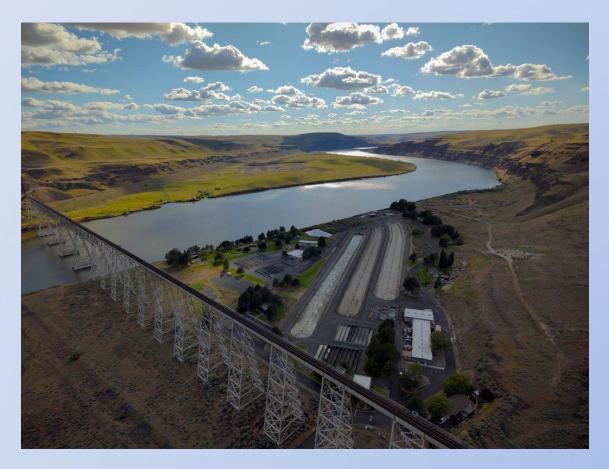
Lyons Ferry Options













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Project

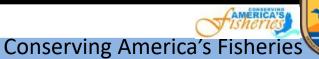
- Remove rocks
- Line sides
 - Concrete or liner?
- Sikaflex expansion joints

Garrison Dam NFH

	Garrison D	Dam National Fis	h Hatchery Pond	layo	ut – Year Li	ned – L	iner Type	as of Dec	ember 15	i, 2024	
1 –2005	2 – 2007	3 – 2009	4 - 2009	5	5 – 2009						
11 – 2004	10 – 2007	9 – 2007	8 – 2009	7	7 – 2009	6 -	6 – 2008				
12 – 2002	13 – 2004	14 – 2005	15 – 2008	1	6 – 2008	17	-2005		2009		
23 – 2004	22 – 2006	21 – 2009	20 – 2006	1	9 – 2009	18	- 2009			I	
29 - 2023	30 3	39 – 2021	40 – 2019		49 – 20	16	50 – 2019		59 – 2	2019	60 – 2019
28 - 2023	31 2	38	41		48 9)	5	1	58 – 2	2021	61 – 2021
32 6	32	37	42 - 2023		47 5	,	52		57 – 2	2021	62 – 2016
26 - 2023	33 10	36	43 4		46 7		53		56 – 2	2016	63 – 2005 **Failed**1
25 - 2023	34 8	35	44		45		54		55 – 2	2016	64 – 2021
Un	lined	Hypalon	Polypr	EPDM * Need to be replace ASAP			Polyeth	ylene			



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Garrison Notes

- Oldest liners are 22 years old
- Polypropylene has been the most effective
- EPDM has failed early
- Connection to concrete is done with aluminum strip and anchor bolts with Sikaflex or silicone gasket

Conserving America's

 Cost - \$200K per acre (Three Lyons Ferry Ponds are 2.25 acres each)

















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