

McNary Dam Avian Deterrent Predation Array Ranking Matrix		Scoring Criteria <small>Five is highest ranking score (best) one lowest ranking score (worst)</small>						
Alternatives <small>Feasibility Report alternatives designed with "FR" letters preceding the title below</small>			Biological Effectiveness	Maintenance and Installation	Device Reliability	Other	Total Accumulated Points (highest score is top preferred)	
1	FR 6.3 JBS Pier to Nav Lock Guidewall - screened out due to added structural load concerns at outfall pier						No score	Cannot secure to a single point on the outfall. Outfall will not support load of wires. Covers small area.
2	FR 6.4 JBS Pier to Navigation Lock & Guidewall, Spillway, and Powerhouse - screened out due to added structural load concerns at outfall pier						No score	Cannot secure to single points on Juvenile bypass pipe. Install/maintenance outweighs the effectiveness around powerhouse and spillway coverage. Very few smolts pass through powerhouse and turbulence in tailrace near spillway is extreme during spill season making predation difficult.
3	FR 6.5 Oregon Shoreline to Navigation Lock Guidewall		3	3	3		9	Covers the area of highest predation concentration. Ease of installation, not attached to spillway/powerhouse. Would have little impact on project operations during installation/maintenance.
4	FR 6.6 Shoreline to Navigation Lock & Guidewall, Spillway, and Powerhouse minus powerhouse		3	2	3		8	Covers areas of highest predation concentration. Costly and difficult to install on powerhouse/spillway. Would have major impact on project operations during installation/maintenance. Very few smolts pass through powerhouse and turbulence in tailrace is extreme during spill season making predation difficult.
5	FR 6.7 Powerhouse and Spillway to Navigation Lock and Guidewall		2	1	3		6	Overlaying wires are difficult to install and repair. Would have major impact on project operations during installation/maintenance. Very few smolts pass through powerhouse and turbulence in tailrace is extreme during spill season making predation difficult. Doesn't cover area of major concern at JBS release site.
6	Jacobs Tailrace Pier – Navigation Lock and Guidewall Array		1	2	3		6	Covers little area of concern.
7	Jacobs Tailrace Pier to JBS Outfall Pier - Originally screened out due to structural concern at outfall pier, but further investigation considered feasible. low biological effectiveness (predation area coverage).		1	2	3		6	Small coverage area. Intallastion/maintenance outweighs the effectiveness around the area of coverage. Very few smolts pass through powerhouse and turbulence in tailrace is extreme during spill season making predation difficult.
8	Jacobs Oregon Shore to Navigation Lock Guidewall Array		3	3	3		9	Covers the area of highest predation concentration. Ease of installation, not attached to spillway/powerhouse. Would have little impact on project operations during installation/maintenance.
9	Jacobs Oregon Shore to Navigation Lock and Spillway Array - no powerhouse included		1	3	3		7	Difficult to install on spillway. Would have major impact on project operations during installation/maintenance. Turbulence in tailrace is extreme during spill season making predation difficult.
10	Jacobs JBS Outfall Pier to Powerhouse Array - Originally screened out due to structural concern at outfall pier, but further investigation considered feasible. Low biological effectiveness and installation complexity.		1	1	3		5	Doesn't cover high predation zones. Install/maintenance outweighs the effectiveness around powerhouse coverage. Very few smolts pass through powerhouse during spill season.
11	Jacobs JBS Outfall Pier to Spillway Array - Originally screened out due to structural concern at outfall pier, but further investigation considered feasible. installation complexity.		2	1	3		6	Intallation/maintenance concerns. Covers little predation area of interest.
12	Jacobs Navigation Lock Guidewall to Spillway Array		1	2	3		6	Intallation concerns. Covers little predation area during high spill.
13	Jacobs Navigation Lock Guidewall to Spillway and Powerhouse Array - screened out due to installation challenges and lack of coverage at JBS outfall						No score	Intallation concerns. Covers little predation area during high spill.
14	Jacobs In-Water Floating Array		1	1	3		5	Intallation difficulty. Continuous maintainance with inwater arry collecting debris.
15	Jacobs In-Water Floating Array with Modified Outfall Location - screened out because moving the outfall would defeat earlier design intent for discharge location						No score	Cannot move outfall.
Alternatives added after Concept Design Workshop								
16	Jacobs 8, 9 (wire array) and 14 (in-water array) combined		4	1	3		8	Covers the area of highest predation concentration. Multi-method approach (effective against multiple avian species?). Would have impact on project operations during installation/maintenance. Very few smolts pass through powerhouse and turbulence in tailrace is extreme during spill season making predation difficult.
17	Jacobs 8 extended to Spillway Deck and 14 combined		4	2	3		9	Covers the area of highest predation concentration. Multi-method approach (effective against multiple avian species?). Would have little impact on project operations during installation/maintenance.