



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: East Fork Hood River Tributary to: Hood 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:

The East Fork Hood River, tributary to Hood River, beginning at river mile 0.0 in the NWNE quarter of Section 1, Township 1 N, Range 9 E W.M. in Hood River County (45.6053, -121.6333) and continuing upstream to river mile 6.2 in the SENW quarter of Section 28, Township 1 N, Range 10 E W.M. in Hood River County (45.5451, -121.5814).

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
180	210	210	210	210	210	150	150	175	175	180	180	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.**

ODFW relied on an IFIM/PHABSIM study to determine the requested amounts (Hood River Tributaries Instream Flow Study, Normandeau Associates 2014. 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 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 produced by this study to derive recommended flows in the East Fork Hood River. 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 the East Fork Hood River. 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 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.**

The methodology used in the study was IFIM/PHABSIM (Hood River Tributaries Instream Flow Study, Normandeau Associates 2014. 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 the East Fork Hood 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.

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:

Bovee, K.D., B.L. Lamb, J.M. Bartholow, C.B. Stalnaker, J. Taylor, and J. Henriksen. 1998. Stream habitat analysis using the Instream Flow Incremental Methodology. U.S. Geological Survey, Biological Resources Division Information and Technology Report USGS/BRD-1998- 0004. viii+131 pp. <https://www.fort.usgs.gov/publication/3910>

Bovee, K.D. 1997. Dave collection procedures for the Physical Habitat Simulation System. . U.S. Geological Survey, Biological Resources Division Information and Technology Draft Report USGS/BRD-1997- 146pp. <https://www.fort.usgs.gov/sites/default/files/products/publications/20002/20002.pdf>

Bovee, K.D. 1982. A guide to stream habitat analysis using the instream flow incremental methodology. Instream Flow Information Paper 12. U.S. Fish and Wildlife Service FWS/OBS-82/26. 248 pp. <http://www.arlis.org/docs/voll/Susitna/1/APA193.pdf>

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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 Middle Fork Irrigation District	Address 8235 Clear Creek Rd. PO Box 291	
City Parkdale	State OR	Zip 97041

Irrigation District Name Mt. Hood Irrigation District	Address PO Box 426	
City Parkdale	State OR	Zip 97041

**SECTION 8: REMARKS**

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

**SECTION 9: MAP**

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**YOU ARE ENCOURAGED TO PROVIDE THIS INFORMATION:**

A means and location for measuring the instream water right:

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

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

**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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# Water Availability Analysis

E FK HOOD R > HOOD R - AB M FK HOOD R  
 HOOD BASIN

Water Availability as of 12/27/2016

Watershed ID #: 189 ([Map](#))

Date: 12/27/2016

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Exceedance Level: 50%

Time: 11:22 AM

[Download Data](#)

## 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	192	HOOD R> COLUMBIA R- AT MOUTH	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	30410575	HOOD R> COLUMBIA R- AT RM 0.75	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	Yes	Yes	Yes
3	30410513	E FK HOOD R> HOOD R- AT MOUTH	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	Yes	Yes	Yes
4	189	E FK HOOD R> HOOD R- AB M FK HOOD R	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	No	Yes	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	189	E FK HOOD R > HOOD R - AB M FK HOOD R	Yes	81.70
FEB	189	E FK HOOD R > HOOD R - AB M FK HOOD R	Yes	97.10
MAR	189	E FK HOOD R > HOOD R - AB M FK HOOD R	Yes	82.80
APR	189	E FK HOOD R > HOOD R - AB M FK HOOD R	Yes	47.60

MAY	189	E FK HOOD R > HOOD R - AB M FK HOOD R	Yes	26.20
JUN	30410575	HOOD R > COLUMBIA R - AT RM 0.75	No	-29.70
JUL	30410575	HOOD R > COLUMBIA R - AT RM 0.75	No	-292.00
AUG	30410575	HOOD R > COLUMBIA R - AT RM 0.75	No	-430.00
SEP	30410575	HOOD R > COLUMBIA R - AT RM 0.75	No	-407.00
OCT	30410575	HOOD R > COLUMBIA R - AT RM 0.75	No	-295.00
NOV	189	E FK HOOD R > HOOD R - AB M FK HOOD R	No	-8.42
DEC	189	E FK HOOD R > HOOD R - AB M FK HOOD R	Yes	33.40
ANN	189	E FK HOOD R > HOOD R - AB M FK HOOD R	Yes	22,100.00

### Detailed Reports for Watershed ID #192

HOOD R > COLUMBIA R - AT MOUTH  
HOOD BASIN

Water Availability as of 12/27/2016

Watershed ID #: 192 ([Map](#))

Date: 12/27/2016

Exceedance Level: 50%

Time: 11:22 AM

### 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	1,260.00	74.30	1,190.00	184.00	170.00	832.00
FEB	1,380.00	77.40	1,300.00	205.00	270.00	828.00
MAR	1,300.00	76.60	1,220.00	183.00	270.00	771.00
APR	1,320.00	125.00	1,200.00	117.00	270.00	808.00
MAY	1,310.00	195.00	1,120.00	111.00	250.00	754.00
JUN	1,040.00	240.00	800.00	79.30	250.00	470.00
JUL	739.00	281.00	458.00	0.00	250.00	208.00
AUG	559.00	239.00	320.00	0.00	250.00	70.40
SEP	511.00	168.00	343.00	0.00	250.00	93.30
OCT	517.00	69.90	447.00	22.20	220.00	205.00
NOV	870.00	71.40	799.00	43.60	100.00	655.00
DEC	1,160.00	73.00	1,090.00	122.00	170.00	795.00
ANN	721,000.00	102,000.00	619,000.00	64,000.00	164,000.00	391,000.00

## 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	1.87	0.00	37.10	2.96	0.23	2.16	29.40	0.64	74.30
FEB	2.34	0.00	39.80	2.96	0.23	2.16	29.40	0.64	77.40
MAR	2.47	0.00	38.80	2.96	0.23	2.16	29.40	0.64	76.60
APR	2.27	48.80	38.30	2.96	0.06	2.16	29.40	0.64	125.00
MAY	0.12	114.00	45.20	2.96	0.06	2.16	29.40	0.64	195.00
JUN	0.09	157.00	48.10	2.96	0.06	2.16	29.40	0.64	240.00
JUL	0.06	205.00	40.30	2.96	0.06	2.16	29.40	0.64	281.00
AUG	0.05	167.00	36.50	2.96	0.06	2.16	29.40	0.64	239.00
SEP	0.04	96.80	35.60	2.96	0.06	2.16	29.40	0.64	168.00
OCT	0.05	0.15	34.50	2.96	0.06	2.16	29.40	0.64	69.90
NOV	1.33	0.00	34.90	2.96	0.06	2.16	29.40	0.64	71.40
DEC	1.74	0.00	36.10	2.96	0.06	2.16	29.40	0.64	73.00

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

Reserved Streamflow in Cubic Feet per Second

Application #	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
RN80401A	39.50	43.00	36.00	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	31.60
RN80402A	130.00	136.00	122.00	104.00	111.00	79.30	0.00	0.00	0.00	22.20	41.60	86.10
RN80403A	14.80	25.50	24.30	13.00	0.00	0.00	0.00	0.00	0.00	0.00	2.01	4.44
<b>Total</b>	<b>184.30</b>	<b>204.50</b>	<b>182.30</b>	<b>117.18</b>	<b>111.00</b>	<b>79.30</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>22.20</b>	<b>43.61</b>	<b>122.14</b>

### 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
MF191A	CERTIFICATE	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00
MF192A	CERTIFICATE	170.00	270.00	270.00	270.00	170.00	170.00	130.00	100.00	100.00	100.00	100.00	170.00
IS83969A	CERTIFICATE	0.00	0.00	0.00	0.00	250.00	250.00	250.00	250.00	250.00	220.00	0.00	0.00
<b>Maximum</b>		<b>170.00</b>	<b>270.00</b>	<b>270.00</b>	<b>270.00</b>	<b>250.00</b>	<b>250.00</b>	<b>250.00</b>	<b>250.00</b>	<b>250.00</b>	<b>220.00</b>	<b>100.00</b>	<b>170.00</b>

### Detailed Reports for Watershed ID #30410575

HOOD R > COLUMBIA R - AT RM 0.75  
HOOD BASIN

Water Availability as of 12/27/2016

Watershed ID #: 30410575 ([Map](#))

Date: 12/27/2016

Exceedance Level: 50%

Time: 11:22 AM

### 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	1,260.00	574.00	686.00	184.00	170.00	332.00
FEB	1,380.00	577.00	803.00	205.00	270.00	328.00
MAR	1,300.00	577.00	723.00	183.00	270.00	271.00
APR	1,320.00	625.00	695.00	117.00	270.00	308.00
MAY	1,310.00	695.00	615.00	111.00	250.00	254.00
JUN	1,040.00	740.00	300.00	79.30	250.00	-29.70
JUL	739.00	781.00	-42.00	0.00	250.00	-292.00
AUG	559.00	739.00	-180.00	0.00	250.00	-430.00
SEP	511.00	668.00	-157.00	0.00	250.00	-407.00
OCT	517.00	570.00	-52.90	22.20	220.00	-295.00
NOV	870.00	571.00	299.00	43.60	100.00	155.00
DEC	1,160.00	573.00	587.00	122.00	170.00	295.00
ANN	721,000.00	464,000.00	283,000.00	64,000.00	164,000.00	117,000.00

## 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	1.84	0.00	37.10	2.96	0.23	2.16	29.40	501.00	574.00
FEB	2.30	0.00	39.80	2.96	0.23	2.16	29.40	501.00	577.00
MAR	2.44	0.00	38.80	2.96	0.23	2.16	29.40	501.00	577.00
APR	2.27	48.80	38.30	2.96	0.06	2.16	29.40	501.00	625.00
MAY	0.12	114.00	45.20	2.96	0.06	2.16	29.40	501.00	695.00
JUN	0.09	157.00	48.10	2.96	0.06	2.16	29.40	501.00	740.00
JUL	0.06	205.00	40.30	2.96	0.06	2.16	29.40	501.00	781.00
AUG	0.05	167.00	36.50	2.96	0.06	2.16	29.40	501.00	739.00
SEP	0.04	96.80	35.60	2.96	0.06	2.16	29.40	501.00	668.00
OCT	0.04	0.15	34.50	2.96	0.06	2.16	29.40	501.00	570.00
NOV	1.30	0.00	34.90	2.96	0.06	2.16	29.40	501.00	571.00
DEC	1.71	0.00	36.10	2.96	0.06	2.16	29.40	501.00	573.00

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## Detailed Report of Reservations for Storage and Consumptive Uses

Reserved Streamflow in Cubic Feet per Second

Application #	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
RN80401A	39.50	43.00	36.00	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	31.60
RN80402A	130.00	136.00	122.00	104.00	111.00	79.30	0.00	0.00	0.00	22.20	41.60	86.10
RN80403A	14.80	25.50	24.30	13.00	0.00	0.00	0.00	0.00	0.00	0.00	2.01	4.44
<b>Total</b>	<b>184.30</b>	<b>204.50</b>	<b>182.30</b>	<b>117.18</b>	<b>111.00</b>	<b>79.30</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>22.20</b>	<b>43.61</b>	<b>122.14</b>

## 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
MF191B	CERTIFICATE	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00
MF192B	CERTIFICATE	170.00	270.00	270.00	270.00	170.00	170.00	130.00	100.00	100.00	100.00	100.00	170.00
IS83969B	CERTIFICATE	0.00	0.00	0.00	0.00	250.00	250.00	250.00	250.00	250.00	220.00	0.00	0.00
<b>Maximum</b>		<b>170.00</b>	<b>270.00</b>	<b>270.00</b>	<b>270.00</b>	<b>250.00</b>	<b>250.00</b>	<b>250.00</b>	<b>250.00</b>	<b>250.00</b>	<b>220.00</b>	<b>100.00</b>	<b>170.00</b>

## Detailed Reports for Watershed ID #30410513

E FK HOOD R > HOOD R - AT MOUTH  
HOOD BASIN

Water Availability as of 12/27/2016

Watershed ID #: 30410513 ([Map](#))  
Date: 12/27/2016

Exceedance Level: 50%  
Time: 11:22 AM

### 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	599.00	18.50	581.00	130.00	0.00	451.00
FEB	630.00	22.30	608.00	136.00	0.00	471.00
MAR	581.00	39.70	541.00	122.00	0.00	419.00
APR	580.00	74.10	506.00	104.00	0.00	402.00
MAY	655.00	137.00	518.00	111.00	0.00	407.00
JUN	626.00	194.00	432.00	79.30	0.00	353.00
JUL	490.00	216.00	274.00	0.00	0.00	274.00
AUG	372.00	194.00	178.00	0.00	0.00	178.00
SEP	331.00	137.00	194.00	0.00	0.00	194.00
OCT	314.00	64.70	249.00	22.20	0.00	227.00
NOV	391.00	22.60	368.00	41.60	0.00	327.00
DEC	535.00	17.30	518.00	86.10	0.00	432.00
ANN	368,000.00	69,000.00	299,000.00	50,000.00	0.00	249,000.00

## 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	0.13	0.00	12.00	2.67	0.22	1.46	1.84	0.14	18.50
FEB	0.13	1.13	14.70	2.67	0.22	1.46	1.84	0.14	22.30
MAR	0.11	19.50	13.70	2.67	0.22	1.46	1.84	0.14	39.70
APR	0.11	54.60	13.20	2.67	0.05	1.46	1.84	0.14	74.10
MAY	0.08	111.00	20.10	2.67	0.05	1.46	1.84	0.14	137.00
JUN	0.07	164.00	23.10	2.67	0.05	1.46	1.84	0.14	194.00
JUL	0.05	195.00	15.30	2.67	0.05	1.46	1.84	0.14	216.00
AUG	0.04	177.00	11.50	2.67	0.05	1.46	1.84	0.14	194.00
SEP	0.04	121.00	10.60	2.67	0.05	1.46	1.84	0.14	137.00
OCT	0.04	49.10	9.48	2.67	0.05	1.46	1.84	0.14	64.70
NOV	0.06	6.59	9.83	2.67	0.05	1.46	1.84	0.14	22.60
DEC	0.10	0.00	11.00	2.67	0.05	1.46	1.84	0.14	17.30

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

Reserved Streamflow in Cubic Feet per Second

Application #	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
RN80402A	130.00	136.00	122.00	104.00	111.00	79.30	0.00	0.00	0.00	22.20	41.60	86.10
<b>Total</b>	<b>130.00</b>	<b>136.00</b>	<b>122.00</b>	<b>104.00</b>	<b>111.00</b>	<b>79.30</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>22.20</b>	<b>41.60</b>	<b>86.10</b>

### Detailed Report of Instream Flow Requirements

Instream Flow Requirements in Cubic Feet per Second

No instream flow requirements were found for this watershed.

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### Detailed Reports for Watershed ID #189

E FK HOOD R > HOOD R - AB M FK HOOD R  
HOOD BASIN

Water Availability as of 12/27/2016

Watershed ID #: 189 [\(Map\)](#)  
Date: 12/27/2016

Exceedance Level: 50%  
Time: 11:22 AM

### 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	325.00	13.70	311.00	130.00	100.00	81.70
FEB	351.00	17.50	333.00	136.00	100.00	97.10

MAR	340.00	34.90	305.00	122.00	100.00	82.80
APR	359.00	57.50	302.00	104.00	150.00	47.60
MAY	392.00	105.00	287.00	111.00	150.00	26.20
JUN	367.00	151.00	216.00	79.30	150.00	-13.20
JUL	272.00	161.00	111.00	0.00	100.00	10.50
AUG	197.00	149.00	47.80	0.00	100.00	-52.20
SEP	169.00	109.00	59.90	0.00	100.00	-40.10
OCT	160.00	60.00	100.00	22.20	150.00	-72.20
NOV	201.00	17.80	183.00	41.60	150.00	-8.42
DEC	282.00	12.50	270.00	86.10	150.00	33.40
ANN	206,000.00	53,900.00	152,000.00	50,000.00	90,600.00	22,700.00

## 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	0.08	0.00	9.03	2.42	0.22	1.08	0.83	0.00	13.70
FEB	0.10	1.13	11.70	2.42	0.22	1.08	0.83	0.00	17.50
MAR	0.10	19.50	10.70	2.42	0.22	1.08	0.83	0.00	34.90
APR	0.08	42.80	10.20	2.42	0.05	1.08	0.83	0.00	57.50
MAY	0.09	83.00	17.10	2.42	0.05	1.08	0.83	0.00	105.00
JUN	0.07	126.00	20.10	2.42	0.05	1.08	0.83	0.00	151.00
JUL	0.05	145.00	12.30	2.42	0.05	1.08	0.83	0.00	161.00
AUG	0.04	136.00	8.47	2.42	0.05	1.08	0.83	0.00	149.00
SEP	0.03	97.10	7.57	2.42	0.05	1.08	0.83	0.00	109.00
OCT	0.03	49.10	6.48	2.42	0.05	1.08	0.83	0.00	60.00
NOV	0.04	6.59	6.83	2.42	0.05	1.08	0.83	0.00	17.80
DEC	0.07	0.00	8.03	2.42	0.05	1.08	0.83	0.00	12.50

## Detailed Report of Reservations for Storage and Consumptive Uses

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Application #	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
RN80402A	130.00	136.00	122.00	104.00	111.00	79.30	0.00	0.00	0.00	22.20	41.60	86.10
<b>Total</b>	<b>130.00</b>	<b>136.00</b>	<b>122.00</b>	<b>104.00</b>	<b>111.00</b>	<b>79.30</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>22.20</b>	<b>41.60</b>	<b>86.10</b>

### 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
MF189A	CERTIFICATE	100.00	100.00	100.00	150.00	150.00	150.00	100.00	100.00	100.00	150.00	150.00	150.00
<b>Maximum</b>		<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>150.00</b>	<b>150.00</b>	<b>150.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>150.00</b>	<b>150.00</b>	<b>150.00</b>

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# Oregon Water Resources Department Attribute Report

Report Date: Dec 27, 2016

**General:**

TRSQQ:	WM1.00N10.00E28SE WM1.00N10.00E28NE WM1.00N10.00E28NW WM1.00N10.00E28SW WM1.00N10.00E28SE WM1.00N10.00E28NW WM1.00N10.00E28NE
DLC:	-
Latitude:	45.5450040884
Longitude:	-121.5813674683
Buffer (ft):	1320
Elevation (ft):	1417
Basin Name:	Hood
Basin Plan:	1-Hood River
County:	Hood River
WM District:	3
WM Region:	NORTH CENTRAL
ODFW Region, District:	High Desert, Mid-Columbia District
Irrigation District AOI:	MIDDLE FORK IRRIGATION DISTRICT
Irrigation District, Other:	
Dams (Permit):	-

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Water Rights:	<u>Platcard for WM1.00N10.00E28</u> <u>Platcard for WM1.00N10.00E28</u> <u>Platcard for WM1.00N10.00E28</u> <u>Platcard for WM1.00N10.00E28</u> <u>Platcard for WM1.00N10.00E28</u> <u>Platcard for WM1.00N10.00E28</u> <u>Platcard for WM1.00N10.00E28</u>
Well Logs:	<u>Logs for WM1.00N10.00E28</u> <u>Logs for WM1.00N10.00E28</u> <u>Logs for WM1.00N10.00E28</u> <u>Logs for WM1.00N10.00E28</u> <u>Logs for WM1.00N10.00E28</u> <u>Logs for WM1.00N10.00E28</u> <u>Logs for WM1.00N10.00E28</u>

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**Rules:**

Withdrawn Authority:	-
Groundwater Retricted:	-
GW Retricted Subunit:	-
GW ODEQ Management Area:	-
GW Umatilla Muni Wells (5mile):	-
Rule 4D:	Rules apply
Division 33 (Area, Watershed, species):	UPPER COLUMBIA, <i>East Fork Hood River</i> , Bull Trout, Coho Salmon, Redband Trout, Coastal Cutthroat Trout, Chinook Salmon, Steelhead
Water Quality Limited Pollutant:	<b>East Fork Hood River</b> R. Mile: 0 to 9.8 HUC4: 17070105 Pollutant: Flow Modification Season: NaN Uses: Resident fish and aquatic life; Salmonid fish rearing;

Salmonid fish spawning  
 Status: Water quality limited not needing a TMDL  
 Action: No 2010 action

**East Fork Hood River**  
 R. Mile: 0 to 27.4  
 HUC4: 17070105  
 Pollutant: Copper  
 Season: NaN  
 Uses: Aquatic life  
 Status: Cat 5: Water quality limited, 303(d) list, TMDL needed  
 Action: No 2010 action

**East Fork Hood River**  
 R. Mile: 0 to 27.4  
 HUC4: 17070105  
 Pollutant: Iron  
 Season: NaN  
 Uses: Aquatic life; Human health  
 Status: Cat 5: Water quality limited, 303(d) list, TMDL needed  
 Action: No 2010 action

**East Fork Hood River**  
 R. Mile: 0 to 27.4  
 HUC4: 17070105  
 Pollutant: Thallium  
 Season: NaN  
 Uses: Human health  
 Status: Cat 5: Water quality limited, 303(d) list, TMDL needed  
 Action: Status modification - EPA addition to 303(d) list

**East Fork Hood River**  
 R. Mile: 0 to 9.8  
 HUC4: 17070105  
 Pollutant: Temperature  
 Season: NaN  
 Uses: Salmonid fish rearing; Anadromous fish passage

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Status: TMDL approved Action: No 2010 action
<b>East Fork Hood River</b> R. Mile: 0 to 27.4 HUC4: 17070105 Pollutant: Beryllium Season: NaN Uses: Human health Status: Cat 5: Water quality limited, 303(d) list, TMDL needed Action: No 2010 action
<b>East Fork Hood River</b> R. Mile: 0 to 27.4 HUC4: 17070105 Pollutant: Biological Criteria Season: NaN Uses: Aquatic life Status: Cat 5: Water quality limited, 303(d) list, TMDL needed Action: Status modification - EPA addition to 303(d) list
<b>East Fork Hood River</b> R. Mile: 0 to 9.8 HUC4: 17070105 Pollutant: Habitat Modification Season: NaN Uses: Salmonid fish spawning; Resident fish and aquatic life; Salmonid fish rearing Status: Water quality limited not needing a TMDL Action: No 2010 action

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Is in Deschutes Study Area: —	-
Deschutes Zone Impact:	-
Deschutes Zone Overlay:	-
Scenic Water Way:	-

**Hydrography:**

OWRD Streamcode:	0417400150 - E Fk Hood R
	04174001500075 - Unn Str
	04174001500070 - Unn Str
Waterbody Name:	-
HUC 10:	1707010505
HUC Watershed:	East Fork Hood River
WAB Wshed Order:	6
WAB Analysis:	E FK HOOD R > HOOD R - AB M FK HOOD R
Streamflow:	OWRD Opportunities: Good ODFW Needs: Highest Combined Priority: Current resources priority
Gaging Station Data:	-

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

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

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

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

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

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

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

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

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

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

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