill Creek, river mile 0.0 in the SESW quarter of Section 22, Township 1 N, Range 12 E W.M. in Wasco County (45.5506, -121.3079) and continuing upstream to the Crow Creek Reservoir Dam at river mile 10.1 in the NENW quarter of Section 20, Township 1 S, Range 11 E W.M. in Wasco County (45.474998, -121.451698).

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**

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. Applied flows include water for fish and wildlife migration, spawning, nesting, brooding, egg incubation, larval or juvenile development, juvenile and adult rearing and aquatic life. Flow levels will vary based on life cycle and life stage development needs.

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
0	0	0	0	0	17	10	10	7	7	7	0	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

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## **SECTION 6: DATA, METHODS, AND COMPLIANCE**

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

The Oregon Method (Thompson 1972) was used in the Basin Investigations to develop flow recommendations. The Oregon Method is a habitat based method that determines the degree of habitat at different streamflow rates and life stages. It requires repeated measurements at different flows. The criteria cover fish spawning, adult migration, and rearing habitat. The desired flow levels are determined by examining flow vs. habitat at different flow levels. Methods for assessing flow needs for spawning, rearing and passage were described by Thompson (1972) as follows:

- Spawning and incubation flows were based on transect measurements with species-specific depth, velocity, and substrate criteria. Repeated measurements over a range of flows were used to develop a relationship of total spawning area vs. discharge.
- Rearing flows were based on repeated measurements, over a range of flows, of the following parameters: adequate depth over key riffles, riffle-pool ratio (i.e. sufficient connectivity between pools), average riffle and pool depths and velocities, and availability of instream cover.
- Passage flows were based on repeated depth measurements at transects across the shallowest riffles judged most likely to impede upstream migration of adult salmonids. Passage criteria were based on the percentage of adequate depth along the transects as a function of discharge.

**Please provide written documentation of how your agency complied with the requirements contained in your own administrative rules for instream water rights, including application of the required methods to determine requested flows.**

ODFW followed all procedures laid out in the agency's 635-400-0015 rules- Determination of Instream Flow Measurement Methodologies. Specifically, the Basin Investigation Report (BIR) flows for this instream flow recommendation were based on 'The Oregon Method', an approved method for determining an instream flow requirement. The BIR identifies fish and wildlife resources of the basin, their distribution, limiting factors, harvest, and water requirements. Stream flow recommendations of the BIR are specifically designed to meet the seasonal biological requirements of the basin's fish. These BIR flow recommendations were used in this instream water right application (see attached BIR: "Hood Basin Supplement" Appendix 2 page 18).

ODFW will also coordinate with OWRD instream water rights monitoring (635-400-0025). Specifically, ODFW will coordinate with OWRD to develop monitoring plans for instream water rights and to revise the existing Memorandum of Understanding between the Department and WRD to include issues related to instream water rights, such as measuring, monitoring and enforcement of instream water rights.

**References:**

Thompson, K.E., 1972. Determining stream flows for fish life. Pages 31-50 plus appendices *in* Proceedings of the Instream Flow Requirement Workshop, March 15-16, 1972, Portland, Oregon. Pacific Northwest River Basins Commission.

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**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 None	Address	
City	State	Zip
Water District Name City of The Dalles	Address 1215 West 1st Street	
City The Dalles	State OR	Zip 97058

**SECTION 8: REMARKS**

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

**SECTION 9: MAP**

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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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# Oregon Water Resources Department Attribute Report

Report Date: Dec 27, 2016

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**General:**

TRSQQ:	WM1.00S11.00E20NENE WM1.00S11.00E17SWSE WM1.00S11.00E20SWNE WM1.00S11.00E20SENW WM1.00S11.00E20NWNE WM1.00S11.00E20NENW WM1.00S11.00E17SESW
DLC:	-
Latitude:	45.4750568714
Longitude:	-121.4517522339
Buffer (ft):	1320
Elevation (ft):	2607
Basin Name:	Hood
Basin Plan:	2-Wasco
County:	Wasco
WM District:	3
WM Region:	NORTH CENTRAL
ODFW Region, District:	High Desert, Mid-Columbia District
Irrigation District AOI:	-
Irrigation District, Other:	-
Dams (Permit):	CROW CREEK RESERVOIR (WASCO) <u>-null</u>

Water Rights:	<u>Platcard for WM1.00S11.00E20</u> <u>Platcard for WM1.00S11.00E17</u> <u>Platcard for WM1.00S11.00E20</u> <u>Platcard for WM1.00S11.00E20</u> <u>Platcard for WM1.00S11.00E20</u> <u>Platcard for WM1.00S11.00E20</u> <u>Platcard for WM1.00S11.00E17</u>
Well Logs:	<u>Logs for WM1.00S11.00E20</u> <u>Logs for WM1.00S11.00E17</u> <u>Logs for WM1.00S11.00E20</u> <u>Logs for WM1.00S11.00E20</u> <u>Logs for WM1.00S11.00E20</u> <u>Logs for WM1.00S11.00E20</u> <u>Logs for WM1.00S11.00E17</u>
Rules:	
Withdrawn Authority:	-
Groundwater Retriected:	-
GW Retriected Subunit:	-
GW ODEQ Management Area:	-
GW Umatilla Muni Wells (5mile):	-
Rule 4D:	Rules apply
Division 33 (Area, Watershed, species):	<b>UPPER COLUMBIA, Mill Creek-Columbia River, Pacific Lamprey, Coastal Cutthroat Trout, Chinook Salmon, Steelhead, Redband Trout</b>
Water Quality Limited Pollutant:	<b>South Fork Mill Creek</b> R. Mile: 0 to 10.6 HUC4: 17070105 Pollutant: Temperature Season: NaN Uses: Salmon and trout rearing and migration

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Status: Cat 4A: Water quality limited, TMDL approved  
 Action: Delisted - TMDL approved

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Is in Deschutes Study Area: -

Deschutes Zone Impact: -

Deschutes Zone Overlay: -

Scenic Water Way: -

**Hydrography:**

OWRD Streamcode: 04001019000190 - S Fk Mill Cr

04001019000190240 - Unn Str

04001019000190280 - Crow Cr

Waterbody Name: -

HUC 10: 1707010504

HUC Watershed: Mill Creek-Columbia River

WAB Wshed Order: 2

WAB Analysis: S.FK MILL CR > MILL CR - AT MOUTH

Streamflow: OWRD Opportunities: Fair  
 ODFW Needs: High  
 Combined Priority: Not a priority

Gaging Station Data: -

**Sources:**

*General*

*Oregon Public Land Survey Quarter-quarters. Bureau of Land Management, Oregon Water Resources Department. n.d. 1:24,000.*



*Donated Land Claims.* Oregon Water Resources Department. January 1, 1995. 1:100,000.

*Elevation.* ESRI World Elevation. February 2000. 1:121,000.

*OWRD Administrative Basins.* Oregon Water Resources Department. January 1, 1995.

*Oregon Counties.* Bureau of Land Management (BLM), Oregon State Office.. January 1, 2008.

*OWRD Watermaster Districts.* Oregon Water Resources Department. March 31, 2014.

*OWRD Regions.* Oregon Water Resources Department. January 1, 1995.

*ODFW Districts and Regions.* Oregon Department of Fish and Wildlife. August 28, 2012.

*Water Organizations* Oregon Water Resources Department. April 1, 2013. 1:24,000.

*Large Dams Inventory.* Oregon Water Resources Department. August 12, 2014. 1:24,000.

**Rules**

*Withdrawn Authority Areas.* Oregon Water Resources Commission. January 1, 2007.

*OWRD Groundwater Restricted Areas.* Oregon Water Resources Department. October 5, 2016.

*OWRD Groundwater Restricted Areas - Subunits.* Oregon Water Resources Department. April 1, 2009.

*ODEQ Groundwater Management Areas (GWMAs).* Oregon Department of Environmental Quality. April 21, 2008.

*Groundwater Umatilla Municipal Wells 5-mile buffer.* Oregon Water Resources Department. June 28, 2012.

*National Marine Fisheries Service (NMFS) 4(d) Rule.* National Marine Fisheries Service. January 1, 2007.

*OAR Chapter 690, Division 33 - HUC 10 .* Oregon Department of Fish & Wildlife. January 1, 2003.

*Oregon Water Quality Assessment 2010.* This data set was assembled by the Oregon Department of Environmental Quality, Water Quality Division, Standards and Assessments Section. GIS data prepared by the Watershed Management Section, Drinking Water Program.. August 16, 2013.

*Deschutes USGS Groundwater Study Area.* Water Resources Commission, U.S. Geological Survey (USGS) Water Resources Division

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(Portland, OR), Oregon Water Resources Department.. January 1, 2001. 1:100,000.

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*Deschutes Zones of Impact*. Oregon Water Resources Department.. October 25, 2007.

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*Deschutes Zones Overlay*. Oregon Water Resources Department. October 25, 2007.

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*Oregon State Scenic Waterway areas*. Oregon Water Resources Department, Oregon Parks and Recreation Department.. January 1, 2007.

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### ***Hydrography***

*Routed OWRD Streamcodes (conflated to the NHD)*. Oregon Water Resources Dept.. August 11, 2014.

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. Unknown. n.d.

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*Watershed Boundary Dataset (WBD), 10-digit (watershed)*. Pacific Northwest Hydrography Framework, U.S. Geological Survey (USGS), National Resources Conservation Service (NRCS).. June 11, 2014. 1:24,000.

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*Water Availability Basins*. Oregon Water Resources Department.. n.d. 1:100,000.

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*Priority Watersheds for Streamflow Restoration*. Oregon Water Resources Dept. and the Oregon Dept. of Fish & Wildlife.. January 15, 2004.

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*Stream Gage Stations*. Oregon Water Resources Department and US Geological Survey. n.d.

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# Water Availability Analysis

S FK MILL CR > MILL CR - AT MOUTH  
HOOD BASIN

Water Availability as of 12/27/2016

Watershed ID #: 72078 [\(Map\)](#)

Date: 12/27/2016

[Download Data](#)

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Exceedance Level: 50%

Time: 2:18 PM

## Water Availability

Select any Watershed for Details

Nesting Order	Watershed ID #	Stream Name	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Sto
1	70246	MILL CR> COLUMBIA R- AT MOUTH	Yes	Yes	Yes	Yes	Yes	No	No	No	Yes	Yes	No	No	Yes
2	72078	S FK MILL CR> MILL CR- AT MOUTH	Yes	Yes	Yes	Yes	Yes	No	No	No	Yes	Yes	No	No	Yes

## Limiting Watersheds

Monthly Streamflow in Cubic Feet per Second  
Annual Volume at 50% Exceedance in Acre-Feet

Month	Limiting Watershed ID #	Stream Name	Water Available?	Net Water Available
JAN	70246	MILL CR > COLUMBIA R - AT MOUTH	Yes	4.12
FEB	72078	S FK MILL CR > MILL CR - AT MOUTH	Yes	15.30
MAR	72078	S FK MILL CR > MILL CR - AT MOUTH	Yes	15.00
APR	72078	S FK MILL CR > MILL CR - AT MOUTH	Yes	8.65
MAY	70246	MILL CR > COLUMBIA R - AT MOUTH	Yes	0.95
JUN	70246	MILL CR > COLUMBIA R - AT MOUTH	No	-7.56

JUL	70246	MILL CR > COLUMBIA R - AT MOUTH	No	-1.55
AUG	70246	MILL CR > COLUMBIA R - AT MOUTH	No	-2.59
SEP	72078	S FK MILL CR > MILL CR - AT MOUTH	Yes	1.56
OCT	72078	S FK MILL CR > MILL CR - AT MOUTH	Yes	1.03
NOV	70246	MILL CR > COLUMBIA R - AT MOUTH	No	-7.25
DEC	70246	MILL CR > COLUMBIA R - AT MOUTH	No	-2.04
ANN	72078	S FK MILL CR > MILL CR - AT MOUTH	Yes	2,760.00

### Detailed Reports for Watershed ID #70246

MILL CR > COLUMBIA R - AT MOUTH  
HOOD BASIN

Water Availability as of 12/27/2016

Watershed ID #: 70246 ([Map](#))  
Date: 12/27/2016

Exceedance Level: 50%  
Time: 2:18 PM

### Water Availability Calculation

Monthly Streamflow in Cubic Feet per Second  
Annual Volume at 50% Exceedance in Acre-Feet

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Month	Natural Stream Flow	Consumptive Uses and Storages	Expected Stream Flow	Reserved Stream Flow	Instream Flow Requirement	Net Water Available
JAN	25.80	6.68	19.10	0.00	15.00	4.12
FEB	61.00	17.50	43.50	0.00	15.00	28.50
MAR	65.10	17.50	47.60	0.00	15.00	32.60
APR	45.30	13.60	31.70	0.00	15.00	16.70
MAY	25.50	9.55	15.90	0.00	15.00	0.95
JUN	15.40	7.96	7.44	0.00	15.00	-7.56
JUL	12.60	4.15	8.45	0.00	10.00	-1.55
AUG	10.70	3.29	7.41	0.00	10.00	-2.59
SEP	9.72	3.27	6.45	0.00	4.00	2.45
OCT	8.43	3.28	5.15	0.00	4.00	1.15
NOV	10.30	2.55	7.75	0.00	15.00	-7.25
DEC	15.80	2.84	13.00	0.00	15.00	-2.04
ANN	18,300.00	5,520.00	12,800.00	0.00	8,920.00	5,120.00

## Detailed Report of Consumptive Uses and Storage

### Consumptive Uses and Storages in Cubic Feet per Second

Month	Storage	Irrigation	Municipal	Industrial	Commercial	Domestic	Agricultural	Other	Total
JAN	4.67	0.00	2.00	0.00	0.00	0.01	0.00	0.00	6.68
FEB	15.50	0.00	2.00	0.00	0.00	0.01	0.00	0.00	17.50
MAR	15.50	0.00	2.00	0.00	0.00	0.01	0.00	0.00	17.50
APR	9.33	2.26	2.00	0.00	0.00	0.01	0.00	0.00	13.60
MAY	1.33	6.21	2.00	0.00	0.00	0.01	0.00	0.00	9.55
JUN	0.81	5.14	2.00	0.00	0.00	0.01	0.00	0.00	7.96
JUL	0.66	1.48	2.00	0.00	0.00	0.01	0.00	0.00	4.15
AUG	0.56	0.72	2.00	0.00	0.00	0.01	0.00	0.00	3.29
SEP	0.51	0.75	2.00	0.00	0.00	0.01	0.00	0.00	3.27
OCT	1.27	0.00	2.00	0.00	0.00	0.01	0.00	0.00	3.28
NOV	0.54	0.00	2.00	0.00	0.00	0.01	0.00	0.00	2.55
DEC	0.83	0.00	2.00	0.00	0.00	0.01	0.00	0.00	2.84

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### Detailed Report of Reservations for Storage and Consumptive Uses

Reserved Streamflow in Cubic Feet per Second

No reservations were found for this watershed.

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### Detailed Report of Instream Flow Requirements

Instream Flow Requirements in Cubic Feet per Second

Application #	Status	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
MF194A	CERTIFICATE	15.00	15.00	15.00	15.00	15.00	15.00	10.00	10.00	4.00	4.00	15.00	15.00
IS70246A	CERTIFICATE	4.00	4.00	10.00	15.00	15.00	15.00	10.00	10.00	4.00	4.00	4.00	4.00
Maximum		15.00	15.00	15.00	15.00	15.00	15.00	10.00	10.00	4.00	4.00	15.00	15.00

### Detailed Reports for Watershed ID #72078

S FK MILL CR > MILL CR - AT MOUTH  
HOOD BASIN

Water Availability as of 12/27/2016

Watershed ID #: 72078 [\(Map\)](#)  
Date: 12/27/2016

Exceedance Level: 50%  
Time: 2:18 PM

### Water Availability Calculation

Monthly Streamflow in Cubic Feet per Second  
Annual Volume at 50% Exceedance in Acre-Feet

Month	Natural Stream Flow	Consumptive Uses and Storages	Expected Stream Flow	Reserved Stream Flow	Instream Flow Requirement	Net Water Available
JAN	16.20	4.53	11.70	0.00	7.00	4.67

FEB	37.40	15.10	22.30	0.00	7.00	15.30
MAR	40.00	15.00	25.00	0.00	10.00	15.00
APR	35.30	9.65	25.60	0.00	17.00	8.65
MAY	20.60	1.69	18.90	0.00	17.00	1.91
JUN	12.10	1.03	11.10	0.00	7.80	3.27
JUL	10.10	0.79	9.31	0.00	4.80	4.51
AUG	8.70	0.67	8.03	0.00	5.40	2.63
SEP	8.30	0.64	7.66	0.00	6.10	1.56
OCT	7.20	1.37	5.83	0.00	4.80	1.03
NOV	7.60	0.57	7.03	0.00	5.50	1.53
DEC	10.20	0.76	9.44	0.00	7.00	2.44
ANN	12,800.00	3,080.00	9,730.00	0.00	6,000.00	3,730.00

## Detailed Report of Consumptive Uses and Storage

Consumptive Uses and Storages in Cubic Feet per Second

Month	Storage	Irrigation	Municipal	Industrial	Commercial	Domestic	Agricultural	Other	Total
JAN	4.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.53
FEB	15.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.10
MAR	15.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.00
APR	9.59	0.06	0.00	0.00	0.00	0.00	0.00	0.00	9.65
MAY	1.54	0.15	0.00	0.00	0.00	0.00	0.00	0.00	1.69
JUN	0.90	0.13	0.00	0.00	0.00	0.00	0.00	0.00	1.03
JUL	0.75	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.79
AUG	0.65	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.67
SEP	0.62	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.64
OCT	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.37
NOV	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
DEC	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.76

## Detailed Report of Reservations for Storage and Consumptive Uses

Reserved Streamflow in Cubic Feet per Second

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No reservations were found for this watershed.

### Detailed Report of Instream Flow Requirements

Instream Flow Requirements in Cubic Feet per Second

Application #	Status	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
IS72078A	CERTIFICATE	7.00	7.00	10.00	17.00	17.00	7.80	4.80	5.40	6.10	4.80	5.50	7.00
Maximum		7.00	7.00	10.00	17.00	17.00	7.80	4.80	5.40	6.10	4.80	5.50	7.00

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