



Fall 2021 and Spring 2022 Program Summary

In the fall of 2021 and spring of 2022, the Rogue Valley Council of Governments working on behalf of the NPDES Phase II Stormwater Communities (Ashland, Central Point, Jackson County, Medford, Phoenix, and Talent), Rogue Valley Sewer Services (RVSS), and local water quality programs (TMDLs- including Grants Pass, Josephine County, Phoenix, Talent, and Jacksonville) partnered with the Jackson Soil and Water Conservation District, Bear Creek Watershed Education Partners (BCWEP), the Rogue River Watershed Council, and others to implement the Salmon Watch Program. Classes were conducted in September, October, and early November (November 5th) of 2021 and April and May of 2022. Overall, 31 field days were conducted with 52 classes and over 1,300 students. Classes represented schools from the Bear Creek Valley and Greater Jackson County.

In addition, 17 organizations, agencies, and municipalities donated their time to the program and provided in kind match to the program. The match reduces program costs and also allows us to leverage grant funding for the program. Details on the class dates, field locations, schools involved, number of students, and other information (e.g., volunteer instructors) can be found in the Table 1.

The 2021-2022 Salmon Watch Program received financial support from the Jackson Soil and Water Conservation District in addition to the Bear Creek DMAs and MS4s, Josephine County, and the City of Grants Pass. We continued our partnership with the Army Corps of Engineers operating under the MOU established for the program. In addition, we continued to work with Oregon State Parks and Jackson County to waive some fees for park use (Tou Velle, Valley of the Rogue, and Cantrall Buckely). ODFW has also continued to provide fish for the dissection module in addition to donating time for training and instruction.

In addition to the field classes, there are a number of other program activities that are conducted to implement the program. Activities include an instructor training held on September 14th and

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16th for both contracted educators and volunteer instructors, recruiting schools and instructors through emails, personal contacts, and at events, advertising the program, completing before and after program surveys, providing in school presentations (limited outside of RVSS' jurisdictions), coordinating logistics for the program (schools, sites, programs, and instructors), obtaining permits for site use at state parks (Tou Velle and Valley of the Rogue), managing contracts for instructors, providing reimbursements for program expenses (transportation, parking fees, and program equipment and supplies), maintaining and stocking kits, and other logistics.

New for the fall 2021 season was the creation of Salmon Watch training videos with the assistance of the Bureau of Land Management. While not new for this season, we also transitioned to a mostly dry erase documentation system resulting in less paper waste for the program.

Salmon Watch Field Day

For most classes, the format is the same in terms of timing, modules, and other logistics. There are exceptions for classes that make special arrangements (e.g., Scenic Middle School and McLoughlin Middle School).

Salmon Watch field days are scheduled for around 4.5 hours (time of classes on site) at field locations spread throughout Bear Creek and the Middle Rogue Watershed. Field sites include Cantrall Buckley Park, Griffin Creek at Scenic Middle School, McGregor Park, Tou Velle State Park, Valley of The Rogue State Park, and numerous sites along Bear Creek (Bear Creek Park, Blue Heron Park, Coyote Trails Nature Center, Lynn Newbry Park, and North Mountain Park).

The “classic” four module model is used from the Salmon Watch Curriculum for the programs. Instructors are assigned stations to discuss Salmon Biology/Salmon Life Cycle (station 1), Water Quality (station 2), Macroinvertebrates (station 3), and Riparian Areas (station 4). Each station also has activities for students, including salmon viewing (when spawning), salmon dissection, water quality testing, macroinvertebrate sampling, native plant identification, drawing riparian cross sections and longitudinal profiles, scavenger hunts, and shade surveys. Classes are divided up into 4 groups and rotated through the stations at approximately 35 minutes, allowing every student to participate in each of the four stations. Examples of completed activity forms are included in Appendix A and an example schedule is presented below:

Schedule

9:00-9:15	Intro (Lead Instructor)
9:15-9:50	Rotation 1
9:55-10:30	Rotation 2
10:35-11:10	Rotation 3
11:15-12:00	Lunch
12:05-12:40	Rotation 4
12:45 - 1:30	Wrap-Up (Lead Instructor)

2021-2022 Field Day Statistics

Table 1 summarizes all of the Salmon Watch classes completed in the fall of 2021 and spring 2022. Information on the dates, field locations, schools/districts, number of students, grade levels, number of classes, and contributing partner organizations (volunteer instructors) are included in the table.

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Table 1: 2021-2022 Salmon Watch Field Trip Information

Date	Location	School/District	# Students	Grade	# Classes	Contributing Partners
9/22/2021	McGregor Park (MG)	Orchard Hill Elementary	22	5	1	RVCOG, RRWC, BLM, MFR, V
9/28/2021	MG	Talent Elementary	63	4	2	BCWEP, MFR
9/29/2021	MG	Shady Cove Elementary	54	3 and 4	2	ODFW
9/30/2021	Blue Heron Park (BH)	Phoenix Elementary	55	5	2	RVSS, BCWEP
10/5/2021	MG	Butte Falls Elementary	20	4	1	BLM
10/6/2021	Harnish Wayside (Eagle Point)	Crater Lake Charter School	43	4 and 5	2	V
10/12/2021	BH	Phoenix Elementary	50	4	2	RVCOG, BLM, BLM, TFT
10/13/2021	Tou Velle State Park (TV)	John Muir Outdoor School	30	6 and 7	2	MWC, JC
10/14/2021	TV	Logos	54	3-5	2	4H, BLM, V, V
10/15/2021	TV	Abe Lincoln Elementary	42	4	2	MFR, SOLC, V, V
10/19/2021	TV	Sams Valley Elementary	40	5	2	TFT, BLM, MFR, SOLC
10/20/2021	Cascade Christian High School	Cascade Christian High School	53	7	2	BLM, V
10/21/2021	Valley of the Rogue State Park	Talent elementary and OTS Charter School	30	2-5	2	SOLC, MFR, BLM, 4H
10/22/2021	Reinhardt Park	Allen Dale Elementary	75	5	3	BLM, MFR, V, V
10/18/2021	Scenic Middle School (SMS)	Scenic Middle School (SMS)	250	8th	10	CP
10/19/2021	Scenic Middle School (SMS)	Scenic Middle School (SMS)				CP
10/20/2021	Scenic Middle School (SMS)	Scenic Middle School (SMS)				RVCOG
10/20/2021	Scenic Middle School (SMS)	Scenic Middle School (SMS)				RVCOG
12/21/2021	Scenic Middle School (SMS)	Scenic Middle School (SMS)				
10/21/2021	Scenic Middle School (SMS)	Scenic Middle School (SMS)				RVCOG
10/22/2021	Scenic Middle School (SMS)	Scenic Middle School (SMS)				

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10/22/2021	Scenic Middle School (SMS)	Scenic Middle School (SMS)				RVCOG
10/26/2021	Provolt	Woodland Charter School	15	5	1	BLM
10/27/2021	Lynn Newbry Park (LNP)	Talent Elementary	45	3	2	V,V
10/28/2021	TV	Oak Grove Elementary	69	4	2	BLM, RRWC, V,V
11/2/2021	Cantrall Buckley (CB)	Ruch Outdoor School	72	Mixed	2	BLM, AP, RVCOG
11/2/2021	TV	Kids Unlimited	156	5	5	RR, BLM, KT
11/3/2021	TV	Kids Unlimited		6		BLM, RVCOG, MWC
11/4/2021	TV	Kids Unlimited		7		MWC, MWC, BLM, RVCOG
4/1/2022	TV	McLoughlin Middle School	60	6	2	RVCOG, RVCOG, ODFW, ODFW
5/1/2022	MG	Ashland	15	3	1	ODFW, RVCOG

Table 2: Key to Instructional Partners

AP	Applegate Partnership and Watershed Council
BLM	U.S. Dept. of Interior, Bureau of Land Management
CP	City of Central Point
JSWCD	Jackson Soil & Water Conservation District
Medford	City of Medford
MWC	Medford Water Commission
ODFW	Oregon Dept. of Fish & Wildlife
KT	Kid Time
SOLC	Southern Oregon Land Conservancy
RRWC	Rogue River Watershed Council
RVCOG	Rogue Valley Council of Governments
RVS	Rogue Valley Sewer Services
4H	4 H
TFT	The Freshwater Trust
BCWEP*	Bear Creek Watershed Education Partners (*Volunteers – Former Board Members)

Pre and Post Program Surveys

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Surveys are used to evaluate what students learned in the program and provide a measure of the effectiveness of the program. Surveys are provided to classes prior to and after the field day is completed. Any changes in survey results provide an indication of what the students learned and how effective the instructors were.

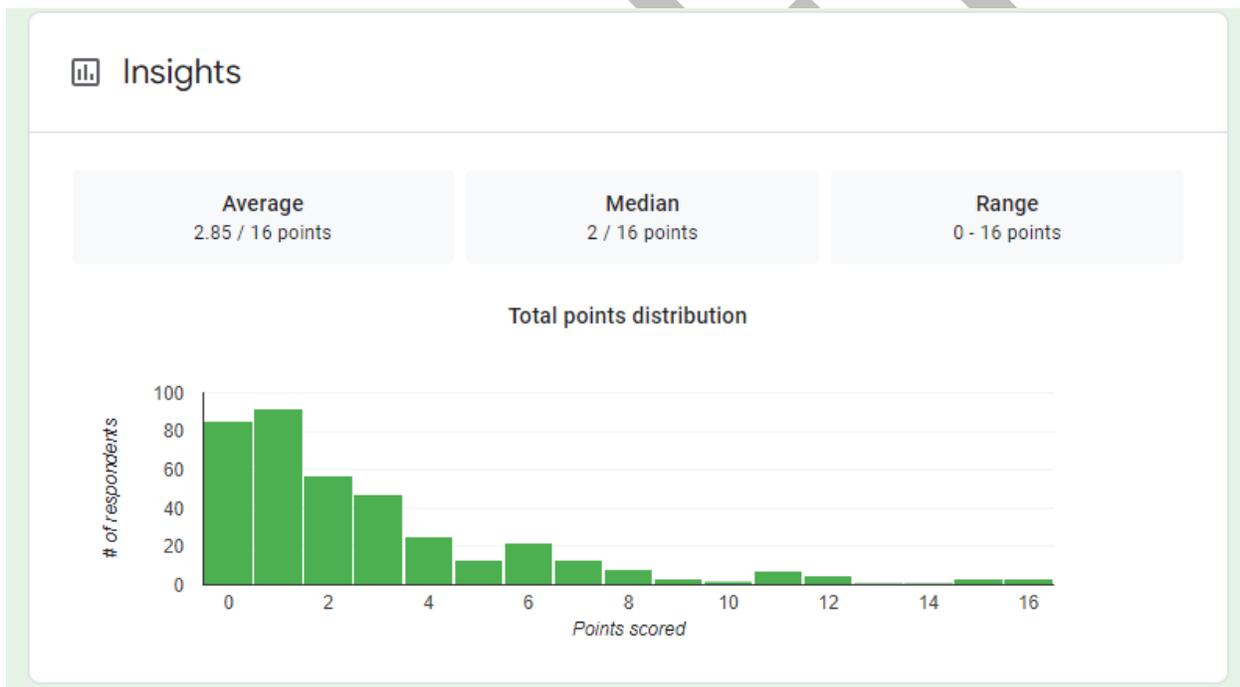
A general survey is sent out to all participants and additional surveys are provided to select classes (e.g., Scenic Middle School).

Survey Results

General Program Results

Before and after surveys were conducted with students from all school except Scenic Middle School. 387 students responded to the pre-program survey and 184 responded to the post-program survey. Scores increased from 2.85/16 (18% correct answers) to 5/16 (31%). Details on the results and questions frequently missed can be found below

Pre-program



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Frequently missed questions ?

Question	Correct responses
1. What is a watershed?	168 / 387
2. Which items below can make streams unhealthy?	69 / 387
3. What is a macroinvertebrate?	160 / 387
4. What kinds of fish in the Rogue River are born in freshwater and travel to the ocean to grow to be adults and back to freshwater to reproduce?	14 / 387
5. What do salmon need to be healthy in our streams?	38 / 387
6. What is a riparian area?	120 / 387
7. Riparian areas are good for streams because:	52 / 387
8. What is a storm drain?	188 / 382

Post-Program Results

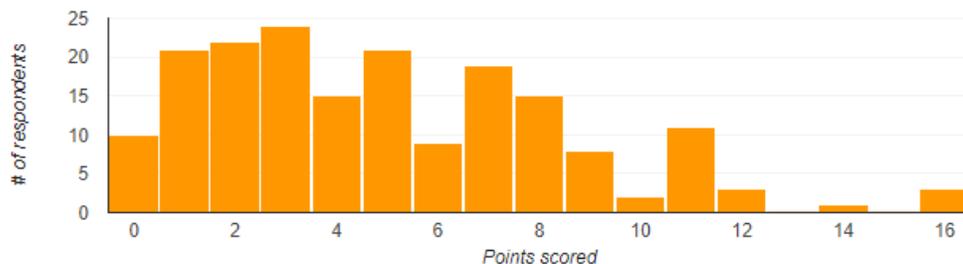
Insights

Average
5 / 16 points

Median
4 / 16 points

Range
0 - 16 points

Total points distribution



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Frequently missed questions ?

Question	Correct responses
2. Which items below can make streams unhealthy?	59 / 184
4. What kinds of fish in the Rogue River are born in freshwater and travel to the ocean to grow to be adults and back to freshwater to reproduce?	8 / 184
5. What do salmon need to be healthy in our streams?	41 / 184
7. Riparian areas are good for streams because:	48 / 184

Scenic Middle School

Before and after surveys were conducted with students from Scenic Middle School. 208 students responded to the pre-program survey and 219 responded to the post-program survey. Scores increased from 5.36/21 (26% correct answers) to 10.31/21 (49%). Details on the results and questions frequently missed can be found below. It should be noted that the questions for the Scenic survey and general survey are different, although there is considerable overlap in the questions asked.

Pre Program Scenic Middle School

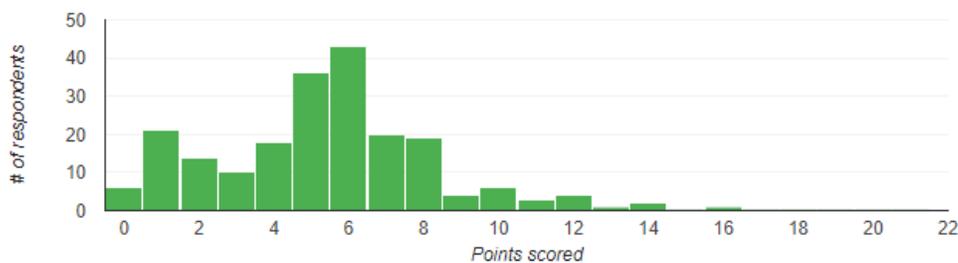
Insights

Average
5.36 / 21 points

Median
5 / 21 points

Range
0 - 16 points

Total points distribution



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Frequently missed questions ?

Question	Correct responses
1. What is a watershed?	101 / 208
3. Which items below can make streams unhealthy?	21 / 208
4. What is a macroinvertebrate?	58 / 208
5. What does the presence of certain types of macroinvertebrates in a stream tell us?	68 / 208
6. What kinds of fish in the Rogue River (and local creeks including Griffin) are born in freshwater and travel to the ocean to grow to be adults and back to freshwater to reproduce?	0 / 208
7. What is a riparian area?	62 / 208
8. Riparian areas are good for streams because:	19 / 208
9. What do salmon need to be healthy in our streams?	9 / 208

Post Surveys

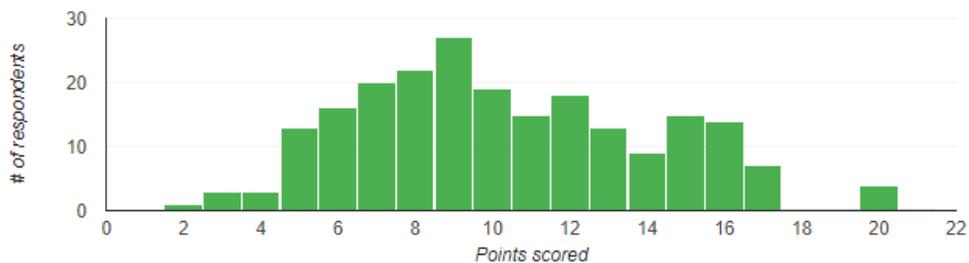
Insights

Average
10.31 / 21 points

Median
10 / 21 points

Range
2 - 20 points

Total points distribution



Frequently Missed Questions

📌 Frequently missed questions ?

Question	Correct responses
6. What kinds of fish in the Rogue River (and local creeks including Griffin) are born in freshwater and travel to the ocean to grow to be adults and back to freshwater to reproduce?	10 / 219
8. Riparian areas are good for streams because:	37 / 219
9. What do salmon need to be healthy in our streams?	69 / 219

Next Steps and Recommended Program Changes

- Continue to work with municipal separate storm sewer systems (MS4), designated management agencies (DMA), Jackson SWCD, Stream Smart, and other partners to continue the program.
- Work with regional (e.g., Rogue Basin Partnership) and statewide groups (e.g., World Salmon Council) to expand the program in the Rogue Basin and tie in with statewide programs. We have talked with the Applegate Partnership and Watershed Council (APWC), the Illinois Valley Soil and Water Conservation District, and Lower Rogue Watershed Council regarding program expansion pre COVID and plan to continue this discussion in 2022-2023.
- Continue to add programs later in the season and in the spring as time and resources allow. Timing is to allow better coordination with ODFW in class fish program where schools grow salmon from eggs and release them later in the year.
- Continue to expand the program by adding back in service learning programs and bringing back the Student Education Symposium if possible (phasing programs back in).
- Use survey results to refine the program teaching points as needed.
- Continue to highlight the program as an important Regional Stream Smart Program.
- Establish geocaches at field site locations.
- Establish permanent locations for the modules at the established field locations (in development):
 - Map locations of sites, and
 - Flag areas and/or map locations of the class layouts for each field site.

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Program Photos



Appendix A: Data Sheet Examples

RIPARIAN SCAVENGER HUNT

Please find or answer the following items. Draw or describe in writing.

1. How many **different kinds of evergreen trees** are there in this area? ✓
10
2. How many **different kinds of deciduous trees** are there in this area?
7
3. Can you identify any **kinds of berries, fruits, or seeds?** (Do not eat them!)
acorn Blackberries
4. What are some **examples of human impacts to streams?**
5. Is there an **eroded stream bank** in the area? If so, what do you think caused the erosion?
air
6. Is there a place where **tree roots** are holding the stream bank? Or where tree roots are needed to help stabilize the banks?
Diasma
next to water
7. Looking around the stream and riparian area, find **3 different types of cover** that help protect fish from predators
rocks tree roots
8. Find an **insect or sign** of an insect.
bee
9. Find different types of **evidence that birds** occur in the area.
10. Did you see any wildlife, fish, or aquatic species?
fish
salmon

RIPARIAN SCAVENGER HUNT

Please find or answer the following items. Draw or describe in writing.

1. How many **different kinds of evergreen trees** are there in this area?
15
2. How many **different kinds of deciduous trees** are there in this area?
5
3. Can you identify any **kinds of berries, fruits, or seeds?** (Do not eat them!)
Blackberries
4. What are some **examples of human impacts to streams?**
litter, trash, garbage
5. Is there an **eroded stream bank** in the area? If so, what do you think caused the erosion?
yes humans
6. Is there a place where **tree roots** are holding the stream bank? Or where tree roots are needed to help stabilize the banks?
yes
7. Looking around the stream and riparian area, find **3 different types of cover** that help protect fish from predators
A leaning tree, Rocks
8. Find an **insect or sign** of an insect.
A chit fruit flies
9. Find different types of **evidence that birds** occur in the area.
A birds nest and bird poop
10. Did you see any wildlife, fish, or aquatic species?
Todd fish birds

Appendix B: Report Highlight Summary Fall 2021



Salmon Watch Program Summary Fall 2021

We pulled it off!

With the continuing challenges of the pandemic including a lack of school bus drivers and limited chaperones, we provided field trips over seven weeks, bringing students outdoors to learn about their local watersheds. Thanks to funding from the Jackson Soil & Water Conservation District and contributions from the water quality programs of local cities (Jacksonville, Ashland, Phoenix, Talent, Medford, Central Point, Grants Pass) and counties (Jackson and Josephine) as well as twelve additional partner organizations we were able to provide no-cost field trips to students in grades 3rd-7th from nine school districts and two private schools in the Rogue basin. Collaboration and partnership make it happen.

We could not do it without your support. Thank you!

of students served: over 1240

of schools participating: 20

of individual instructors contributing: 38

Coordinating agencies:



Students learning about water quality at Blue Heron Park



Students learn at four stations:

- Salmon Biology
- Riparian Ecology
- Water Quality
- Macroinvertebrates



Macroinvertebrates are an important part of the stream ecosystem

Thank you to our Salmon Watch Partners!



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Appendix C: Correspondence from Students

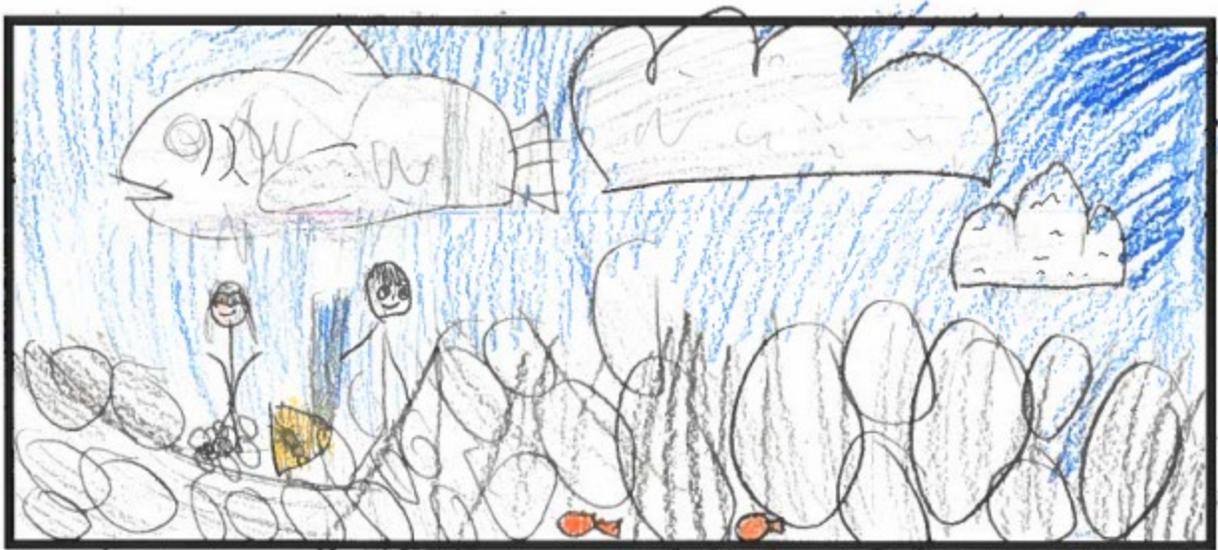
Date: 5-26-22

Dear Ryan and Amie,

Thank you so much

for teaching us about fish

I liked the macro invertebrates





April 29, 2022

Dear Mrs. Amy,

Thank you so so much for inviting us to learn about life in the river and volunteering to teach us about them. My favorite part is when I caught the crawdad (Mr. Krabs). I had never seen one before. You told me that the water conditions have to be pretty good to have crawdad living in it. Overall, Thank you so much for going out there and spending your time with us.

Sincerely, Moi or the kid who caught Mr. Krabs