

Salmon Watch Fall 2018 Activity Report



2018 Program Summary

In the fall of 2018, the Rogue Valley Council of Governments working on behalf of the NPDES Phase II Stormwater Communities (Phoenix, Talent, Medford, Ashland, Jackson County, and Central Point), Rogue Valley Sewer Services and local water quality programs (TMDLs) partnered with the Gray Family Foundation, 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 1st). Overall, 25 field days were conducted with 46 classes and over 1,200 students. Classes represented schools from the Bear Creek Valley, Greater Jackson County, and Josephine 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.

New to the program in 2018 was the Gray Family foundation financial support of the program. The initial grant application included provisions for three years of total funding at a reduced level each subsequent year if the program continues to be a success. We applied for Year 2 funding in December 2018 and were approved in March 2019. In 2019, we are working with the Army Corps of Engineers for long term use of McGregor Park for the Salmon Watch Program. The Corps is also a new partner for the program.

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 12th for 19 contracted educators and volunteer instructors, recruiting schools and instructors through emails, personal contacts, and at the August Institute and other 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,

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instructors), obtaining permits for site use (TouVelle and Valley of the Rogue), managing contracts for instructors, providing reimbursements for program expenses (transportation, parking fees), maintaining and stocking kits, and other logistics.

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).

Salmon Watch field days are scheduled for around 4 hours at field locations spread throughout Bear Creek and the Middle Rogue Watershed. Field sites include McGregor Park, Valley of The Rogue State Park, Tou Velle State Park, Cantrall Buckley Park, Griffin Creek at Scenic Middle School, Reinhart Park, Fish Hatchery Park, and numerous sites along Bear Creek (Blue Heron Park, Lynn Newbry Park, Bear Creek Park, Coyote Trails Nature Center, 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 every 35 minutes, so every student participates in 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) |

2018 Field Day Statistics

Table 1 summarizes all of the Salmon Watch classes completed in the Fall of 2018. Information on the field location, schools, grade levels, number of students, and contributing partner organizations (volunteer instructors) are included in the table.

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Table 1: 2018 field trip dates, location, schools, # students, grade, # classes, partners

| Date | Location | School/District | # Students | Grade | # Classes | Contributing Partners |
|------------------|--------------------------------------|--|-------------------|-----------------------------------|------------------|------------------------------|
| Sept 25 | McGregor | Kennedy Elementary | 60 | 4th | 2 | BLM, RVSS |
| Sept 26 | McGregor | Phoenix Elementary | 57 | 3-5 | 2 | BLM, BCWEP |
| Sept 27 | McGregor | Bellview/Orchard Hill | 60 | 4th | 2 | BLM, TFT, SWCD |
| Oct 2 | McGregor | LOGOS Charter School | 60 | 3 rd – 6 th | 2 | BLM, RVSS |
| Oct 3 | McGregor | North Medford HS | 50 | High School | 2 | BLM, BCWEP |
| Oct 4 | McGregor | Orchard Hill | 60 | 4,5 | 2 | BLM, BCWEP, OSU Extension |
| Oct 8- Oct 12 | Scenic Middle School (Griffin Creek) | Scenic Middle School (Central Point) | 268 | 8 | Multiple (10) | RVCOG, City of Central Point |
| Oct 9 | Touvelle | Talent Middle School SDI | 55 | 7,8 | 2 | RVCOG, RVSS |
| Oct 10 | Valley of the Rogue (VOTR) | Orchard Hill Elementary | 60 | 4,5 | 2 | SFI |
| Oct 16 | VOTR | Talent Outdoor Discovery Program | 57 | 3,4,5 | 2 | RVSS |
| Oct 17 | Coyote Trails | Talent Elementary School | 60 | 3,4 | 2 | RRK |
| Oct 18 | VOTR | Oak Grove | 60 | 6 | 2 | MWC, BCWEP |
| Oct 19 | VOTR | Rogue River Elementary | 70 | 5 | 2 | RRED, City of Rogue River |
| Oct 24 | Cascade Christian | Cascade Christian | 48 | 7 | 2 | TFT |
| Oct 25 | Cantrall Buckley (CB) | Ruch School,/Talent Elementary | 43 | 3,8 | 2 | RVSS, ARWC |
| Oct 30 | Reinhart Park | Parkside Elementary | 72 | 5 | 3 | BLM, RVCOG |
| Oct 31 | CB | Hidden Valley High School | 30 | 9-12 | 1 | RRWC |
| Nov 1 | VOTR | Hanby Middle School, Talent Elementary | 54 | 5-8 | 2 | TFT, RVCOG, RRWC, BCWEP |
| TOTAL | 8 LOCATIONS | 16 Schools | 1224 | Students | | |

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Table 2: Key to instructional partners

| | |
|----------|---|
| ARWC | Applegate River Watershed Council |
| BLM | US Dept. of Interior, Bureau of Land Management |
| JSWCD | Jackson Soil & Water Conservation District |
| MWC | Medford Water Commission |
| ODFW | OR Dept. of Fish & Wildlife |
| OSU Ext. | Oregon State Univ. Extension |
| RBP | Rogue Basin Partnership |
| RRED | Rogue River Education District |
| RRK | Rogue RiverKeeper |
| RRWC | Rogue River Watershed Council |
| RVCOG | Rogue Valley Council of Governments |
| RVSS | Rogue Valley Sewer Services |
| SFI | Siskiyou Field Institute |
| TFT | The Freshwater Trust |
| BCWEP* | Bear Creek Watershed Education Partners (*Volunteers – Former Board Members) |

Pre and Post Program Surveys

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 (Scenic Middle School in 2018)

Survey Results- Scenic Student Surveys

Students were scored on 10 questions given to Scenic Middle School students (8th graders) pre and post the field days. Results were compiled from randomly selected respondents in several classes. Average scores pre test were 2.34. Scores increased to an average of 6.32 in the pre-test, which is a 176% increase in the scores.

Other students survey results in Appendix B. Appendix B also contains instructor and teacher survey results which provide feedback on field locations, trainings, preparation, and other program elements. Changes are incorporated into the next field season. For example, we are changing our training program to allow for more time for new instructors to test the kits and also see how the kits are incorporated into the curriculum. In addition, we offer shadowing for new instructors at programs with experienced instructors.

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Next Steps/Recommended Program Changes

- Continue to work with MS4s, DMAs, and other partners to continue the program. We are working on a long term MOU with the Army Corps of Engineers to use McGregor Park for classes every year for two weeks for the program.
- Continue to 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, the Illinois Valley Soil and Water Conservation District, and Lower Rogue Watershed Council regarding program expansion. In 2019, the Applegate is working to create additional program at and manage classes at Cantrall Buckley Park.
- Consider adding programs in the Spring. There are several partner organizations including ODFW who are interested in developing a spring program schedule.
- Add additional program ties to other programs including ODFW's Salmon rearing and release program to tie in the service learning aspect.
- Reassess the feasibility of bringing back the Student Education Symposium.
- Integrate the Salmon Watch Program into a larger program (e.g., Stream Smart) to assist with long term funding needs. Salmon Watch was added as a program under Stream Smart in 2016. In 2019, the Salmon Watch Program is being incorporated into SWMPs to meet the conditions of the Stormwater General Permit (released November 2018).
- Establish permanent locations for the modules at the established field locations (in development).
 - Map locations of sites
 - Flag areas and/or map locations of the class layouts for each field site

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Program Photos

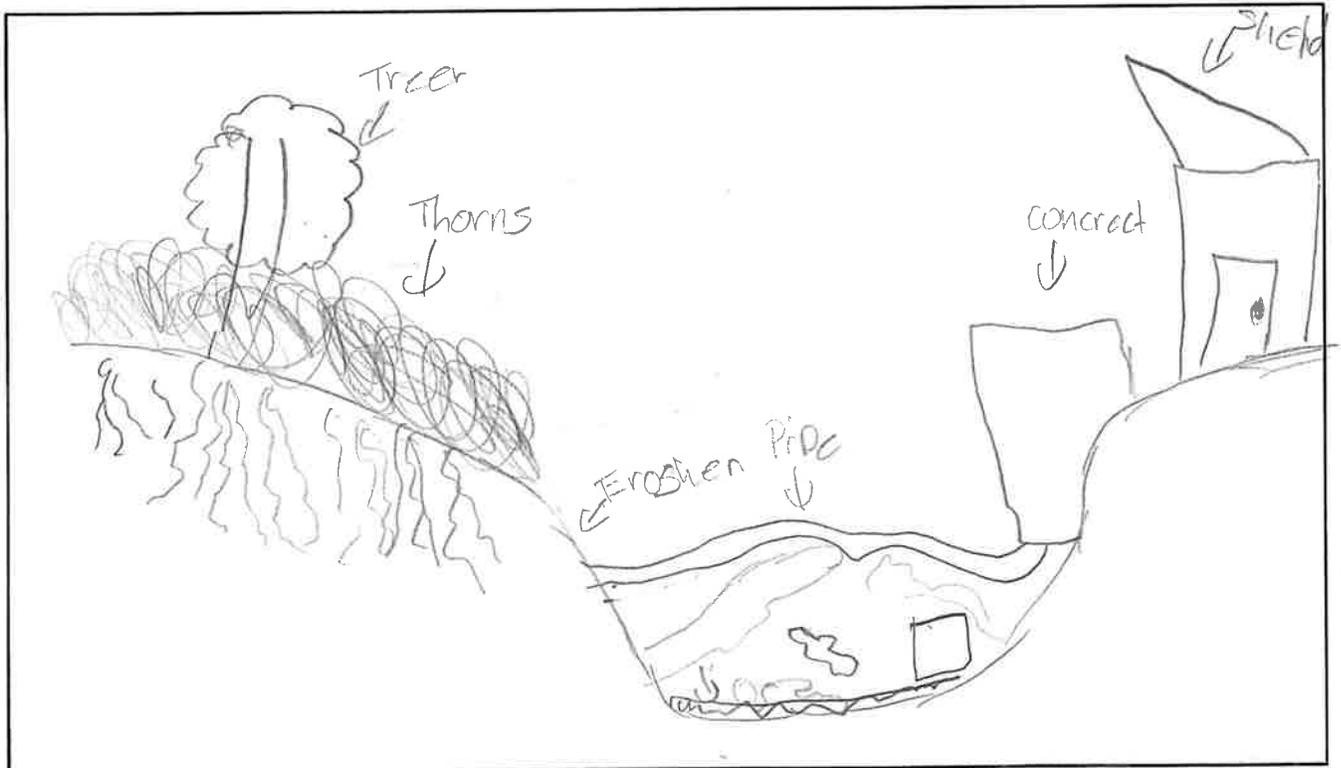
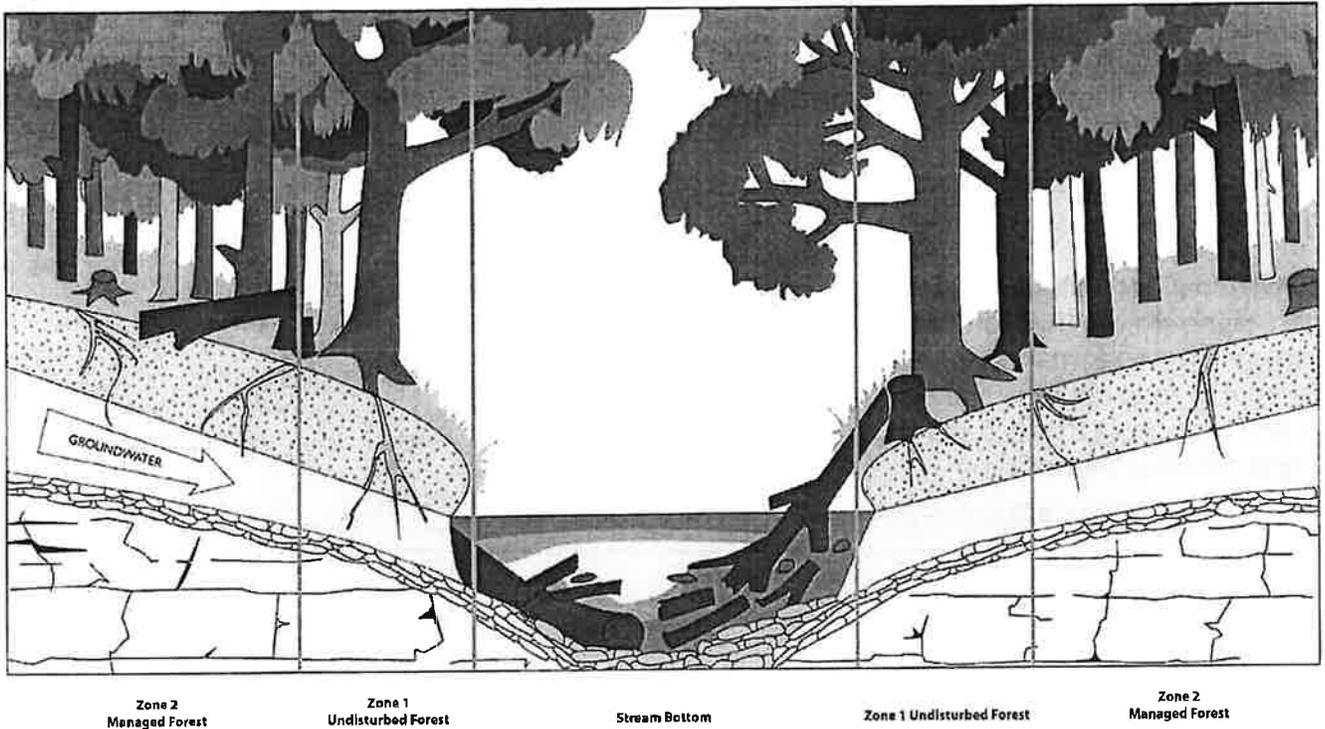


Appendix A: Data Sheet Examples

RIPARIAN AREA PROFILE DATA FORM

Directions: Pick a place along the stream that you particularly like. Draw a profile (cross-section, see **Figure 2**) of this place. Include the near bank, stream, and opposite bank in your drawing. If you aren't sure how to do this, ask your adult group leader. Show the water level in your drawing. Now, draw in features of the riparian zone that you think are important to salmon.

Figure 2



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?
2. How many **different kinds of deciduous trees** are there in this area?
3. Can you identify any **kinds of berries, fruits, or seeds**? (Do not eat them!)
4. What are some **examples of human impacts to streams**?
An around creeks
5. Is there an **eroded stream bank** in the area? If so, what do you think caused the erosion?
concrete pumps, houses, near school, fence
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
bushes, logs, ~~rocks~~ rocks, shade
8. Find an **insect or sign** of an insect.
Garden Spider
9. Find different types of **evidence that birds** occur in the area.
Birds in sky
10. Did you see any wildlife, fish, or aquatic species?

NO

RIPARIAN SCAVENGER HUNT

Sophie Quackenbush

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?
2. How many **different kinds of deciduous trees** are there in this area?
3. Can you identify any **kinds of berries, fruits, or seeds**? (Do not eat them!)
4. What are some **examples of human impacts to streams**?
Black berries all along creek
5. Is there an **eroded stream bank** in the area? If so, what do you think caused the erosion?
concrete pumps, pipes, houses, by a school
6. Is there a place where **tree roots** are holding the stream bank? Or where tree roots are needed to help stabilize the banks?
Water over time
Yes
7. Looking around the stream and riparian area, find **3 different types of cover** that help protect fish from predators
Bushes, logs, water fall
8. Find an **insect or sign** of an insect.
Garden spider
9. Find different types of **evidence that birds** occur in the area.
Birds in the sky
10. Did you see any wildlife, fish, or aquatic species?

No

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RIPARIAN AREA MAPPING DATA FORM

School: Scenic Middle School

Teacher: Mrs. Ryher

Date: 10-8-18 Time: 9:27 a.m.

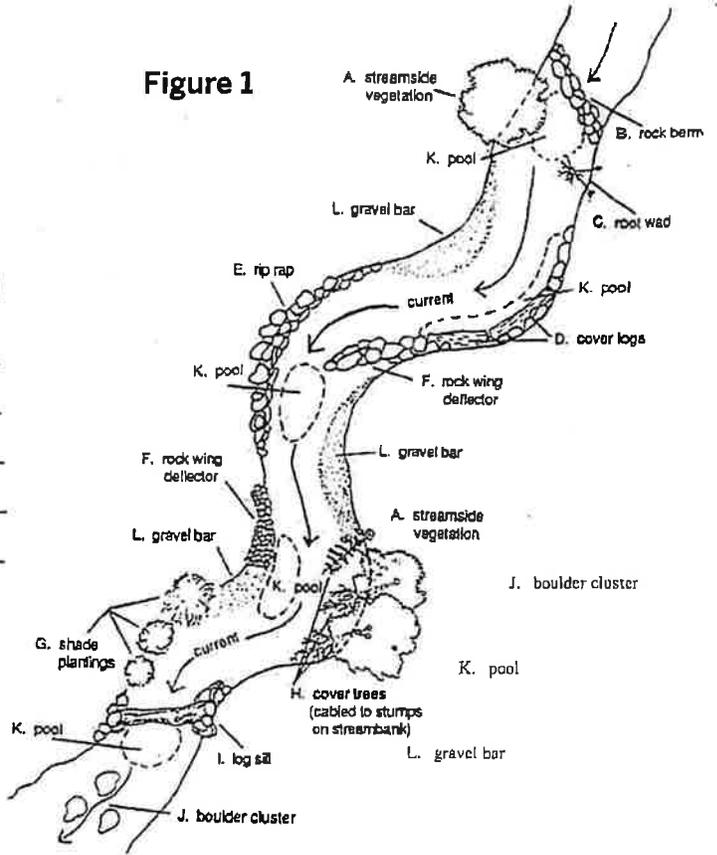
Weather: Cloudy

Stream/Site Name: _____

Directions: Use this space to make a map of the part of the stream that you think is important (imagine the stream from a "bird's-eye-view"). Be sure to map both the aquatic and riparian zones. Draw in all the features you think are important (see **Figure 1**).

Turn over for profile activity. →

Figure 1





The Freshwater Trust™

Salmon Watch®

RIPARIAN AREA MAPPING DATA FORM

School: Seaside Middle School

Teacher: Mrs. S. Sauer

Date: 10/8/18 Time: 9:29:24

Weather: cloudy

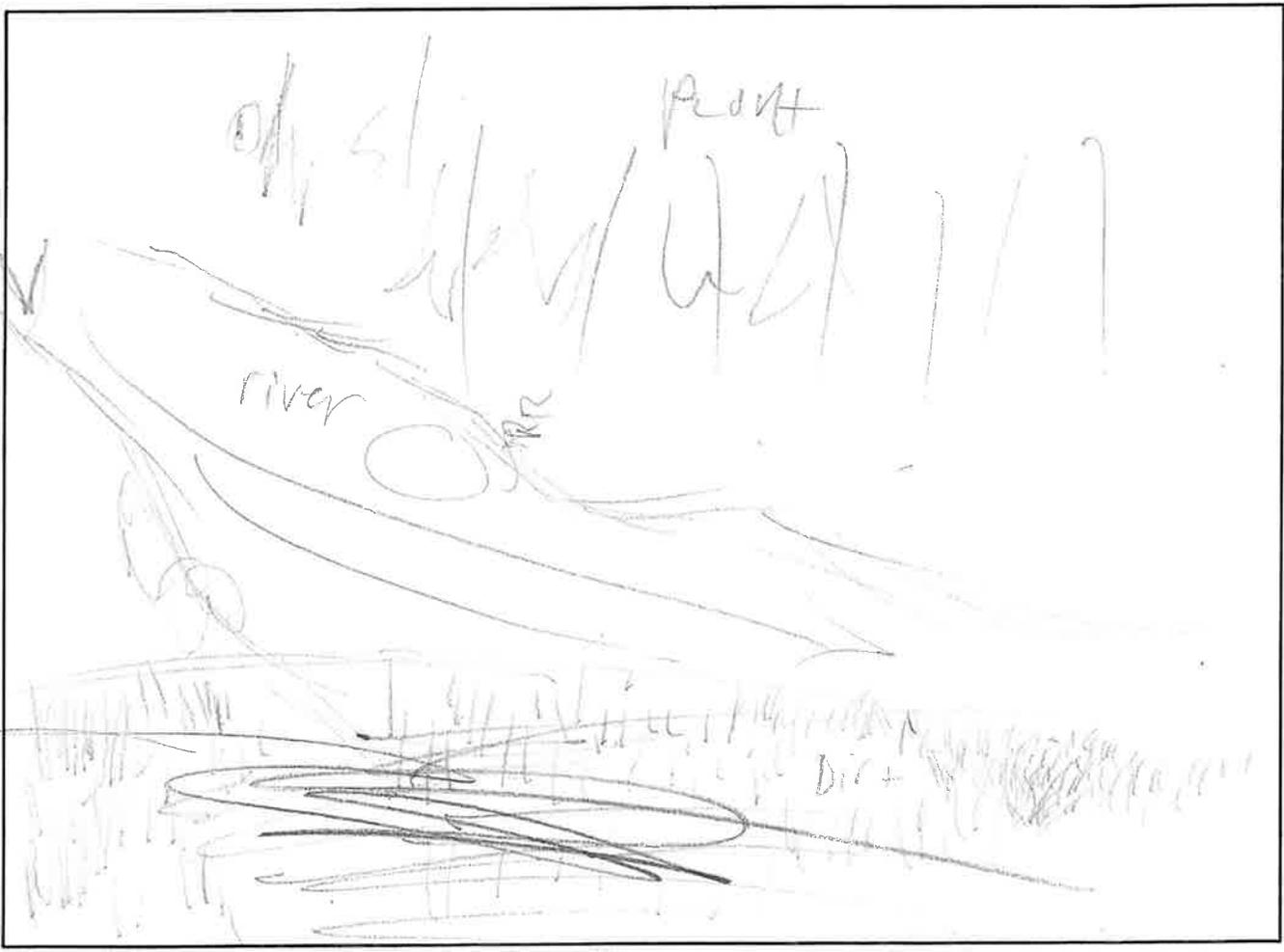
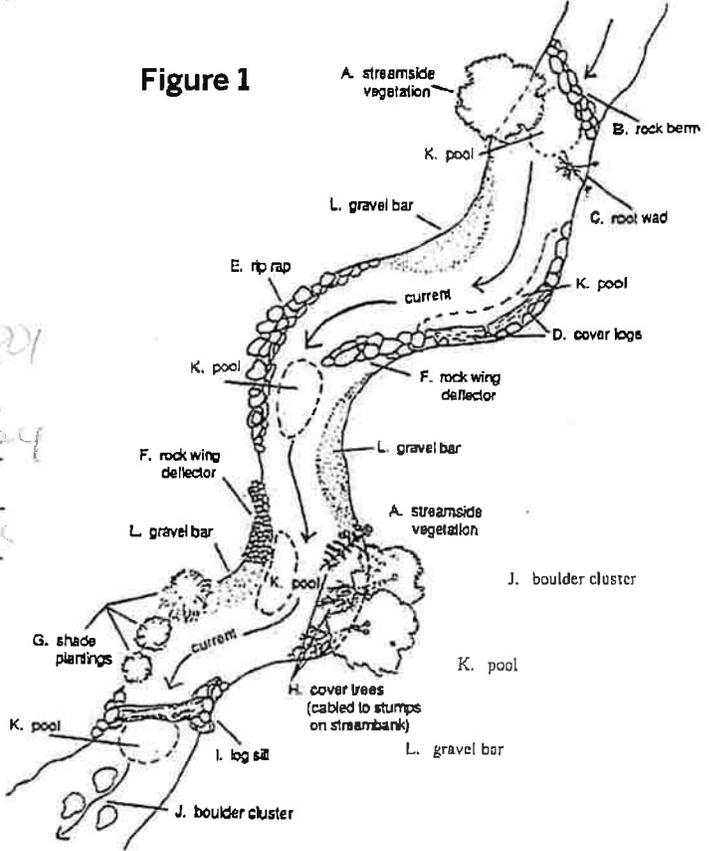
Stream/Site Name: Drift Creek

Directions: Use this space to make a map of the part of the stream that you think is important (imagine the stream from a "bird's-eye-view"). Be sure to map both the aquatic and riparian zones. Draw in all the features you think are important (see **Figure 1**).

Turn over for profile activity. →

Area

Figure 1



CANOPY COVER SURVEY



Share your field data quickly and easily using StreamWebs. Find out what the macroinvertebrates you found say about your stream, keep track of your photopoints, graph water quality data, upload a video, and much more.

www.streamwebs.org

Name: Bianca Tartaglia

School: SUB

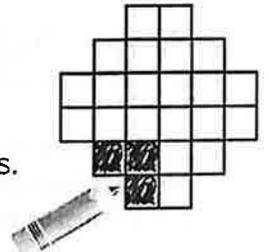
Teacher: Mrs. Risher

Date: 10/18/13 Time: 9:25

Stream/Site Name: Grassen creek

Weather: Cloudy

Directions: Working with a partner, take one sample of canopy cover in each cardinal direction using the spherical densiometer. Once you have the densiometer positioned correctly, fill in the areas on this worksheet that are covered with canopy shade. If the square is 50% shaded or more, fill in the entire square. Record the number of shaded boxes for each sample. Add up the numbers for all four samples. The result is your estimated percent canopy for your location.



| | | | | | |
|---|---|---|---|---|---|
| | | A | B | | |
| | C | D | E | F | |
| G | H | I | J | K | L |
| M | N | O | P | Q | R |
| | S | T | U | V | |
| | W | X | | | |

Shaded Boxes
19

North

| | | | | | |
|---|---|---|---|---|---|
| | | A | B | | |
| | C | D | E | F | |
| G | H | I | J | K | L |
| M | N | O | P | Q | R |
| | S | T | U | V | |
| | W | X | | | |

Shaded Boxes
18

East

| | | | | | |
|---|---|---|---|---|---|
| | | A | B | | |
| | C | D | E | F | |
| G | H | I | J | K | L |
| M | N | O | P | Q | R |
| | S | T | U | V | |
| | W | X | | | |

Shaded Boxes
15

South

| | | | | | |
|---|---|---|---|---|---|
| | | A | B | | |
| | C | D | E | F | |
| G | H | I | J | K | L |
| M | N | O | P | Q | R |
| | S | T | U | V | |
| | W | X | | | |

Shaded Boxes
12

West

19 + 18 + 15 + 12 = 64%

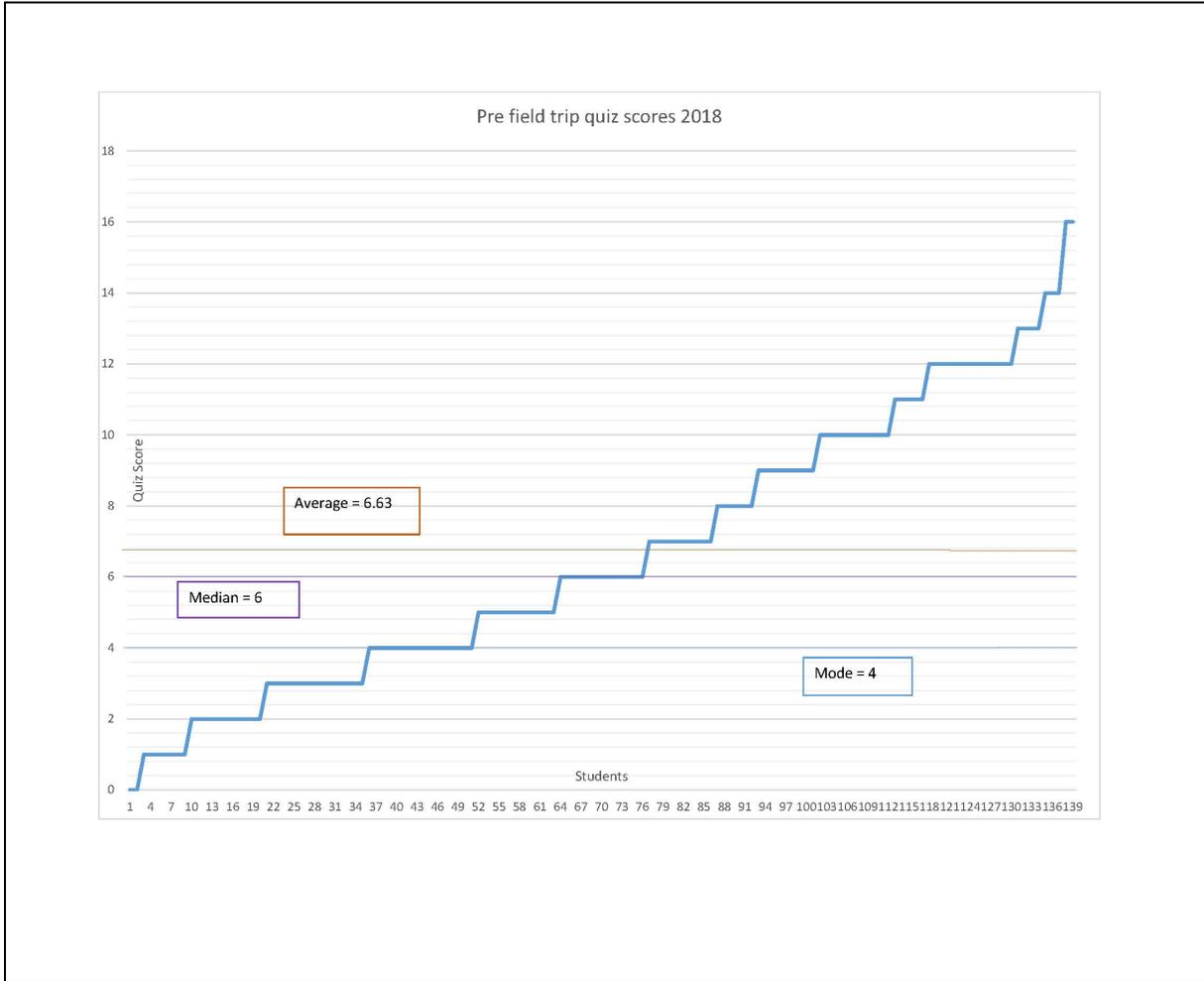
North + East + South + West = Estimated % Canopy

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Survey Results Summary

Prior to the Salmon Watch field days, students were given a 16 question quiz to test their knowledge of watersheds and salmon. Students are also given the test after the program to help evaluate overall effectiveness. Table B-1 and B-2 show the survey results from 139 responses before and after program participation. Overall mean scores increased from 6.63 correct answers to 10.24 correct (a 54.45% increase).

Table B-1: Pre Field Trip



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Table B-2: Post Field Trip

