

# Lower Snake River Compensation Plan Infrastructure



Nate Wiese, LSRCP



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# Columbia Basin Restoration Initiative

- “\$200M over 10 years in additional capital funding will be made available by Bonneville to the U.S. Fish and Wildlife Service (FWS) for Lower Snake River Compensation Plan (LSRCP) hatchery modernization, upgrades, and maintenance, as guided by the priorities of other fishery managers including the Six Sovereigns.”



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# RDC Update

- \$25M over five years (2023-2028)
- \$8.7M obligated (\$3.6M expended) in FY23
- \$16.3M planned for obligation in FY24/FY25
- \$1M In-house hatchery projects (ODFW, IDFG, WDFW) in FY23-24



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# LSRCP RDC Completitions

<u>Facility</u>	<u>Purchase Order Description</u>	<u>Obligation Amount</u>
Clearwater	Clearwater Pipeline leak Assessment	\$ 176,426
Clearwater	Clearwater Roof Project	\$ 613,796
Dworshak	Dworshak Flow Meter, Forklift, Chiller	\$ 133,500
IDFG	IDFG In-house Maintenance Projects	\$ 490,000
Irrigon	Irrigon Raceway Valves	\$ 275,174
Lookingglass	Lookingglass Intake Design	\$ 257,703
Lookingglass	Lookingglass Quarters roofing	\$ 501,167
Lookingglass	Lookingglass New Chiller	\$ 931,100
LSRCP	LSRCP/Fisheries Program Support	\$ 96,780
Lyons Ferry	Dayton Dam Repair	\$ 1,264,251
Lyons Ferry	Lyons Ferry Marmes Check Valves	\$ 1,185,085
McCall	McCall Adult Holding Shade Structure	\$ 552,802
McCall	MCCALL FISH HATCHERY SETTLING POND DREDG	\$ 170,000
ODFW	ODFW In-house Maintenance Projects	\$ 359,780
Sawtooth	Sawtooth Well Rehab	\$ 373,903
Sawtooth	Sawtooth Back-up Generator	\$ 170,905
Sawtooth	Sawtooth Early Rearing Vats	\$ 178,342
Tucannon	Tucannon Siding Replacement	\$ 325,000
Wallowa	Wallowa Bridges	\$ 397,060
WDFW	WDFW In-house Maintenance Projects	\$ 153,217
Yankee Fork	Yankee Fork Resistance Board Weir	\$ 100,000



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# Dayton Dam



- \$1.26M



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# McCall

- New Adult Holding Ponds
- Address NPDES compliance



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# Clearwater

- New Feed Building roof
- Pipeline repairs
- New feed system in 2025



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# Sawtooth

- Additional Incubators
- New housing roofs
- Scour hole fill-in
- New Hatchery tanks



August 2021



August 2024



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# Hagerman/Magic Valley

- New Asphalt  
- \$2.6M



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# Yankee Fork

- Resistance Board Weir
- Acclimation scoping



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# Other Stuff

- Crystal Springs Hatchery



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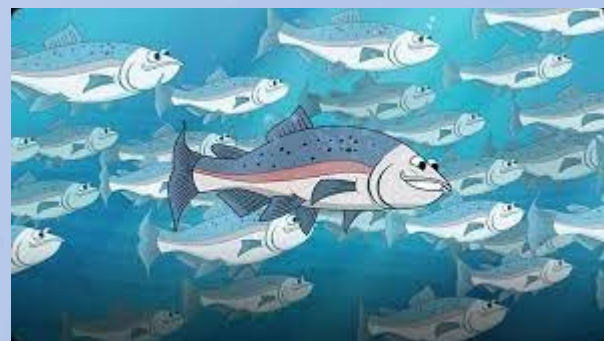


# LSRCP DM List

- Annual budget of \$2M and \$430M of dreams
  - A lot of dreams and a few priorities
  - Now we have a lot of prioritizing and refining to do



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# 2025 Project Engineering List

Award FY	Facility	Description	Cost Estimate	Last Date to Submit PPR	PM
2025	MCCALL	Epoxy adult ponds	\$350,000	11/19/2024	Spruell
2025	HAGERMAN	Replace Truck Fill Chiller	\$125,000	1/30/2025	Behrens
2025	IRRIGON	Irrigon - Replace Truck Fill Chiller	\$150,000	3/3/2025	Paulson
2025	SAWTOOTH	Expansion Scoping and Alternative Analysis	\$300,000	5/20/2025	Paulson
2025	IMNAHA	Imnaha - New Generator 40kw and ATS	\$40,000	7/1/2025	Behrens
2025	MCCALL	NPDES issues scoping	\$150,000	7/1/2025	Paulson
2025	SAWTOOTH	Domestic water system overhaul	\$200,000	7/1/2025	Paulson
2025	WALLOWA	Repair fish ladder and outflow structure	\$100,000	7/1/2025	Starr/Realty
2025	YANKEE FORK	Acclimation Scoping and Alternative Analysis	\$150,000	7/1/2025	Paulson
2025	SAWTOOTH	NOAA compliance Planning and Permitting	\$450,000	5/20/2025	Paulson
2025	SAWTOOTH	Dredge work above the weir, include permitting.	\$150,000	3/3/2025	Paulson
2025	IRRIGON	Shade Cover 35% Design	\$100,000	7/1/2025	Behrens
2025	LYONS FERRY	Lyons Ferry - North & South Side Generators and ATS	\$600,000	5/20/2025	Behrens
2025	SAWTOOTH	Predator Exclusion/Shade Cover Design	\$250,000	5/20/2025	Paulson
2025	TUCANNON	Replace 250 kw generator	\$300,000	5/20/2025	Paulson
2025	HAGERMAN	Seismic safety for Maint Shop Bldg	\$75,000	7/1/2025	Behrens
2025	LOOKINGGLASS	Expansion Scoping and Alternative Analysis	\$150,000	7/1/2025	Paulson
2025	MCCALL	Replace Back-up Generator and ATS	\$80,000	7/1/2025	Behrens
2025	MAGIC VALLEY	Rebuild Alternative Analysis and 35% Design	\$369,000	5/20/2025	Paulson
2025	MCCALL	Adult Holding Visitor/Staff Areas	\$500,000	5/20/2025	Paulson
2025	CLEARWATER	Clearwater/Dworshak Expansion Scoping	\$500,000		NA Paulson



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# What's Next?

- Funding signatures from BPA
- Execute engineering planning in 2025 and scoping of Upper Salmon Options, Magic Valley Rebuild, and Clearwater Pipeline
- Continue prioritizing and refining needs while dealing with day to day maintenance needs



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# LSRCP Asset Management Recommendation Team

- Lead – Chris Starr LSRCP
- NPT – Becky Johnson (alt Jeremy Sommer)
- USFWS – Chris Foster (Dworshak NFH)
- ODFW – Andrew Gibbs
- IDFG – Cassie Sundquist
- WDFW – Ace Trump
- CTUIR – Jen Krajcik
- SBT – Josh Jackson



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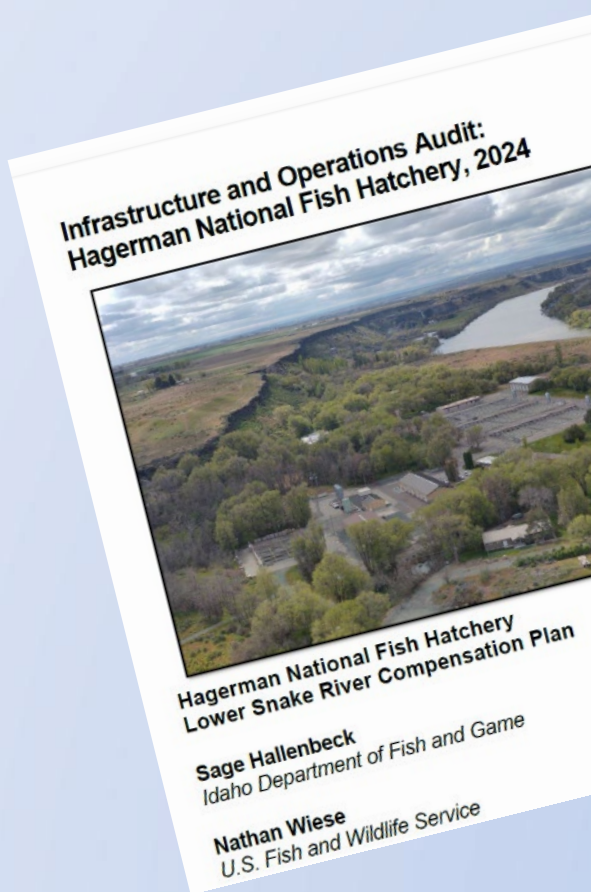
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# Lower Snake River Compensation Plan Infrastructure Audits



## Infrastructure and Operations Audit: Irrigon Fish Hatchery 2024



Irrigon Fish Hatchery  
Lower Snake River Compensation Plan

Keenan Schmidt  
Oregon Department of Fish and Wildlife

Chris Starr  
U.S. Fish and Wildlife Service



Nate Wiese, LSRCP



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# Goal of Infrastructure Audits

- To review current hatchery practices
- To review existing infrastructure (concrete) –  
What could we produce?
- To identify strategies which address  
hindrances to achieving adult return goals.
- To identify additional opportunities
  - Operations
  - Infrastructure
  - Program changes



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# Goal of Infrastructure Audits

- What didn't we do?
  - The audits didn't directly address deferred maintenance or capital needs



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# LSRCP Steelhead Performance

Facility	Smolts (2024 Goals)	Adult Goal	BY07-20 Mean SAR	Expected Adults	Difference from Goal	
Clearwater	843,000	14,000	0.94%	7,924	-6,076	↓
Hagerman	1,560,000	13,600	0.92%	14,282	682	↑
Magic Valley (A-Run)	868,000	6,530	1.18%	10,242	3,713	↑
Magic Valley (USR-B)	682,000	5,130	0.33%	2,251	-2,880	↓
Irrigon	1,015,000	11,184	0.96%	9,778	-1,407	↓
Lyons Ferry	585,000	4,656	1.23%	7,224	2,568	↑
	<b>5,553,000</b>	<b>55,100</b>	<b>0.93%</b>	<b>51,701</b>	<b>-3,399</b>	



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# Dworshak Steelhead Goals (ACOE)

Basin	Facility	Smolts (2024 Goals)	Adult Goal
Clearwater	Dworshak	2,100,000	19,000



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# Steelhead Adults/Trapped Adult BY2007-2020

Facility	Adults Returned per Trapped Adult
Clearwater	22
Hagerman	20
Magic Valley	23
Irrigon	19
Lyons Ferry	25
Average	22



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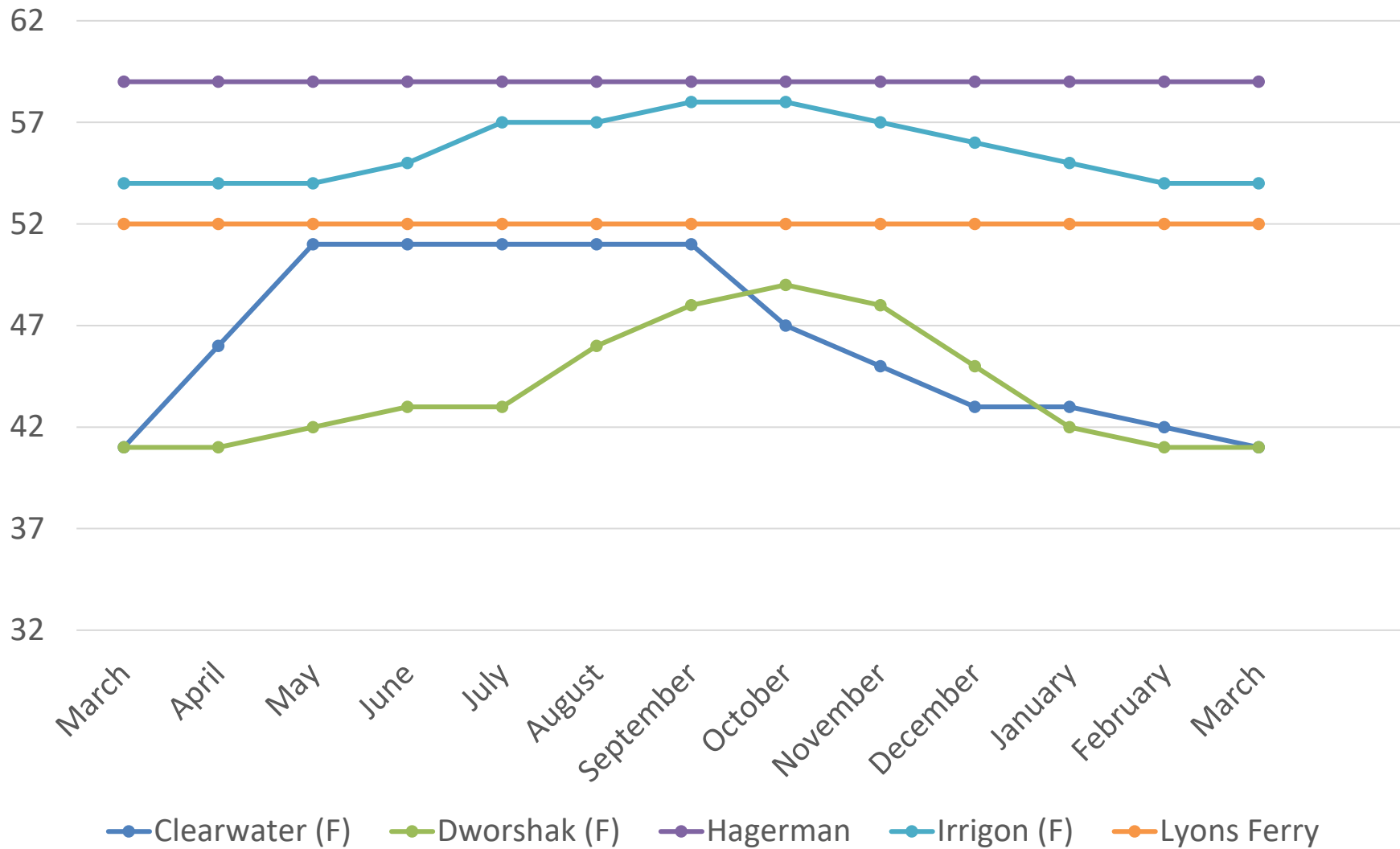
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## Steelhead Rearing Temperatures

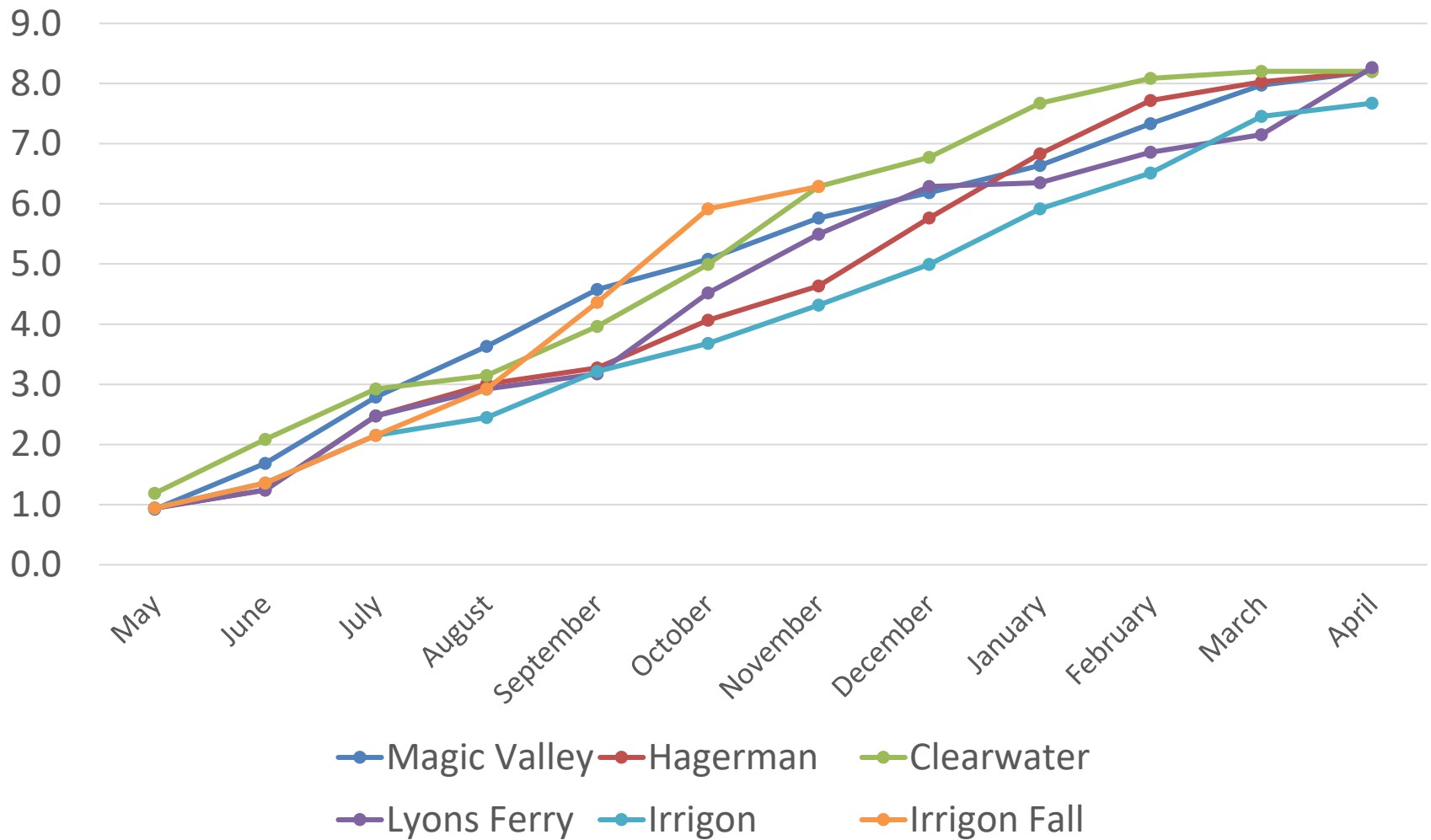


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# Steelhead Growth per Month (Inches)



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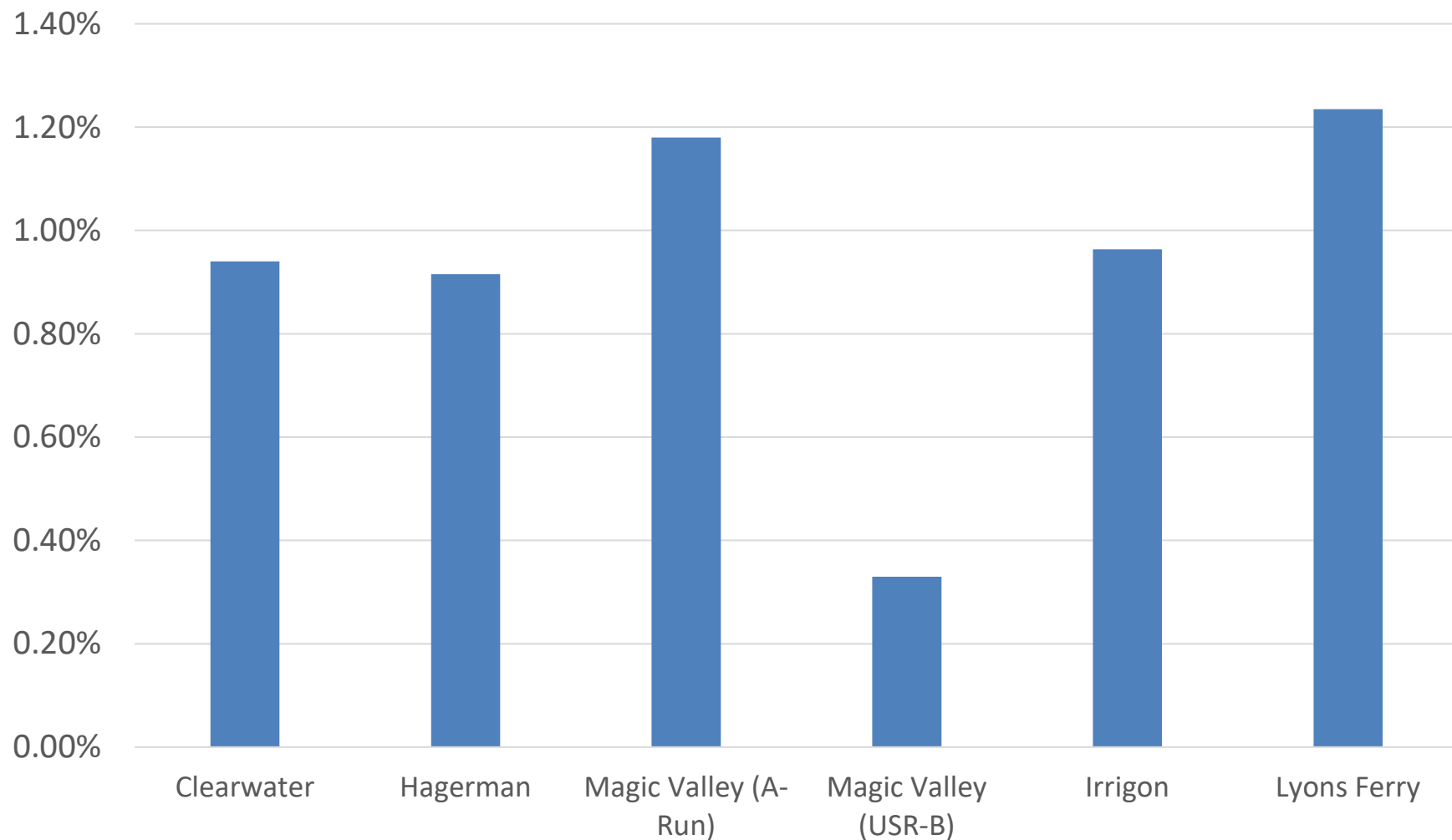


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# Steelhead SAR



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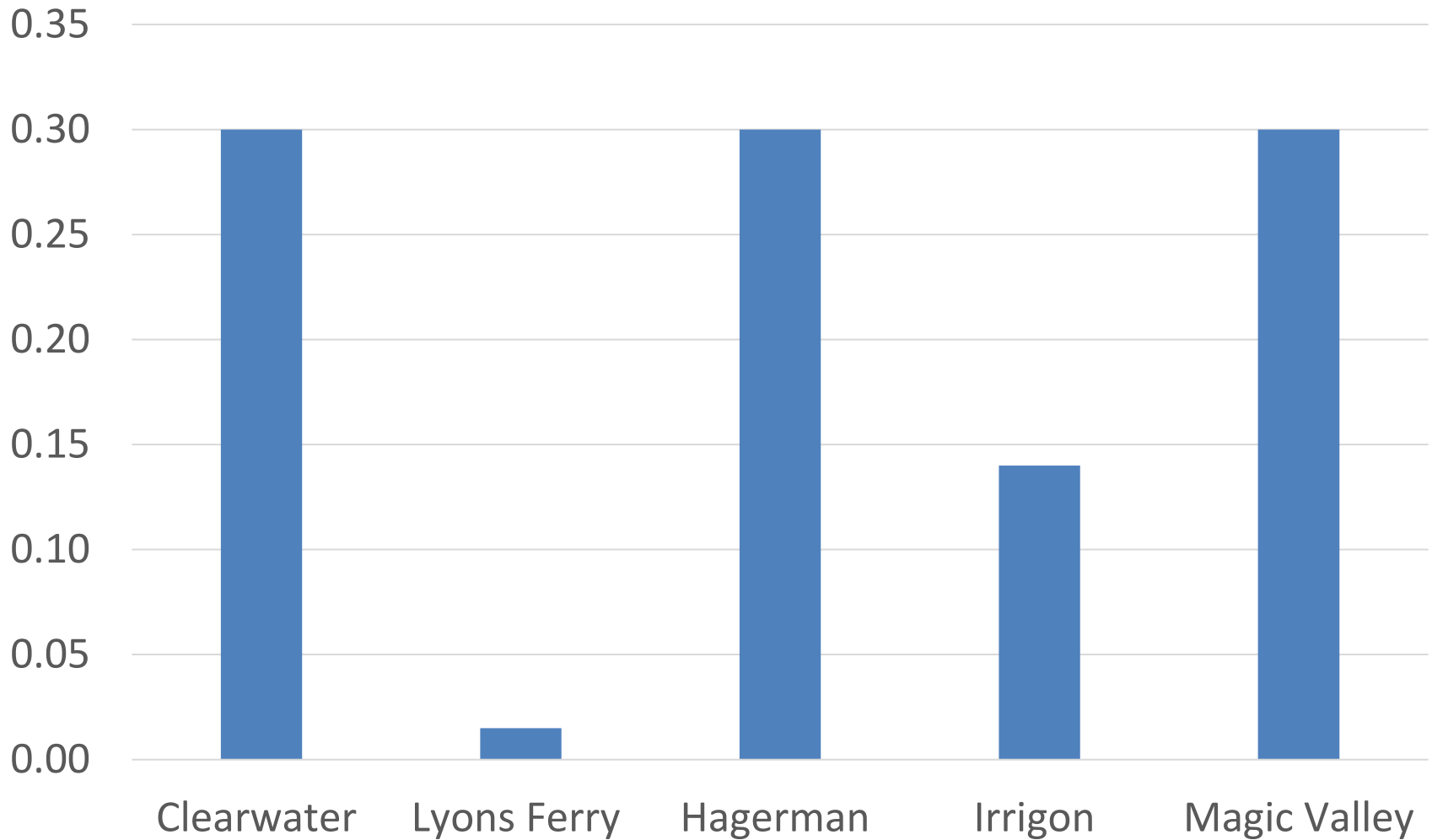
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## Density Index



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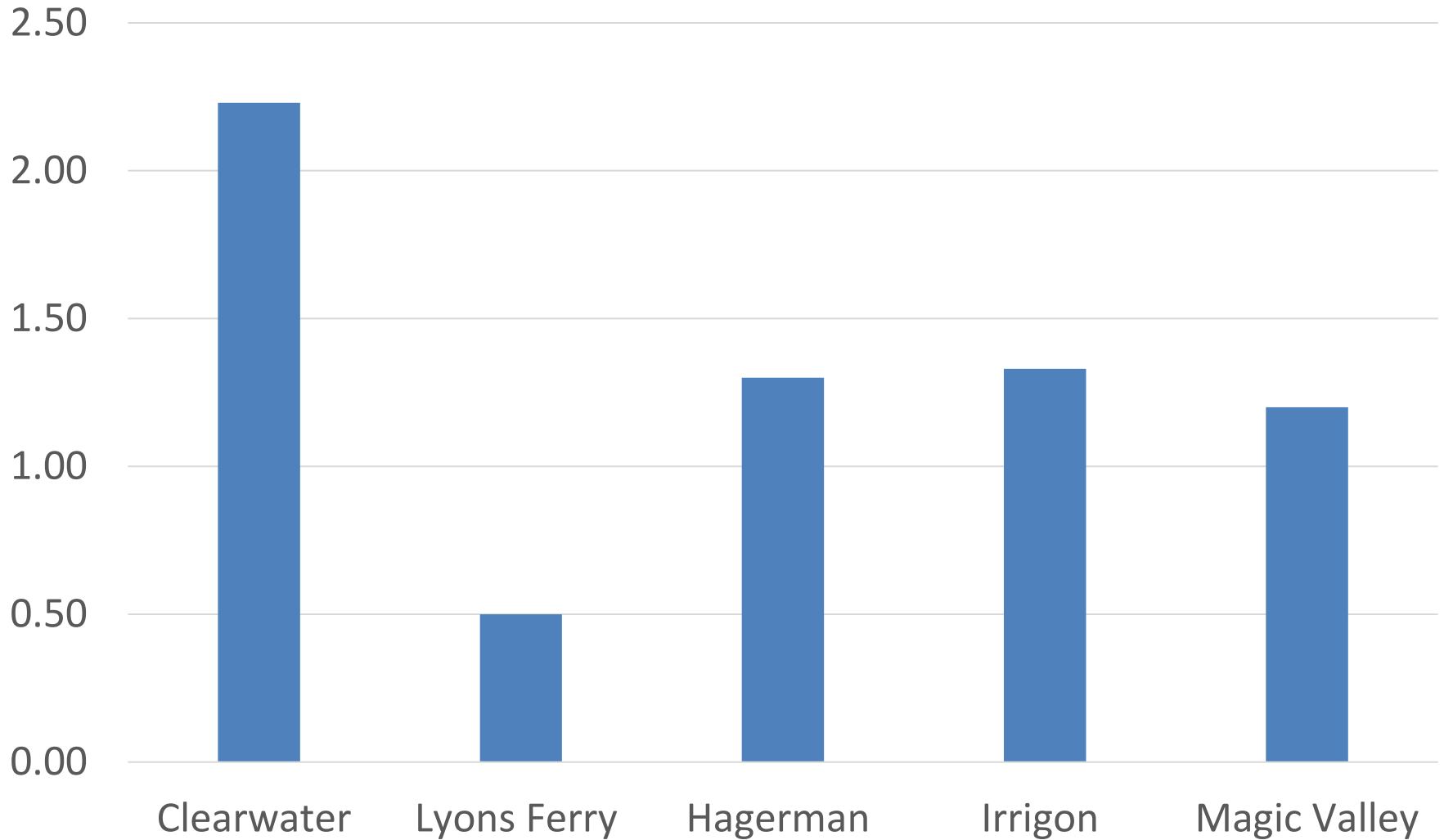
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## Flow Index



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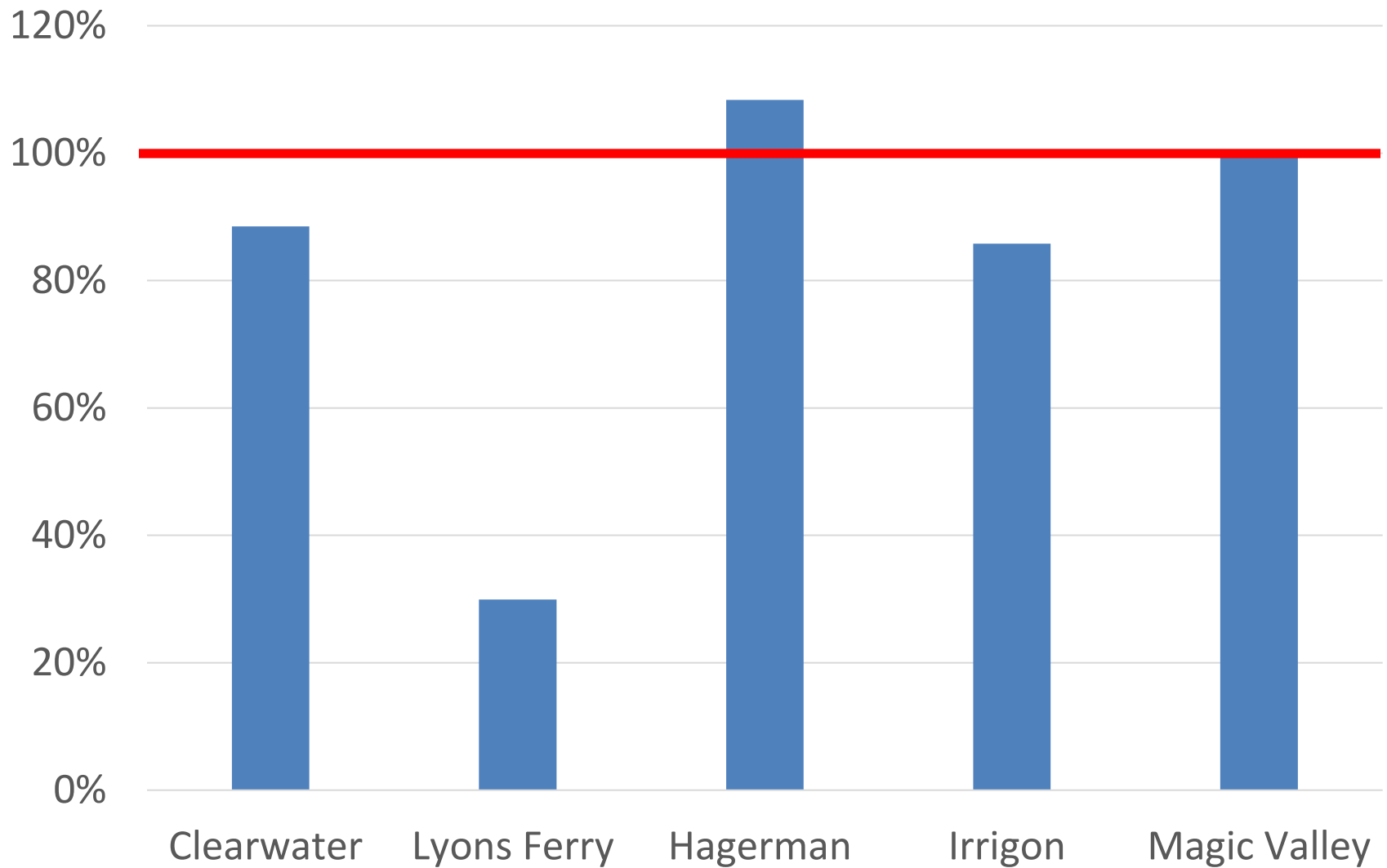
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## % FI Max



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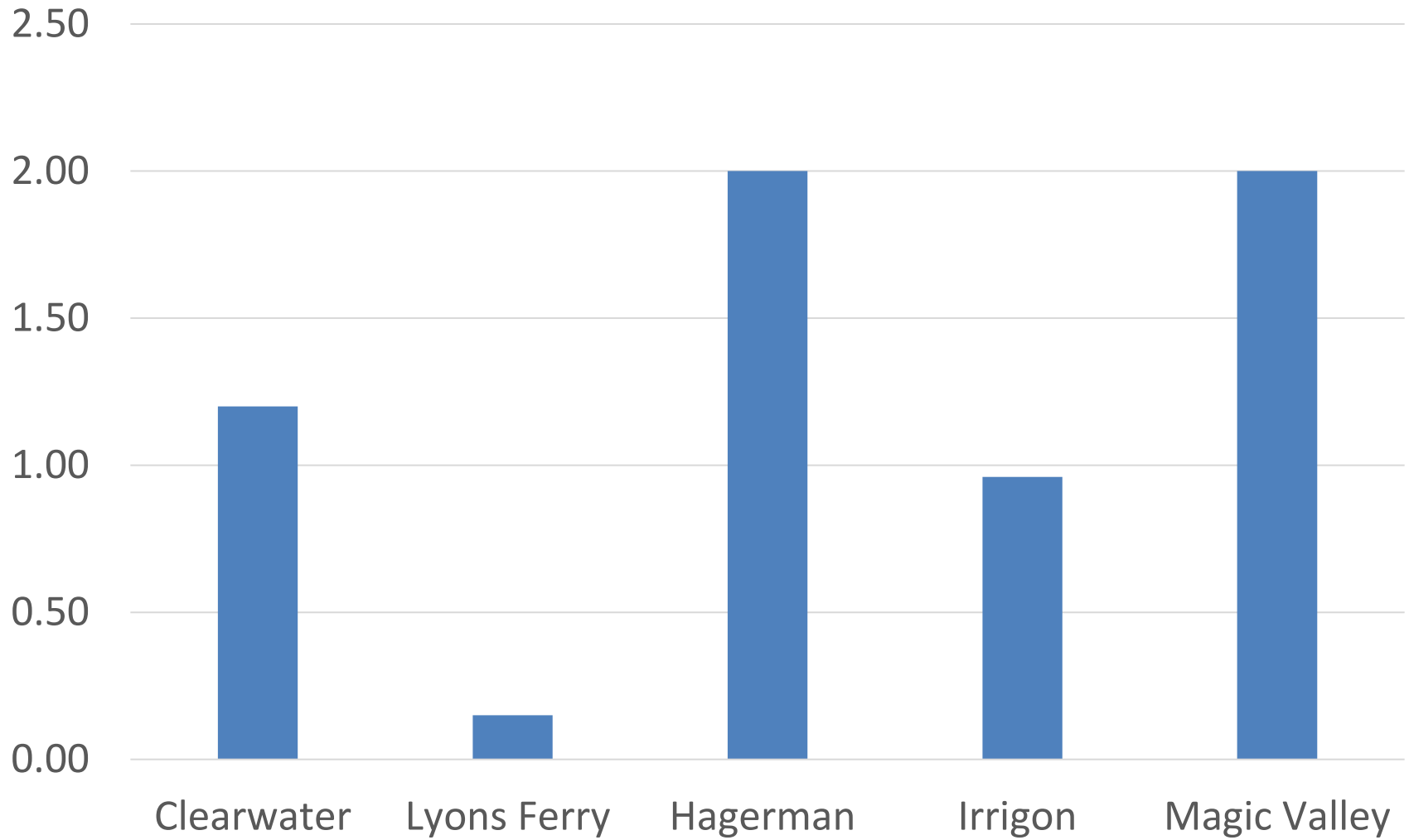
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## Turnover



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# Challenges

- IHN mitigation
- Meeting 4.5 fpp size target at Lyons Ferry, Wallowa, and Clearwater
- Lyons Ferry Rearing Lakes
- Water availability at Hagerman (PRAS), Magic, Clearwater, and Irrigon
- Release logistics of 1.2 million pounds of fish – 250+ trucking trips annually



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# Opportunities

- Magic Valley Rebuild
- Irrigon Water pumpback and LHO's
- Lyons Ferry Lake Expansions
- Clearwater Pipeline
- Wallowa Incubation Expansion
- Shade Structures/Solar
- Hagerman/Magic Valley Acclimation



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# Opportunities

- Hagerman/Magic Valley Acclimation
  - Both facilities produce roughly 1.5M smolts
  - January acclimation transfer of 500K @5 fpp (7.9")
  - Rear remaining 1M fish while maintaining water quality and rearing density below maximum values. Maintaining an FI below 1.3 with 50 cfs.
    - Magic Valley – currently 70 cfs
    - Hagerman – 52 cfs



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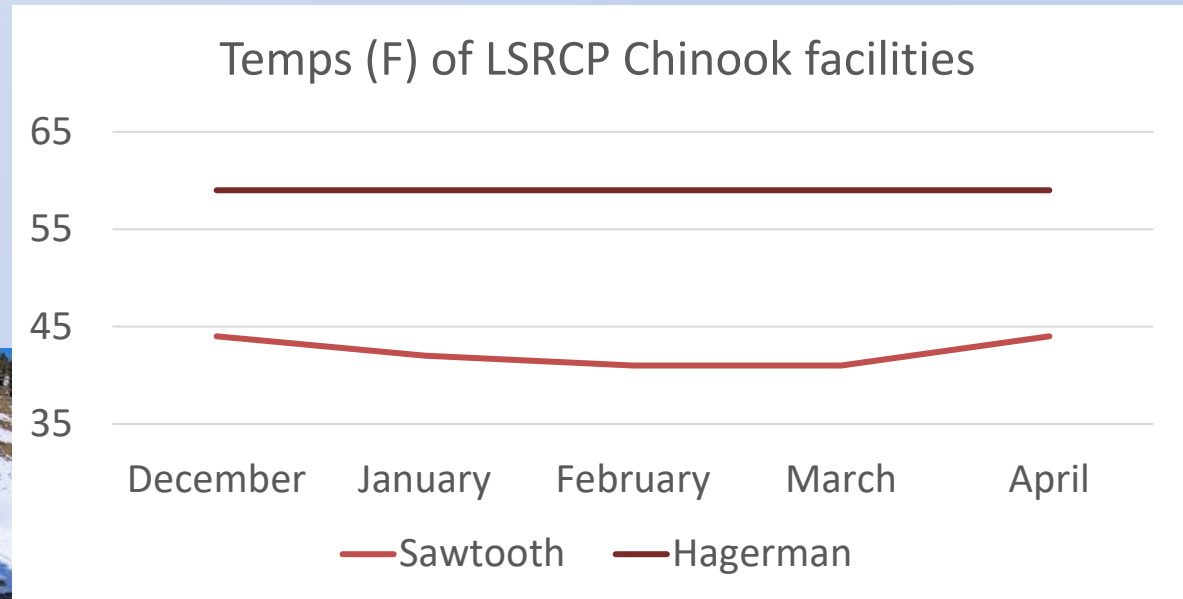


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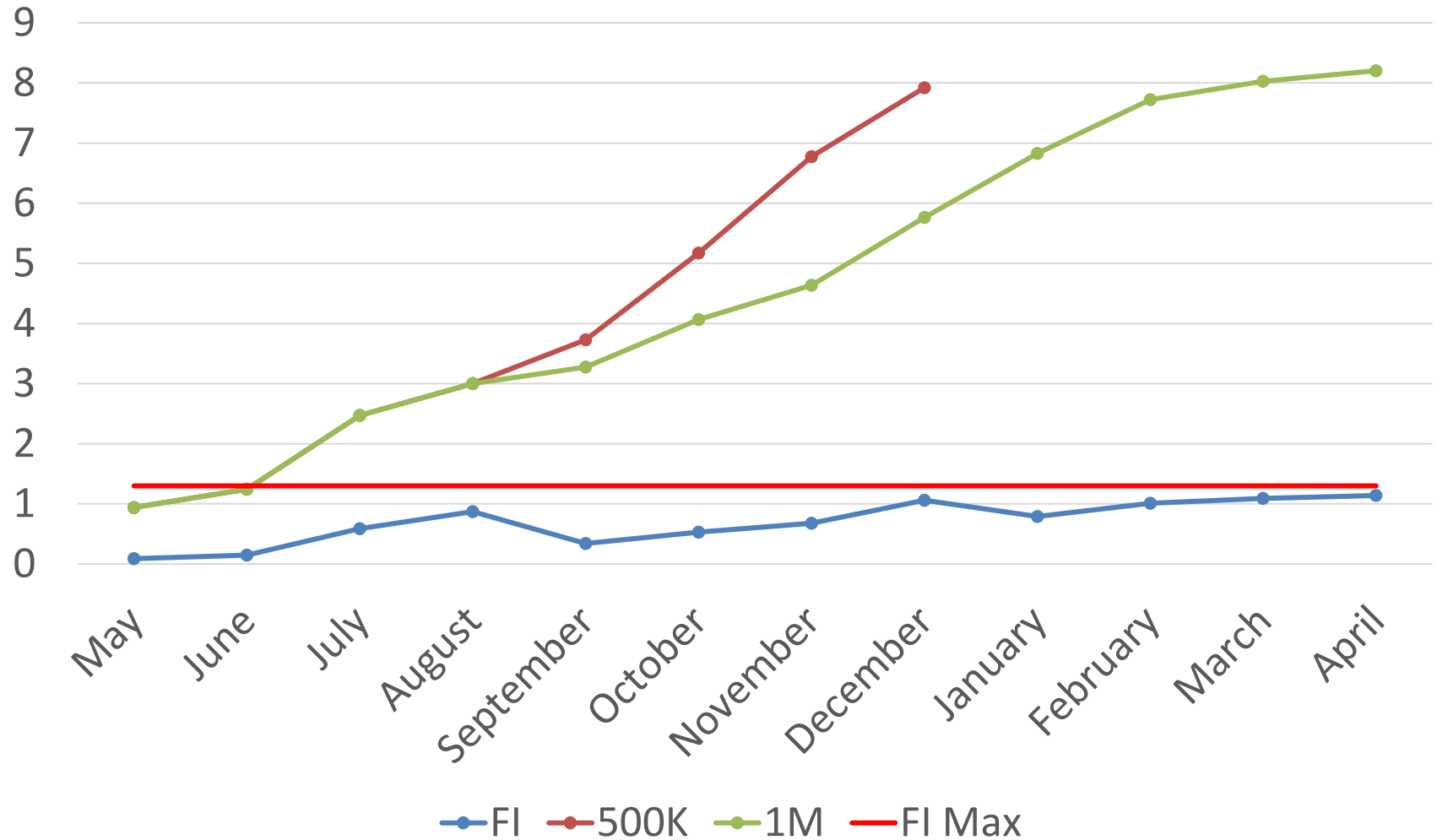
# Acclimation

- Scoping of Yankee Fork site





## Acclimated Steelhead Length (in) and FI



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# Questions?



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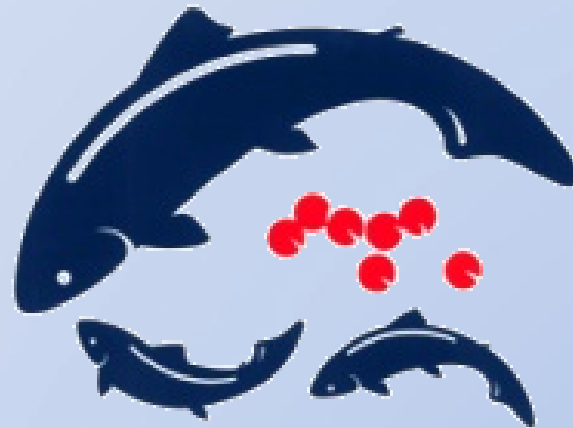
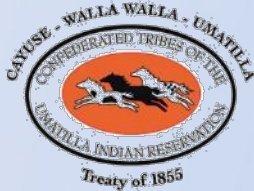
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# Lower Snake River Compensation Plan Program



## LOWER SNAKE RIVER COMPENSATION PLAN *Hatchery Program*



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