



# Yakama Nation Pacific Lamprey Project Outreach and Education, 2018

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[Cover Photo: Students from Christian Brothers High School (Sacramento, CA) assisting Yakama Nation staff to monitor adult Pacific Lamprey on March 21, 2018]

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**Dave'y Lumley and Ralph Lampman**

**Confederated Tribes and Bands of the Yakama Nation  
Yakama Nation Fisheries Resource Management Program, Pacific Lamprey Project  
P. O. Box 151, Toppenish, Washington 98948, USA**

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## Summary

Yakama Nation Fisheries Resource Management Program Pacific Lamprey Project (YN PLP) has a duty and responsibility to educate the public and community about Pacific Lamprey and their importance. Pacific Lamprey has become infamous relatively quickly, in part, due to the notoriety of the Sea Lamprey in the Great Lakes. The ecological and cultural significance has become lost among the younger generations. Conservation of this species is critical, and if the public is not educated about the importance of Pacific Lamprey, our efforts will be unsustainable and there will be no focus on their restoration.

For the YN PLP, our primary concern is to restore the Pacific Lamprey to its rightful place in the culture of the Columbia Basin Native Americans. From a tribal perspective, the decline of lamprey equals a loss of a family member, a close friend, and a loss of an important culture. Many young tribal members do not know how to catch and prepare lamprey for cooking and drying, while myths and legends associated with lamprey are being forgotten or lost. We need to dissuade the public of the “River Monster” view of Pacific Lamprey. When we open our hatchery for tours and invite schools, organizations, and the general public to our release events, we have an opportunity to educate them. We have created a variety of visual displays and interactive exhibits. Our team members give presentations about the life cycle, history, cultural significance, medicinal uses of lamprey, and the problems they face. Gaining the support of the public is a vital part of restoring Pacific Lamprey to their rightful place.

We must continue to educate through school presentations, lamprey in the classroom programs, hands-on tours for college students, and reach out to other biologists and fishery managers. At release events, the visitors are able to hold a lamprey and release it into the river. Providing a hands-on experience for people to hold and touch the lamprey is a memorable event for visitors. It can dispel their image of the monstrous creature and many leave with a great respect for this incredible creature.

Last year, through our community events and hatchery tours, we participated and/or organized **31** events, including adult lamprey translocation release events, summer camp hands-on field trips, presentations in classrooms, and hatchery tours (Table 1). In this process, we reached out to over **3,931** students, **331** teachers, **245** agency workers, and **905** people from the general public, reaching over **5,412** people combined (Table 2).

Our team gives presentations to the scientific community, funding sources, and fisheries managers frequently. In 2018, our biologists and partners sharing YN PLP work gave over **17** presentations at a variety of conferences and meetings, including Upper Columbia Science Conference, California Lamprey Passage Workshop, Annual Lamprey Information Exchange Workshop, and Sitka Whalefest, targeting the scientific and fisheries management community, ranging in

locations from Ukiah, California, to Sitka, Alaska (Table 1). Through scientific presentations, we reached out to over **272** students, **55** teachers, **1,111** agency workers, and **287** people from the general public, reaching over **1,620** people combined (Table 2).

Local news and social network media, and various educational blogs continue to support our outreach efforts and are helping to promote the need to restore Pacific Lamprey (Table 1). We take the initiative to announce various outreach events through the local news media and we take the time to provide feedback to reporters and bloggers to ensure they get their stories on Pacific Lamprey written as accurately and correctly as possible. Through these various media outreach, totaling **17** sources, we estimated that we reached out to over **44,441** people from the general public, based on a very conservative estimate (Table 2).

For the Pacific Lamprey Project, 2018 was an outstanding year of good publicity with many opportunities to reach out to students, teachers, partners, and the general public (Table 1). All together, we reached out to over **4,203** students, **386** teachers, **1,356** agency workers, and **45,633** people from the general public, totaling over **51,578** people (Table 2). We have many opportunities to continue to reach out to the public and all of us on our team will continue to do our best to be the rightful spokesperson and messenger for the Pacific Lamprey, using various means available.

**Table 1. List of 2018 Yakama Nation Pacific Lamprey Project outreach and education activities.**

#	Date	Event/Audience	Location	Type of Event	# of			# of		# of People Total
					Students	Teachers	Agency Workers	General Public	People	
1	2/27/2018	Cowiche Canyon Conservation/Yakima Valley College Biology Lecture Series	Yakima, WA	Outreach	15	-	5	40	65	
2	3/14/2018	Oregon Chapter American Fisheries Society Meeting Film Festival	Eugene, OR	Outreach	5	-	50	5	60	
3	3/21-22/2018	Christian Brothers High School Volunteer Days	Prosser, WA	Outreach	10	2	-	-	12	
4	3/28/2018	Salmon Release Tour (Grandview High School)	Prosser, WA	Outreach	23	3	2	-	28	
5	4/6/2018	Sunnyside High School Intern	Prosser, WA	Outreach	1	-	-	-	1	
6	4/10/2018	Presentation (Campbell Farm Summer Camp)	Wapato, WA	Outreach	9	2	2	1	14	
7	4/10/2018	Presentation (LaSalle High School)	Union Gap, WA	Outreach	11	1	-	-	12	
8	4/11/2018	Lower Ahtanum Creek Adult Release (LaSalle High School Students)	Union Gap, WA	Outreach	8	1	-	-	9	
9	4/11/2018	Outreach for the World Fish Migration Day	Yakima Valley, WA	Outreach	15	2	10	30	57	
10	4/12/2018	Prosser Hatchery Tour (Cheif Kamiakin Elementary School)	Prosser, WA	Outreach	132	19	-	19	170	
11	4/13/2018	Methow River Adult Release (Methow students)	Twisp, WA	Outreach	7	2	3	1	13	
12	4/21/2018	Prosser Science Expo	Prosser, WA	Outreach	70	5	5	140	220	
13	4/21/2018	Lower Yakima River Adult Release (World Fish Migration Day #3)	Prosser, WA	Outreach	25	2	5	20	52	
14	4/22/2018	Central Washington University Salmon Run	Ellensburg, WA	Outreach	20	6	-	10	36	
15	4/23/2018	Wenatchee River Adult Release (Cascade Middle School)	Leavenworth, WA	Outreach	14	2	4	-	20	
16	4/24-25/2018	Benton Conservation District Salmon Summit	Kennewick, WA	Outreach	2,600	130	30	130	2,890	
17	4/25/2018	Prosser Hatchery Tour (Mount Hood Community College)	Prosser, WA	Outreach	10	1	1	-	12	
18	4/30/2018	Upper Toppenish Creek Adult Release (Mt. Adams School District)	Brownstown, WA	Outreach	30	3	-	-	33	
19	5/10/2018	Upper Toppenish Adult Release (NRCS tour)	Upper Toppenish Creek	Outreach	-	-	20	4	24	
20	5/12/2018	Aquatic Travelers: Migratory Fishes of the Columbia River (REACH Museum)	Richland, WA	Outreach	125	10	10	75	220	
21	6/22/2018	Family Fishing Event at Marion Drain Hatchery	Toppenish, WA	Outreach	100	3	10	30	143	
22	7/17/2018	Kititas Environmental Educational Network Summer Camp	Hellen McCabe State Park	Outreach	24	4	-	-	28	
23	7/26/2018	Prosser Hatchery Tour (Yakama Nation Staff)	Prosser, WA	Outreach	-	-	2	-	2	
24	8/2/2018	Presentation (Heritage University Salmon Camp)	Prosser, WA	Outreach	24	11	-	-	35	
25	8/16/2018	Lamprey Outreach Tabling (Backpack Giveaway)	Toppenish, WA	Outreach	250	20	20	100	390	
26	8/16/2018	Upper Toppenish Adult Release (Federal Caucus Group)	White Swan, WA	Outreach	-	-	16	-	16	
27	8/20/2018	Presentation (KEEN Camp and Mid-Columbia Fisheries Intern)	Ellensburg, WA	Outreach	10	3	-	-	13	
28	10/25/2018	Prosser Hatchery Tour (NRCS Group)	Prosser, WA	Outreach	-	-	10	-	10	
29	10/27/2018	SCREECH (REACH Museum)	Richland, WA	Outreach	150	10	20	150	330	
30	10/29/2018	Wanapum Archaeology Days at Wanapum Dam	Beverly, WA	Outreach	150	10	20	150	330	
31	11/10/2018	Native American Arts/Crafts and Culture Day (Richland Public Library)	Richland, WA	Outreach	93	74	-	-	167	
1	1/24/2018	Upper Columbia Science Conference Presentation	Wenatchee, WA	Science Pres.	15	-	225	15	255	
2	2/7/2018	Rocky Reach Fish Forum Presentation	Wenatchee, WA	Science Pres.	-	-	12	-	12	
3	2/15/2018	BPA Master Plan Coordination Meeting Presentation	Portland, OR	Science Pres.	-	-	15	-	15	
4	4/19/2018	Lamprey ID Workshop	The Dalles, OR	Science Pres.	2	-	34	2	38	
5	5/16/2018	California Lamprey Passage Workshop Presentation	Ukiah, CA	Science Pres.	5	-	85	5	95	
6	5/21/2018	Western Division American Fisheries Society Presentation	Anchorage, AK	Science Pres.	20	5	50	5	80	
7	6/14/2018	Yakima Basin Science & Management Conference Presentation (Adult)	Ellensburg, WA	Science Pres.	15	5	75	5	100	
8	6/14/2018	Yakima Basin Science & Management Conference Presentation (Juvenile)	Ellensburg, WA	Science Pres.	15	5	75	5	100	
9	7/10/2018	Northwest Power and Conservation Council Presentation (#1)	Boise, ID	Science Pres.	-	-	40	-	40	
10	8/15/2018	Northwest Power and Conservation Council Presentation (#2)	Portland, OR	Science Pres.	-	-	40	-	40	
11	11/1/2018	Sitka Whalefest Presentations	Sitka, AK	Science Pres.	150	15	50	200	415	
12	11/29/2018	McNary Mitigation Funds Project Proposal Presentation	Wenatchee, WA	Science Pres.	-	-	10	-	10	
13	12/12/2018	Annual Lamprey Information Exchange Workshop Presentation (Entrainment)	Portland, OR	Science Pres.	10	5	80	10	105	
14	12/13/2018	Annual Lamprey Information Exchange Workshop Presentation (Predation)	Portland, OR	Science Pres.	10	5	80	10	105	
15	12/13/2018	Annual Lamprey Information Exchange Workshop Presentation (Juv. Passage)	Portland, OR	Science Pres.	10	5	80	10	105	
16	12/13/2018	Annual Lamprey Information Exchange Workshop Presentation (Propagation)	Portland, OR	Science Pres.	10	5	80	10	105	
17	12/13/2018	Annual Lamprey Information Exchange Workshop Presentation (Climate Change)	Portland, OR	Science Pres.	10	5	80	10	105	
1	2018	Yakama Nation Fisheries (Facebook)	Website	Media	-	-	-	1,981	1,981	
2	2018	Prehistoric Species (Facebook)	Website	Media	-	-	-	62	62	
3	2018	Kamiakun Fishing (Facebook)	Website	Media	-	-	-	607	607	
4	2018	Luna the Lamprey - Collaboration (Facebook)	Website	Media	-	-	-	2,110	2,110	
5	2018	Leavenworth Fisheries Complex - Collaboration (Facebook)	Website	Media	-	-	-	1,262	1,262	
6	2018	Yakama Nation Fisheries (Agency Website)	Website	Media	-	-	-	1,050	1,050	
7	2/8/2018	Columbia Insight: "The amazing ancient lamprey"	Newspaper / Website	Media	-	-	-	230	230	
8	2/23/2018	The Columbia Basin Bulletin: "Council Fish/Wildlife Committee Gives..."	Newspaper / Website	Media	-	-	-	2,835	2,835	
9	4/18/2018	Sunnyside Sun: "Why release lamprey when salmon runs remain marginal?"	Newspaper / Website	Media	-	-	-	475	475	
10	4/18/2018	Tri-City Herald: "See weird fish, robots and scientists at Richland, Prosser..."	Newspaper / Website	Media	-	-	-	8,700	8,700	
11	4/18/2018	Yakima Herald: "Outdoors Happenings: April 19, 2018"	Newspaper / Website	Media	-	-	-	2,809	2,809	
12	4/25/2018	Daily Sun: "Yakamas release lamprey"	Newspaper / Website	Media	-	-	-	475	475	
13	4/25/2018	Prosser Record-Bulletin - "Pacific Lamprey Project"	Newspaper / Website	Media	-	-	-	171	171	
14	6/12/2018	Argonaut (UOI newspaper): "The bacon-cheeseburger of the sea"	Newspaper / Website	Media	-	-	-	754	754	
15	6/12/2018	My Columbia Basin: "Pacific lamprey returns in record numbers"	Newspaper / Website	Media	-	-	-	986	986	
16	6/13/2018	The Oregonian: "Pacific lamprey show signs of recovery in Umatilla River"	Newspaper / Website	Media	-	-	-	19,434	19,434	
17	6/14/2018	East Oregonian: "Pacific lamprey swarm Umatilla River in best numbers in years"	Newspaper / Website	Media	-	-	-	500	500	

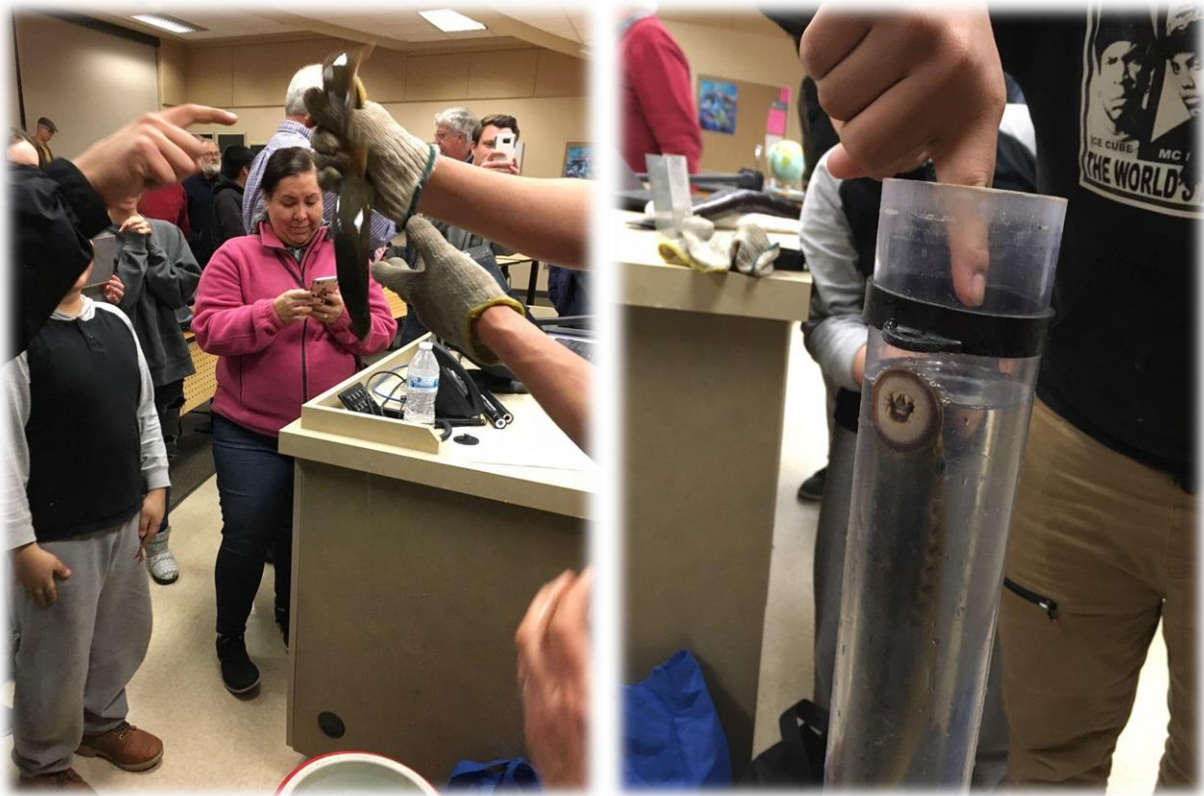
**Table 2. Summary of 2018 Yakama Nation Fisheries Pacific Lamprey Project outreach and education activities audience.**

Type of Event	# of Events	# of Students	# of Teachers	# of Agency Workers	# of General Public	# of People (Total)
Outreach	31	3,931	331	245	905	5,412
Science Pres.	17	272	55	1,111	287	1,725
Media	17	-	-	-	44,441	44,441
<b>Total</b>	<b>65</b>	<b>4,203</b>	<b>386</b>	<b>1,356</b>	<b>45,633</b>	<b>51,578</b>

## Tours and Events

### 1. Cowiche Canyon Conservation / Yakima Valley College Biology Lecture Series

- Date: 2/27/2018
- Location: Yakima Valley College (Yakima, WA)
- Presenters: Ralph Lampman
- Audience: General public and college students
- # of students: 15
- # of teachers: 5
- # of agency workers: 5
- # of general public: 40
- Comments: Presented a 1-hour long PowerPoint presentation on lamprey biology, importance, and YN restoration work and also shared a short film I created (first time sharing this with large audience – received positive responses). Brought one adult lamprey and a few larval lamprey of different sizes to show the audience what they look like.





## 2. Oregon Chapter American Fisheries Society Meeting Film Festival

- Date: 3/14/2018
- Location: Eugene, OR
- Presenters: Ralph Lampman (& partners)
- Audience: attendees for the Oregon Chapter AFS meeting (agency biologists, managers)
- # of students: 5
- # of teachers: 0
- # of agency workers: 50
- # of general public: 5
- Comments: Submitted the collaboration film titled “The Plight and Curious Life of Asum (Pacific Lamprey)” edited and produced by Ralph Lampman for the Oregon Chapter AFS meeting. It was a good opportunity to share the adult lamprey outreach video to various agency biologists that attend the Oregon Chapter AFS. Weblink for the video: <https://vimeo.com/242105080>



### 3. Christian Brothers High School Volunteer Days

- Date: 3/21/2018 and 3/22/2018
- Location: Prosser Hatchery (Prosser, WA)
- Presenters: Ralph Lampman, Tyler Beals, Dave'y Lumley, Sean Goudy, Leona Wapato
- Audience: Christian Brothers High School students and teachers
- # of students: 10
- # of teachers: 2
- # of agency workers: 0
- # of general public: 0
- Comments: Worked with 10 high school students (junior grade level) from Sacramento, CA, for two days, marking and measuring adult lamprey, digging a trench for plumbing / electrical, and making tank accessories for our new incubation room. We also gave a tour to the Prosser Dam lamprey passage structure and released 77 adults together to Yakima River on the last day.





#### 4. Salmon Release Tour with Grandview High School

- Date: 3/28/2018
- Location: Prosser Hatchery (Prosser, WA)
- Presenters: Ralph Lampman, Tyler Beals, Dave'y Lumley, Sean Goudy, Leona Wapato
- Audience: Grandview High School
- # of students: 23 (2 homeschooled)
- # of teachers: 3 (1 homeschool)
- # of agency workers: 2 (Benton Conservation District)
- # of general public: 0

Comments: Gave presentations related to tribal culture and biological life histories, and then gave hands-on demonstrations on larval feeding and adult handling, with a Q&A at the end.







## 5. Sunnyside High School Internship

- Date: 4/6/2018
- Location: Prosser Hatchery (Prosser, WA)
- Presenters: Dave'y Lumley and Leona Wapato
- Audience: Yajaira Ayala (student from Sunnyside High School)
- # of students: 1
- # of teachers: 0
- # of agency workers: 0
- # of general public: 0
- Comments: Showed her daily tasks, cleaned screens in the incubation room and outside. Fed all tanks. We went to the dam and cleaned traps. Sorted a tank with adults by PIT tag sizes (8 vs 9 mm). Worked up 3 dead lamprey (mortality). We also released macrophthalmia together and gave a tour and an overview for lamprey life history.

## 6. Campbell Farm Summer Camp Presentation

- Date: 4/10/2018
- Location: Campbell Farm (Wapato, WA)
- Presenters: Sean Goudy
- Audience: 6<sup>th</sup> grade students
- # of students: 9

- # of teachers: 2
- # of agency workers: 2
- # of general public: 1
- Comments: A presentation followed up by a Q&A session afterwards. Background of presenters (school, major, motivations, etc.) were shared. Lamprey biology, life cycle, cultural significance, use of educational tools (types of equipment used, PIT tags, GPS, etc.). There were two other presenters that participated as well. A news reporter from Yakima Herald Republic was there to report the event as well.



## 7. LaSalle High School Presentation

- Date: 4/10/2018
- Location: LaSalle High School (Union Gap, WA)
- Presenters: Sean Goudy and Ralph Lampman
- Audience: Students and teacher
- # of students: 11
- # of teachers: 1
- # of agency workers: 0
- # of general public: 0
- Comments: Ralph Lampman gave a presentation about the lamprey biology, life history, threats and restoration work, and Sean Goudy gave a presentation about lamprey and tribal culture.



## 8. Lower Ahtanum Creek Adult Translocation with La Salle High School Students

- Date: 4/11/2018
- Location: Ahtanum Creek at Fullbright Park (Union Gap, WA)
- Presenters: Dave'y Lumley and Leona Wapato
- Audience: La Salle High School students and teacher
- # of students: 8
- # of teachers: 1
- # of agency workers: 0
- # of general public: 0

- Comments: Brought 20 adult lamprey to Fullbright Park on Ahtanum Creek and met up with the teacher Elise Tulloss's environmental education class from La Salle High School. There was a temperature difference from the hatchery water and creek water so while the fish were tempering down, gave a small talk about life history, cultural importance, and then answered questions. We then released the lamprey into the creek.





## 9. Outreach for the World Fish Migration Day

- Date: 4/11/2018
- Location: Yakima Valley (Yakima, Wapato, Toppenish, Granger, Prosser)
- Presenters: Dave'y Lumley and Leona Wapato
- Audience: general public
- # of students: 15
- # of teachers: 2
- # of agency workers: 10
- # of general public: 30
- Comments: Dropped off flyers for the World Fish Migration Day public event at the following locations and talked with the shop owners and office staff - Yakima/Union Gap (Cabela's, PetSmart, Petco, Yakima Valley Regional Library, Radio Yakima), Wapato (Wapato Wolf Den, Yakima Nation Tech, Wapato Library), Toppenish (YN Cultural Center, YN Agency, Yakamart, Pioneer Park bulletin board, Toppenish Library, Toppenish Community Center), Granger (Granger Public Library), and Prosser (Loves gas station, Prosser Rest Stop, ACE hardware store, Davy's Burger Ranch, Princess Theater, Shear Delite Salon, Golden Yan Restaurant).

## 10. Prosser Hatchery Tour (Chief Kamiakin Elementary School)

- Date: 4/12/2018
- Location: Prosser Hatchery (Prosser, WA)
- Presenters: Dave'y Lumley, Tyler Beals, and Leona Wapato
- Audience: general public
- # of students: 132
- # of teachers: 19
- # of agency workers: 0
- # of general public: 19

Comments: 5 Classes of 5<sup>th</sup> grade students from Chief Kamiakin School – had 5 stations for the tour so cycled through 5 classes talking about lamprey life history, cultural significance, and showed them larvae and adults.





## 11. Methow River Adult Translocation Release with students

- Date: 4/13/2018
- Location: Halderman Hole (Twisp WA)
- Presenters: Dave'y Lumley and Leona Wapato
- Audience: students and adults
- # of students: 7 (highschool)
- # of teachers: 2
- # of agency workers: 3 (Paul Wagner, John Crandle, Sara Mounsey)
- # of general public: 1 (Bernadine Phillips)
- Comments: Took adult lamprey to the Methow River to release in two different locations, one location with a group of students. We set up a table to show props and gave a talk about cultural significance, life history, biology, and life cycle before releasing. The students were not too interested in touching the fish till the release.





## 12. Prosser Science Expo

- Date: 4/21/2018
- Location: Prosser Park (Prosser, WA)
- Presenters: Ralph Lampman and Leona Wapato
- Audience: general public, lots of families with kids, and some agency workers
- # of students: 70
- # of teachers: 5
- # of agency workers: 5
- # of general public: 140

Comments: I (Ralph) participated in the 2<sup>nd</sup> Prosser Science Expo organized by Elyshia Holiday by setting up a lamprey table with live adult and larval lamprey and also gave a speech (rap song) in the early afternoon (just before our World Fish Migration Day release event). Students were really curious about lamprey (especially the adult lamprey) and many were interested in seeing them up close and/or touching them. Leona came in towards the end to help field the table while I gave the speech and also helped close down the table (while I rushed to the adult release event). It was a bit hectic (chaotic?) trying to participate in these two events on the same day, so next year it will be best to plan them on a separate date.

## 13. World Fish Migration Day (3<sup>rd</sup>) Adult Translocation

- Date: 4/21/2018
- Location: Yakima River (Prosser, WA)
- Presenters: Ralph Lampman, Tyler Beals, Dave'y Lumley, Sean Goudy, Leona Wapato, and Ann Grote (USFWS), Sarah Hanchett and Ryan Dunbeck (Uni of Idaho), and Robert Hogg (ODFW)



- Audience: general public, lots of families with kids, and some agency workers
- # of students: 25
- # of teachers: 2
- # of agency workers: 5
- # of general public: 20
- Comments: This was an open house event for the public to participate in the adult Pacific Lamprey release in Prosser, WA (at the Prosser Church near Les Schwab). Many families with kids attended. We set up five tables that the participants can rotate through to learn about 1) larval/juvenile lamprey life history, 2) adult life stage, 3) tribal culture, 4) radio telemetry and adult dam passage, and 5) ecology of spawned out carcasses. We released a total of 35 adults along with the participants.





#### 14. Central Washington University Salmon Run

- Date: 4/22/2018
- Location: Dean Hall, CWU Campus (Ellensburg, WA)
- Presenters: Dave'y Lumley
- Audience: College students, professors, general public
- # of students: 20

- # of teachers: 6
- # of agency workers: 0
- # of general public: 10
- Comments: Set up a booth inside Dean Hall with live adults and larvae for people to come observe and ask questions during the event.



### 15. Wenatchee River Outreach and Adult Translocation with the Cascade Middle School

- Date: 4/23/18
- Location: Jolanda Lake (Leavenworth, WA)
- Presenters: Tyler Beals, Sean Goudy
- Audience: Families and school children
- # of students: 14 (8<sup>th</sup> grade)
- # of teachers: 2
- # of agency workers: 2 YN, 2 USFWS (Ann and Marjie)
- # of general public: 0
- Comments: Shared lamprey outreach information such as life history and showing larvae and adults, then talking about the cultural significance and photos. We released a total of 35 adults into Jolanda Lake, behind the Alps Candy Store.



**16. Benton Conservation District Salmon Summit at Columbia Park**

- Date: 4/24/2018 and 4/25/2018
- Location: Kennewick, WA
- Presenters: Leona Wapato and Sean Goudy
- Audience: K-12 students and adults
- # of students: 2,600
- # of teachers: 130
- # of agency workers: 30
- # of general public: 130
- Comments: Leona Wapato participated in the first day event (4/24/2018) and set up a table with live lamprey and outreach gear. Sean Goudy participated in the second day event (4/25/2018) and set up a similar table as the day before. Many students were excited to see the live lamprey and learn more about this curious creature. It was a great event to get the message out about lamprey for students and adults.



### **17. Prosser Hatchery Tour (Mount Hood Community College)**

- Date: 4/24/2018
- Location: Prosser Hatchery (Prosser, WA)
- Presenters: Tyler Beals, Dave'y Lumley
- Audience: Students and teachers
- # of students: 10
- # of teachers: 1
- # of agency workers: Joe (Prosser Hatchery Manager)
- # of general public: 0
- Comments: Shared knowledge of translocation program, stream surveys, and life histories while also showing live adults, larvae, and macrophthamia.

### **18. Upper Toppenish Creek Outreach and Adult Translocation with the Mt. Adams School District White Swan High School**

- Date: 4/30/2018
- Location: Toppenish Creek (Fort Rd near Brownstown)
- Presenters: Ralph Lampman, Dave'y Lumley, Sean Goudy, Leona Wapato
- Audience: Students and teachers
- # of students: 24
- # of teachers: 3
- # of agency workers: 0
- # of general public: 0
- Comments: Set up tables for groups to cycle through to learn about adult lamprey, larval/juvenile lamprey, cultural significance, and habitat surveys. We also explained the threats they face and the restoration activities we are working on to restore them. We released 25 adults into Toppenish Creek along with the students.



## 19. Upper Toppenish Adult Release (Natural Resource Conservation Service tour)

- Date: 5/10/2018
- Location: Upper Toppenish Creek (stream restoration site)
- Presenters: Ralph Lampman, Joshua Hall, Shannon Adams, Paul Ward
- Audience: Delegation from Natural Resource Conservation Service (Washington, D.C.)
- # of students: 0
- # of teachers: 0
- # of agency workers: 20
- # of general public: 4
- Comments: As part of the tour of the Upper Toppenish restoration site, Ralph gave a presentation about the status of Pacific Lamprey in the Yakima Basin and shared the threats and solutions that are being applied to restore the species. He also brought several adult lamprey for the tour group to release at the restoration site.



## 20. Aquatic Travelers: Migratory Fishes of the Columbia River at REACH Museum

- Date: 5/12/2018
- Location: Richland, WA
- Presenters: Ralph Lampman
- Audience: students and teachers
- # of students: 125
- # of teachers: 10
- # of agency workers: 10
- # of general public: 75
- Comments: This weekend event focused on fish in the Columbia River and many families with kids participated. All the kids were interested in seeing the live lamprey and many of the younger kids enjoyed interacting with the larval lamprey. I also gave a 45 min presentation to give an overview of Pacific Lamprey and the management of the species. It was a very fun event for all ages.







## 21. Family Fishing Event

- Date: 6/22/2018
- Location: Marion Drain Sturgeon Hatchery (outside Toppenish, WA)
- Presenters: Leona Wapato
- Audience: children, parents, families, hatchery workers
- # of students: 100
- # of teachers: 3
- # of agency workers: 10
- # of general public: 30
- Comments: Leona set up the table (unfortunately we did not have any live adult at this time). Live larval lamprey were shown as well as outreach gear. Some of the tribal elders requested that our project should be showing and demonstrating how to prepare, dry, and cook lamprey for the younger generations so they learn the skillsets (and appreciate the cultural values).

## 22. Outreach Presentation to Kittitas Environmental Educational Network (KEEN) Summer Camp

- Date: 7/17/2018
- Location: Helen McCabe State Park (Ellensburg, WA)
- Presenters: Sean Goudy
- Audience: Students and teachers
- # of students: 24 (kindergarten to 5<sup>th</sup> grade)
- # of teachers: 4

- # of agency workers: 3 (WDFW)
- # of general public: 0
- Comments: Gave a 1.5 hour presentation over general outreach information. Took 2 adult lamprey, artificial propagation YOY and Pacific Lamprey and Westernbrook larvae. Sean let the students handle the live lamprey and discussed their importance.

### **23. Prosser Hatchery Tour (Yakama Nation Staff)**

- Date: 7/26/2018
- Location: Prosser Hatchery (Prosser, WA)
- Presenters: Dave'y Lumley
- Audience: Paul Ward, Molly
- # of students: 0
- # of teachers: 0
- # of agency workers: 2
- # of general public: 0
- Comments: Paul Ward, Yakama Nation Program Coordinator, brought a staff member (Molly) from a Policy Meeting they just finished, to come and observe the hatchery and what the lamprey facility had. Gave them a tour of the outside area holding tanks for adults and juveniles and then showed the new incubation setup in the conex building.

### **24. Outreach Presentation with the Heritage University Salmon Camp (Umatilla, Warm Springs, Nez Perce, and Yakama middle schools)**

- Date: 8/2/2018
- Location: Prosser Hatchery (Prosser, WA)
- Presenters: Sean Goudy
- Audience: Students and staff, Jessica Black, and Micheal Buck
- # of students: 25
- # of teachers: 11
- # of agency workers: 0
- # of general public: 0
- Comments: Placed fish in aquarium to show for the outreach presentation. Talked about cultural significance, life history, and gave a hands on demonstration with adults and larvae.



## **25. Backpack Giveaway Event at Yakama Nation Agency**

- Date: 8/16/2018
- Location: Yakama Nation Agency (Toppenish, WA)
- Presenters: Sean Goudy
- Audience: Families with school children
- # of students: 250 (primarily elementary, but also middle and high school students)
- # of teachers: 20
- # of agency workers: 20
- # of general public: 100
- Comments: Set up a table to display live lamprey (two adults and several larval lamprey of various sizes and juvenile lamprey) and interacted with audience to educate them about Pacific Lamprey and lamprey in general (brought the outreach gear as well).

## **26. Upper Toppenish Creek Tour for Federal Caucus group**

- Date: 8/16/2018
- Location: Upper Toppenish Creek restoration site (White Swan, WA)
- Presenters: Ralph Lampman, Tom Elliot, Shannon Adams, Dallas Reed, and Paul Ward
- Audience: Federal Caucus group
- # of students: 0
- # of teachers: 0
- # of agency workers: 16
- # of general public: 0
- Comments: We gave a tour to the federal caucus group (10 federal agency representatives) as well as their companies that tagged along to share hands on

experience the instream restoration work as well as lamprey translocation. I set up a table to display live lamprey (several larval lamprey of various sizes and juvenile lamprey) and outreach gear and interacted with the audience to share our latest work on Pacific Lamprey restoration activities. Towards the end of the tour, we released eight adults into Upper Toppenish Creek together with the group.



## 27. Outreach Presentation to the KEEN Camp and Mid-Columbia Fisheries interns

- Date: 8/20/2018
- Location: United Methodist Church (Ellensburg, WA)
- Presenters: Tyler Beals, Dewey Bill
- Audience: Students, campers, interns and helpers
- # of students: 7 students, 3 interns
- # of teachers: 3 helpers
- # of agency workers: 0
- # of general public: 0
- Comments: Took 3 adult lamprey and a few YOY larvae and a few larger larvae. Transported the adults in a tote with the smallest amount of air going into the tote. Gave outreach presentation then took adults and larvae back to Prosser (after a short stay in the office.)

## 28. Prosser Hatchery Tour (Conservation District Delegation)

- Date: 10/25/2018
- Location: Prosser Hatchery (Prosser, WA)
- Presenters: Ralph Lampman and Sean Goudy
- Audience: Staff from Natural Resource Conservation Service and local Conservation Districts
- # of students: 0
- # of teachers: 0
- # of agency workers: 10
- # of general public: 0
- Comments: Ralph and Sean gave a hatchery tour for the delegation talking about their biology and life history and also gave a tour to Prosser Dam fish ladder where we have new passage structures (vertical wetted walls).



## 29. SCREECH at REACH Museum

- Date: 10/27/2018
- Location: REACH Museum (Richland, WA)
- Presenters: Ralph Lampman (& family)
- Audience: mainly families with children
- # of students: 150 (primarily elementary, but also middle and high school students)
- # of teachers: 10
- # of agency workers: 20
- # of general public: 150

- Comments: Set up a table to display live lamprey (two adults and several larval lamprey of various sizes and juvenile lamprey) and interacted with audience to educate them about Pacific Lamprey and lamprey in general (brought the outreach gear as well). Some smaller students were hesitant to touch lamprey, but most were eager and were curious about lamprey. One high school student from Prosser (Anthony) really fell in love with lamprey and did not want to leave the lamprey table.



### 30. Wanapum Archaeology Days at Grant County PUD

- Date: 10/29/2018
- Location: Wanapum Cultural Center (Beverly, WA)
- Presenters: Sean Goudy and Barbara Kelly-Ringel (USFWS)
- Audience: mainly families with children
- # of students: 150 (primarily elementary, but also middle and high school students)

- # of teachers: 10
- # of agency workers: 20
- # of general public: 150
- Comments: Set up a table to display outreach gear and assisted with Barb (USFWS) who brought live lamprey (adults and larval lamprey). We interacted with audience to educate them about Pacific Lamprey and lamprey in general. There were 27 stations including Pacific Lamprey (YN).





### **31. Richland Public Library Outreach Event- NA Arts/Crafts and Culture Day**

- Date: 11/10/18
- Location: Richland Public Library (Richland, WA)
- Presenters: Sean Goudy
- Audience: students, teachers, and general public
- # of students: 93
- # of teachers: 74
- # of agency workers: 0
- # of general public: 0
- Comments: Brought outreach material and live lamprey, pictures and videos in the DFS folder. Brought 2 adults and 8 ammocoetes. The students were divided into 14 teams.





## **Scientific Presentations**

### **1. Upper Columbia Science Conference**

- Date: 1/24/2018
- Location: Wenatchee WA
- Presenters: Ralph Lampman
- Audience: fish biologists and managers from the Upper Columbia region
- # of agency workers: 225
- # of general public: 15
- Comments: Gave a presentation on the status of Pacific Lamprey in the Upper Columbia (Wenatchee, Entiat, Methow, and Okanogan). Shared the up to date adult translocation activities and the results we are seeing from monitoring.

### **2. Rocky Reach Fish Forum**

- Date: 2/7/2018
- Location: Wenatchee WA
- Presenters: Ralph Lampman
- Audience: Rocky Reach Fish Forum members
- # of agency workers: 12
- # of general public: 0
- Comments: Gave a presentation summarizing the 2 years of artificial propagation and larval rearing work along with Umatilla Tribe / NOAA Fisheries and USFWS. We shared what we have learned so far and what we expect to learn in the near future.

### **3. BPA Master Plan Coordination Meeting**

- Date: 2/15/2018
- Location: Portland OR
- Presenters: Ralph Lampman
- Audience: BPA staff and other fish management agencies
- # of agency workers: 15
- # of general public: 0
- Comments: Gave a presentation summarizing the Master Plan and what we aim to achieve through this projects. We received feedback from other agencies as well as BPA on the need for environmental compliance and coordination.

#### 4. Lamprey ID Workshop

- Date: 4/19/2018
- Location: The Dalles OR  
Presenters: Ralph Lampman, Tyler Beals, and Ben Clemens (ODFW), Laurie Porter (CRITFC), and Ann Gray (USFWS)
- Audience: fish biologists and seasonal technicians
- # of agency workers: 34 (plus 2 students)
- # of general public: 2
- Comments: Gave presentation on lamprey identification and also gave hands-on training for identification using live lamprey, focusing on larval lamprey. Ben Clemens (ODFW) helped organize this event, and also gave an overview presentation on status and distribution. Laurie Porter gave a presentation on lamprey genetics. Ann Gray supplied the laminated lamprey ID guides that Yakama Nation produced for each participant. Yakama Nation brought live larval and adult lamprey (both Pacific Lamprey and Western Brook Lamprey).



## 5. California Lamprey Passage Workshop

- Date: 5/16/2018
- Location: Ukiah California
- Presenters: Ralph Lampman
- Audience: fish technicians, biologists, and managers from a wide region (CA, OR, WA, and ID)
- # of agency workers: 85 (plus 5 students)
- # of general public: 5
- Comments: Ralph gave a presentation summarizing the adult passage improvement work in the Yakima Basin, focusing primarily on the vertical wetted wall design and its improvement over the years.



## 6. Western Division American Fisheries Society Annual Meeting

- Date: 5/21/2018
- Location: Anchorage Alaska
- Presenters: Hiroaki Arakawa
- Audience: fish technicians, biologists, and managers
- # of agency workers: 50 (plus 20 students and 5 teachers)
- # of general public: 5
- Comments: Hiroaki Arakawa (Ishikawa Prefectural University) gave a presentation summarizing the collaborative work that his university and Yakama Nation has conducted on larval lamprey habitat thermal dynamics and its effects on lamprey distribution.



## **7. Yakima Basin Science & Management Conference**

- Date: 6/14/2018
- Location: Ellensburg WA
- Presenters: Tyler Beals
- Audience: fish technicians, biologists, and managers
- # of agency workers: 75 (plus 15 students and 5 teachers)
- # of general public: 5
- Comments: Tyler Beals provided a synopsis on Yakama Nation adult Pacific Lamprey work (monitoring, restoration, etc.) in a 20 minute presentation for the partners working in the Yakima Basin.

## **8. Yakima Basin Science & Management Conference**

- Date: 6/14/2018
- Location: Ellensburg WA
- Presenters: Tyler Beals
- Audience: fish technicians, biologists, and managers
- # of agency workers: 75 (plus 15 students and 5 teachers)
- # of general public: 5
- Comments: Tyler Beals provided a synopsis on Yakama Nation larval and juvenile Pacific Lamprey work (monitoring, restoration, etc.) in a 20 minute presentation for the partners working in the Yakima Basin.

## **9. Northwest Power and Conservation Council Presentation (#1)**

- Date: 7/10/2018
- Location: Boise Idaho
- Presenters: Brian McIlraith
- Audience: council members for the Northwest Power and Conservation Council
- # of agency workers: 15
- # of general public: 0
- Comments: Gave a presentation summarizing the Master Plan and what we aim to achieve through the various projects (Yakama Nation and Umatilla Tribe). We received some questions about project budget and whether it was available to do all the work.

## **10. Northwest Power and Conservation Council Presentation (#1)**

- Date: 8/15/2018
- Location: Portland OR

- Presenters: Ralph Lampman, Aaron Jackson, and Brian McIlraith
- Audience: council members for the Northwest Power and Conservation Council
- # of agency workers: 15
- # of general public: 0
- Comments: Brian gave an overview presentation summarizing the Master Plan and what we aim to achieve through the various projects, and Aaron and I (Ralph) presented more specifics about each of our own project and answered questions posed by the council. Overall, the reviews were positive and we received wide support for the project.

## **11. Sitka WhaleFest Presentations**

- Date: 11/1/2018
- Location: Sitka Alaska
- Presenters: Ralph Lampman
- Audience: very diverse audience, including fishermen, retirees, environmental activists, agency workers, university professors and staff, etc.
- # of agency workers: 50 (plus 150 students and 15 teachers)
- # of general public: 200
- Comments: The trip was very successful (all the air fare and lodging was paid by the sponsors of this event). Many tribal and non-tribal students (high school to college) from all over Alaska State attended this event as well as people of all ages (from high school students to retirees from over 20 US states), reaching ~400 people total. Thursday we had a communication workshop among the presenters. On Friday, I gave a 45 min presentation in front of a 300 people audience and it was very well received (was told that it was one of the best presentations by many attendees). After the presentation, I sat down with all of the high school and college classes to have a question and answer session with them. Many attendees of all ages talked with me afterwards to share their new appreciation of lamprey and their importance to tribal culture. On Saturday, I attended the other presentations and question and answer sessions and also performed a lamprey song during the musical talent show. On Sunday, I joined a field trip on a cruise ship with ~50 people to help answer questions about lamprey in the ocean over the microphone and attended the presentations by others as well as the final question and answer session in the afternoon involving all the presenters. Also, I met graduate & undergraduate students working on lamprey projects in Alaska, so we exchanged our contacts to develop future partnerships and a support network for lamprey restoration/research across the range.



## 12. McNary Mitigation Funds (Project Proposal Presentation)

- Date: 11/29/2018
- Location: Wenatchee WA
- Presenters: Ralph Lampman
- Audience: McNary Mitigation Fund Committee

- # of agency workers: 10
- # of general public: 0
- Comments: Gave a presentation summarizing the first year of juvenile lamprey acoustic telemetry project (97 lamprey tagged and monitored moving downstream from mid reach of Yakima River to lower Columbia River). I shared the planning and vision for the 2<sup>nd</sup> year of the project and requested funding to continue this project. The presentation was well received and we received the funding we were seeking to attain.

### 13. Annual Lamprey Info Exchange Workshop

- Date: 12/12/2018
- Location: McMenamins Edgefield Conference Center (Portland, OR)
- Presenters: Tyler Beals
- Audience: fish technicians, biologists, and managers primarily from WA, OR, and ID
- # of agency workers: 80 (plus ~10 students and ~5 teachers)
- # of general public: 10
- Comments: Tyler presented the latest work on juvenile / larval entrainment in irrigation diversions. He shared multiple strategies to reduce and mitigate impacts to larval/juvenile lamprey during dewatering and dredging activities.



### 14. Annual Lamprey Info Exchange Workshop

- Date: 12/13/2018
- Location: McMenamins Edgefield Conference Center (Portland, OR)
- Presenters: Hiroaki Arakawa
- Audience: fish technicians, biologists, and managers primarily from WA, OR, and ID
- # of agency workers: 80 (plus ~10 students and ~5 teachers)
- # of general public: 10



- Comments: Hiroaki presented the predation study that he conducted while working with the Yakama Nation as an intern. He and I recently submitted the draft manuscript for publication and this presentation summarized the highlight points from that study.

### **15. Annual Lamprey Info Exchange Workshop**

- Date: 12/13/2018
- Location: McMenamans Edgefield Conference Center (Portland, OR)
- Presenters: James Barron
- Audience: fish technicians, biologists, and managers primarily from WA, OR, and ID
- # of agency workers: 80 (plus ~10 students and ~5 teachers)
- # of general public: 10
- Comments: James presented a summary of the combined work in recent years put together by Yakama Nation, Umatilla Tribe, NOAA Fisheries, and USFWS on artificial propagation and larval rearing.

### **16. Annual Lamprey Info Exchange Workshop**

- Date: 12/13/2018
- Location: McMenamans Edgefield Conference Center (Portland, OR)
- Presenters: Ralph Lampman and Hiroaki Arakawa
- Audience: fish technicians, biologists, and managers primarily from WA, OR, and ID
- # of agency workers: 80 (plus ~10 students and ~5 teachers)
- # of general public: 10
- Comments: Hiroaki presented his work from Japan on the thermal dynamics of larval lamprey habitat and its effects on the status of Japanese lampreys (with a focus on Arctic Lamprey) and Ralph presented a summary of thermal dynamics monitoring on larval lamprey habitat within the Yakima Basin.

## Media (Newspaper & Social Network Outreach)

### 1. Facebook – “Yakama Nation Fisheries”

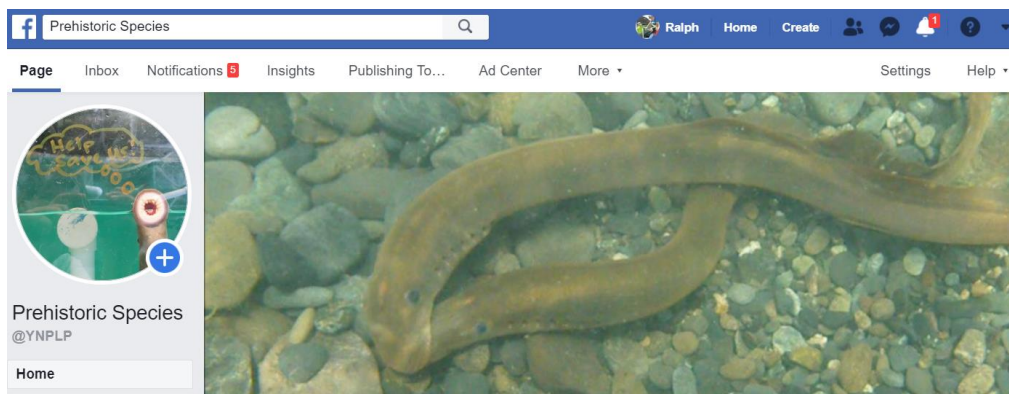
- Date: 1-1-2018 – 12-31-2018
- Location: Website
- Presenters: Yakama Nation Fisheries
- Audience: general public
- # of general public: 1,987 followers
- Comments: <https://www.facebook.com/YakamaNationFisheries/>  
Submitted various posts and material throughout the year.



### 2. Facebook – “Prehistoric Species”

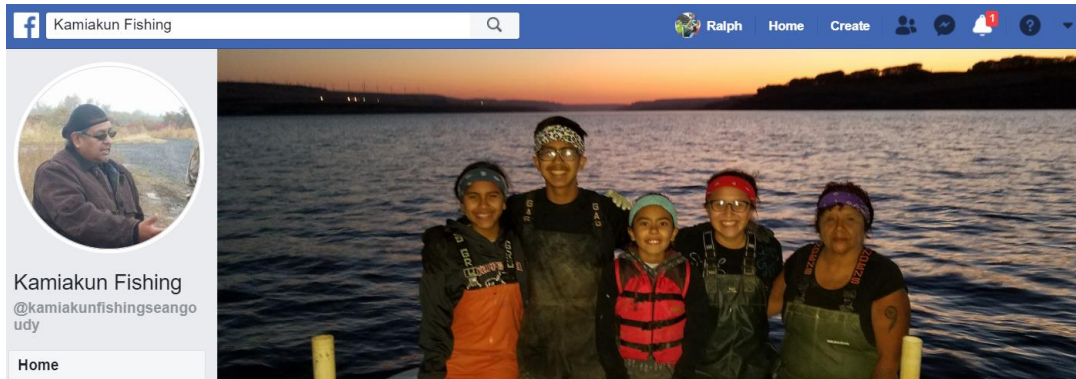
- Date: 1-1-2018 – 12-31-2018
- Location: Website
- Presenters: Yakama Nation Fisheries Pacific Lamprey Project
- Audience: general public
- # of general public: 62 followers
- Comments: <https://www.facebook.com/YNPLP/>

This Facebook page was recently created by our project and it is growing. We plan to post our outreach and research activities and interesting daily findings on this page.



### 3. Facebook – “Kamiakun Fishing”

- Date: 1-1-2018 – 12-31-2018
- Location: Website
- Presenters: USFWS
- Audience: general public
- # of general public: 607 followers
- Comments: <https://www.facebook.com/kamiakunfishingseangoudy/>  
Some of our lamprey projects and updates are shared by Sean Goudy on his personal page here.



### 4. Facebook – “Luna the Lamprey”

- Date: 1-1-2018 – 12-31-2018
- Location: Website
- Presenters: USFWS
- Audience: general public
- # of general public: 2,110 followers
- Comments: [https://m.facebook.com/PacificLamprey/?locale2=es\\_LA](https://m.facebook.com/PacificLamprey/?locale2=es_LA)  
Some of Yakama Nation posts and material were shared throughout the year.

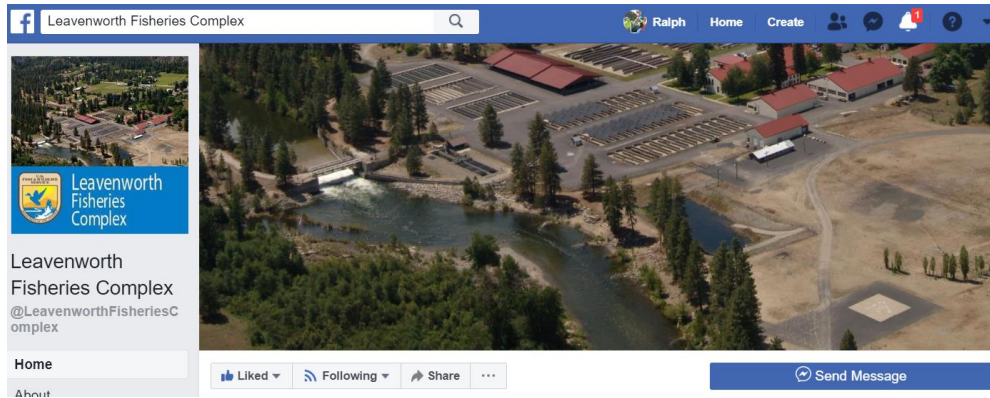


## 5. Facebook – “Leavenworth Fisheries Complex”

- Date: 1/1/2018 – 12/31/2018
- Location: Website
- Presenters: Leavenworth Fisheries & Sean Goudy
- Audience: general public
- # of general public: 1262

Comments: <https://m.facebook.com/LeavenworthFisheriesComplex/>

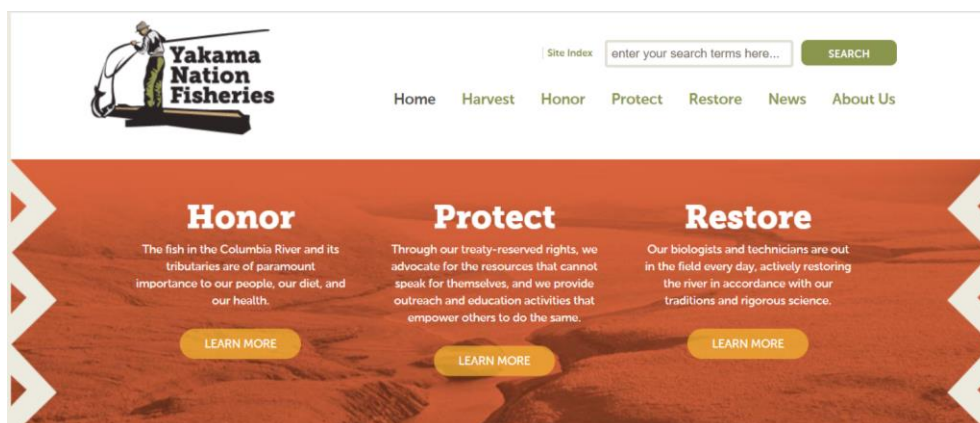
Some of our partnership outreach projects were featured as posts and shared.



## 6. Webpage – “Yakama Nation Fisheries”

- Date: 1-1-2018 – 12-31-2018
- Location: Website
- Presenters: Yakama Nation Fisheries
- Audience: general public
- # of general public: 1,050 followers (estimate)
- Comments: <http://yakamafish-nsn.gov/>

Information about each of our fisheries projects, including Pacific Lamprey Project, is posted here on this webpage as well as background information about our program, relevant news updates, etc.



## 7. Columbia Insight – “The amazing ancient lamprey”

- Date: 2/8/2018
- Location: Newspaper & Website
- Presenters: Valerie Brown (reporter), Ralph Lampman
- Audience: general public
- # of general public: 230 (3% of Hood River OR ~7,686)
- Comments: <http://envirogorge.com/the-amazing-ancient-lamprey/>



## 8. The Columbia Basin Bulletin – “Council Fish/Wildlife Committee Gives Go-Ahead For Three Lamprey Projects”

- Date: 2/23/2018
- Location: Newspaper & Website
- Presenters:
- Audience: general public
- # of general public: 2835 (3% of Bend OR ~94,520)
- Comments: [https://www.eastoregonian.com/sports/outside/pacific-lamprey-swarm-umatilla-river-in-best-numbers-in-years/article\\_d0353b2f-84ed-55b8-b728-48fb11add776.html](https://www.eastoregonian.com/sports/outside/pacific-lamprey-swarm-umatilla-river-in-best-numbers-in-years/article_d0353b2f-84ed-55b8-b728-48fb11add776.html)

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Fish & Wildlife News Bulletin

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**COUNCIL FISH/WILDLIFE COMMITTEE GIVES GO-AHEAD FOR THREE LAMPREY PROJECTS**  
Posted on Friday, February 23, 2018 (PST)

Efforts to recover Pacific lamprey in the Columbia River basin took a step forward with the approval of three projects of the Pacific Lamprey Conservation Initiative facilitated by the U.S. Fish and Wildlife Service and administered by the Pacific States Marine Fisheries Commission.

The Northwest Power and Conservation Council's Fish and Wildlife Committee agreed at its Feb. 13 meeting in Portland to fund a quarter million dollars from cost-savings for three lamprey projects during fiscal year 2018 in the Yakima, Snake and South Fork McKenzie rivers.

## 9. Sunnyside Sun – “Why release lamprey when salmon runs remain marginal?”

- Date: 4/18/2018
- Location: Newspaper & Website
- Presenters: Linda Freepons (reporter), Ralph Lampman
- Audience: general public
- # of general public: 475 (3% of Sunnyside WA ~15,858)
- Comments: <http://www.dailysunnews.com/news/2018/apr/18/why-release-lamprey-when-salmon-runs-remain-margin/>

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**SPECK** CHEVROLET-BUICK  
A FAMILY AUTOMOTIVE TRADITION SINCE 1912  
61 EAST ALLEN ROAD SUNNYSIDE

**Why release lamprey when salmon runs remain marginal?**  
Lamprey are a parasitic species that literally suck the life out of salmon

Linda Freepons As of Wednesday, April 18, 2018

Sign in to favorite this Discuss 4 comments, Blog about Share this Email, Facebook, Twitter

**PROSSER** — Does anyone else think it is ironic that the Yakama Indian Nation – long a champion for salmon restoration – plans to release adult Pacific lamprey into the Yakima River? (Page 3 of the April 18 edition of The Daily Sun).

Lamprey may be culturally important to the tribe, but they also are a parasitic eel-like species that literally sucks the life out of salmon. Lamprey and salmon both migrate downstream, then return as adults to spawn.

So, what will that mean to the ongoing dam and water-spill controversy? Will we have to worry in the future about lamprey passage over the dams, too?

The bottom line – reintroducing a predator species like lamprey when salmon runs are still marginal doesn't make much sense. It would be better to wait.

Linda Freepons

**YELLOW PAGES**

**BUSINESSSES RECENT ADS**

Abeyla Nelson Injury Law  
Sunnyside, WA

Alex Newhouse  
Sunnyside, WA

Lower Valley Credit Union  
Sunnyside, WA

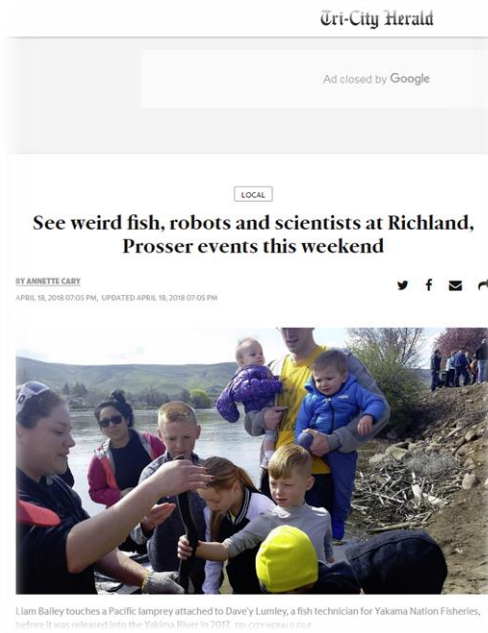
Hernandez Law Office  
Sunnyside, WA

Sunnyside Cardiology Clinic  
Sunnyside, WA

## 10. Tri-City Herald – “See weird fish, robots and scientists at Richland, Prosser events this weekend”

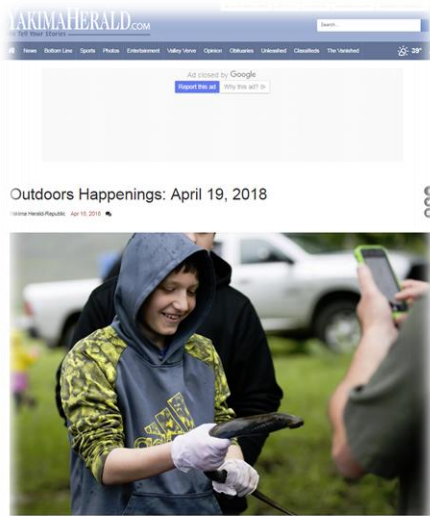
- Date: 4/18/2018
- Location: Newspaper & Website
- Presenters: Annette Cary (reporter), Ralph Lampman

- Audience: general public
- # or general public: 8,700 (3% of Tri-Cities WA ~290,000)
- Comments: <https://www.tri-cityherald.com/news/local/article209186379.html>



## 11. Yakima Herald – “Outdoors Happenings: April 19, 2018”

- Date: 4/18/2018
- Location: Newspaper & Website
- Presenters: Kerry L. Turley (reporter), Ralph Lampman
- Audience: general public
- # of general public: 2809 (3% of Yakima WA ~93,637)
- Comments: [https://www.yakimaherald.com/sports/outdoors/outdoors-happenings-april/article\\_77eda0b8-4396-11e8-b335-f7e1156164ef.html](https://www.yakimaherald.com/sports/outdoors/outdoors-happenings-april/article_77eda0b8-4396-11e8-b335-f7e1156164ef.html)



## 12. Daily Sun – “Yakamas release lamprey”

- Date: 4/25/2018
- Location: Newspaper & Website
- Presenters: Jessica Quirk (reporter), Ralph Lampman
- Audience: general public
- # of general public: 475 (3% of Sunnyside WA ~15,858)
- Comments: <http://sunnysidesun.com/news/2018/apr/23/yakamas-release-lamprey/>



The screenshot shows the Sunnyside Sun website. At the top is the logo with a sun icon and the text "SUNNYSIDE SUN". Below the logo is a navigation menu with links: Home, News, Sports, Opinion, Community, Vitals, Events, Media, Classifieds, Legal notices, Contact, and Login/Register. A banner for "SPECK CHEVROLET BUICK" is visible, with the text "A FAMILY AUTOMOTIVE TRADITION SINCE 1912" and "61 EAST ALLEN ROAD SUNNYSIDE". The main article is titled "Yakamas release lamprey" with a sub-headline "Tribe, others celebrate eel-like fish contribution to Yakima River". The article features a photo of a woman, Jessica Quirk, wearing sunglasses and holding a lamprey. Below the photo is a caption: "Jessica Quirk Davey Lumley, 27, has a lamprey suctioned onto her face during a cultural event for the fish Saturday in Prosser." To the right of the article is a "YELLOW PAGES" sidebar with a search bar and a list of businesses: Davita Mt Adams Kidney Ce..., Alex Newhouse, Sunnyside Pediatrics: Nealen..., Sunnyside Cardiology Clinic, Slam Dunk Athletics, and Taylor'd Footwear. At the bottom of the sidebar are links for "SEE MORE" and "BY CATEGORY".

## 13. Prosser Record-Bulletin – “Pacific Lamprey Project

- Date: 4/25/2018
- Location: Newspaper & Website
- Presenters: Victoria Walker & Ralph Lampman
- Audience: general public
- # of general public: 171 (3% of Prosser WA ~5,714)
- Comments: [www.recordbulletin.com](http://www.recordbulletin.com)



RECORD BULLETIN WASHINGTON "SINCE 1892" WWW.RECORDBULLETIN.COM APRIL 25, 2018

# Pacific Lamprey Project



Photo by Benton Conservation District  
A youth (rainbow tie dye shirt) of Yakima releasing a lamprey into the Yakima River.



Photo by Dave Herasimtschuk  
Lampreys are usually caught by hand where rapids and waterfalls force them to attach themselves to rocks.



Photo by Benton Conservation District  
Grayson Squeecha holds a lamprey poster for his son Remy to pose.

**By Victoria Walker**  
On Saturday, April 21 from 1:30 to 3:00 p.m. there was a release of lampreys into the Yakima River from 310 Wine Country Road in Prosser. April 21 is also World Fish Migration Day. It was a perfect day to release 50 lampreys into the river. Ralph Lampman, Pacific Lamprey Project Biologist, addressed the crowd to introduce the Yakama Nation lamprey (YNL) program. Yakama tribal member, Leona Wapato, gave the invocation with a traditional prayer and song.

A lamprey is like an eel. They have a large sucking disk for a mouth. Lampreys belong to a primitive group of fishes that are eel-like in form but lack the jaws and paired fins of true fishes. Pacific lampreys have a round sucker-like mouth, no scales, and gill openings. Adult Pacific lampreys are characterized by the presence of three large anterior teeth and many smaller posterior teeth on the oral disc. Lampreys are native to the Pacific NW and they say are older

than dinosaurs. Pacific lampreys are parasitic and feed on a variety of marine and anadromous fish including Pacific salmon, flufffish, rockfish, and pollock, and are preyed upon by sharks, sea lions, and other marine animals. The local native Pacific lamprey should not be confused with the problematic sea lamprey introduced into the Great Lakes. The Pacific lamprey provide important ecological benefits. Juvenile lamprey burrows in river bottom sediments, creating healthy soil, just like earthworms

enhance the soils in a garden. Lampreys are poor swimmers, and rich in oils and nutrients, so predators generally prefer eating them instead of salmon. As local lamprey populations have severely declined, and lamprey become scarce, predators are switching to other food items like juvenile salmon. Rebuilding lamprey populations could help reduce the huge predator impact on young salmon while also making the river healthier.

Today, the lamprey is significant for their bitter-tasting but protein-rich flesh and oil, which is processed into animal feed, and used as a source of medicinal anticoagulants. They are described as an original 'super food,' rich in omega-3 oils and vitamins. In Japan, lamprey pills are sold as a nutritional supplement. Yakama hunters packing food for a trip would often chose lamprey jerky as a tasty and nutritional snack that

See LAMPREY on page 5

## 14. Argonaut, University of Idaho newspaper – “The bacon-cheesburger of the sea”

- Date: 6/12/2018
- Location: Newspaper & Website
- Presenters: Lindsay Trombly, Matthew Dunkle, Christopher Caudill, and Ralph Lampman
- Audience: general public
- # of general public: 754 (3% of Moscow ID ~25,146)
- Comments: <https://www.uiargonaut.com/2018/05/02/the-bacon-cheesburger-of-the-sea/>

The screenshot shows the Argonaut newspaper website. At the top is the masthead "ARGONAUT" with the tagline "FOR AND BY THE STUDENTS SINCE 1898". Below the masthead is a navigation menu with links for News, Sports, Arts & Culture, Opinion, Advertising, Contact, Student Media, Give to The Argonaut, and Newsletter. The main content area features a large blue graphic with the text "NEWS ARG 1898". To the right of the graphic is a "Featured" section with several news items, including "Presidential finalist speaks to campus", "Women's Center: Where it's going, where it's been", "New president named by April", and "Dirt covered hands and green thumbs". Below the featured section is a "Follow Us on Facebook" section with a Facebook logo and a photo of a person. The main article, "The bacon-cheesburger of the sea", is partially visible at the bottom of the page, with a sub-headline "US and other stakeholders help Pacific lampreys migrate".

## 15. My Columbia Basin – “Pacific lamprey returns in record numbers”

- Date: 6/12/2018
- Location: Newspaper & Website
- Presenters: Bonneville Power Administration
- Audience: general public
- # of general public: 989 (3% of Walla Walla WA ~32,854)
- Comments: <http://www.mycolumbiabasin.com/2018/06/12/pacific-lamprey-returns-in-record-numbers/>

The screenshot shows the homepage of My Columbia Basin. The header includes the site name, URL (www.mycolumbiabasin.com), and social media links for Facebook and My CB. There are also buttons for downloading the app from the App Store and Google Play. The main navigation menu includes HOME, NEWS, LISTEN LIVE, LINE-UP, ROADS, and CONTACT. A search bar is present with the placeholder text "Type to search, then press enter".

The featured article is titled "Pacific lamprey returns in record numbers" and is dated June 12, 2018, 4:03 pm. It includes a photo of lampreys in a river and a caption: "Photo via Oregon Fish & Wildlife". The text of the article reads:

*The following is a news release from the Bonneville Power Administration:*

**PORTLAND, Ore.** – Pacific lamprey, a prehistoric fish native to the Columbia River Basin and treasured by Native American people, are returning to Oregon's Umatilla River in record numbers.

From the late 1960s through the early 2000's lamprey were functionally extinct in the Umatilla Basin, and less than five years ago, only a few-hundred Pacific lamprey returned to the Umatilla River each year. However, through efforts such as adult translocation, scientists with the Confederated Tribes of the Umatilla Indian Reservation have counted more the 2600 of the ancient fish migrating up the eastern Oregon river to spawn this spring.

The Confederated Tribes of the Umatilla have worked for nearly 25 years to increase lamprey numbers. The Bonneville Power Administration has funded most of the tribe's lamprey projects since the early 1990's, with much of the money going toward lamprey research and improving instream passage. Over the past 10 years, BPA ratepayers have invested just over \$5 million in the Umatilla Basin for lamprey.

Below the article is an advertisement for Hermiston Walk-In Clinic, featuring a photo of a woman and child, and listing clinic hours: Mon-Thu 8am-7pm, Friday 8am-5pm, Sat-Sun 10am-5pm, and phone number (541) 966-0535. The ad also mentions CHI St. Anthony Hospital.

## 16. The Oregonian – “Pacific lamprey show signs of recovery in Umatilla River”

- Date: 6/13/2018
- Location: Newspaper & Website
- Presenters: Kale Williams
- Audience: general public
- # of general public: 19,434 (3% of Portland OR ~647,808)
- Comments: [https://www.oregonlive.com/environment/2018/06/pacific\\_lamprey\\_show\\_signs\\_of.html](https://www.oregonlive.com/environment/2018/06/pacific_lamprey_show_signs_of.html)



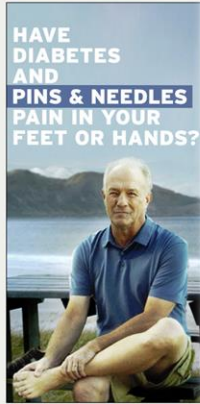
ENVIRONMENT

Pacific lamprey show signs of recovery in Umatilla River

Posted Jun 13, 2018



Lamprey attach to a viewing window at Bonneville Dam where new passage ways for lamprey are being tested to allow the fish to more successfully move up the Columbia River during their return from the ocean. (Randy L. Rasmussen/The Oregonian)



17. East Oregonian – “Pacific lamprey swarm Umatilla River in best numbers in years”

- Date: 6/14/2018
- Location: Newspaper & Website
- Presenters: Gosia Wozniacka
- Audience: general public
- # of general public: 500 (3% of Pendleton OR ~16,677)
- Comments: [https://www.eastoregonian.com/sports/outside/pacific-lamprey-swarm-umatilla-river-in-best-numbers-in-years/article\\_d0353b2f-84ed-55b8-b728-48fb11add776.html](https://www.eastoregonian.com/sports/outside/pacific-lamprey-swarm-umatilla-river-in-best-numbers-in-years/article_d0353b2f-84ed-55b8-b728-48fb11add776.html)

EAST OREGONIAN

Pacific lamprey swarm Umatilla River in best numbers in years

East Oregonian Jun 14, 2018

AP Photo/Gosia Wozniacka A Native American man shows off a lamprey, an eel-like fish caught at Willamette Falls, a 40-foot waterfall south of Portland in 2015. An ancient fish that's a source of food for tribes in the Pacific.

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Eastern Oregon Events

FRI	Pendleton Delphic Club
15	Vert Club Room / Pendleton, OR
FRI	Story and Craft Time
15	Elfin Public Library - Elfin, OR
SUN	Hungry Spirit Open AA Meeting
17	Rockwell Restaurant - Pendleton, OR
MON	Preschool Story Time
18	Athens Public Lib. - Athens, OR